

ACADEMICIA

ISSN (online) : 2249-7137

ACADEMICIA

An International  
Multidisciplinary Research  
Journal



Published by  
**South Asian Academic Research Journals**  
A Publication of CDL College of Education, Jagadhri  
(Affiliated to Kurukshetra University, Kurukshetra, India)

**ACADEMICIA**

An International Multidisciplinary Research Journal

ISSN (online) : 2249 –7137

Editor-in-Chief : Dr. B.S. Rai

Impact Factor : SJIF 2020 = 7.13

Frequency : Monthly

Country : India

Language : English

Start Year : 2011

Indexed/ Abstracted : Scientific Journal Impact Factor (SJIF2020 - 7.13), Google Scholar, CNKI Scholar, EBSCO Discovery, Summon (ProQuest), Primo and Primo Central, I2OR, ESJI, IJIF, DRJI, Indian Science and ISRA-JIF and Global Impact Factor 2019 - 0.682

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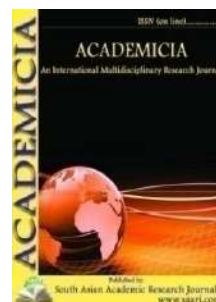
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# ACADEMICIA

## An International Multidisciplinary Research Journal

(Double Blind Refereed & Reviewed International Journal)



SR. NO	PARTICULAR	PAGE NO	DOI NUMBER
1.	COMMON OFFENCES AND SANCTIONS IN THE MANAGEMENT OF DISCIPLINE IN HIGHER EDUCATION IN NIGERIA  Daminabo, Dagogo Allen Frank	38-53	10.5958/2249-7137.2020.00566.2
2.	IMPROVEMENT OF MODERN TEACHING METHODS IN FOREIGN LANGUAGE TEACHING METHODOLOGY  Abbosova Zarnigor Abbosovna, Najmiddinova Mekhrigul Najmiddin qizi	54-57	10.5958/2249-7137.2020.00624.2
3.	PROFESSIONALLY IMPORTANT QUALITIES OF A PEDIATRIC DOCTOR IN SOCIAL ACTIVITY  Axmedova Nigora Dadahanovna, Azimov Akmaljon Axmadillaevich, Tulakov Elbek Oybekovich	58-61	10.5958/2249-7137.2020.00625.4
4.	NOTION AND LEGAL REGULATION OF STARTUPS IN THE REPUBLIC OF UZBEKISTAN  Tojiboev Akbar Zafar ugli	62-68	10.5958/2249-7137.2020.00626.6
5.	THE METHOD OF APPROXIMATION OF THE SEQUENCE FOR SOME NONLINEAR BOUNDARY VALUE PROBLEMS  Baymuratova K, Erejepova Sh, Kilishbaeva G	69-73	10.5958/2249-7137.2020.00627.8

6.	<b>RELEVANCE AND DEVELOPMENT OF DISTANCE LEARNING IN THE REPUBLIC OF UZBEKISTAN</b>  Saidmuratova Umida Rajabbayevna	<b>74-77</b>	<b>10.5958/2249-7137.2020.00628.X</b>
7.	<b>COMMUNICATIVE COMPETENCE AS A PEDAGOGICAL MODEL IN THE CLASSROOMS</b>  N. A. Narzieva, N.Hasanova	<b>78-81</b>	<b>10.5958/2249-7137.2020.00629.1</b>
8.	<b>FEATURES OF THE CLINICAL COURSE OF PURULENT THORACIC SURGICAL DISEASES AGAINST DIABETES MELLITUS</b>  O.M. Kurbonov	<b>82-90</b>	<b>10.5958/2249-7137.2020.00630.8</b>
9.	<b>EQUITY PORTFOLIO CONSTRUCTION FOR INVESTOR'S IN INDIAN CAPITAL MARKET WITH SPECIAL REFERENCE TO PHARMACEUTICAL, LOGISTICS AND TELECOMMUNICATION SECTORS.</b>  Dr P Varadharajan	<b>91-100</b>	<b>10.5958/2249-7137.2020.00583.2</b>
10.	<b>PERSONALITY-ORIENTED APPROACH TO MORAL CONSCIOUSNESS IS THE BASIS OF THE MODERNIZATION OF THE SYSTEM OF EDUCATION AND UPBRINGING OF THE YOUTH OF THE REPUBLIC OF UZBEKISTAN</b>  Khalilova Khabiba Маматкуловна	<b>101-06</b>	<b>10.5958/2249-7137.2020.00600.X</b>
11.	<b>HISTORIOGRAPHIC APPROACH TO THE STUDY OF UZBEK PUBLIC PEDAGOGY</b>  Sokhibov A.R, Rustamov D. A	<b>107-10</b>	<b>10.5958/2249-7137.2020.00601.1</b>
12.	<b>CULTURAL LIFE IN UZBEKISTAN DURING THE SECOND WORLD WAR</b>  Kakhkhorov Shukhrat Khudoyberdiyevich	<b>111-15</b>	<b>10.5958/2249-7137.2020.00602.3</b>
13.	<b>DEVELOPMENT OF CREATIVE ABILITIES OF FUTURE PRIMARY SCHOOL TEACHERS IN THE PROCESS OF TEACHING PRACTICE</b>  Farmonov Uktam Nematovich	<b>116-21</b>	<b>10.5958/2249-7137.2020.00603.5</b>



14.	<b>MODERNIZATION OF MOTHER TONGUE EDUCATION THROUGH IMPROVEMENT OF STUDY TASKS</b> Hamroev Gafir Hasanovich	122-26	10.5958/2249-7137.2020.00604.7
15.	<b>SCRIPTURES OF EASTERN SCIENTISTS ON SCIENCE</b> Malikova Dilrabokhon Mahmudovna	127-32	10.5958/2249-7137.2020.00605.9
16.	<b>VIDEO CONTENT AS A TECHNOLOGY FOR THE FORMATION OF PROFESSIONAL COMPETENCE OF A FUTURE GERMAN LANGUAGE TEACHER</b> Suleymanova Nilufar Kamilovna	133-38	10.5958/2249-7137.2020.00606.0
17.	<b>EFFECT ON CONSUMER PURCHASE BEHAVIOR THROUGH INFLUENCE OF BRAND EQUITY WITH SPECIAL REFERENCE TO CARGILLS BRAND IN JAFFNA DISTRICT OF SRI LANKA.</b> Mr. E. Ratnam, Mrs. Sabina Dinesh kumar, Mr. Sivapragasam Sivanenthira	139-50	10.5958/2249-7137.2020.00710.7
18.	<b>ON THE ISSUE OF THE CHRONOLOGY OF THE HISTORY OF THE BAIHUA LANGUAGE</b> Khasanova Feruza Mirzabekovna	151-63	10.5958/2249-7137.2020.00643.6
19.	<b>METHODS FOR GENERATING KEYS FOR SYMMETRIC ENCRYPTION ALGORITHMS AND THEIR ANALYSIS</b> Karimova Iqbol Madaminova, Xojiboyev Jonibek Maxmudjonovich	164-72	10.5958/2249-7137.2020.00645.X
20.	<b>PRACTICAL FORMS AND METHODS OF "IMPROVING ENVIRONMENTAL EDUCATION TECHNOLOGIES THROUGH PROTECTION OF NATURAL AREAS FOR STUDENTS"</b> Aydarov Erkin Bakitovich	173-77	10.5958/2249-7137.2020.00705.3

21.	<b>TRADITIONS OF ALISHER NAVOI IN THE WORKS OF ERKIN VAHIDOV</b> Shomurodova Sitara Xoshimqizi	178-81	10.5958/2249-7137.2020.00646.1
22.	<b>CYCLE OF SONNETS IN THE KARAKALPAK POETRY</b> Orazymbetova Marjangul Kelimbetovna	182-87	10.5958/2249-7137.2020.00647.3
23.	<b>SCIENTIFIC AND THEORETICAL FUNDAMENTALS OF ECOLOGICAL MANAGEMENT (ON THE EXAMPLE OF THE REPUBLIC OF UZBEKISTAN)</b> Nigmatov Askar Nigmatullaevich, Yuldashov Abrorjon Ubaydulloevich	188-97	10.5958/2249-7137.2020.00648.5
24.	<b>REGISTRATION OF NEUROLOGICAL PATIENTS IN PRIMARY HEALTH CARE</b> Babadjanova Zamira Khikmatovna	198-03	10.5958/2249-7137.2020.00649.7
25.	<b>IMPACT OF INFLATION ON CONSUMER BEHAVIOUR TOWARDS GOLD – A STUDY</b> Dr. Puja Archana Sahu, Dr. Mudita Srivastava	204-08	10.5958/2249-7137.2020.00584.4
26.	<b>TAX SYSTEM ON THE TERRITORY OF KYRGYZSTAN DURING THE KOKAND KHANATE</b> Hatamova Zumradkhon Nazirjonovna, Nuriddinov Mirsaidjon Abdumannobovich	209-12	10.5958/2249-7137.2020.00576.5
27.	<b>IN UZBEKISTAN ROOF LANDSCAPING - THE NEED FOR ENVIRONMENTAL HEALTH, CONVENIENCE, BEAUTY</b> Muminova N. Z, Toshmatov U. T, Norimova S.A	213-15	10.5958/2249-7137.2020.00577.7
28.	<b>WAYS TO ATTRACT INVESTMENT AND IMPROVE ITS ACCOUNTING</b> Kunduzova K.I	216-21	10.5958/2249-7137.2020.00578.9

29.	<b>INNOVATIVE TECHNOLOGIES FOR GRAIN STORAGE OF DIFFERENT CROPS</b>  Nazirova R. M, Usmonov N. B, Bakhtiyorova D	222-28	10.5958/2249-7137.2020.00579.0
30.	<b>NEW DATA IN THE FIELD OF PALEO-ECOLOGY AND PALOE LANDSCAPES IN ARCHAEOLOGICAL RESEARCH</b>  Omonov Anvarbek Murodovich	229-36	10.5958/2249-7137.2020.00580.7
31.	<b>FOREIGN EXPERIENCE IN THE FORMATION OF PERSONAL QUALITIES OF PRESCHOOL CHILDREN IN COLLECTIVE RELATIONS</b>  Yarmanova Yulduz Burievna	237-41	10.5958/2249-7137.2020.00581.9
32.	<b>CURRENT PROBLEMS OF INCREASING SOIL FERTILITY</b>  Rakhmatullayev G. D, Manopov X.V, Mirzakarimova G. M	242-46	10.5958/2249-7137.2020.00582.0
33.	<b>TO STUDY THE LEADERSHIP SKILLS OF THE PRIMARY MULTIPURPOSE COOPERATIVES SOCIETIES BOARD DIRECTORS IN GAMBELLA, ETHIOPIA</b>  Ochum Omod, R.Karunakaran	247-57	10.5958/2249-7137.2020.00711.9
34.	<b>EFFECTS OF STIMULATORS ON THE GROWTH AND DEVELOPMENT OF SILIC SWEET SEEDS</b>  Atabayeva Khalima Nazarovna, Tajetdinov Naurizbay Daribayevich	258-62	10.5958/2249-7137.2020.00588.1
35.	<b>CULTURAL HERITAGE IS ONE OF THE MAIN WAYS OF CULTURE</b>  Jabbarova Xilola Kuchkarovna, Fayzieva Fotima Alisherovna	263-66	10.5958/2249-7137.2020.00589.3
36.	<b>KHOQAND AND INDIA: THE ROLE OF ULEMA IN DIPLOMATIC RELATIONS</b>  Sherzodhon Mahmudov	267-75	10.5958/2249-7137.2020.00618.7

37.	<b>MONOESTERS OF ETHYLENE AND DIETHYLENE GLYCOLS AS PHAGOSTIMULANTS OF ANACANTHOTERMESTURKESTANICUS</b> U. R. Togaev, Z. Tilyabaev, Kh. Khaitbaev, F. Yu. Jololiddinov, Sh. Turageldiyev	276-81	10.5958/2249-7137.2020.00619.9
38.	<b>CURRENT TRANSPORT MECHANISMS IN ANISOTYPE HETEROJUNCTIONS p-Cu<sub>2</sub>ZnSnS<sub>4</sub>/n-Si</b> Ahmed Yusupov, Sukhrob. Aliev, Zafar Turaev	282-87	10.5958/2249-7137.2020.00620.5
39.	<b>AIR TRANSPORT: STRUCTURE, ACTIVITY, SHAPE</b> Tukhtabaev Azamjon Sharipkhujaevich	288-91	10.5958/2249-7137.2020.00590.X
40.	<b>FEATURES PRODUCTIONS REACTIVE POWER ON SYSTEMS ELECTRICAL SUPPLY WITH RENEWABLE SOURCES ENERGIES</b> Siddikov Ilkhom Khakimovich, Makhsudov Mokhirbek Tolibjonovich, Boikhanov Zailobiddin Urazali'gli, Uzaqov Rakhmanjan	292-96	10.5958/2249-7137.2020.00591.1
41.	<b>METHODS OF TEACHING STUDENTS TO CLASSIFY MATHEMATICAL PROBLEMS</b> Nurillo Aliyev	297-300	10.5958/2249-7137.2020.00592.3
42.	<b>A WAY TO WORK CREATIVELY ON MULTIPLE SOLUTIONS USING INFORMATION TECHNOLOGIES</b> Asimov Alijon, Mamasaidova Muhabbat Abdusalom kizi	301-05	10.5958/2249-7137.2020.00593.5
43.	<b>THE LEARNING HISTORY OF THE PROBLEM OF ANCIENT BACTRIAN CITIES AND THE ARCHAEOLOGICAL LOCALIZATION OF POLITICAL AREAS (4<sup>TH</sup> CENTURY. B.C)</b> Nigora Egamberdiyeva	306-14	10.5958/2249-7137.2020.00594.7



44.	<b>STREET VENDORS IN INDIA: AN OVERVIEW</b> Rachna	315-23	10.5958/2249-7137.2020.00585.6
45.	<b>THE ROLE OF MEMORIES OF TOURISTS AND AMBASSADORS IN TRADE AND ECONOMIC RELATIONS OF THE KOKAND KHANATE</b> Tolqin Dustboboevich Khudoikulov, Abduvali Abduganievich Berdiev	324-33	10.5958/2249-7137.2020.00522.4
46.	<b>THE ROLE OF NATIONAL-CULTURAL COMMUNICATIONS IN THE CULTURE OF NAMING</b> Daniyarova Z.J	334-39	10.5958/2249-7137.2020.00523.6
47.	<b>THE EFFECTIVENESS OF FINANCING HIGHER EDUCATIONAL INSTITUTIONS IN A MARKET ECONOMY</b> Husen Ahadovich Khudoykulov	340-45	10.5958/2249-7137.2020.00524.8
48.	<b>DEVELOPMENT OF ARTICLE IN CRITICISM OF UZBEK LITERARY</b> Khudoykulova Marhabo Ahadovna	346-53	10.5958/2249-7137.2020.00525.X
49.	<b>EVAPORATION AND CRYSTALLIZATION AS A RESULT OF CHANGES IN THE AMOUNT OF BIOLOGICAL FLUID AND ITS CONTENT (NACL)</b> Karabayev Mukhammadjon Karabayevich, Ergashev Erkinjon Abdusattor-ugli	354-58	10.5958/2249-7137.2020.00526.1
50.	<b>EFFECTIVE USE OF ELECTRONIC AND DISTANCE LEARNING TO INCREASE THE NUMBER OF STUDENTS IN THE HIGHER EDUCATION SYSTEM BY CORRESPONDENCE COURSE</b> Bekchanova Shoiraz Bazarbaevna	359-63	10.5958/2249-7137.2020.00527.3
51.	<b>EDUCATIONAL ISSUES IN FOREIGN EXPERIENCE</b> Alfiya Zhienbekovna Turekeeva	364-76	10.5958/2249-7137.2020.00528.5

52.	<b>DETERMINANTS EFFECTING COMPANIES' LEVERAGE: A STUDY OF PANEL DATA IN SRI LANKA.</b>  Lingesiya. Y	377-88	10.5958/2249-7137.2020.00712.0
53.	<b>ARCHAEOLOGICAL STUDY OF THE MONUMENTAL STRUCTURES OF YERKURGAN</b>  Razhabova Nilufar Nasrillaevna	389-93	10.5958/2249-7137.2020.00597.2
54.	<b>IMPROVEMENT OF TRANSFORMER PROTECTION ELEMENTS</b>  Nabiyev Muminjon, Numonjonov Shahzod Dilshodjonugli	394-98	10.5958/2249-7137.2020.00598.4
55.	<b>PEDAGOGICAL TECHNOLOGIES AND PRINCIPLES OF INFORMATIZATION IN EDUCATIONAL PROCESSES</b>  R. B. Tursunov	399-02	10.5958/2249-7137.2020.00599.6
56.	<b>THEORETICAL WAYS OF ACHIEVING SUCCESS IN TEACHING ENGLISH TO DEAF CHILDREN</b>  Nodira Nabiyeva Rustamjon qizi	403-06	10.5958/2249-7137.2020.00631.X
57.	<b>ABOUT A TYPE OF ADVERTISING TEXT</b>  Abdullaev Bekzodbek Kholdaralievich	407-12	10.5958/2249-7137.2020.00632.1
58.	<b>DEVELOPMENT OF PROFESSIONAL SPEECH CULTURE OF MEDICAL STUDENTS</b> Dzugaeva Zarina Ruslanovna	413-15	10.5958/2249-7137.2020.00633.3
59.	<b>ABOUT THE PERSIAN TRANSLATION OF "TARIKH AR-RUSUL VAL MULUK"</b> Agzamova Muhabbatxon Mirtoxirovna	416-19	10.5958/2249-7137.2020.00634.5
60.	<b>THE IMPACT OF SENSORY BRANDING (FIVE SENSES) ON CONSUMER: A CASE STUDY ON KFC (KENTUCKY FRIED CHICKEN)</b>  Sharafat Hussain	420-28	10.5958/2249-7137.2020.00586.8

61.	CULTURE-BOUND WORDS IN LINGUO-CULTURAL ANALYSIS OF LITERARY TRANSLATION (BY THE EXAMPLE OF THE TRANSLATION VERSIONS OF THE NOVEL "BYGONE DAYS" BY ABDULLAH QADIRI)	429-39	10.5958/2249-7137.2020.00650.3
	Dosbaeva Nargiza Turgunpulatovna		
62.	EVALUATION OF MEDICAL AND DIAGNOSTIC ACTIONS CARRIED OUT BY NEUROLOGICAL PATIENTS IN THE PRIMARY HEALTHCARE	440-48	10.5958/2249-7137.2020.00651.5
	Gafurov Bakhtiyar Gafurovich, Babadjanov Abdumurat Sattarovich, Babadjanova Zamira Khikmatovna		
63.	SOCIOLINGUISTIC ASPECT IN TEACHING A NON-RICH (RUSSIAN) LANGUAGE IN A GENERAL EDUCATIONAL SCHOOL WITH A UZBEK LANGUAGE OF TEACHING	449-54	10.5958/2249-7137.2020.00652.7
	Alimsaidova Sayyora Amid'evna		
64.	ON THE VOCABULARY OF POLITICAL SPEECH IN CHINESE (BASED ON XI JINPING'S SPEECH AT THE STRONG TWENTIETH SPECIAL SUMMIT)	455-60	10.5958/2249-7137.2020.00653.9
	Mustafaeva Samida Toshmuhammedovna		
65.	INDUSTRIAL IMPACT OF INDUSTRY IN SAMARKAND REGION	461-67	10.5958/2249-7137.2020.00654.0
	Raximova Gulchexra Sobirjonovna		
66.	THE USE OF PHRASEOLOGICAL METAPHORS IN T.MURAD'S STORY "STARS BURN FOREVER" (YULDUZLAR MANGU YONADI)	468-73	10.5958/2249-7137.2020.00655.2
	Kholnazarov Umid Erkinovich		
67.	METHOD OF APPLICATION OF GAME RECEPTIONS IN THE FORMATION OF ELEMENTARY MATHEMATICAL REPRESENTATIONS IN PRESCHOOLERS	474-80	10.5958/2249-7137.2020.00706.5
	Mamazhonova Khushruy Shavkatovna		

68.	<b>CHILDREN'S BEHAVIOR OVER TELEVISION ADVERTISEMENTS: A STUDY OF PARENTS' EXPERIENCE IN THE POST-WAR PERIOD IN SRI LANKA.</b>  Dilogini. K, Shivany.S	481-97	10.5958/2249-7137.2020.00713.2
69.	<b>USE OF INTERACTIVE METHODS IN THE FORMATION OF CREATIVE QUALITIES OF STUDENTS</b>  Oripova Feruza Melievna, Soyibnazarova Muqaddas Norpulatovna, Sanakulova Zilola Abdulkhakimovna	498-02	10.5958/2249-7137.2020.00529.7
70.	<b>INFORMATION MODELING BASED ON IMITATION ROLE IN MODERN ECONOMIC THEORY</b>  Qakhramonova Khumora Qakhramonovna, Khamraev NodirZokir ugli	503-07	10.5958/2249-7137.2020.00530.3
71.	<b>ISLAMIC FINANCE, OPPORTUNITIES AND PROBLEMS OF ITS DEVELOPMENT</b>  Abdullaev Khabibullo Asadulla ugli SaidovElyor Ilkhomovich	508-13	10.5958/2249-7137.2020.00531.5
72.	<b>THE IMPACT OF USING MINERAL FERTILIZERS AND INOCULATING WITH NITROGEN BEFORE SEEDING SOYBEAN ON THE EFFICIENCY OF THE SOIL AND PRODUCTIVITY OF THE CROP</b>  Iminov Abduvali Abdumannobovich, Kurbonov Akhmad Alovkhanovich, Khayrullayev Sardor Shamsiddin ugli, Usmonova Dilnoza Khamrokulovna	514-18	10.5958/2249-7137.2020.00532.7
73.	<b>INTERRELATION OF LANGUAGE AND CULTURE: REFLECTION OF NATIONAL-CULTURAL TRADITIONS OF "FAMILY AND MARRIAGE" IN THE LINGUO-CULTUROLOGY OF THE ENGLISH AND UZBEK PEOPLES</b>  Mamatova Feruza Makhammadovna	519-26	10.5958/2249-7137.2020.00533.9



74.	<b>THE PROBLEM OF CLASSIFICATION OF LITERARY TERMS IN “THE CONCISE OXFORD DICTIONARY OF LITERARY TERMS” BY CHRIS BALDICK</b>  Saidova Mukhayyo Umedilloevna	527-31	10.5958/2249-7137.2020.00534.0
75.	<b>ORGANIZATION OF COMPUTER MONITORING IN ASSESSING STUDENT KNOWLEDGE OF A COMPUTER SYSTEM</b>  Djuraeva Ra'no Bakhrombekovna	532-38	10.5958/2249-7137.2020.00535.2
76.	<b>IMPACT OF RASHTRIYA SWASTHYA BHIMA YOJANA IN HEALTH SECTOR DEVELOPMENT IN MALABAR REGION (KERALA)</b>  Susmitha M.S	539-47	10.5958/2249-7137.2020.00587.X
77.	<b>COVID-19: TOURISM HAS BEEN HIT HARDEST BY THE PANDEMIC</b>  Matkabulova Dilorom Xalilullaevna	548-55	10.5958/2249-7137.2020.00656.4
78.	<b>FROM THE HISTORY OF THE ART OF BOOK IN CENTRAL ASIA DURING THE TIMURIDS</b>  Rakhmankulova Matluba Boyhurozovna	556-62	10.5958/2249-7137.2020.00657.6
79.	<b>OPTIMIZATION OF SOIL AND ATMOSPHERIC AIR VINCA LIGHTING, HEALTH (VINCA L) BAR ANATOMY OF INDIVIDUAL TYPES AND ENVIRONMENT</b>  Ganieva Sarvinoz Allamurodovna, Rakhimova Turakhon Uzokovna	563-68	10.5958/2249-7137.2020.00658.8
80.	<b>THEORETICAL ISSUES OF NATIONAL CLASSICAL MUSIC IN THE SCIENTIFIC WORKS OF UZBEK MUSICOLOGISTS OF THE XX CENTURY</b>  Sherimmatov Juratbek Shukhratovich	569-72	10.5958/2249-7137.2020.00659.X
81.	<b>EUROPEAN TOURIST H. VAMBERI'S OPINIONS ABOUT SHARIF CITY BUKHARA</b>  Shukurova Lobar Sherbaevna	573-76	10.5958/2249-7137.2020.00660.6

82.	<b>ANALYSIS OF FORECASTING OF THE ASSORTMENT OF CHILDREN'S FOOTWEARS</b> Ergashev Jamoliddin Samatovich, Umarova Venera Babakulova, Dadaboev Farhod Makhmudjanovich, Mamadalieva Ominakhon Boltaboevna, Rayimberdieva Dilrabo Khabibillaevna	577-84	10.5958/2249-7137.2020.00661.8
83.	<b>INTER-SUBJECT COMMUNICATIONS IN THE TEACHING OF CHEMISTRY IN THE PREPARATION OF A FUTURE BIOLOGY TEACHERS</b> Jumanov Akhmadjon Mirzaevich, Nishonov Mirkomzimjon, Sodikov Murodjon Usmonalievich	585-90	10.5958/2249-7137.2020.00662.X
84.	<b>A STUDY OF TALENT ACQUISITION PRACTICES IN ITS INDUSTRY: INNOVATIONS IN HR STRATEGIES</b> Dr. Madhavi Deshpande	591-04	10.5958/2249-7137.2020.00725.9
85.	<b>ADAPTATION OF MODERN TEACHING TASKS ON THE DEVELOPMENT SPEAKING</b> Yusupov Azat Atakhanovich	605-09	10.5958/2249-7137.2020.00607.2
86.	<b>THE USE OF INTERACTIVE METHODS IN THE DEVELOPMENT OF CRITICAL AND CREATIVE THINKING</b> Khidirov Sukhrob Norbutayevich	610-13	10.5958/2249-7137.2020.00608.4
87.	<b>ORGANIZATION OF INNOVATIVE APPROACHES TO METHODS OF TEACHING MATHEMATICS</b> Kadirova Charos Turobovna	614-18	10.5958/2249-7137.2020.00609.6
88.	<b>ISSUES OF OPTIMAL MANAGEMENT IN THE DEVELOPMENT OF CREATIVE COMPETENCE IN STUDENTS</b> Mahmudova Dilfuza Melievna	619-24	10.5958/2249-7137.2020.00610.2

89.	<b>SPECIFIC FEATURES OF USING TRAINING AND COMPETITION METHODS IN ADAPTIVE PHYSICAL CULTURE AND PARA-OLYMPIC SPORT PSYCHO-EMOTIONAL FACTOR</b>  Palibayeva Zulfiya Halmakhanovna	625-29	10.5958/2249-7137.2020.00611.4
90.	<b>INDICATIONS AND DYNAMICS OF INFECTION WITH SETARIALABIATO-PAPILLOSA IN CATTLE</b>  Goyipova Mutabar Ergashevna, Aripova Shoyra Djurakulovna	630-34	10.5958/2249-7137.2020.00612.6
91.	<b>ISSUES OF ENERGY DEVELOPMENT IN THE ARALSEA CONDITIONS</b>  Kdyrbayeva Gulan Utebayevna	635-38	10.5958/2249-7137.2020.00613.8
92.	<b>THE EFFECT OF PROPERTIES OF ELECTRONIC ADVERTISING IN UNITED ARAB EMIRATES</b>  Dr. Entisar Alobaidi	639-48	10.5958/2249-7137.2020.00714.4
93.	<b>2-LOCAL MULTIPLIERS ON ASSOCIATIVE, LIE AND JORDAN ALGEBRAS</b>  Farhodjon Arzikulov, Jamilahon Aliyeva, Olimjon Nuriddinov	649-53	10.5958/2249-7137.2020.00621.7
94.	<b>IMPROVING THE CULTIVATION OF PERSIMMON VARIETIES, STORAGE AND DRYING OF FRUITS IN UZBEKISTAN</b>  Nazarov Abdikodir Mukhammadievich, Hakimova Malokhat Kholmuratovna, Abdalova Gulistan Nuranovna	654-60	10.5958/2249-7137.2020.00614.X
95.	<b>DEVELOPMENT OF GENERAL CREATIVE ABILITIES AS A PROBLEM OF EDUCATIONAL PSYCHOLOGY</b>  Samarova Shoxista Rabidjanovna, Omonov Abduvohijon Muhiddinugli	661-68	10.5958/2249-7137.2020.00615.1
96.	<b>ABDURAUF FITRAT IS ONE OF THE EARLIEST RESEARCHERS OF UZBEK FOLKLORE</b>  Amonov Ulugmurod Sultonovich	669-73	10.5958/2249-7137.2020.00616.3

97.	<b>PSYCHOLOGY OF PERSONALITY OF THE HEAD OF MODERN COMPREHENSIVE SCHOOLS</b> Aliyeva Kamola Saidnegmatovna	674-78	10.5958/2249-7137.2020.00617.5
98.	<b>RELIGIOUS SPEECH AND PHONETIC INTERFERENCE</b> Yusupova Shahzoda Tohirjon qizi	679-83	10.5958/2249-7137.2020.00622.9
99.	<b>THE FIFTH ANGER AND JEALOUSY IN THE ECTOMORPHIC CHARACTERS OF SHAHNAMEH</b> Zahra Safari Jundabeh	684-96	10.5958/2249-7137.2020.00623.0
100.	<b>BALL CATCHING ROBOTS: A REVIEW OF SELECTED TECHNIQUES</b> Kartik Sharma, Gianetan Singh Sekhon	697-03	10.5958/2249-7137.2020.00725.9
101.	<b>READING SEQUENCES AND PRINCIPLES IN TEACHING ENGLISH</b> Babadjanova Umida Baxodirovna	704-06	10.5958/2249-7137.2020.00636.9
102.	<b>CONCERNING THE STUDY OF HEME-ONYMS IN THE UZBEK LANGUAGE</b> Sapaeva Boljon Kadamovna	707-10	10.5958/2249-7137.2020.00637.0
103.	<b>TEACHING STUDENTS TO STUDY READING IN TERMS OF THE REQUIREMENTS OF THE INTERNATIONAL PIRLS SYSTEM</b> Xurramov Mansur Musurmonugli	711-14	10.5958/2249-7137.2020.00638.2
104.	<b>AR AND VR TECHNOLOGIES AS THE FUTURE OF COMMERCIALS</b> Tuxtayeva Muyassar Shavkat qizi	715-18	10.5958/2249-7137.2020.00639.4
105.	<b>RELATIONSHIP BETWEEN PENALTY AND GUILT IN CIVIL-LEGAL LIABILITY (EXPERIENCE OF UZBEKISTAN)</b> Adham Sa'dulloyevich Odinaev	719-25	10.5958/2249-7137.2020.00640.0



106.	<b>STUDY OF THE LEXICON OF UZBEK FOLK EPICS</b> Kholmuradova Jamila Ermetovna	726-31	10.5958/2249-7137.2020.00641.2
107.	<b>THE IMPACT OF THE CYTOKINE IMBALANCE ON ANGINA DESTABILIZATION IN WOMEN OF DIFFERENT AGE CATEGORIES</b> Tashkenbaeva Eleonora Negmatovna, Rajabova Nilufar Turabaevna, Nasyrova Zarina Akbarovna, Kadirova Farzona Shuhratovna	732-38	10.5958/2249-7137.2020.00642.4
108.	<b>TO STUDY THE EFFECT OF STRUCTURAL EQUATION MODELING OF CONCEALED VARIABLES UPSETTING STOCK PRICES IN NEPAL.</b> Dipendra Karki	739-50	10.5958/2249-7137.2020.00715.6
109.	<b>COMPARATIVE ANALYSIS OF PHRASEOLOGY IN ENGLISH AND UZBEK LANGUAGES</b> Khudaynazarova Uglonoy Allamurodovna	751-54	10.5958/2249-7137.2020.00539.X
110.	<b>LEXICO – STYLISTIC MEANS IN THE FORMATION OF PROVERBS.</b> Eshmuratova Dildor Urolovna	755-62	10.5958/2249-7137.2020.00540.6
111.	<b>WAYS TO ORGANIZE EXTRACURRICULAR ACTIVITIES IN THE FORMATION OF ECOLOGICAL CULTURE IN STUDENTS</b> Malikova A.R, Shomurodova X, Jo`rayeva H	763-66	10.5958/2249-7137.2020.00541.8
112.	<b>PSYCHOLOGICAL FACTORS OF SOCIAL AND PERSONAL IDENTIFICATION IN ADOLESCENTS SELF-CONSCIOUSNESS</b> Murodov Kamoliddin Fakhridinovich	767-71	10.5958/2249-7137.2020.00542.X
113.	<b>METHODS OF ACCLIMATIZATION OF IMPORTED CARP BREEDS IN THE ZARAFSHAN OASIS</b> Norbaev Bakhrom Baxtiyorovich, Tukhtaev Ozod Bariddinovich, Normuminova Mokhichekhra Bahodir Qizi, Adizova Nigora Narzullayvna	772-75	10.5958/2249-7137.2020.00543.1

114.	<b>THE BLENDING OF FACT AND FICTION IN MODERN AMERICAN DOCUMENTARY NOVELS</b>  Khidirova Mukhlisa Alisherqizi	<b>776-79</b>	<b>10.5958/2249-7137.2020.00544.3</b>
115.	<b>IMPROVING THE METHODS OF FORMING AN ECOLOGICAL CULTURE IN YOUNG PEOPLE</b>  Palwanova Gulmira Zholimbetovna	<b>780-86</b>	<b>10.5958/2249-7137.2020.00545.5</b>
116.	<b>TO EVALUATE THE SELF AND ITS RELATIONSHIP AMID FEMALE-HEADED HOUSEHOLDS SUPPORTED BY IMAM KHOMEINI RELIEF COMMITTEE (RA) IN RESPECT TO SOCIAL ANXIETY, ENTREPRENEURSHIP IN THE CITY OF URMIA, WEST AZERBAIJAN, IRAN</b>  Habib valizadeh, saaid lotfollahzadeh, Vali Aghli, Amin Rostamzadeh	<b>787-97</b>	<b>10.5958/2249-7137.2020.00716.8</b>
117.	<b>MEMORIAL COMPLEX OF THE SULTAN UVAYS BOBO – ONE OF CULT HISTORICAL CENTERS IN CENTRAL ASIA</b>  Nematullo Mukhamedov, Nurilla Turambetov	<b>798-03</b>	<b>10.5958/2249-7137.2020.00663.1</b>
118.	<b>MODERN REQUIREMENTS OF THE IMAGE OF THE LEADER</b>  Dekhkanov Narimon Burkhonjonovich	<b>804-09</b>	<b>10.5958/2249-7137.2020.00664.3</b>
119.	<b>FORMATION OF PROFESSIONAL COMPETENCY OF FUTURE TEACHERS-PSYCHOLOGISTS AND SPECIALISTS ON MENTAL DEFECTS AND PHYSICAL HANDICAPS OF THE 12-YEAR SCHOOL UNDER THE CONDITIONS OF INCLUSIVE EDUCATION</b>  Lekerova Gulsim Zhanabergenovna, Isabaeva Ayman Sagintaevna, Arifkhodjayev Gulyam Sayyarovich, Sobirov Akhror	<b>810-14</b>	<b>10.5958/2249-7137.2020.00665.5</b>

120.	<b>THE CORRECTIVE IMPORTANCE OF INCLUSIVE EDUCATION FOR CHILDREN WITH DISABILITIES</b>  Nazargosimov Q, Muzaffarova H.N, Rizayeva Sh.M	815-21	10.5958/2249-7137.2020.00666.7
121.	<b>IMPROVING THE EFFICIENCY OF GAS TURBINE PLANTS WITH COGENERATION BY USING THE HEAT OF THE EXHAUST GASES IN THE BOILERS OF THE HEATING SYSTEM</b>  Samatova Sh.Y, Sherkulov B.G, Temirova L.Z, Mirzaev A.U	822-26	10.5958/2249-7137.2020.00667.9
122.	<b>THE ROLE OF ISLAM IN THE FORMATION OF THE ETHNIC CULTURAL IDENTITY OF THE DUNGAN PEOPLE</b>  Ortikov Yosin Abdulbokiyeich	827-33	10.5958/2249-7137.2020.00668.0
123.	<b>RESEARCH THE TOP AND ASATRICS MATERIALS FOR MEN SHOES</b>  Parpiev Umidjon Melievich, Ismatullaev Nizom Adashaliyevich, Khomidzhonov Frail son of Abrorjon	834-40	10.5958/2249-7137.2020.00669.2
124.	<b>RELATIVE EFFECTIVENESS OF 'GENERAL LINE TEACHERS' AND 'REHBAR-E-TALIM TEACHERS' IN JAMMU AND KASHMIR</b>  Shabir Ahmad Para	841-46	10.5958/2249-7137.2020.00726.0
125.	<b>LINGUODACTICAL FUNDAMENTALS OF SPEECH COMPETENCE DEVELOPMENT</b>  Kurbanova Oysha Beknazarovna	847-51	10.5958/2249-7137.2020.00670.9
126.	<b>SUBSTANTIAL NATURE OF FUNCTIONAL WORDS AND THEIR PRAGMATIC-STYLISTIC VALUE</b>  Pardaev Azamat Bakhronovich, Usmonov Aslam Qarshiboyevich	852-57	10.5958/2249-7137.2020.00671.0

127.	<b>DEVELOPMENT OF KESH CITY IN THE EARLY MIDDLE AGES</b> Parmanov Shokir Eshboyevich, Yusupova Nodira Bahodir qizi	858-64	10.5958/2249-7137.2020.00672.2
128.	<b>CORRELATION OF ALIENATION AND CONSUMERISM</b> Abdurakhmonov Zaribjon	865-68	10.5958/2249-7137.2020.00673.4
129.	<b>SPECIAL SET OF PROBLEMS ON SOLUTIONS OF LINEAR EQUATIONS IN PRIME NUMBERS</b> B. Abraev, S.Nishonov, I.Tilavov	869-80	10.5958/2249-7137.2020.00674.6
130.	<b>THE ROLE OF CLOUD TECHNOLOGIES IN LIFE</b> Kurbanov Zafar Mamanazarovich	881-90	10.5958/2249-7137.2020.00675.8
131.	<b>THE STATUS OF THE STATE LANGUAGE IN THE CONSTITUTIONS OF AFGHANISTAN</b> Alimova Kholida Zikrillaevna	891-97	10.5958/2249-7137.2020.00676.X
132.	<b>JOB CHALLENGE AFFECTING PERCEIVED ORGANIZATION SUPPORT</b> S. Kumares, Jayasree Krishnan	898-05	10.5958/2249-7137.2020.00727.2
133.	<b>SHARP (SPAND) BARG SANO - SASSIA ASUTIFOLIA DEL. THE IMPORTANCE OF PLANTS AND AGRO-TECHNOLOGY OF GROWTH</b> Z.T. Bustonov, M.Y. Jurayev, O.Z., O. Z. Muminova	906-10	10.5958/2249-7137.2020.00546.7
134.	<b>THE SEMANTIC CLASSIFICATION OF PHRASES IN "BABURNAME" AND PROBLEMS OF THEIR TRANSFER IN TURKISH TRANSLATIONS</b> Dilafruz Mukhammadiyeva	911-17	10.5958/2249-7137.2020.00547.9
135.	<b>ASSESSMENT OF THE STABILITY OF QUARRY BOARDS USING THE "USTOI" PROGRAM</b> Makhmudov Dilmurod Rahmatjonovich, Kodirov Vohid Rakhimovich	918-25	10.5958/2249-7137.2020.00548.0



136.	<b>TO STUDY THE LEVEL OF FORMATION OF CONCEPTS ABOUT FAMILY AND FAMILY LIFE IN STUDENTS</b> Suletbaeva Ella Serikbaevna	926-29	10.5958/2249-7137.2020.00549.2
137.	<b>RESTORATION AND REPRODUCTION OF USEFUL BRUCELLOSIS STRAINS COLLECTION FOR INDUSTRY AND PRODUCTION</b> Ruzimurodov M.A	930-39	10.5958/2249-7137.2020.00550.9
138.	<b>PATHOLOGICAL CHANGES IN MIXED BACTERIAL INFECTIONS OF BIRDS</b> Butaeva I.M	940-45	10.5958/2249-7137.2020.00551.0
139.	<b>REFLECTION OF PHRASEOLOGICAL UNITS IN TRANSLATION</b> Azamova Gulnoza	946-49	10.5958/2249-7137.2020.00552.2
140.	<b>CONSIDERATIONS FOR MAKING SUCCESSFUL MERGERS AND ACQUISITIONS (M&amp;A) PROPOSALS: A STUDY</b> Thejo Jose	950-63	10.5958/2249-7137.2020.00719.3
141.	<b>REGIONAL ASPECTS OF ATTRACTING FOREIGN INVESTMENTS</b> Kenjaev Ikrom Ergashboevich	964-83	10.5958/2249-7137.2020.00707.7
142.	<b>POLITICAL CULTURE AND PROSPECTS FOR THE DEVELOPMENT OF POLITICAL INSTITUTIONS IN KARAKALPAKSTAN</b> A. Kojageldiev	984-91	10.5958/2249-7137.2020.00677.1
143.	<b>NATURAL TOURISM RESOURCES AND OPPORTUNITIES FOR THEIR USE IN SURKHANDARYA REGION</b> Ziyadulla Turayev Norsoatovich	992-97	10.5958/2249-7137.2020.00678.3
144.	<b>WORTHY CONTRIBUTION OF THE INHABITANTS OF SURKHANDARYA REGION TO THE GREAT VICTORY IN THE SECOND WORLD WAR</b> Toshov Kamoliddin Tojinorovich	998-1003	10.5958/2249-7137.2020.00679.5

145.	<b>RAMAN SPECTRA OF CADMIUM SELENIDE FILMS</b> Khojiev Sh.T, Rotshtein V.M, Ashurov P. X, Gaibnazarov B.B	1004-08	10.5958/2249-7137.2020.00681.3
146.	<b>ELEMENTARY SCHOOL PUPILS BY MEANS OF PHYSICAL CULTURE OF NATIONAL AND UNIVERSAL VALUES, WAYS OF INTIMIDATION</b> Atamuradov Shodiyor Uralovich	1009-12	10.5958/2249-7137.2020.00682.5
147.	<b>CALCULATION OF THE CHANGE IN THE PARAMETERS OF THE CONDITION OF CONDITIONED AIR IN TWO-STAGE EVAPORATIVE COOLING SYSTEMS OF AIR</b> Toshmamatov Bobir Mansurovich, Khuseinov Aslam Aktam ugli, Temirova Lobar Zokir kizi, Safarova Setora Ulugbek kizi, Rakhmatov Anvar Rakhmat ugli	1013-19	10.5958/2249-7137.2020.00683.7
148.	<b>TO MEASURE SWELLING ADAPTIVE ABILITY FOR CLIMATE CHANGE: A STUDY IN SRI LANKA</b> U.S. Thathsarani, L. H. P.Gunarathne	1020-29	10.5958/2249-7137.2020.00717.X
149.	<b>PRODUCTION OF VINYL ACETATE FROM ACETYLENE</b> Omanov Bekhruzjon Shuhrat ugli, Fayzullaev Normurot Ibodullayevich, Ernazarov Komil Anorboevich, Khatamova Muhabbat Sattorovna	1030-37	10.5958/2249-7137.2020.00754.5
150.	<b>ON THE PRODUCTIVITY OF THE INTERVAL LINEAR ECONOMIC MODEL OF THE INTER-INDUSTRY BALANCE</b> Ibragimov Alimzhan Artikbayevich, Hamroeva Dilafruz Namozovna	1038-43	10.5958/2249-7137.2020.00755.7

151.	<b>THE PLACE OF SYMBOLIC AND VIRTUAL IMAGES IN UZBEK STORIES OF THE INDEPENDENCE PERIOD</b> Farhod Nizamov, Orzigul Fayzulloyeva	1044-48	10.5958/2249-7137.2020.00756.9
152.	<b>QUANTUM-CHEMICAL CALCULATION OF REACTIONARY ABILITY OF LIGAND THIO-SEMICARBAZONE DIMETILAMINOBENZALDEGIDE</b> Kadirova Sh.A, Holov H.M	1049-55	10.5958/2249-7137.2020.00757.0
153.	<b>ACTION OF REACTIONS OF N - DIALKYLAMINO (BUTIN-2)-OL-1 PRODUCT</b> Sobirov Bakhodir Boypulatovich, Xamrayev Kamoliddin Shakhobiddinovich, Botirova Sabogul Rakhmatullayevna	1056-60	10.5958/2249-7137.2020.00758.2
154.	<b>REMOVED DUE TO TECHNICAL REASONS</b>		
155.	<b>BASIC REQUIREMENTS AND OPERATING MODES FOR POWER TRANSFORMERS</b> Mirzaliyev Boburbek Baxtiyorovich	1078-84	10.5958/2249-7137.2020.00553.4
156.	<b>BACK PAIN: EVIDENCE-BASED MEDICINE AND CLINICAL PRACTICE</b> Khalimova Dilrabo Jalilovna	1085-88	10.5958/2249-7137.2020.00554.6
157.	<b>SYNTHESIS OF ESSENTIAL OILS BASED ON LOCAL RAW MATERIALS</b> Mutalipova Diloromxon Baxtiyorjon qizi, Ochilova Mahbuba Kamol qizi, Baxranova Dilnoza Axmedovna	1089-93	10.5958/2249-7137.2020.00555.8
158.	<b>METHODS OF USING INFORMATION TECHNOLOGIES IN THE FORMATION OF STUDENTS ' KNOWLEDGE AND SKILLS</b> Raymova Marfuga Umirzakovna	1094-98	10.5958/2249-7137.2020.00556.X
159.	<b>APPLICATION OF BIONIC OR PLASTIC ARCHITECTURAL STYLES IN ARCHITECTURE OF UZBEKISTAN AND OTHER COUNTRIES</b> Sharipova Yulduzxon Olimqizi	1099-03	10.5958/2249-7137.2020.00557.1

160.	<b>THE HISTOLOGICAL STRUCTURE OF SKIN OF KARAKALPAK SURA SHEEP</b> Turganbaev P .U, Toreshova A.U, Astankulov A.F, Bekbaev X . A	1104-08	10.5958/2249-7137.2020.00558.3
161.	<b>ECONOMIC COMPETENCE IN THE MANAGEMENT OF VOCATIONAL EDUCATION INSTITUTIONS AND EFFICIENT USE OF FINANCIAL RESOURCES</b> Ilkhomov Bakhodir	1109-16	10.5958/2249-7137.2020.00559.5
162.	<b>TO STUDY SCHOLARS AND UNDERGRADUATES PERSPECTIVE REGARDING LEVEL OF ENTREPRENEURIAL INTENTION OF THE MANAGEMENT UNDERGRADUATES IN THE UNIVERSITY OF JAFFNA, SRI LANKA</b> Sivapalan Achchuthan, Balasundaram Nimalathan	1117-32	10.5958/2249-7137.2020.00718.1
163.	<b>NIOBIUM CLUSTERS: MECHANISM OF COMBINATORIAL SYNTHESIS OF SPRAYED METAL CLUSTER Nb<sub>n</sub>O<sub>m</sub>-</b> Khojiev Sh. T, Tashmu khamedova D.A, Gaibnazarov B.B, Kosimov I.O, Murodkobilov D.M	1133-37	10.5958/2249-7137.2020.00684.9
164.	<b>ISHCHANTEPA - A LARGE SETTLEMENT OF CENTRAL SOGHD</b> Sandiboev Alisher Nazarbekovich	1138-41	10.5958/2249-7137.2020.00685.0
165.	<b>ELECTIONS ARE AN IMPORTANT MECHANISM FOR FORMING A PROFESSIONAL POLITICAL ELITE</b> Ortiqova Nargiza Akramovna	1142-47	10.5958/2249-7137.2020.00686.2
166.	<b>JARGAN IN UZBEK LANGUAGE AND ITS STUDY</b> Rahimova Zebiniso Shomansurkizi	1148-52	10.5958/2249-7137.2020.00687.4

167.	<b>CLASSIFICATION OF VERBS EXPRESSING THE MENTAL STATE OF A PERSON IN THE COMPOSITIONS OF ODIL YAKUBOV</b> Ergasheva Dilrabo Allanazarovna	1153-59	10.5958/2249-7137.2020.00688.6
168.	<b>THE RELEVANCE OF THE ASSESSMENT OF MANAGEMENT COMPETENCIES OF EXECUTIVES</b> Qaxxorov Avaz Jamolovich, Ergashev Jahongir Jamoliddin o'g'li	1160-68	10.5958/2249-7137.2020.00689.8
169.	<b>EDUCATION SYSTEM OF IRAN: HISTORY, DEVELOPMENT STAGE AND FEATURES</b> Dilshoda Sunnatillaevna Khodjimuratova	1169-77	10.5958/2249-7137.2020.00690.4
170.	<b>VIRTUAL EDUCATION THROUGH SWAYAM: AN ANALYSIS OF STAKEHOLDERS 'PERSPECTIVES IN WEST BENGAL.</b> Mr. Kartik Mondal	1178-90	10.5958/2249-7137.2020.00760.0
171.	<b>PEDAGOGICAL ATTITUDE AND ITS ROLE IN THE FORMATION AND DEVELOPMENT OF PROFESSIONAL CONSCIOUSNESS OF THE FUTURE TEACHER</b> Xolmurodova Zuxra Nishonovna	1191-95	10.5958/2249-7137.2020.00560.1
172.	<b>A LOOK AT THE CREATIVE HERITAGE OF MIRSODIQ TADJIEV</b> Otegenov Ayapbergen Allambergenovich	1196-1199	10.5958/2249-7137.2020.00561.3
173.	<b>TYOLOGICAL FEATURES AND IMAGE SYSTEMS OF ELSA TRIOLETT'S NOVELS</b> Ayrapetyan Irina Grigorevna, Raufov Miraziz Mustafakulovich, Sheralieva Aziza Utkurovna	1200-10	10.5958/2249-7137.2020.00562.5
174.	<b>REQUIREMENTS TO THE ENVIRONMENT FOR TRAINING FUTURE TEACHERS OF COMPUTER SCIENCE IN THE CONTEXT OF INFORMATIZATION OF EDUCATION</b> Kalekeeva Tamara Turkmenbaevna	1211-15	10.5958/2249-7137.2020.00563.7

175.	<b>FEATURES OF PUBLIC-PRIVATE PARTNERSHIP IN E-GOVERNMENT</b> Kubaev Ulugbek	1216-23	10.5958/2249-7137.2020.00564.9
176.	<b>PROVISION SYSTEM OF PRIMARY SCHOOL PUPILS 'LEARNING ACTIVITY</b> Bobomurodov Ikrom Davlatovich	1224-29	10.5958/2249-7137.2020.00565.0
177.	<b>THE EFFECT OF WINTER WHEAT APPLIED COMPOST AND MUNG BEAN AS A SECOND CROP ON SOIL PRODUCTIVITY</b> Iminov Abduvali Abdumannobovich, Mirzaev Shoxrux Fayzullaevich	1230-35	10.5958/2249-7137.2020.00567.4
178.	<b>FEDERALISM IN INDIA: ASYMMETRIC IN NATURE</b> Javid Ahmad Bagth	1236-45	10.5958/2249-7137.2020.00761.2
179.	<b>NON-MADHHABISM AND ITS POSSIBLE CONSEQUENCES</b> Nigora Khakimova	1246-52	10.5958/2249-7137.2020.00691.6
180.	<b>EFFECTIVE METHODS AND RECOMMENDATIONS FOR TEACHING FOREIGN LANGUAGES IN HIGHER EDUCATION (IN THE CONTEXT OF UZBEKISTAN)</b> Ikromova Muazzam Dilmurod kizi	1253-59	10.5958/2249-7137.2020.00692.8
181.	<b>LITERATURE – THE FOUNDATION OF STRONG FRIENDSHIP</b> Saodat Kamilova, Sodirjon Yakubov	1260-64	10.5958/2249-7137.2020.00708.9
182.	<b>USE OF LOCAL SORBENTS AS A REAGENT FOR SOFTENING DRINKING, BOILER WATER AND INDUSTRIAL WASTE WATER</b> Umirova Nilufar Ravilevna, Rahmatillayev Shahzod Fahriddinovich	1265-76	10.5958/2249-7137.2020.00693.X



183.	INTERPRETATION AND DESCRIPTION OF THE CONCEPT OF HISTORIOGRAPHY IN SCIENTIFIC RESEARCH  Alisher Doniyorov	1277-82	10.5958/2249-7137.2020.00694.1
184.	CULTURAL LIFE AND ITS CHARACTERISTICS IN THE EPHTHALIS PERIOD  Buvakov Nosirbek	1283-89	10.5958/2249-7137.2020.00695.3
185.	SOCIAL SOLIDARITY: THE HISTORY OF THE DEVELOPMENT OF SOCIOLOGICAL THOUGHTS IN CENTRAL ASIA AND UZBEKISTAN.  Rakhmatullayev Alimjon Riskulovich	1290-95	10.5958/2249-7137.2020.00696.5
186.	AN ARTICLE ON RELEVANT TECHNOLOGY EDUCATION CURRICULUM FOR MANPOWER DEVELOPMENT TO USE IN SUSTAINABLE POVERTY ALLEVIATION.  S. T. Puyate	1296-01	10.5958/2249-7137.2020.00720.X
187.	SOME FEATURES OF ARCHITECTURE AND CONSTRUCTION IN THE CONDITIONS OF UZBEKISTAN  Rahmonova G.A, Goncharova N.I	1302-05	10.5958/2249-7137.2020.00767.3
188.	VALUE OF GEODETIC WORKS IN CONSTRUCTION OF HYDROTECHNICAL STRUCTURES  Abdukadirova M. A, Mirzakarimova G. M	1306-11	10.5958/2249-7137.2020.00766.1
189.	DETERMINATION OF THE CHIMNEY ROLL  Habibullaev Elyorbek, Kosimov Lazizbek, Kosimov Makhmud	1312-17	10.5958/2249-7137.2020.00765.X
190.	TOURISM – THE FUTURE OF ECONOMY  Rahmonova G.A, Goncharova N.I, Rahmonov D.M	1318-23	10.5958/2249-7137.2020.00768.5
191.	CATEGORY OF IRONY IN HISTORICAL AND FUNCTIONAL LIGHTING  Kadyrova Nigora Abdurashidovna	1324-30	10.5958/2249-7137.2020.00769.7

192.	<b>WAYS TO INCREASE THE CREATIVITY OF PUPILS IN PRIMARY EDUCATION</b> Ziyaqulova M. Sh, Hayitova F. A	1331-34	10.5958/2249-7137.2020.00770.3
193.	<b>MECHANIZED SEED OF RICE ON WATERFILLED RICE CHECKS</b> Shodmonov Kh. M, Davronov K.A	1335-39	10.5958/2249-7137.2020.00771.5
194.	<b>AMYGDALA - IN PURSUIT OF FEAR OR CHEER?????</b> Ramya R Prabhu	1340-42	10.5958/2249-7137.2020.00762.4
195.	<b>RESEARCH OF THE AIR-WATER-VAPOR COOLING PROCESS IN AIR COOLING DEVICES</b> B.A. Absadikov	1343-49	10.5958/2249-7137.2020.00569.8
196.	<b>A LIBRARY CULTURE IN THE WORLD</b> Muminova Dilafro'z Akbaralievna	1350-53	10.5958/2249-7137.2020.00570.4
197.	<b>FACTORS INCREASING WOMEN'S SOCIAL AND POLITICAL ACTIVITY</b> D. Ruzieva, S. Khamroyeva, F. Shirinova	1354-57	10.5958/2249-7137.2020.00571.6
198.	<b>BARBARISMS OF ENGLISH ORIGIN IN RUSSIAN LITERATURE</b> Alibaeva Lola Namazovna, Urinova Nasiba	1358-61	10.5958/2249-7137.2020.00572.8
199.	<b>INTRODUCTION OF MODERN INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE FIELD OF NORMATIVE ACTIVITY AND ACTIVITIES OF JUSTICE BODIES</b> Khujanazarov Azizjon Anvarovich	1362-73	10.5958/2249-7137.2020.00573.X
200.	<b>KEY FACTORS - LEADING TO DEPRECIATION OF THE NATURAL SOIL CONDITION: CAUSES AND CONSEQUENCES</b> Yuldashov Murod Khudargonovich, Yakhshiboeva Damira Tolib qizi, Bakhodirova Shakhlo Burkhonovna	1374-77	10.5958/2249-7137.2020.00574.1

201.	APPLICATION OF THE COMMUNICATIVE APPROACH TO THEORETICAL KNOWLEDGE APPLIED IN PRACTICE  S.S. Tajbenova	1378-83	10.5958/2249-7137.2020.00575.3
202.	TO STUDY YOUTH PERCEPTION REGARDING IMPACT ON ECONOMIC GROWTH IN VIEW OF DECLINE IN CRUDE OIL PRICE IN OMAN  Bakhtawar Durrani, Dr. Lenin Kumar Nooney	1384-99	10.5958/2249-7137.2020.00721.1
203.	THE PRACTICAL STATE OF THE FORMATION OF SOCIAL CONSCIOUSNESS IN PRESCHOOL ADULT CHILDREN  Khujamatova Khusnidakxon Mansurovna, Khaydarova Charoskxon Jaxongir qizi, Mamatkulova Marhabohon Nuriddin qizi, Ahmedov Ikboljon I lhomovich	1400-04	10.5958/2249-7137.2020.00776.4
204.	TECHNOLOGY MANAGEMENT ACTIVITIES OF SECONDARY SCHOOLS  Husanov Ahmadjon Juayevich, Yuldoshev Odiljon Toshpulatovich	1405-09	10.5958/2249-7137.2020.00777.6
205.	CONTENT OF THE CONCEPT OF CITIZEN POLITICAL ACTIVITY  Yusupov Ahrorjon Kurbanovich	1410-13	10.5958/2249-7137.2020.00778.8
206.	SOURCE STUDIES OF THE FOOD PROBLEM IN THE FERGANA VALLEY (1917-1924)  Bakhriddinov Kakhramon Nabiyeovich, Yakubov Kamoliddin Najmiddinovich, Akhmedov Rakhmonjon Rasulovich	1414-17	10.5958/2249-7137.2020.00785.5
207.	COMPUTER GRAPHICS AS A TOOL FOR THE DEVELOPMENT OF STUDENTS' CREATIVE AND INTELLECTUAL ABILITIES IN CLASSES ON THE BASICS OF INFORMATION TECHNOLOGY  Sayyora Abdulhakovna Zakirova	1418-22	10.5958/2249-7137.2020.00779.X

208.	USING THE EDUCATIONAL ELECTRONIC RESOURCE PHET IN THE TEACHING OF PHYSICS  Karimova Sanobar Tuyboevna	1423-25	10.5958/2249-7137.2020.00780.6
209.	FROM THE HISTORY OF AGRICULTURAL SCIENCES OF CENTRAL ASIA  Mamatkulova Iroda Ergashevna	1426-31	10.5958/2249-7137.2020.00781.8
210.	SEXUAL BEHAVIOR OF LEFT BEHIND WIFE AND POTENTIAL MIGRANT IN INDIA  Dr Anjum Shaheen, Dr Sunil Mehra, Vandana Nair, Rajesh Ranjan Singh, Dr. Suchismita Roy	1432-40	10.5958/2249-7137.2020.00763.6
211.	EFFICIENCY OF COMPUTER TECHNOLOGY IN TEACHING FOREIGN LANGUAGES  Makhmudova Malokhat Akhmatovna, Nasirova Shaira Narmuradovna, Abdullaeva Dildora Anvarovna	1441-48	10.5958/2249-7137.2020.00697.7
212.	ON THE INTERPRETATION OF NAVOI'S IMAGE AND THE STUDY OF IT  Gulbahor Ashurova	1449-53	10.5958/2249-7137.2020.00698.9
213.	THE DEVELOPMENT OF THE IDEA OF THE FORMATION OF COGNITIVE ABILITIES IN PEDAGOGICAL SCIENCE  Isahanova Mohidil Erkinovna, Nurmatova Madina Odiljon Daughter	1454-61	10.5958/2249-7137.2020.00699.0
214.	PHRASEOLOGISM FORMED ON THE BASIS OF METAFORA IN THE NOVEL "THEOREM"  Sulaymonov Bobur Nodir ogli	1462-66	10.5958/2249-7137.2020.00700.4
215.	LABORATORY OF CREATIVITY AND ARTISTIC PRACTICE IN LITERATURE  Karimova Nafisa Bakhadirovna	1467-73	10.5958/2249-7137.2020.00701.6

216.	<b>ARTISTIC PICTURE OF THE WORLD IN THE WORKS OF TIMUR PULATOV</b> Abdumuminova Makhliyo Akmyrza kizi, Zulfiya Pardayeva	1474-79	10.5958/2249-7137.2020.00702.8
217.	<b>CLINICAL MORPHOLOGICAL FEATURES OF THE ALGORITHM FOR THE ANALYSIS OF SPINE PROTRUSION AND HERNIA</b> Maxkamov H.J, Isroilov R.I	1480-84	10.5958/2249-7137.2020.00709.0
218.	<b>A REVIEW OF THE ROLE OF CULTURE IN ACCEPTING ENTREPRENEURIAL ORIENTATION &amp; BUSINESS PERFORMANCE</b> Dr. Jagadish Brahma Goulap, Dr. Mohammed Seid	1485-98	10.5958/2249-7137.2020.00722.3
219.	<b>LINGUOCULTURAL ASPECT OF INTERRELATION OF LANGUAGE AND CULTURE</b> Shuhratova Muhlisaxon Shuhratjonqizi, Mamatqulova Marhabo Nuriddinqizi, Khaydarova Charoskhon Jakhongirqizi	1499-1501	10.5958/2249-7137.2020.00728.4
220.	<b>THE IMPORTANCE OF ONLINE LESSONS IN THE PANDEMY PERIOD</b> Fayzullayeva Laylo Fakhriiddinqizi, Archaboyeva Nargiza Nasimovna	1502-06	10.5958/2249-7137.2020.00729.6
221.	<b>FORMATION AND ACTIVITY OF JOINT-STOCK COMMERCIAL BANKS IN THE TURKESTAN REGION (LATE XIX - EARLY XX CENTURIES)</b> Nasirov Otabek Nazirjanovich	1507-16	10.5958/2249-7137.2020.00730.2
222.	<b>PROBLEMS OF ENSURING PROFESSIONAL MEMBERSHIP IN THE CONTINUOUS EDUCATION SYSTEM (BASED ON EDUCATION CLUSTER)</b> Koshanova Nilufar Maxsudovna, Zulhumor Kuchkarova Rakhmonberganovna	1517-23	10.5958/2249-7137.2020.00731.4

223.	<b>THE EVOLUTION OF THE SYSTEM OF SPIRITUAL PROPAGANDA</b> Rustamov R.R, Hamdamova Lola	1524-28	10.5958/2249-7137.2020.00732.6
224.	<b>COMMUNICATIVE APPROACH IN WRITING</b> Noila F. Ochilova	1529-35	10.5958/2249-7137.2020.00733.8
225.	<b>ANALYSIS OF THE BIOTECHNOLOGICAL COTTON PLANT POPULATION FOR GENOMES FREE OF NPT II GENE</b> A. S. Imamkhodjaeva, Sh. B. Kadirova, M. B. Ganikhanova, J. A. Muhammadov, Sh. I. Mamanazarov	1536-42	10.5958/2249-7137.2020.00734.X
226.	<b>DIVIDEND ANNOUNCEMENT AND SHARE PRICE BEHAVIOUR: A STUDY OF SELECTED INDIAN COMPANIES</b> Dhananjay Narzary, Dr. K.C Biswal	1543-60	10.5958/2249-7137.2020.00764.8
227.	<b>HISTORICISM IN THE POETRY OF ERKIN VOKHIDOV</b> Yuldasheva Zarnigor Hasanboy qizi, Qurbonova Mohidil Ulug'bek qizi	1561-65	10.5958/2249-7137.2020.00772.7
228.	<b>SOME ISSUES OF RE-UTILIZATION OF CASING STRINGS, UNUSED WATER INTAKE WELLS (FOR EXAMPLE, SOME COUNTRIES IN THE SOUTH-WESTERN SAHEL)</b> Qayumov Odiljon Abduraufovich, Manopov Xasan Valiyevich, Habibullaev Elyorbek Dilshodbeko'g'li	1566-72	10.5958/2249-7137.2020.00773.9
229.	<b>RESEARCH OF TRAFFIC SAFETY CONDITIONS ON THE ROADS OF THE FERGHANA VALLEY</b> O'roqov A. X, Tashev D. V	1573-79	10.5958/2249-7137.2020.00774.0



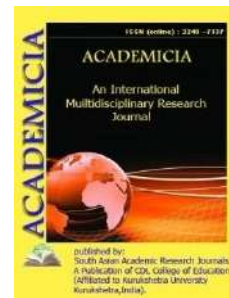
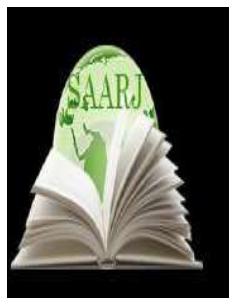
230.	<b>PRINCIPLES OF FORMING A GARDEN-PARK LANDSCAPE DESIGN AROUND HISTORICAL MONUMENTS OF THE FERGANA VALLEY</b>  Kosimova SH. F, Kosimov L. M.	1580-87	10.5958/2249-7137.2020.00775.2
231.	<b>ORGANIZATIONAL INTELLECT IN ACQUAINTANCE BASED PHARMACEUTICAL COMPANIES IN IRAN</b>  Mohammad Mahboudi, Arzu Fasahati	1588-99	10.5958/2249-7137.2020.00723.5
232.	<b>EVALUATION OF THE WEAR OF THE TIRE WHEEL PAIR AT ROLLING FRICTION</b>  Fayzibaev Sh. S, Avdeeva A.N, Mamaev Sh. I	1600-04	10.5958/2249-7137.2020.00782.X
233.	<b>THE ROLE OF SCIENCE IN SHAPING THE WORLDVIEW</b>  Nishanova Farida Mamasharifovna	1605-10	10.5958/2249-7137.2020.00783.1
234.	<b>PHOTOGALVANIC CHARACTERISTICS OF THE ELEMENTS OF THE SUN AND THE NONIDEALISTIC COEFFICIENT OF THE PHOTOVAC</b>  Alinazarova Makhfuza Alisherovna	1611-17	10.5958/2249-7137.2020.00784.3
235.	<b>FEATURES OF THE INTERACTION OF POLYVINYL CHLORIDE WITH AMMONIA UNDER HETEROGENEOUS CONDITIONS</b>  Nargiza Yusupova, Dिल्фуза Gafurova, Mukhtarjan Mukhamediev	1618-25	10.5958/2249-7137.2020.00703.X
236.	<b>DIDACTIC REQUIREMENTS FOR FUTURE ECONOMISTS TO DEVELOP EDUCATIONAL CONTENT IN THE ELECTRONIC INFORMATION ENVIRONMENT</b>  Rustamov Jamshid Ergashevich	1626-30	10.5958/2249-7137.2020.00751.X

237.	<b>“CLEANUPS” OF THE SOVIET GOVERNMENT IN GOVERNMENT OFFICES (ON THE EXAMPLE OF GOVERNMENT AGENCIES IN THE FERGANA VALLEY)</b> Qambarova Shoirahon Askarovna	1631-36	10.5958/2249-7137.2020.00752.1
238.	<b>CHARACTERISTICS OF USING THE MORTGAGE METHOD IN PROVIDING OBLIGATIONS</b> Akaeva Marapat Abduxalikovna	1637-40	10.5958/2249-7137.2020.00753.3
239.	<b>A VIEW OF MYTHS AND POLITICS RELATED TO KOHOMBĀ KANKĀRIYA: SOME INVENTIVE DIMENSION OF HISTORY</b> K. R. Priyantha Tilakasiri	1641-55	10.5958/2249-7137.2020.00724.7
240.	<b>ANALYSIS OF THE BIOTECHNOLOGICAL COTTON PLANT POPULATION FOR GENOMES FREE OF NPT II GENE</b> A. S. Imamkhodjaeva, Sh. B. Kadirova, M. B. Ganikhanova, J. A. Muhammadov, Sh. I. Mamanazarov	1656-62	10.5958/2249-7137.2020.00734.X
241.	<b>TEACHING STUDENTS TO THINK CREATIVELY THROUGH INDEPENDENT EDUCATION IN HIGHER EDUCATION IS A PRESSING ISSUE</b> Sohiba Mirkhayitova, Abdullayeva Dilorom, Khoshimova Diloromxon	1663-68	10.5958/2249-7137.2020.00735.1
242.	<b>FUTURE APPLICATIONS OF FUTURE EDUCATIONAL TECHNOLOGIES IN TEACHING THE SCIENCE OF INFORMATICS AND INFORMATION TECHNOLOGIES</b> Madumarova Mamlakatxon Khasanboyevna	1669-75	10.5958/2249-7137.2020.00736.3
243.	<b>MECHANIC AND MIKRO-AGGREGATE STRUCTURE OF TYPICAL FOOTWEAR GROUND OF NUROTA REGION</b> Kungirov X.N, Normammedova M.X	1676-78	10.5958/2249-7137.2020.00737.5

244.	<b>APPLICATION OF XML TECHNOLOGY FOR DATA DESIGN</b> Khodjaeva Mavluda Sabirovna	1679-87	10.5958/2249-7137.2020.00738.7
245.	<b>WATER SYSTEM IN UZBEKISTAN: PROBLEMS AND SOLUTIONS</b> Shomurotov Sharofiddin Shukurjon ogli	1688-92	10.5958/2249-7137.2020.00739.9
246.	<b>THE ROLE OF "NEED" AND "INTEREST" IN THE THEORY OF JOHN LOCKE LIBERAL</b> Elmurotov Jamshid Shodiyorovich	1693-99	10.5958/2249-7137.2020.00740.5
247.	<b>DEVELOPMENT TRENDS IN THE BUILDING COMPLEX IN UZBEKISTAN</b> Toshkuzieva Zulfiya Eraliyevna	1700-03	10.5958/2249-7137.2020.00786.7
248.	<b>FURAN-PHENOLIC OLIGOMERS</b> Absarova Dilrabo, Kasimova Xafiza, Nazokat Mirzahujayeva	1704-10	10.5958/2249-7137.2020.00787.9
249.	<b>CLASSIFICATION OF TOURISM BY PURPOSE OF CARTOGRAPHY</b> Gulmurodov Farrukh Eshmurodovich, Pulatov Asliddin Sayfullaevich	1711-18	10.5958/2249-7137.2020.00741.7
250.	<b>A NEW LAW OF LOGICAL THINKING</b> Gayrat Omar	1719-28	10.5958/2249-7137.2020.00742.9
251.	<b>LINGUISTIC FEATURES OF TERMS RELATED TO THE CULTURE OF INTERETHNIC COMMUNICATION IN THE FIELD OF TOURISM ON THE EXAMPLE OF UZBEK AND ENGLISH LANGUAGES</b> Umarova Zebo Xafizovna	1729-34	10.5958/2249-7137.2020.00743.0
252.	<b>RELIGIOSITY AND SECULARISM: INTERPRETATIONS AND CATEGORY ANALYSIS</b> Davron Kamilov	1735-42	10.5958/2249-7137.2020.00744.2

253.	KNOWLEDGE, PRACTICE AND SCIENTIST Namozov Bobir Bakhriyevich	1743-54	10.5958/2249-7137.2020.00745.4
254.	THE ROLE OF THE "COLLECTION OF ORIENTAL MANUSCRIPTS" IN THE STUDY OF THE HISTORY OF UZBEKISTAN IN THE IX-XII CENTURIES Mustafaeva Nodira Abdullayevna	1755-58	10.5958/2249-7137.2020.00746.6
255.	SPEECH DEFECTS IN YOUNG CHILDREN AND WAYS TO OVERCOME THEM G. Teshaboyeva	1759-65	10.5958/2249-7137.2020.00747.8
256.	FACTORS INFLUENCING LANGUAGE LEARNING IN PRESCHOOL CHILDREN IN COGNITIVE DEVELOPMENT Iminova Xumora Mukhammadisa kizi	1766-69	10.5958/2249-7137.2020.00788.0
257.	USE OF PROGRAMMING LANGUAGES IN APPROXIMATE CALCULATION OF EXACT INTEGRALS IN PROBLEMS OF TECHNICAL SPECIALISTS Ravshanov Anvar Asatilloevich, Tursunov Mirolim Ahmadovich	1770-75	10.5958/2249-7137.2020.00748.X
258.	PROGRAMS USED TO CREATE THE LANGUAGE CORPUS AND THEIR PRINCIPLES Abdullayeva Oqila Xolmo'minovna	1776-81	10.5958/2249-7137.2020.00749.1
259.	ASSESSMENT OF FACTORS INFLUENCING THE QUALITY OF EDUCATION IN HIGHER EDUCATIONAL INSTITUTIONS A.B. Nizamov, Sh.K.Gafurova	1782-94	10.5958/2249-7137.2020.00750.8
260.	TO ENHANCE THE DEVELOPMENT OF STUDENTS' COMMUNICATION SKILLS IN THE PROCESS OF TEACHING A FOREIGN LANGUAGE Rahimova Nigora Nemadjonovna, Rahimova Nasiba Karimovna	1795-00	10.5958/2249-7137.2020.00789.2
261.	WATER AND LAND REFORMS IN KASHKADARYA OASIS: THE CONSEQUENCES AND LESSONS Ergashea Yulduz Alimova, Jabbarova Ikbol Khujamuratovna	1801-05	10.5958/2249-7137.2020.00790.9

262.	<b>THE ROLE OF UZBEK FOLK GAMES IN EDUCATION OF YOUTH</b> Sunnatillaev Asatilla Sunnatovich	1806-09	10.5958/2249-7137.2020.00635.7
263.	<b>THE ORETICAL FRAMEWORK FOR TARJE-BAND AND TARKIB-BAND GENRES IN UZBEK CLASSICAL LITERATURE</b> Kazakbaeva Dilrabo Djalalovna, Muxanbetova Zulfiya Djalalovna	1810-18	10.5958/2249-7137.2020.00595.9
264.	<b>TELEVISION IS THE MOST IMPORTANT INSTITUTION OF CIVIL SOCIETY</b> Yusupalieva Dilafroz Kahramonovna	1819-21	10.5958/2249-7137.2020.00596.0
265.	<b>USE OF LOCAL MATERIALS IN BIOLOGY LESSONS</b> Safarbaev Jumabay, Aymkhan Imamatdinovna Orazbaeva, Aymuratov Miyirbek Kalmurat ugli	1822-26	10.5958/2249-7137.2020.00536.4
266.	<b>NEW APPROACHES IN THE ART OF LITERARY LANGUAGE</b> Rasulova Zulfiya Kholmurotovna, Amankulov Shavkat Kudratovich	1827-31	10.5958/2249-7137.2020.00537.6
267.	<b>FRIEND NUMBERS AND THE CRITERIA FOR DETERMINING THEM</b> Nizamova Nigora Negmatovna	1832-38	10.5958/2249-7137.2020.00538.8
268.	<b>THE GREAT THINKERS OF SOUTHERN ARAL CIVILIZATION</b> Mavluda Kidirbaeva, Rakhmanbergenov Nurpolat, Turdibaev Abbaz	1839-45	10.5958/2249-7137.2020.00568.6



DOI: **10.5958/2249-7137.2020.00566.2**

## COMMON OFFENCES AND SANCTIONS IN THE MANAGEMENT OF DISCIPLINE IN HIGHER EDUCATION IN NIGERIA

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### ABSTRACT

*The study examined the sociological nature of common offences and sanctions in the management of staff and students discipline prevalent in tertiary institutions in Rivers State, Nigeria. The study is a survey research with a population of 9671, and a sample of 250 respondents made up of students were drawn using multi stage sampling approach. The theoretical framework used for the study are functionalist perspective of law and bureaucratic theory. Mean, percentages and t-test and ANOVA were used for the analysis of the research questions and hypotheses of the study. These common offences such as stealing, raping, examination malpractice, academic dishonesty, insubordination, arson, bullying, drug abuse, hazing, cultism, plagiarism and sexual harassment were discovered to be rampant and constitute a bane to the development and attainment of the objectives of higher education in Nigeria as the findings indicated. The common sanctions frequently used at the hands of the management includes detention, suspension, rustication, expulsion and withdrawal which are the commonly set standards within the law to regulate the discipline of students. The major recommendations made were that the principles of rule of law and due process should be implemented in order to develop good organizational culture in the higher educational institutions in Rivers State, Nigeria.*

**KEYWORDS:** *Hazing, Cultism, Arson, Bullying,*



## INTRODUCTION

Every society thrives on rules and regulations guiding its existence. The survival of any individual institution or society depends deeply on the ability of those in it to act in accordance with stated laws, rules, regulations, values, mores and approved behavior guiding the particular society. Failure to abide by the laws or rules of a particular society is seen as an unacceptable behavior and attracts some level of punishment as a deterrent for the enforcement of social control on deviants. The tolerance of deviant behavior in an organization generates indiscipline as an acceptable value. Consequently, every organization institutes rules and regulations which are designed to meet the disciplinary needs, protect the rights of members, privileges, responsibilities, obligations and define the nature of relationships with one another in their operations as regards the legal functions of the various departments in the organization.

The school, according to Oboada (2016), is a bureaucratic organization with high degree of specialization, explicit rules and regulations assigned to each member. These rules were made to guide the behavioral pattern of its members and are directed towards the attainment of its objectives. According to Sadker and Sadker (2005), the purposes of establishing school is to transmit society's knowledge and values, reconstructing society and demand for schools. These, he itemized as the four broad goals of the school, namely: academic, vocational, social and personal.

In all universities in Nigeria, discipline is very crucial in the actualization of the stated objectives, purpose, mission and vision of the society. Discipline enables the institution to train individuals, develop responsible behavior leading to self-disciplined person that have been cultured within the dictates and values of the university and society at large. Discipline encourages and exposes students to the art of self-control, and social disorder in the university. It can only be avoided if restraints are built into the character of students. Consequently, Were (2006) argued that discipline instills social control, social order and thereby reducing the incidence of social chaos. This is due to the fact that, discipline instills in the students the power and value of self-restraints. Discipline in the form of sanctions, exposes students and staff to ways of handling the challenges and delegations of living. It equips them with the personal strength needed to meet the demands imposed on them by the school and society.

The school is a type of service organization regulated by law for the purposes of enforcing social control and with the primary function of educating the students in accordance with the value system of the society. This value is reflected in the National Policy of Education in Nigeria. The policy highlighted the responsibilities of schools at all levels and the strategies to be applied in its implementation. The policy indicated that, the primary functions of universities is the acquisition, development and inculcation of proper value orientation to the students for their survival in the society. It further placed on the shoulder of the management of the universities the responsibilities of helping the students to develop physical, intellectual skills and intellectual capabilities that are geared towards the development of a better value system. This will enable them appreciate and understand their environment. These values will help build the individuals to develop into useful members of the university community and society at large.

These assertions above manifest into functions assigned to the management of the universities and it is indeed a complex one in the face of the dynamics of social change in the society. Consequently, for the efficient functioning of the university system, the school management

must be given powers to control the conduct of students through reasonable rules and regulations. In supporting this view, Daminabo (2004) opined that universities are organizations that are coffered with power or authority by the extent law to make or stipulate its internal rules and regulations to the extent it does not conflict with grand norm or constitution of the Federal Republic of Nigeria. Hence, it becomes deductible that the sole purpose of rules making in the universities is for the maintenance of state of equilibrium and the growth of the university in the attainment of the universal objectives of higher education and invariably become a catalyst for the growth of the society.

In the same vein, Agu (2011) argued that bureaucratic discipline stresses the maximization of actions that are accountable and acceptable through standardization of rules and procedures which carefully excludes all forms of uncountable actions. This implies that, common offences in the management of universities should be properly defined, processed for adjudication and adequately provided in order to achieve justice to the institution, students and society. Consequently, this study will examine the philosophy, nature of common offences, causes, and strategies to curb it through appropriate sanction mechanism.

### **Philosophy of Discipline or Sanctions in the University**

The efficient functioning of the universities devoid of unnecessary acts of deviants or common offences as the key to organizational success is the ability of the system to develop standardized disciplinary procedures that are consistent with the constitution, state laws, substantive and procedural laws. These laws enable the universities to operate unhindered and compel members to fit into their role expectations. In the event of violation of the rules and regulations of the university, the system should develop a mechanism that will automatically be activated by principal officers in charge of such responsibilities as specified in the staff and students hand book or manual.

This philosophy of discipline or sanctions is principally based on the administrative authorities of the universities to utilize management reserved powers to control the conduct of staff and students. This is possible through the reasonable application of rules, regulations and sanctions in a just manner, fair play and compliance to the due process of the law as a deterrence. It will be practically impossible for administrative authorities in the universities to ignore common offences within their environment without applying appropriate sanctions for the stability and sustainability of the institution as a learning environment conducive for teaching, research, entrepreneurship and community service.

It is equally important to note that a university is a micro society and requires law for self-regulation in order to make the life of the members of the university community safe, meaningful and worthwhile. This implies that the absence of law in the university creates disorderliness and injustice. Law under this circumstance provides checks and balances to avoid anarchy in accordance to functionalist perspective of law. In supporting this view, Daminabo (2016) argued that, educational institutions are characterized by distinctive values, culture and are united by common purpose of providing teaching and the pursuit of knowledge and research. Consequently, he pointed out that, the laws of universities outline the legal status, their structures of governance, the rights, privileges of its members and their responsibilities to the institution and society.

The stability of the university environment is vital for the successful execution of its mandates and thus, Ogbonda (2016) argued that, the survival of any institution depends to a great extent on the ability of its members to perform or act within the limits of approved behaviours. It is no longer news that, the Nigerian university environment have become increasingly fearful and insecure for sound academic activities due to the kinds of behaviour exhibited by the recipient of education and staff members. These behaviours are deviant in nature and not consistent with the norms of an ivory community in global sense and negates the expected behavioral patterns of staff and students as set out in the constitution, laws, rules and regulations of the universities in Nigeria. Consequently, common offences or deviant behaviour may be seen as an individual acting indifferent of accepted norms, rules and regulations of the society.

Staff and students' deviant is a prevailing problem affecting most universities in Nigeria but not limited to Nigerian environment alone; since most people made crime and deviance as a career and deviant behaviours in the classroom has disruptive tendencies towards the attainment of organizational objectives with the school as a whole and also interferes with teaching and learning. It is thought to be one of the major precursors to undergraduate dropout syndrome, teachers' stress and similarly; negative social outcome in our society according to Daminabo (2019).

### **Nature of Common Offences in Higher education**

The common offences are seen as acts of indiscipline which negatively affects the effective and efficient operation, administration and management of higher education for higher productivity in the society. These common offences, according to Oboada (2016), Amanchukwu (2013) and Daminabo (2014) that may be described as deviant behaviour among staff and students includes: dishonesty, stealing, disobedience, truancy, sex offences, assault, drug offences, suicide, mass demonstration, cultism, kidnapping, corruption, academic dishonesty, examination malpractice, murder, plagiarism, violation of rights of others, violation of professional standards, false declaration of information, intimidation, harassment, written abuse, hazing, possession of fire arms, unauthorized entry into control or restricted areas, drunkenness, prostitution, traffic offence and gabbling etc.

In the same vein, Amaele (2012) argued that, discipline among staff and students in their school is characterized by obedience, respect and self-control for the preservation of order. Consequently, the pursuit that staff and student discipline manifests itself in such qualities as punctuality to work and other engagement, rejection of gratification and pleasure from clients, simplicity and modesty in speech, appearance and approach to issues, neatness in dressing, sincerity, humour and truthfulness in action, patience as well as self-control. He further argued that, indiscipline is almost becoming institutionalized in institutions of learning and as such this posed some credibility questions on the moral integrity of the university products in Nigeria.

The concept of common offences in its simplest term are what constitute disciplinary problems among staff, students and management of the universities. Common offences, according to Daminabo (2004) are offences described to be deviant behaviours exhibited by staff and students in the form of policy and rule violation; which constitute grave disciplinary problems in the system that require sanctions on the offenders in order to accomplish educational objectives. This simply means that, any act or behavior that violates or is not consistent with the rules and

regulations that exist in the university community and beyond probably may likely be described as deviant behavior.

Common offences could be seen as activities engaged by students and staff which constitute act of indiscipline in the system. These acts may be described as undesirable and so constitute nuisance in the university system. Okay (2008) consequently identified some of these behaviours that constitute common offences as general unrest, demonstration, breach of school rules, drug abuse, hazing, bullying, examination malpractice, absenteeism, truancy, sexual harassment, noise making, stealing, cultism, rape, drunkenness and many others. Ololube (2011) sees it as a violation of social norms. He postulates deviance to be any thought, action or feeling that members of a social group judge to be a contradiction of their values, rules or regulations of their society. These acts are seen to be indifferent to the approved norms and expectation of the university laws which is detrimental to the wellbeing of the educational system. The above situation indeed has shaken the norms and the fabrics of our society due to the existence of the following common offences prevalent among staff and students that may lead to disciplinary problems in the universities according to Daminabo (2014) are as follows: academic dishonesty, withholding or giving false information, verbal or written abuse, threats, intimidation, harassment, violation of professional ethics, violation of rights of others, examination malpractice, plagiarism, stealing, fighting, drug abuse, financial mismanagement, armed robbery, murder, cultism, rape, sexual harassment, illegal possession of firearms, explosive, ammunition, use of fireworks, weapons, dangerous chemicals, obstructing the students and staff judicial process, arson, unauthorized use, possession and destruction of public or private properties.

Furthermore, adding to the volume of knowledge in this area of study Daminabo (2019) identified the following common offences associated with staff and students presently as examination malpractice, stealing, destruction of learning facilities, indecent dressing or appearance, sexual harassment, breach of school rules, cultism, lateness to school, bullying, truancy, drunkenness, cheating, forgery, embezzlement, nepotism, bribery and corruption, sorting for scores, unauthorized duplication of university keys, obstructing staff and students judiciary process, fabrication and falsification of information and misuse of university document and e-crime etc. Common offences or acts of indiscipline in the modern times interfere with the teaching, learning and research in the university and thus it is thought to be a precursor to later school dropout and similar negative social outcomes especially among staff that were dismissed from their job and students rusticated, or suspended or even expelled from the university.

### **Causes of Common Offences and Discipline in the Universities in Nigeria**

Discipline exists in the universities in Nigeria due to the incidents of common offences. The laws of the universities envisaged that it is common for members of the universities to test the competency of its policies, laws, rules and regulations which may not be consistent with the objectives of the institutions. Discipline, according to Agi and Adiele (2009), means compliance to acceptable standard or rules and regulations of a given system. It may also mean punishment. In another view, Ezeoha (1985) in Agi and Adiele (2009) defined it as a systematic training through education or mode of life which meets societal requirements. It therefore could be described as a process and an activity of insisting on socially acceptable standards of behavior which makes one self-controlled and obedient to authority in order to avoid sanctions or for the avoidance of punishment.

The motivating factors responsible for the existence of common offences may be attributed to the fundamental philosophy used in the explanation of the nature of crime and deviance in the society. Accordingly, Ogbondah (2011) highlighted six categories under which common offences may be classified and explained. These are innovation deviance, ritualism, excessive conformity, alienation and anomic.

In contrast, Henslim (1995) in his social control theory stressed that, everyone is propelled toward deviance by temptations, inner drives, hostility, resentment, pressure from peers and so on. It may also be argued that common offences may be attributed to individual status, and phenomenon that exist in the society such as poverty; and physical development of the individual involved in the infractions, conformity to common cultural norms, economic deprivation, drugs abuse, peer group influence, family background or condition, societal factors, unemployment, politics, cultism, social level of morality and value system, poor policing of the campus, security lapses which might result to robbery, burglary, automobile theft, phone and laptop theft, aggravated assault, arson, embezzlement, forgery, false pretenses, and possession of stolen goods, etc. (Daminabo, 2014).

These common offenses constitute a violation of values, norms, standards, rules and regulation of the university to the extent that learning, teaching, research and community service are affected. In this situation, common offences are disruptive and harmful to the university system. It should be discouraged in all its ramifications for the effective and efficient management of the system towards the attainment of organizational objectives.

In the same vein, on the causes of common offences, Okah (2006) opined that students come from different backgrounds and have individual differences; they often engage in certain activities that constitute indiscipline in the school system that results to disciplinary problems. He identified the following as factors responsible for common offences in the educational sector, namely, ineffective teaching, harsh rules and regulation, poor home training, poor school climate, moral laxity and poor physical classroom condition. Ogbondah (2016) argued that, common offences in the school are caused by poverty, social factors, lack of family upbringing, and physical body development etc. It is important for the school and university management to tackle issues of common offences critically in order to work towards the achievement of organizational objectives. This is necessary because of the disruptive effects of common offences in creating poor organizational climates in an organization.

Common offences that led to sanctions in the universities has become a reoccurring decimal that distract and affect the productivity of the university in the attainment of its stated objectives in the National Policy on Education and their laws of establishment. It is a common knowledge and concern that, common offences associated with student's discipline generates disruptive tendencies in the actualization of objectives, purpose, mission and vision, and the efficient functioning of the institution. It is more worrisome that, students and staff in universities are currently being arrested and charged to courts for unknown offenses that were never envisaged by the laws of establishment. These offences such as murder, kidnapping, armed robbery, obtaining with tricks (OBT), yahoo boys, gun running, assassination and militancy are the new generation offenses that are currently big challenge to effective and efficient management of the universities for higher productivity.



### **Significance of the Study**

This study will be relevant to university management, education law enforcement officers and students in the identification of common offences prevalent in Nigerian universities and help all those in the universities to understand the dynamics of disciplinary acts that may have destructive tendencies in the effective management of the universities as a community.

### **Purpose of the study**

The purpose of this study is to examine management roles and strategies to curb common offences in the universities in Rivers State, Nigeria. The study will further identify the types of offences, sanctions, management roles and strategies adopted by the university authorities to curb the abysmal situation that is threatening the peace in the university campuses in Nigeria.

### **Research Questions**

- (1) What are the common offences committed by students of higher education in Rivers State?
- (2) What are the common sanctions that exist in the management of common offences in the universities in Rivers state?
- (3) What is the perception of students on the roles of management and disciplinary committees in the management of common offences among staff and students in the universities in Rivers State?

### **Hypotheses**

1. There is no significant difference between the perception of students on the nature of common offences committed by students based on academic levels in the universities in Rivers State.
2. There is no significant difference between the perceptions of University students in Rivers State on the common offences based on academic levels.
3. There is no significant difference between the mean response of male and female students on the roles of management and disciplinary committee on student's common offences in University in Rivers State.
4. There is no significance difference between the mean responses of male and female students on the roles of management and disciplinary committee in the management of common offences in University in Rivers State

### **Scope of the study**

The content scope of this study covered the concept of common offences, nature, causes and management strategies to curb the negative impacts in the academic development of the institutions in Rivers State.

## **METHODOLOGY**

### **Population of the study**

The population of the study consisted is 9671 students in the three public universities in Rivers State. The universities are Rivers State University, Ignatius Ajuru University of Education and University of Port Harcourt; and all in the city of Port Harcourt.



### Sample and sampling technique

A sample of two hundred and fifty students participated in the study using multistage sampling techniques of four stages in the sample selection from the three universities at the ratio of 36:34:30 percent for University of Port Harcourt, Rivers State University and Ignatius Ajuru University of Education which was judgmental based on the needs of the study.

### Instrumentation

A fifteen self-structured instrument named "Common offences in the management of students discipline inventory"(CFMSD) was used for the collection of data with a fourpoint rating scale from strongly agreed to strongly disagreed. The face and content validity of the instrument were determined by three experts in education and the reliability of the instrument was obtained using the Cronbach Alpha (ra) method and put at a reliability coefficient of 0.745 which justified the use of the instrument. A total number of two hundred and twenty nine of the instrument was found useful out of the two hundred fifty issued and retrieved for the study.

### Data Analysis

The survey research study data obtained was coded, scored, and subsequently analyzed using mean, standard deviation to answer the research questions with a criterion mean cutoff of point of 2.5. while Analysis of Variance (ANOVA) and t test were used to test the four stated hypotheses at 0.05 level of significance. The results of the data analysis is presented below.

### Results

**Research Question 1:** What are the common offences committed by students of universities in Rivers State?

**TABLE 1 MEAN AND STANDARD DEVIATION ON THE NATURE OF COMMON OFFENCES COMMITTED BY STUDENTS OF THE UNIVERSITY IN RIVERS STATE.**

S/N	The frequently committed offences among university students in Rivers State include:	N = 229		Decision
		Mean	SD	
1	Stealing	2.69	1.16	*
2	Rape	2.92	1.02	*
3	Examination malpractice	2.52	1.27	*
4	Fighting or bullying	2.72	1.12	*
5	Cultism	3.21	.95	*
6	Truancy	3.31	1.02	*
7	Drug Abuse	3.03	.98	*
8	Absenteeism	2.83	1.03	*
9	Sexual harassment	2.73	1.07	*
<b>Grand Mean</b>		<b>2.88</b>	<b>1.07</b>	<b>*</b>

\* (Agree) =  $\geq 2.50$  while # (Disagree) =  $< 2.50$ .

Table 1: shows that the mean rating and standard deviation on the common offences committed by students of higher education in Rivers State. It further shows that the common offences committed by students in Universities in Rivers State includes: truancy ( $\bar{X}$  = 3.31) in item 6, cultism ( $\bar{X}$  = 3.21) in item 5, drug abuse ( $\bar{X}$  = 3.03) in item 7, rape ( $\bar{X}$  = 2.92) in item 2,

absenteeism ( $\bar{X} = 2.83$ ) in item 8, sexual harassment ( $\bar{X} = 2.73$ ) in item 8, fighting or bullying ( $\bar{X} = 2.72$ ) in item 4, stealing ( $\bar{X} = 2.69$ ) in item 1, while the least was examination malpractice ( $\bar{X} = 2.52$ ) in item 3. Furthermore, the grand mean score of 2.88 indicates that these common offences were committed by students in the universities in Rivers State.

**Research Question 2:** What are the common sanctions adopted in the control of student's common offences in then universities in Rivers State?

**TABLE 2: MEAN AND STANDARD DEVIATION ON THE COMMON SANCTIONS ADOPTED IN THE CONTROL OF STUDENT'S COMMON OFFENCES IN THE UNIVERSITIES IN RIVERS STATE**

S/N	The frequent common sanctions adopted by the University for acts of common offences include:	N = 229		Decision
		Mean	SD	
10	Detention	2.97	1.07	*
11	Suspension	2.89	.95	*
12	Rustication	3.06	.98	*
13	Expulsion	3.09	.93	*
14	Withdrawal	3.63	.80	*
<b>Grand Mean</b>		<b>3.13</b>	<b>0.95</b>	<b>*</b>

\* (Agree) =  $\geq 2.50$  while # (Disagree) =  $< 2.50$ .

**Table 2:** shows that the mean rating and standard deviation on the common sanctions adopted in the control of common offences among university students in Rivers State. It further shows that the common sanctions adopted include: withdrawal ( $\bar{X} = 3.63$ ) in item 14, expulsion ( $\bar{X} = 3.09$ ) in item 13, rustication ( $\bar{X} = 3.06$ ) in item 12, detention ( $\bar{X} = 2.97$ ) in item 10, while the least was suspension ( $\bar{X} = 2.89$ ) in item 11. Furthermore, the grand mean score of 3.13 indicates that these common sanctions were adopted in student's control of common offences in the universities in Rivers State.

**Research Question 3:** What is the perception of students on the roles of management and disciplinary committee in the control of common offences among university students?

**TABLE 3: MEAN AND STANDARD DEVIATION ON THE PERCEPTION OF STUDENTS ON THE ROLES OF MANAGEMENT AND DISCIPLINARY COMMITTEE IN THE CONTROL OF COMMON OFFENCES AMONG UNIVERSITY STUDENTS IN RIVERS STATE**

S/N	The roles of management in students common offences include:	N = 229		Decision
		Mean	SD	
11	Planning	3.32	.78	*
12	Organizing	2.63	1.15	*
13	Leading	2.66	1.16	*
14	Controlling	2.73	1.19	*
15	Setting laws and standards	2.39	1.19	#
<b>Grand Mean</b>		<b>2.75</b>	<b>1.09</b>	<b>*</b>

\* (Agree) =  $\geq 2.50$  while # (Disagree) =  $< 2.50$ .

**Table 3:** shows that the mean rating and standard deviation on the perception of students on the roles of management and disciplinary committee in the control of common offences among university students in Rivers State. It further shows that the perception of students on the roles of management and disciplinary committee includes: planning ( $\bar{x} = 3.32$ ) in item 22, controlling ( $\bar{x} = 2.73$ ) in item 26, leading ( $\bar{x} = 2.66$ ) in item 24, and organizing ( $\bar{x} = 2.63$ ) in item 23. Although, the respondents disagreed that setting laws and standards ( $\bar{x} = 2.39$ ) in item 26. However, grand mean score of 2.75 indicates that these were perception of students on the roles of management and disciplinary committee in the management of common offences in the universities in Rivers State.

### Test of Hypotheses

**H<sub>01</sub>:** There is no significant difference between the perceptions of University students in Rivers State on the common offences based on academic levels.

**TABLE 4: SUMMARY OF ANALYSIS OF VARIANCE (ANOVA) ON THE MEAN RATINGS ON THE PERCEPTIONS OF STUDENTS IN THE UNIVERSITIES IN RIVERS STATE ON THE COMMON OFFENCES BASED ON ACADEMIC LEVELS**

Source of variation	Sum of Squares	Df	Mean Square	F	Sig.	Decision
Between Groups	96.770	3	32.257	1.077	.359	NS
Within Groups	6736.121	225	29.938			
Total	6832.891	228				

**Decision rule:** if  $p < .05$  reject  $H_0$ , else retain  $H_0$ . NS = Not Significant,  $p > .05$ , S = significant,  $p < .05$

**Table 4:** shows that the academic levels of students have no significant influence on their perception on the common offences committed in Ignatius Ajuru University of Education ( $F_{3, 225} = 1.077$ ,  $p > .05$ ). The null hypothesis was retained. This indicated that the academic levels of students did not predict their perception of common offences committed in Universities in Rivers State.

**H<sub>02</sub>:** There is no significant difference between the perceptions of students in the sanctions adopted by management based on academic levels.

**TABLE 5: SUMMARY OF ANALYSIS OF VARIANCE (ANOVA) ON THE MEAN RATING OF THE PERCEPTIONS OF STUDENTS IN THE SANCTIONS ADOPTED BY MANAGEMENT BASED ON ACADEMIC LEVELS**

Source of variation	Sum of Squares	Df	Mean Square	F	Sig.	Decision
Between Groups	35.044	3	11.681	1.149	.330	NS
Within Groups	2288.144	225	10.170			
Total	2323.188	228				

**Decision rule:** if  $p < .05$  reject  $H_0$ , else retain  $H_0$ . NS= Not Significant,  $p > .05$ , S= significant,  $p < .05$

**Table 5:** shows that the academic levels of students has no significant influence on their perception on the sanction adopted by management in Universities in Rivers State ( $F_{3, 225}=1.149$ ,  $p > .05$ ). The null hypothesis was retained. This indicated that the academic levels of students did not predict their perception on the sanctions adopted by management.

**H<sub>03</sub>:** There is no significant difference between the mean response of male and female students on the roles of management and disciplinary committee on student's common offences in University in Rivers State.

**TABLE 6: SUMMARY OF T-TEST ANALYSIS ON THE DIFFERENCE BETWEEN THE MEAN RESPONSES OF MALE AND FEMALE STUDENTS ON THE ROLES OF MANAGEMENT AND DISCIPLINARY COMMITTEE ON STUDENT'S COMMON OFFENCES IN UNIVERSITY IN RIVERS STATE**

Gender	N	Mean	SD	T	Df	p-value	Decision
Male	84	12.0595	3.62173	.957	227	0.329	NS
Female	145	12.5103	3.91776				

**Decision rule:** if  $p < .05$  reject  $H_0$ , else retain  $H_0$ . NS= Significant,  $p > .05$ , \* significant,  $p < .05$

Table 6 shows that gender has significant influence on the roles of management and disciplinary committee on students common offences in University in Rivers State ( $t_{(227, .025)}=.957$ ,  $p=0.329$ ). The null hypothesis was retained. The mean difference was relatively close but in favour of the female students. The implication is that the roles of management and disciplinary committee on student's common offence control do not differ between the male and female students in University in Rivers State.

## DISCUSSION OF FINDINGS

The result in Table 1 revealed a grand mean score of 2.88 which indicated that the common offences committed by students of higher education in Rivers State include: truancy, cultism, drug abuse, rape, absenteeism, sexual harassment, fighting or bullying, stealing, and examination

malpractice. This finding is in agreement with earlier findings by UNESCO (2017) that truancy, cultism, drug abuse, rape, absenteeism, sexual harassment, fighting or bullying, and intimidation, stealing, arson, and examination malpractice are common offences committed by students in schools and institutions of learning. This continuous committal of these common offences affects the bedrock of progress, socialization and development in Nigeria's educational system (Nwogu, 2013).

The result in Table 2 revealed a grand mean score of 3.13 which indicated that sanctions adopted in the control of common offences include: withdrawal, expulsion, rustication, detention, and suspension. This finding is consistent with the views of Ohakamike and Agwu (2016) who asserts that common offences attract sanctions like withdrawal, expulsion, rustication, detention, and suspension in order to maintain and regulate students discipline in the institution, thereby maximizing efficiency, professionalism, and productivity.

The result in Table 3 revealed a grand mean score of 2.75 which indicated that the perception of students on the roles of management and disciplinary committee in the control of students' common offences includes: planning, controlling, leading, organizing, and setting laws and standards. This finding is in agreement with Nnokam (2011) that organizations or institutions are specifically conferred with the authority to set or stipulate its internal rules and regulation. Such rules are made to ensure it maintains equilibrium, growth, meet different needs of the subsystem and the individual member as well as enhance planning, effectively lead, control, and organize activities, operations and services in the institution.

The result in Table 4 revealed that the academic levels of students did not predict their perception of common offences committed. This finding is consistent with *Tack and Chan (2017) who stated that students feel, understand and perceive acts like: absenteeism, truancy, indecency, rape, cultism, examination malpractice, etc. as common offences that can attract sanctions on the students who commit such offences.*

The result in Table 5 revealed that the academic levels of students did not predict their perception on the sanctions adopted by management in the universities in Rivers State. This finding aligns with Ekpenyong (2011) that the incessant or increasing cycle of school-based offences committed by students individually or under the cover of illegitimate groups (like cults and other forms of unlawful assembly) in our higher institutions or educational system attract sanctions like withdrawal, expulsion, rustication, detention, and suspension, in order to fight or resist perceived injustices and place themselves in the pedestal of law and order.

The result in Table 5 revealed that gender influenced students' perception of the administrative procedures adopted by management on students' common offences in Universities in Rivers State. This finding is in agreement with Fry, Fang, Elliott, Casey, Zheng, Li, Florian and McCluskey (2018) that institutions or organizations sanction students across all levels as a way of adjudicating for violence, offences or actions that have contravened the laws, rules, and regulations set within the limits permissive by the management of such institutions or organizations.

The result in Table 6 revealed that gender did not influence students' perception on the roles of management and disciplinary committee on students' common offences committed. This finding is consistent with the position of Mertz and Mullins (2012) who opined that an organizations

stability and very existence depend on the roles and standard set by management in dealing with discipline and misconducts by individuals in that organization.

### **SUMMARY/CONCLUSION**

The purpose of the study was to investigate common offences in the management of students discipline in the universities in Rivers State. The key summary of the findings indicated that truancy, cultism, drug abuse, rape, absenteeism, sexual harassment, fighting or bullying, stealing, and examination malpractice were the common offences committed by students in the universities in Rivers state and the major sanctions adopted to sanction students were withdrawal expulsion, rustication, detention, and suspension students that were indicted.

Furthermore, planning, controlling, leading, organizing, and setting laws and standards were the perception of students on the roles of management and disciplinary committee in students' discipline and that, the academic levels of students did not predict their perception of common offences committed.

It should be noted that, the academic levels of students did not predict their perception on the sanctions adopted by management and gender influenced students' perception of the administrative procedures adopted by management on students discipline and gender did not influence students' perception on the roles of management and disciplinary committee on students discipline in the universities in Rivers State.

The study concludes that common offences like: truancy, cultism, drug abuse, rape, absenteeism, sexual harassment, fighting or bullying, stealing, and examination malpractice committed by students necessitated the adoption of sanctions like: withdrawal, expulsion, rustication, detention, and suspension in order to regulate students common offences in Universities in Rivers State.

### **RECOMMENDATIONS**

1. The University management is encouraged to adopt effective measures like timely teaching, class attendance/roll call, etc. to effectively engage students thereby leaving them with no time to commit offences like: truancy, cultism, drug abuse, rape, absenteeism, sexual harassment, fighting or bullying, stealing, and examination malpractice.
2. Management should ensure that proportionate sanctions are meted to students who violates the acts upon which sanctions imposed based on the due process of the law to avoid unnecessary litigations.
3. All students should be given equal opportunity of fair hearing at all levels beginning from the Departmental panel, Faculty panel and the University disciplinary committee before any sanctions is imposed.
4. The counseling unit should be established at all departments with students' advisors to meet the emotional and academic needs of the students.
5. Students handbooks should be produced and distributed during students' orientation programmes at all level.



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DOI: **10.5958/2249-7137.2020.00624.2**

## IMPROVEMENT OF MODERN TEACHING METHODS IN FOREIGN LANGUAGE TEACHING METHODOLOGY

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### ABSTRACT

*The article reveals new methods of teaching English in higher education institutions. The shortcomings in this regard have been comprehensively identified and analyzed. Also, recommendations and suggestions on the introduction of new methods of teaching in the educational process and its methodological significance have been developed.*

**KEYWORDS:** *Educational Processes, Advanced Innovative Technologies, Teaching Methods, Teaching Methodology.*

### INTRODUCTION

The main purpose of the introduction of new pedagogical technologies in the process of teaching foreign languages is to ensure the achievement of the planned results in the current conditions and time given in the curriculum, thereby increasing the effectiveness of education, forming a new generation of foreign language teachers armed with advanced pedagogical technologies. is to turn them into professionals who can speak foreign languages fluently and read and understand foreign literature.

In modern foreign language teaching methods, the concept of teaching methods (Greek methodos) is used in the sense of the conceptual rules of the teacher's activity in the organization and management of students' learning activities on a particular topic, aimed at optimal learning. The method of teaching means the general ways of organizing and managing the joint learning activities of teachers and students, ensuring the achievement of the set educational goals.

One of the main criteria for the effectiveness of lectures and practical classes in foreign languages is to encourage students to work in pairs or groups, to exchange ideas. This method is often referred to as the interactive method. Interactive methods - involves active interaction of the teacher with the students, the student with the student, with all subjects of the educational process. Interaction can also be organized through multimedia tools. The higher the level of interactivity, the more effective the learning process will be.

The technological process involves the planning, design and application of differentiated and individualized, pair and group work (dialogue, polylogue), the interaction of teachers and students based on the principles of teaching the theoretical foundations of a foreign language, including communication. Such an organization of the educational process provides systematic and rapid communication between teachers and students, as well as students, continuous monitoring of the current results of the educational process, diagnosis, rapid assessment, analysis and adoption of optimal management conclusions.

Theoretical and practical lessons are based on the principles of the humanities, formed in the disciplines of philosophy, psychology and pedagogy. In pedagogy, this direction is interpreted as a referral to independent learning activities that take into account the individual characteristics and capabilities of students, clearly focused on the learner's self-awareness, self-awareness, conscious development of independent critical thinking.

In the process of teaching foreign languages, special attention is paid to the development of the student and the student's personality. Therefore, when planning lessons, the following tasks should be performed:

- To create a comfortable, non-confrontational and safe environment for the full free and creative development of the learner, taking into account his natural intellectual potential;
- Consideration by the teacher of the student or student's personality: understanding and appreciation of his goals, excitements, interests, views, attitudes, belief in him, his strengths and abilities;
- in the process of planning and implementation of educational technology to take into account the knowledge of the student or pupil in this field of knowledge, the general level of development of individual culture;
- take into account the psychological and physiological characteristics of the student or pupil;
- Organization of the educational process in accordance with the level of development of each student and his abilities;
- To help the student to determine his knowledge, identity, continuous development of his intellect, to monitor and diagnose him as a person;
- Development and implementation of general pedagogical technologies of student or pupil development as an individual.
- Teaching the technological process of teaching foreign languages involves planning by directing students to interactive activities. Orientation is carried out in the following ways:
- The teacher teaches students to independently search, analyze, compare, change, apply knowledge in the communication process, constantly update and supplement their knowledge;
- In this process, the teacher should be the organizer, consultant and supervisor of the learning process;

- organization of education in pairs and groups ensures high activity of students; in this process, the independent activity of learners in predicting outcomes, planning and organizing learning activities is supported.

It is known that the teaching of any foreign language involves the teaching of the rules of correct pronunciation of sounds, words and sentences in that language. Pronunciation learning is the starting point for the processes of learning to speak, hear, understand, read, and write in a foreign language. A word or sentence in a foreign language is understood through the sum of the sounds that occur as a result of the action of the organs of hearing, sight and speech. Hence, the sum of sounds and sounds is reflected in words, sentences, articulations and graphic symbols. In pronunciation training, these three components must be activated in a complex way.

When teaching pronunciation, special attention is paid to the development of the student's ability to hear correctly. Students who do not develop the ability to hear correctly even have difficulty pronouncing sounds and sentences that occur in our native language. Special exercises for differentiating sounds are organized for them. So, it is necessary to talk about the formation of auditory and pronunciation skills of students. Hearing and pronunciation skills begin to be formed in the first year of foreign language teaching, and these skills are gradually improved. The pronunciation material, which is complex with the lexical and grammatical materials included in the lessons, is distributed among the classes according to this principle. In the elementary courses, pronunciation training began with sounds that were spelled the same, pronounced the same, and lexical material in both languages. Gradually, sounds and phonetic phenomena that did not exist in the native language began to be taught.

Particular attention is paid to the study of the acoustic, articulatory aspects of difficult sounds to avoid the negative consequences of interlingual phonetic interference. Such interference can occur in the teaching of nasal sounds, semi-vowels, liaison, enchainement, élision phenomena, in distinguishing open and closed, short and long vowels, in teaching the expression of different sounds according to the position of the letter in the word, in teaching readable and unreadable consonants.

Teaching writing involves mastering the graphic representations of sounds in a foreign language alphabet, turning letters into sounds, words, and sentences, spelling them correctly, and using them to express an idea in writing. Thus, teaching writing is understood as the acquisition of phonetic units such as sounds, letters, syllables, lexical units such as words, phrases, sentences, paragraphs, text, the formation of skills and competencies related to the preparation of written information.

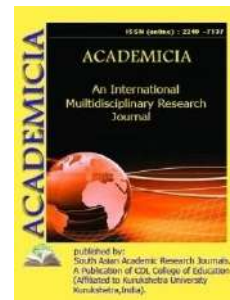
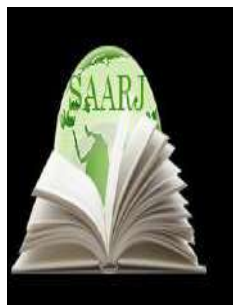
In the methodology, teaching to write and to express an idea in writing is taught as separate steps. Teaching writing is a complex psychophysiological process in which all speech analyzers are involved and play a key role in reinforcing written, read, understood, and reinforced material by making words from letters, word combinations, and sentences. Speech mechanisms are also involved in writing. In writing, meaning, sound symbols are interconnected with graphic symbols (letters), i.e., a literal symbol is added to the meaning and sound symbol that is used in

speech. The graphic representation is mastered in reading and writing and comes under the control of written speech analyzers.

Teaching writing and written speech is related to these aspects of speech activity with the types of teaching speaking, listening comprehension, reading comprehension. Therefore, in teaching speech activity, one is first taught to speak, listen, understand, read, and finally written speech. Graphical representations of the sounds used in the speech process in the primary grades, i.e., spelling, are taught in the middle and upper stages, with priority given to teaching the idea to be expressed in writing.

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DOI: **10.5958/2249-7137.2020.00625.4**

## PROFESSIONALLY IMPORTANT QUALITIES OF A PEDIATRIC DOCTOR IN SOCIAL ACTIVITY

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### ABSTRACT

*This scientific article sets the task of researching and studying the professional and spiritual qualities of pediatric doctors. Currently, the personality of the doctor is considered a central component of the system of medical activity, ensuring its focus and successful functioning in solving the humanistic goal of medical work. Professional and spiritual qualities determine the norms of the cognitive-behavioral system, regulating pedagogical activity, act as a mediator, and a link between pedagogical activity and the social worldview. The development of professional and spiritual qualities of students of medical universities is a complex, lengthy, and consistently developing process that requires the cooperation of all participants in the educational process - the teaching staff and students. The effectiveness of this process is primarily achieved due to the scientific validity of educational work, system aticity, creativity, spiritual and educational foundations, and the effectiveness of educational activities, creating the most favorable conditions for the spiritual and moral development of students.*

**KEYWORDS:** *professional and spiritual qualities (PSQ), pedagogy, psychology, social activity, pediatrician, patient, communication skills, training.*

### INTRODUCTION

Large-scale spiritual reforms carried out by the President of the Republic of Uzbekistan Sh.M. Mirziyoyev, the Development Strategy of Uzbekistan, accelerating reforms in the framework of the Concept for the Development of Higher and Secondary Special Education until 2030, the increasing demands on the spirituality of modern specialists are determined by the requirements to improve the moral level of future government employees, services and social workers in



general, it seemed to us It is interesting to find out the motivation of elementary students and graduates of a medical university to professional activity in the outpatient service.

Healing is a professional activity based on humanistic principles. This is evidenced by several accepted international legal normative documents on the deontology and ethics of doctors. These include the Geneva Declaration (1948), the Geneva Oath, the International Code of Medical Ethics (1949), the Helsinki-Tokyo Declaration (1964, 1975), the Sydney Declaration (1969), the Edinburgh Declaration of the World Federation of Medical Education (1988).

In the preparation of medical personnel, great attention has always been paid to the formation of not only professional knowledge and skills, but also its moral development. Currently, the personality of the doctor is considered as the central component of the system of medical activity, ensuring its focus and successful functioning in solving the humanistic goal of medical work (Ermolaeva E.V., Pavlova L.A, 2013) [2]. In the preparation of a modern doctor, great attention should be paid to the formation of communicative competence, since the success of the medical activity is associated not only with medical knowledge but also with communicative skills. A pediatrician is a profession, which is considered to be very popular in the labor market, and it is also linguistic speech, and communication skills are necessary for a doctor in medical, preventive, educational, organizational, and managerial activities.

Medical rhetoric as a theory and practice of effective speech behavior in a public monologue and dialogue can contribute to the training of future pediatricians. The new requirements of society and the market for future specialists reinforce the need for university students to form not only clinical skills but also specialists with several important social skills: the ability to communicate with various categories of people, be able to work in a team, interest and motivate others. In addition to skills, working in a dialogue mode plays an important role in the ability to assimilate information of a large volume and diverse content: the ability to analyze, structure, prioritize, select information blocks, and also draw independent conclusions, predict the consequences of their decisions and answer for them. The role of pediatricians is increasing in the world, and the requirements for their professional qualities are growing. In difficult conditions in the pediatric field, not just professionals are needed, but real devotees of their work, bright personalities who can overcome difficulties and work creatively.

Nevertheless, the triad founded by Abu Ali Ibn Sina, "when treating the patient, first of all, use the power of the word, if the word is not enough, use medicinal herbs and, last but not least, use the scalpel remains an axiom in modern world medicine.

In communicating with the patient, the doctor should help to overcome his fear and get rid of doubts arising before making a responsible decision, to calm and give hope for recovery.

That is why the famous doctor V.M. Bekhterev said, "if the patient does not feel relief after talking with the doctor, he is not a doctor. He must leave the medical profession".

It follows that the ability to inspire people should be a professional and spiritual quality of every doctor. Unfortunately, in recent years, a decline in professional and spiritual qualities has been observed in the relationship between the doctor and the patient, and there are tendencies to consider the patient as a passive object. In pedagogical science, upbringing is interpreted as cultural identification, the process of pedagogically controlled social adaptation, the disclosure of the individual's creative talents, and their direction (Asmolov A.G., Berulava M.N., Bratchenko

S.L., Vulfov B.Z., Gavrilovets K. V., Novikova L.I., Selivanova N.L.). This understanding of the phenomenon of education is reflected in the form of professional education in the professional sphere. However, many foreign and domestic studies did not address the issues of professional spirituality and the spiritual qualities of future doctors.

Assessing the effectiveness of problem-oriented teaching methods, revealing the theoretical and methodological foundations of the development of professional and spiritual qualities of future pediatricians and improving the system of measures aimed at improving the exchange of experience in the field of spiritual education between experienced and respected doctors with experience and future doctors-students at Based on the principle of "Teacher-student", as well as in practice, the technology of social cooperation "Stories of a pediatric on-call" was implemented. For this, the greatest effects were given by methods such as: posing a problem or a problem situation; discussion. The essence of this method is to present the educational material of the lesson in the form of an accessible, figuratively, and vividly stated problem that takes into account not only clinical but also social skills and knowledge of student's pediatricians. This method is close to the method of creative tasks but has a significant advantage in that it creates a strong motivation among students.

Discussion (organization of discussion of material) is a teaching method based on the exchange of opinions on a specific problem in which social thinking is improved giving a great opportunity to find the right approach to solving a particular problem.

The point of view expressed by students during the discussion can reflect both his own opinions and be based on the opinions of others. A well-conducted discussion has great educational and educational value: it teaches a deeper understanding of the problem, the ability to defend one's position, to reckon with the opinions of others.

Here it is necessary to develop the following qualities: - not to transfer the negative attitude of society to one or another way of solving the issues under discussion on yourself, to prove the correctness of your opinion not by offensive intonations and words, but by facts and examples (S. A. Smirnov, I. B. Kotova, R.G. Shiyanov et al., 2000) [3].

Thus, it is obvious that a pediatrician, as a subject of medical activity, must be comprehensively developed, as well as motivated to help everyone in need, and be humane. Undoubtedly, a pediatrician should not only possess knowledge, skills, analytical thinking, but also high spirituality, benevolence towards colleagues and patients, bear a positive emotional charge, which is a manifestation of professionally-spiritual qualities (Yas'ko B.A., 2005) [4].

The foregoing will help to improve the relationship between the doctor and the patient in communication, as well as combining clinical knowledge with professional and spiritual qualities that increase their work efficiency tenfold during the medical history, which in turn gives an advantage in timely and high-quality medical care. a complex aimed at promoting the development of professional and spiritual qualities of students of medical universities, scripts of spiritual and educational events "History of a pediatrician on duty", "Andijan doctors".

Practical significance is determined based on clarifying the pedagogical and psychological features of the development of professional and spiritual qualities of future doctors, determining the parameters, stages that make up the pedagogical support of this complex of professional and spiritual qualities, improving the content, forms and technologies of spiritual and educational

work to develop the spiritual and moral qualities of future doctors, the development of scientifically based proposals and recommendations for the implementation of historical and medical heritage in the modern system of higher medical education on the principle of "spiritual medicine".

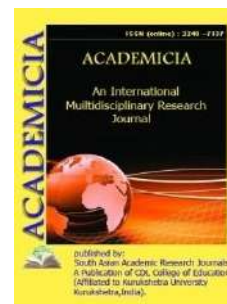
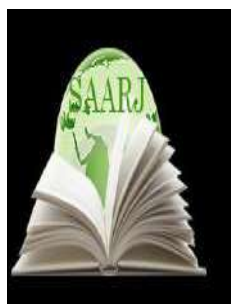
The most significant factor determining the social status of the pediatrician providing primary health care to children is his relationship with his parents, which in turn depends on the amount of time allotted to the pediatrician to examine the child and talk with parents. Material incentives in many respects determine the motivation of the pediatrician's labor activity (86% of doctors and 94% of students decided that the salary of a pediatrician should be increased). However, working conditions and material and technical support of the workplace are no less significant (73 % of doctors and 85% of students). The daily supervision of patients carried out by students in a hospital and polyclinic, according to the work program, does not fully comply with the modern requirements for training a doctor who must have clinical skills, but also social ones that would be more developed when a medical student is directly involved in the correct definition and solving these problems, including carrying out preventive measures and medical examination, for this it is necessary to introduce a system of weekly practice and control over the level of formation and the use of professional and spiritual qualities. To correct these qualities of the identified deficiencies during practice, it is necessary to create objective criteria for assessing and monitoring students' knowledge over the stages and levels of knowledge and skills acquired, both clinical and social.

Particular emphasis was placed on the spiritual environment, contributing to the development of future doctors professionally-spiritual qualities by professional and spiritual values. Therefore, the integrity of the educational process, praxiology, devotion to the motherland, subjectivity, and reflexivity are the principles of the process of the formation of future doctors. It was understood that in determining a set of complex criteria for professional and spiritual components of a future doctor, a student should know professional and spiritual qualities, a good understanding of their true purpose and effectiveness, as well as the ability to substantiate appropriate behavioral algorithms and, if necessary, improve skills and skills needed in pedagogical situations.

The professional and spiritual development of future doctors is based on the achievements of scientific and pedagogical approaches and concepts developed in Uzbekistan and around the world, as well as the theoretical and methodological foundations of the development of professional and spiritual qualities of future doctors and the identification of emerging features and opportunities during their formation during training at the university.

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DOI: **10.5958/2249-7137.2020.00626.6**

## NOTION AND LEGAL REGULATION OF STARTUPS IN THE REPUBLIC OF UZBEKISTAN

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### ABSTRACT

*The article studies the concept of startup, startup activity and its description from the legal point of view, the system of legislation aimed at regulating the activities of startups, the specifics of the activities of startups as an object of civil law regulation. Furthermore, an author's definition of the concepts on startup company and startup activity, signs that differentiate the startup from SME that use the usual technological production has been developed in the research.*

**KEYWORDS:** *Startup, Startup Activity, Innovation, Intellectual Property, High Risk, Legal Regulation.*

### INTRODUCTION

The term startup appeared several years ago and began to mean a business starting “from zero”. However, startups have their own and distinctive characteristics. So any business as an activity involves organizing company in order to profit or diversify activities already existing company with the aim of increasing capital and profits. Such actions can be carried out both at the expense of own and borrowed funds under responsibility of the head of the organization or its guarantor. Most practitioners believe that startup is fundamentally a new organization, most often conducting activities in the IT or Internet sphere. The main characteristic of startup is the potential for rapid growth, which achieved by creating new market segments or offering completely original and innovative products and/or services.

Last three years Uzbekistan has been also paying special attention to develop national innovation system, to support young generation engaged in the field of IT and other related directions, to accelerate the legislation basis on startup and so related innovative fields. One of the results of these reforms have been identified with the establishment of IT-Park and Yashnabad Technology

park specialized in researching different technology studies, IT, software and computer design and etc. State also have been offering various type of state research programs which aim to support startup in pre seed stages, as well as proposing new regulations to improve startups. There have been adapted and entered into force more than 20 normative legal acts that directly related to the startups. Namely, the Startups draft law, several decree and resolutions of the President and Cabinet of Ministries of the Republic of Uzbekistan are one of the main legal acts that should be noted.

## MATERIALS AND METHODS

Methods such as comparative-legal, logical, complex study of scientific sources, induction and deduction, analysis of statistical data were used during the article. The data were collected through the official websites of organizations in the field of regulation startups.

## Results

**Concept of startups in national and international scope.** The term startup first appeared in 1939 in the Santa Clara Valley, California, USA, which specializes in high-tech developments. At the time, Stanford University students David Packard and William Hewlett created their own small project, which he called a startup. Later, the startup gradually became a large and successful Hewlett-Packard (later known as HP) company.

Today, startups include Business Products & Services, Artificial Intelligence (AI), Internet Software & Services, Mobile Software & Services, Internet of Things, e-commerce, financial technology (Fintech), biotechnology (Biotech), advertising technology (Adtech), 3D printing (3D Printing), logistics transportation (Supply chain & Logistics).

There are 305 million registered startups worldwide, with 100 million startups operating each year. Of these, 1.35 million startups specialize in the field of technology. Each year 5.7 million startups from startups are successfully selected for accelerator programs, but 824 of them startups will be able to enter the global market by offering their goods, works and services. Other registered startups are usually forced to close down for a number of reasons, such as not choosing the right business model, not forming an effective startup idea, and not having a source of funding.

Since the concept of startup is of general one, it has been studied not only by legal scholars, but also by economists and technical scientists. According to Russian economists T.Bondarenko and E.Isayeva startup is a potential new organization specializing in information technology and the Internet. D.Urganova, a scientist in the field of business and management technologies, spoke about the infrastructure of startups, first of all, she emphasized the contractual relations that arise during the implementation of startups. According to her, a startup is a project or enterprise, which is short-lived and the main purpose of its activities is to make a profit. American entrepreneur S. Blank, one of the founders of the customer development method, considers a startup as a temporary structure that aims to implement and expand the business model (project). D.Bennett studies the dynamics of U.S. investment and business infrastructure from an economic point of view and evaluates startups as small business activities. I. Moroni emphasizes that the organization of startups in various fields is an innovative center of products and services that embodies the intention to “revolutionize” the market. National specialists in the field of economics and innovation also propose their views on startups and tried to distinguish its main



characteristics from simple business activity. As according to A. Khudainazarov any startup is a new small enterprise, but not every new small enterprise is a startup. Startup produces goods or provides services that are the result of an innovative approach to solving problems and high risk of bankruptcy compared to ordinary business projects.

Startups and their activities, similarities with innovation activities, aspects of the relationship with intellectual property, the contractual-legal relationship in their activities have not been left out of the eyes of foreign legal researchers and practitioners. K. Tondo-Kramer calls startups software companies. He also researched aspects of startups related to intellectual property, such as company names, trademarks, and patents. A. Reid and Monroe-Sheridan call startups from organizations that depend on a particular form of external financing. In our view, his above opinion is mainly important in the successful continuity of the startups.

National lawyers have also researched on startups in the field of innovation in their works. In particular, according to the opinion of O.Oktyulov, a startup company is a commercial entity that has a certain amount of material and financial resources and builds its business on the basis of innovation. Startups can also be organized as a structure in accordance with the provisions of Article 39 of the Civil Code of legal entities. In this case, the activities of startups begin with the definition of organizational and legal forms of the legal entity. A. Akhmedov said that it is necessary to include startups in the list of new entities engaged in innovative activities, coordinate the activities of state and economic authorities, commercial banks, scientific and educational institutions to promote the development of the technology park, the creation of favorable conditions for the creation of "startups" on the basis of innovative developments. K.Mehmonov studied the rights to computer programs and databases that collide during the activities of startups and the construction of related contracts. N.Raimova analyzed the issues related to startups at the stage of ideas or seeding, as well as the results of research and development of innovative activities and undisclosed information, production secrets (know-how). In turn, the above-mentioned scientific views show that startups are a risk-based and profit-oriented structure.

In accordance with Article 3 of the Law of the Republic of Uzbekistan On guarantees of freedom of entrepreneurial activity of 2012, entrepreneurial activity (entrepreneurship) is an activity carried out by business entities in accordance with the law, aimed at gaining income (profit).

In accordance with the Regulation on the procedure for selection and financing of startup projects, approved by the Cabinet of Ministers of the Republic of Uzbekistan dated March 9, 2020, a startup company is a legal entity established to promote and commercialize the results of scientific, scientific and technological activities. It is obvious that any startup company is a business entity. However, the above document does not specify the characteristics of a startup company that distinguish it from another business entity.

Based on the generalization of the above analysis the legal nature of the startups is deemed as:

- A. special type of innovative activity;
- B. results of intellectual property created as a result of scientific and creative activity;
- C. startups operate on a very high level of risk;
- D. the main purpose of its activities is to benefit, expand (scale), as well as support social goals;

e. one of the organizational and legal forms of innovative investment;

F. entrepreneurial activity based on scientific and creative process or intellectual property;

G. can operate in the form of a legal entity or sole entrepreneur, as well as, individuals who are the main part of the startup participants are allowed to carry out their activities without state registration as entrepreneurs.

**Legal regulation of startups in Uzbekistan.** Just as there are legal bases for any activity, there are normative and legal documents on the legal regulation of startups. In accordance with existing legal sources in the field, the regulation base of startups can be divided into the following subgroups:

a. legal documents defining the general principles of regulation of startup activities;

b. legal documents on relating tasks, functions of startup and startup support.

**A) Legal documents defining the general principles of regulation of startup activities.**

In general manner the startup activities like business activities are regulated by Civil Code of the Republic of Uzbekistan (1995, 1996), Limited Liability and Additional Liability Companies Law (2001), Joint Stock Companies and Protection of Shareholders' Rights Law (2014), Guarantees of Freedom of Entrepreneurship Law (2012), Investments and Share Funds Law (2015), Securities Market Law (2015) and various laws on intellectual property. Since the activities of startups are an innovative complex approach, the legal documents governing the organizational and legal, contractual and intellectual legal relations related to their activities are legal sources in the organization and implementation of the activities of startups.

According to the civil and business legislation of the Republic of Uzbekistan, any business activity must be registered by the state. Since the activities of startups also reflect the characteristics of business activity, they also need state registration. The general basis and rules for the state registration of business activity are established by Civil Code and Guarantees of Freedom of Entrepreneurship Law. But the detailed procedure and terms of the state registration of business entities are regulated by Regulations of the Cabinet of Ministers of the Republic On the procedure for the state registration of business entities from 2017.

Liquidation and bankruptcy order, basis and rules for business entities, including startups, are carried out in prescribed manner in accordance with the Bankruptcy Law (2004) and Civil Code.

Depending on the organizational and legal form of registration of startups as a business entity their activities will be regulated by a number of laws. In order to be more successful in revenues, to use effective risk management and distribute liability over founders and/or participants most startups are tent to register as LLD (limited liability company) in Uzbekistan, JSC also preferable in some cases. Very few startups select to commence their activity as registering sole entrepreneur, though no prohibition by legislation. On the other hand, startups in the form of sole entrepreneur is extremely risky due to improper liability management, no right to issue the corporate bonds, securities and no exchangeable shares. These factors, without any doubt, may lack startup-sole entrepreneur the opportunity to attract financial funds like venture funding, funding by business angels. Depending on the business form in which startups are established Civil Code, Limited Liability and Additional Liability Companies Law, Joint Stock Companies and Protection of Shareholders' Rights Law, Guarantees of Freedom of Entrepreneurship Law are the laws to regulate.



As one of the main features of startups is innovation in product, service and business model, it usually deals with intellectual property. For example, if a startup project is associated with the creation of a particular field of invention, utility model and industrial design it is regulated by laws On Inventions, Utility Models and Industrial Designs (2002) and On Copyright and Related Rights (2006). The main issue is the right to the result created in the framework of the startup project and the relationship with its management.

**B) Legal documents establishing the related tasks and functions of startup and startup support.**

In 2017 the Presidential decree "On the establishment of an innovation technology park in Yashnabad district of Tashkent" was adopted in order to ensure the advance of high technologies, sustainable development of science, technology and innovation entrepreneurship. The decree determined the establishment of small innovation enterprises, the creation of a favorable environment for the production and supply of competitive, science-intensive products in domestic and foreign markets. The Yashnabad technology park is established according to the decree which specializes to carry out its main activity and launch startup projects in the field of chemical technology, biotechnology, pharmaceutical and medical biotechnology, plant protection products, building materials, food industry, energy saving, production of alternative and renewable energy sources, robotics, mechanical engineering, electrical engineering.

Next Decree of the President of the Republic of Uzbekistan "On approval of the Strategy of innovative development of the Republic of Uzbekistan in 2019-2021" (2018) sets the Republic of Uzbekistan tasks to become one of the 50 leading countries in the world by 2030 according to the Global Innovation Index.

Currently, the Resolution of the Cabinet of Ministers "On measures to organize the activities of the technology park of software products and information technology" (2019) is important on the organization of startup projects, startups, their investment through venture funds. The IT Park Tashkent is established according to the resolution which specializes to carry out its main activity and launch startup projects in the field of software products and information technology. Furthermore, the resolution is identified and distinguished the terms like startup and business projects, is applied for the first time terms like accelerator and business incubator that to boost the startups through consultancy, training services. According to the website IT-Park.uz, in the second half of 2019, 15 out of 103 startup projects in the software and information technology IT-Park in Tashkent were selected for incubation and acceleration programs. These startups are mainly projects in the field of e-commerce, medical technology (Medtech), financial technology (Fintech), agricultural technology (Agrotech) and Internet of Things (IoT).

The Resolution "On investment and management companies" of the Cabinet of Ministers 2019 defines the procedure and forms of venture financing, as well as the rights, obligations and powers of the investment company, management company and venture fund. As a rule, four main actors are involved in the implementation of venture financing: investment company, management company, venture funds and qualified investors.

The Regulation on the procedure for selection and financing of startup projects, approved by the Cabinet of Ministers of the Republic of Uzbekistan dated March 9, 2020, defines the terms like a startup company and the procedure for approval, financing and implementation of startup projects.

On April 27, 2020, the Ministry of Innovative Development proposed the draft Startups law that consists of 33 articles, the main purpose of which is to regulate relations in the field of organization and development of startups, as well as incentive mechanisms and the use of innovative ideas in their activities. According to the draft law The Ministry of Innovative Development is determined as an authorized state body in the field of startups.

## CONCLUSION

The role and importance of startups in achieving economic stability in the country is great. Startups are different from other types of business as a form of innovation. In our opinion, these differences are mainly characterized by the distinctive features of startups. The main differences of startups from ordinary entrepreneurship are determined by the stages of formation and development of startups, their connection with innovation, high risk category, the specifics of the organizational and legal form, property and exclusive rights to intellectual property created on the basis of startup projects.

In our view, **startup** is a temporary structure in the form of a commercial legal entity or a simple partnership, as well as in the form of sole entrepreneur with innovative features and based on high risk, designed to seek and implement an expandable business model that requires specific investment.

Startups should be distinguished from small businesses that use traditional technological production by the following characteristics:

- A. not more than 5 years since the state registration as a legal entity;
- B. have an innovative business model;
- V. have innovative technologies to carry out their activities;
- G. be able to apply all types of legal protection of intellectual property in the stage of their activities;
- D. the existence of a plan for dynamic growth in profitability and job creation.

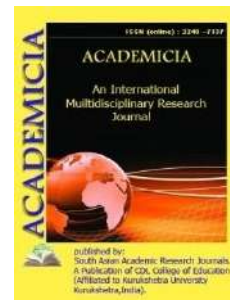
The activity of startups is the activity aimed at the development and introduction of new or improved products (works and services) on the basis of an innovative approach in high-risk conditions.

2. Issues such as state registration of startups, the concept and procedure for concluding crowd funding and option contracts in turn funding the startups, management measures of startup risks are not included in the Startups draft law. The establishment of mechanisms such as risk management, as well as the availability of organizational platforms for venture and crowd funding are very important not only for startups looking for an expanding business model by attracting investment, but also for investors. According to the above-mentioned views, in order to improve the relationship between the organization and development of startups, it is proposed to amend and supplement the Startups draft law which provides with enrichment of proposed law with the new items such as state registration, methods to manage, minimize risks and etc.

Above-mentioned proposals can serve as formalization and development of startup infrastructure in the Republic of Uzbekistan.

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DOI: **10.5958/2249-7137.2020.00627.8**

## THE METHOD OF APPROXIMATION OF THE SEQUENCE FOR SOME NONLINEAR BOUNDARY VALUE PROBLEMS

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### ABSTRACT

*In this paper, we consider a system of simple differential equations for boundary-value nonlinear problems. Nonlinear boundary conditions of the considered interval for the condition of the solution of the studied function of this side the considered boundary value problem is solved using the numerical analytical method of A.M. Samoylenko and is erroneously estimated. Therefore together with this nonlinear boundary condition for considering the right side interval instructions are given for solving the value of the function for investigation.*

**KEYWORDS:** Simple Differential Equations, Nonlinear Boundary Value Problems Numerical-Analytical Method For Solving Approximations.

### INTRODUCTION

For the first nonlinear ordinal differential equation it will be

$$\frac{dx}{dt} = f(t, x), \quad (1)$$

$$\Phi(x(0), x(T)) = 0 \quad (2)$$

the boundary value problem will be given, here is the function  $f$  function in the area  $[0, T] \times D$ , and  $\Phi$  function will be  $D \times D$  defined in the area  $n$  measurement functions of the vector. Let be nonlinear (1), (2) numerical-analytical method for solving boundary value problems of approximation in turn [1,2] using this method, let's consider the task of calculating the approximation.

If from (2)  $\det A \neq 0$  will be  $x(0)$  can be divided, then (2) will be

$$Ax(0) + Bx(T) = \varphi(x(T)) \quad (3)$$

written like this, here  $A$  and  $B$  matrixes  $n \times n$  measuring constants of the square matrixes. In this case (1),(3) boundary task for this  $\alpha = 0$  will be equivalent

$$x(t) = x_T - \int_t^T f(s, x(s)) ds + \alpha(T - t), \quad (4)$$

we can change with integral equation, here  $x_T = x(T)$ .

$\alpha$  to choose parameter (4) to (3) put to boundary condition

$$A \left[ x_T - \int_0^T f(s, x(s)) ds + \alpha T \right] + Bx_T = \varphi(x_T)$$

from that  $\alpha$  will have the meaning.

This meaning of  $\alpha$  will put instead of this (4)

$$x(t) = x_T - \int_t^T f(s, x(s)) ds + \frac{T-t}{T} \int_0^T f(s, x(s)) ds + \frac{T-t}{T} A^{-1} [\varphi(x_T) - (A+B)x_T]$$

or

$$x(t) = x_T + \int_0^t \left[ f(s, x(s)) ds - \frac{1}{T} \int_0^T f(s, x(s)) ds \right] ds + \frac{T-t}{T} A^{-1} [\varphi(x_T) - (A+B)x_T]$$

we will have such equation.

(4) if you use the method of approximation to the integral equation in turn

$$x_{m+1}(t, x_T) = x_T + \int_0^t \left[ f(s, x_m(s, x_T)) - \frac{1}{T} \int_0^T f(s, x_m(s, x_T)) ds \right] ds + \frac{T-t}{T} A^{-1} [\varphi(x_T) - (A+B)x_T], \quad m = 0, 1, 2, \dots \quad (5)$$

this will be, this order is defined as  $x_m(t, x_T)$  functions any  $m = 0, 1, 2, \dots$  and consistently  $x_T$  parameter (3) satisfies the boundary conditions, here will be  $x_0(t, x_T) = x_T$ . That's why our next aim is (5) determine the conditions for the collected sequence order of the function and limitation of these sequences (1) to satisfy the system of differential equations is to choose parameter  $x_T$ .

From (5) any  $m = 0, 1, 2, \dots$  will be this

$$\begin{aligned} |x_{m+1}(t, x_T) - x_T| &\leq \left(1 - \frac{t}{T}\right) \int_0^t |f(s, x_m(s, x_T))| ds + \frac{t}{T} \int_t^T |f(s, x_m(s, x_T))| ds + \\ &+ |A^{-1}[\varphi(x_T) - (A + B)x_T]| = M\alpha_1(t) + N \leq M\frac{T}{2} + N \end{aligned} \quad (6)$$

can take inequalities, here  $M$  and  $N$  constancies,  $|f(t, x)| \leq M$ ,  $|\varphi(x_T) - (A + B)x_T| \leq N$

will be taken the conditions of satisfaction of the inequality, here

$$\alpha_1(t) = \left(1 - \frac{t}{T}\right) \int_0^t ds + \frac{t}{T} \int_t^T ds = 2t \left(1 - \frac{t}{T}\right).$$

From (6) as can be seen (5) each approximation defined by the formula  $D$  to avoid leaving the area includes  $x_T$  taking this point and its  $M\frac{T}{2} + N$  circle with  $D$  located in the area  $D_1$  multitude should be, in other words the empty set should not be :

$$D_f \neq \emptyset. \quad (7)$$

As we know [1,2], (5) solved with the formula  $x_m(t, x_T)$  functions any  $m = 0, 1, 2, \dots$  and  $j = 1, 2, \dots$  is

$$|x_{m+j}(t, x_T) - x_m(t, x_T)| \leq (E + Q + Q^2 + \dots + Q^{j-1}) Q^m \left(M + \frac{\pi}{T} N\right) \tilde{\alpha}_1(t)$$

satisfies the inequality, here  $Q = K\frac{T}{\pi}$ ,  $\tilde{\alpha}_1(t) = \frac{\pi}{3}\alpha_1(t)$  and with this matrix  $K$  of  $f$  function is

$$|f(t, x_2) - f(t, x_1)| \leq K|x_2 - x_1| \quad (8)$$

defined by the condition of satisfying the Lipschitz condition.

Let  $Q$  matrix eigenvalues are the same small, that is

$$\lambda_i(Q) < 1, \quad i = 1, 2, \dots, n. \quad (9)$$

Then from (8)  $j \rightarrow \infty$  limit of efforts

$$|x^*(t, x_T) - x_m(t, x_T)| \leq (E - Q)^{-1} Q^m \left(M + \frac{\pi}{T} N\right) \tilde{\alpha}_1(t)$$

can take this inequality, here  $x^*(t, x_T)$  as said (5) defined with the formula  $x_m(t, x_T)$  sequence of functions  $m \rightarrow \infty$  limit of efforts.

But this limit (1),(3) to boundary value problem  $\alpha = 0$  equivalent for (4) tries to find a solution to integral equations  $\alpha$  equalize to zero,

$$\alpha = \frac{1}{T} A^{-1} [\varphi(x_T) - (A + B)x_T] + \frac{1}{T} \int_0^T f(s, x^*(s, x_T)) ds = 0 \quad (10)$$

From equality  $x_T$  to  $x_T^*$  if we define, then  $x^*(t, x_T^*)$  function (1),(3) it is an exact solution to the boundary value problem.

When these obtained results are generalized the following theorem is given.

**Theorem.** Let  $f(t, x)$  function  $(t, x) \in [0, T] \times D$  defined in this area, is a continuous function and in this area (7)-(9) conditions will be given.

There (5) defined with formula  $\{x_m(t, x_T)\}$  sequence of functions  $m \rightarrow \infty$  (4) solution of the integral equation  $x^*(t, x_T)$  efforts to equal function dimensions and  $x_T$  parameter (8) defined with formula (10) if you select equality turning to zero then the function (1), (3) it will be a solution to the boundary value problem.

Exact  $x^*(t, x_T^*)$  with solution  $x_m(t, x_T)$  error between approximation solution

$$\left| x^*(t, x_T) - x_m(t, x_T) \right| \leq \tilde{\alpha}_1(t) Q^m (E - Q)^{-1} \left( M + \frac{\pi}{T} N \right)$$

Estimated with inequality.

If from (2)  $\det A \neq 0$  will be  $x(0)$  not this, but  $\det B \neq 0$  will be  $x(T)$  if you can divide this, then (2)

$$Ax(0) + Bx(T) = \varphi(x(0)) \quad (11)$$

can write like this. In this case (1),(11) boundary value problem to  $\alpha = 0$  equivalent will be

$$x(t) = x_0 + \int_0^t f(s, x(s)) ds + \alpha t \quad (12)$$

Change with integral equation, there  $x_0 = x(0)$ . (12) put to (11), define  $\alpha$

$$\alpha = \frac{1}{T} B^{-1} [\varphi(x_0) - (A + B)x_0] - \frac{1}{T} \int_0^T f(s, x(s)) ds$$

this will be, in this case (5) sequence of functions will be like this

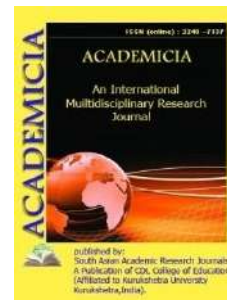


$$x_{m+1}(t, x_0) = x_0 + \int_0^t \left[ f(s, x_m(s, x_0)) - \frac{1}{T} \int_0^T f(s, x_m(s, x_0)) ds \right] ds + \\ + \frac{t}{T} B^{-1} [\varphi(x_0) - (A + B)x_0], \quad m = 0, 1, 2, \dots$$

The sequence of collecting these functions is proved similar to the previous case.

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DOI: **10.5958/2249-7137.2020.00628.X**

## RELEVANCE AND DEVELOPMENT OF DISTANCE LEARNING IN THE REPUBLIC OF UZBEKISTAN

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### ABSTRACT

*A set of approaches to the educational process, in which the main focus is on organizing the widest possible access to educational and vocational training facilities, freeing students from attachment to time and place of study and using flexible methods of individual and group learning is distance education. Relevance and development of distance learning in the republic of Uzbekistan. Open and distance learning is one of the fastest growing areas of education, and its impact on the development of all educational systems increases significantly with the development of modern information technologies and the spread of the Internet.*

**KEYWORDS:** *Virtuality, Virtual Universities, Virtual Libraries.*

### INTRODUCTION

In this turbulent time of development of modern information technologies, information and communication technologies play a special role. Speaking about all spheres of life, it is impossible not to pay attention to the process of training specialists and experienced personnel. The adoption by the Republic of Uzbekistan of several laws on the development of information and communication technologies in many areas has provided a mechanism for the movement and promotion of technology and the higher education industry. To achieve such an environment, it is necessary to develop information of a professional degree and the only way is to ensure the activities of educational institutions with modern information and communication technologies. And to fulfill it as required, it is necessary to conduct basic research and implement the results in the process of educational institutions.

The concept of the process of informatization and automation of educational institutions is understood as a complex of measures built for the effective use of theoretical and practical knowledge in the areas of the activity process. Informatization of the learning process is an

organizational, socio-economic and scientific-technical process of creating the conditions for providing legal and physical information on the territory of the republic using information technologies and information systems. The process of informatization requires solving a number of the following problems:

1. The introduction of computer technology in all structures of educational institutions;
2. Training staff on the effective use of computer technology;
3. Ensure the full and effective use of the information resources of students and professors to meet their needs.

Reforms carried out by the state in this area place a great responsibility on the shoulders of employees of higher educational institutions and intelligentsia: delivery of documents to the appropriate higher institutions, confirming the full implementation of the curricula conducted by the state; providing information to the appropriate authorities on the implementation of the documents received within their time limits of the nature of laws and orders that serve for education, stability and development in the life of students, as well as other information related to personal life, meeting needs and others. Promising and timely solution to such problems largely depends on the effective use of computer technology. The era has come when learning continues throughout life. An ordinary person and a professional need to quickly acquire new knowledge and skills in a global, knowledge-based economy. The pace of economic development is driving a growing need for systematic training. This need is supported by the technologies for teamwork that the Internet provides, the ability to create and disseminate information electronically, to learn, to work on a network for teams scattered geographically. All these forces, gathered together, create the conditions for training in real time. Today, virtual learning has become a reality in academic and corporate education, and the word "virtuality" has become commonplace. The concepts of "virtual universities", "virtual libraries", "e-books and catalogs", "virtual stores and trading floors" are emerging.

We are witnessing the process of combining schools and universities into powerful "virtual universities", "corporate virtual universities", where a significant part of the educational process is carried out via the Internet. Competition in the training system is becoming global in nature, since the opportunity to receive education abroad has become real. For example, 560 thousand foreign students are currently studying in US higher education institutions, in the UK - about 200 thousand, in France - 130 thousand. Problems arose with the development of education both for a wide range of students (among them not only students receiving traditional full-time education), but also for older people who want to improve their professional level. To meet the needs of all categories of students, educational institutions need to provide educational conditions depending on the individual educational level, age and financial capabilities. Education has become a necessary factor for success and well-being.

We are witnessing the process of combining schools and universities into powerful "virtual universities", "corporate virtual universities", where a significant part of the educational process is carried out via the Internet. Competition in the training system is becoming global in nature, since the opportunity to receive education abroad has become real. For example, 560 thousand foreign students are currently studying in US higher education institutions, in the UK - about 200 thousand, in France - 130 thousand. Problems arose with the development of education both for a wide range of students (among them not only students receiving traditional full-time education),

but also for older people who want to improve their professional level. To meet the needs of all categories of students, educational institutions need to provide educational conditions depending on the individual educational level, age and financial capabilities. Education has become a necessary factor for success and well-being.

It is designed for those who, for various reasons (lack of time, remoteness of residence, financial difficulties) do not have the opportunity to study directly in an educational institution under the supervision of a teacher, but strive to obtain the same knowledge on their own. Using distance learning, sitting at a computer, you can study at any educational institution in any country of the world, get a special education, improve your professional level without leaving your home or office, at a convenient time, from anywhere in the world. Psychologists have long established that a person receives the deepest knowledge precisely when he independently works with textbooks, teaching aids, reference books, and task books. Distance learning develops independent thinking skills, teaches to think in a systematic way, analytically assess the situation, draw conclusions and predictions. It allows you to get acquainted with the latest information and helps to easily navigate in the discipline. It is these qualities that today show the high qualification of a specialist. The prospect of developing distance learning in Uzbekistan is very high and is growing rapidly. The following are some examples of this.

Today in the Republic of Uzbekistan prerequisites have been created for the development of distance learning, as well as a base for the development of multimedia lessons and video lessons, an opportunity has appeared for conducting video conferences, a number of projects are being implemented. Both public and private entities are interested in the development of distance learning. We will talk about some distance education projects.

**The Tempus-TACIS project** - "Distance Learning in Uzbekistan" ("Uzbekiston MasofadaKitishtizimi", "Long Distance Teaching System in Uzbekistan") together with the European Community. Project partners: Tashkent State Technical University (coordinator), Navoi State Mining Institute, Hamburg Technical University (Germany), Twente University (Netherlands), Aalborg University (Denmark). The project installed equipment at the Tashkent State Technical University for video conferencing and worked out video conferencing between partner universities.

**The project "Adaptation of the Distance Learning System for Economics: Case Studies for Uzbekistan"** is funded by the Soros Foundation. It is carried out at the Institute of Macroeconomic and Social Research of the Ministry of Macroeconomics and Statistics of the Republic of Uzbekistan. The project involves the study of macroeconomic patterns in the conditions of Uzbekistan, revealing the specificity and originality of the manifestation of various theoretical patterns.

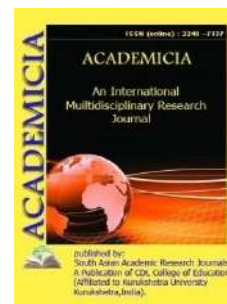
**The project "Digital Library of the National University"**. A virtual library has been created at the National University together with the Ustoz Foundation.

**Project "Virtual Library of the Financial News Agency"**. Under the Financial News Agency, with the financial support of the Eurasia Foundation, a library on electronic media has been created. In the framework of the project, information disks were developed on the topics: new information technologies in the media, economics, the catalog of foundations and seminars, the catalog of educational institutions, law and legislation, the catalog of publications on economics,

business and law. The technology for creating informational electronic textbooks and video lessons has been worked out.

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DOI: **10.5958/2249-7137.2020.00629.1**

## COMMUNICATIVE COMPETENCE AS A PEDAGOGICAL MODEL IN THE CLASSROOMS

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### ABSTRACT

*This paper discusses the construct of “Communicative competence” as a pedagogic way utilizing to better learning second language. It is argued that second language learners satisfied with the model, since it has great impact on development of language proficiency. We will discuss the relevance of models such as Grammar Translation, Audiolingual models by comparing to Communicative Competence, moreover, the outcomes and effect while learning second language.*

**KEYWORDS:** Grammar Translation, Audio Lingual, Communicative Competence.

### INTRODUCTION

The passage discusses the efficient ways of learning second language and effect their learning trajectories. The negotiation between second and foreign language teaching and learning has been a huge matter.

As Mondada and Doebler(2004,pp. 502-503) stated it, "If interactional activities are the fundamental organizational tissue of learner's experience, then their competence cannot be defined in purely individual terms as a series of potentialities located in the mind/brain of a lone individual." Different theories and methods of language learning were acquainted.

### Main part

One of them is Grammar translation method, which has a huge role in the field of foreign and second language teaching for centuries and is still of use in some countries. The grammar translation method or classic method was based on drilling some activities like translating the texts and rote learning of vocabulary. The learners ability has not been enough explored by



teachers, as teachers also were taught by the same method, technique. The teachers and learners dissatisfied with prevailing grammar translation method and materials for their purpose, so there was a need to a new method instead to reach more in learning second language. Language was seen as a set of grammar or vocabulary but its wider notion. After such need brought to an audio lingual method which occurs writing, reading, speaking and listening. This method was claimed to promote. The method could prove that speaker need to know not only grammar structures, but also norms of usage and accuracy in given context. There has been a drastic change in teaching since the introduction of communication competence method. I will explore the term communicative competence in a foreign language. It shows how the term “Communicative Competence” comes into existence and how is its usage today and is it beneficial to acquiring second language. The role of communicative competence in the study is immeasurable and significant in pedagogy. Communicative competence is a term in linguistics which directs to a language learners grammatical knowledge of syntax, morphology, phonology and social knowledge about how and when to use patterns appropriately and accurately while making a communication. The second language users learn grammar, correct use of words, consistent spelling of ideas and clear and understandable pronunciation during communication. Although the term goes back to the distant past but has been used in linguistics since the 1970s. A number of scholars have done research on this issue and proved how it is considerable. Communicative competence undergoes the various definitions and some models of the communicative competence specifically those most common models of Hymes (1972) and Canale and Swain (1980) and Alcon (2000).

The term ‘communicative competence’ was first used by Dell Hymes in 1966 when he held a conference then it was published under the title Communicative competence in 1972 and republished in 2001. Hymes has introduced his notion ‘communicative competence’ in contrast to Chomsky’s differentiation between competence and performance. For Chomsky (1965), competence is “the ideal speaker-listener knowledge of his language”(p:3). He argued that the focus of the linguistic theory is “to characterize the abstract abilities of the speaker listener which enable him to produce grammatically correct sentences”

Hymes (1972) points out that communicative competence doesn’t only represent the grammatical competence but also the sociolinguistic competence. He has stated that “there are rules of use without which the rules of grammar would be useless” (Hymes,2001) and defined communicative competence as “the tacit knowledge” of the language and “the ability to use it for the communication”(p: 16). From the discussion above, we come to a conclusion that the term competence as used by Chomsky equals the grammatical or linguistic competence in Hymes’ model which represents only one part of the communicative competence. Savignon (1972) defined communicative competence as “the ability to function in a truly communicative setting” (p: 8). This means that, to her, communicative competence is close to Hymes’ view (1972). She considered communicative competence as an ability for functioning in communicative settings and this is something totally different from the linguistic competence by Chomsky (1965) as no one can function in real life situation with only grammatical competence.

For Savignon (1983), competence is “what one knows” and performance is “what one does” (p: 94). Terrel and Krahen (1983) have defined communicative competence as the use of language in social communications without grammatical analysis. They related communicative competence to the communication and didn’t give a focus for the grammatical competence. This

means that communicative competence is manifested in the communication. They argued that the primary goal of language learning should be the development of the communicative skills. They arrived at a principle that “language is best taught when it is being used to transmit messages, not when it is explicitly taught for conscious learning” (Krashen and Terrell 1983p:55).

Canale and Swain (1980) defined communicative competence as a synthesis of an underlying system of knowledge and skill needed for communication. This view agreed with Hymes and others that communicative competence includes various competencies. Knowledge here refers to one’s knowledge of the various aspects of language and language use, while skill refers to how one can use the knowledge in actual communication.

Widdowson (1978) defined communicative competence in terms of usage and use where usage means one’s competence of the linguistic structures and refer to one’s ability to use. (Sabri T.2018)

Grammatical competence is the branch of Communication Competence that includes lexical knowledge, morphology, syntax, sentence- grammar semantics, and phonology ( Canale and Swain, 1980, p.29)

Hymes referred to Communicative Competence as that aspect of our competence that enables us to convey and interpret messages and negotiate meanings interpersonally within specific contexts.

Sauvignon (1983,p 9) noted that “Communicative competence is relative, not absolute, and depends on the cooperation of all the participants involved”

According to Hymes theory Communicative Competence is due to the ability of a person to convey knowledge to the listener and its not individual capacity, but also cater with the collaborative work.

CC went through long way, to which was evidence to several methods:

Grammar Translation Method	1800-1900
Direct Method	1890-1930
Structural Method	1930-1960
Reading Method	1920-1950
Audiolingual Method	1950-1970
Situational Method	1950-1970
Communicative Approach	1970- present

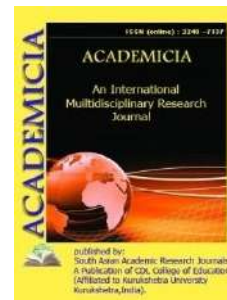
## CONCLUSION

Learners always have a desire and motivation toward acquiring language in effective and consecutive way. The provided explorations on the learners wishes brought to invention of new methods. Every of them had impact on better learning the target language, however the role of Communicative Competence is immeasurable. Today the science defined how successful it is. Majority of the learners are satisfied with, since they see the progress in a short period of learning.

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DOI: **10.5958/2249-7137.2020.00630.8**

## FEATURES OF THE CLINICAL COURSE OF PURULENT THORACIC SURGICAL DISEASES AGAINST DIABETES MELLITUS

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### ABSTRACT

*A retrospective analysis of the clinical course of purulent thoracic surgical patients with diabetes mellitus (DM) and an assessment of the results of surgical treatment and their complications were performed. In 105 (30.1%) of 348 patients treated in the clinical base of BSMI, diabetes was diagnosed. As a result of the study, in patients with purulent thoracic surgical diseases against the background of diabetes, a complex peculiar clinical course is observed that is different from patients who do not have diabetes and leading to serious complications. Timely correction of hyperglycemia before and after surgery reduces the complications of diabetes mellitus, improves the effectiveness of surgical operations with purulent thoracic surgical diseases and leads to better treatment results. Such patients must be treated in conjunction with an endocrinologist.*

**KEYWORDS:** *Purulent Thoracic Surgical Diseases, Diabetes Mellitus, Clinical Course, Treatment, Surgical Intervention.*

### INTRODUCTION

Purulent thoracic surgical diseases are among the most common pathologies in patients with concomitant diabetes mellitus and are one of the leading causes of death. From a practical point of view, it is advisable to allocate lung abscess found in 30-35% of patients into the group of patients with purulent thoracic surgical diseases, Pleural empyema in 42-47% of patients, suppressed pulmonary echinococcosis in 32-36% of patients (1; 7; 18). The main reasons that contribute to the development of purulent thoracic surgical diseases in patients with diabetes mellitus (DM): reduced immunity and general weakening of the body; penetration of infection into the lung tissue and respiratory tract (2; 5; 8;) hyperglycemia which leads to a more severe course of the disease than in patients with normal blood sugar; pathological changes in the vessels of the lungs (pulmonary microangiopathy) which, according to medical statistics, are

found in patients with diabetes twice as often as in healthy people; the presence of focal cavities in the lungs (1; 6; 12). All these factors, as well as poor control of blood sugar in the human body create favorable conditions for the development of purulent thoracic surgical diseases. A general decrease in immunity in diabetes contributes to the severe course of the disease and can lead to various complications (4; 13; 17). For the growth of pathogenic microflora, lung tissue is the best nutrient medium (5; 11; 13). According to experimental studies (9), directly in the center of the lesion, it was noted the development of massive hemorrhages in the alveolar and interalveolar tissue with necrotic changes in the alveolar epithelium, severe edema and loosening of the interalveolar tissue, and the appearance of perifocal inflammation. Pulmonary microangiopathy, necrobiotic, discirculatory and inflammatory changes with the subsequent development of pulmonary necrosis are manifested by the appearance of microabscesses. These pathological changes are morphologically characterized by acute serous-purulent inflammatory disease. Despite many publications, a single tactic for managing patients with purulent thoracic surgical diseases against diabetes mellitus, the percentage of cases of purulent thoracic surgical diseases against diabetes mellitus and clinical features of this category of patients have not yet been developed. The solution to these problems will help to develop questions of tactics, the need and volume of surgical intervention of purulent thoracic surgical diseases with a concomitant pathology of diabetes mellitus.

**Purpose of the study:** Improving the results of treatment of purulent thoracic surgical diseases against the background of diabetes mellitus by studying clinical data with correction of hyperglycemic indices.

## MATERIALS AND METHODS

For the period from 2009 to 2019, in the clinical base of BSMI under our supervision there were 348 patients with various types of purulent thoracic surgical diseases, of which 105 (30.1%) patients were associated with diabetes mellitus, 72 were men (68.5 %), women 33 (31.4%) as a rule, the most active, able-bodied part of the population suffers from this pathology, the age of patients ranged from 19 to 74 years, the average age was  $47.8 \pm 2.7$  years. All patients are conditionally divided into 2 groups: I - control and II - main. The first group consisted of 243 patients with purulent thoracic surgical diseases without diabetes. The second group of 105 patients with purulent thoracic surgical diseases against diabetes mellitus. All patients were distributed by gender and age according to the classification of age groups adopted at the regional seminar of the World Health Organization. (Kiev, 1962)

**TABLE 1. AS CAN BE SEEN FROM TABLE 1, IN THE FIRST GROUP THERE WERE 152 (62.6%) MEN AND 91 (37.4%) WOMEN AGED 19 TO 80 YEARS (MEAN AGE WAS  $48.4 \pm 2.1$  YEARS). IN GROUP II - 64 (60.9) AND 41 (39.1%) AGED 19 TO 75 YEARS (AVERAGE AGE WAS  $49.4 \pm 1.8$  YEARS), PATIENT CHARACTERISTICS BY GENDER AND AGE.**

Groups	Age										Total
	Up to 19		20-44 years old		45-59 years old		60-75 years old		75 years and older		
	male	fem	male	fem	male	fem	male	fem	male	Fem	
I	18	14	52	30	56	35	19	9	7	3	243
II	7	3	14	8	21	14	14	10	8	6	105
Total	42 (12%)		104 (30%)		126 (36,2%)		52 (15%)		24 (6,8%)		348

Most patients (74.4%) were at the most difficult age. (from 20 to 59 years old)

A diabetic history revealed that out of 105 patients, diabetes mellitus was detected in 58 (55.2%) patients for the first time, 47 (44.7%) patients had 4 or more years, the average duration of the disease was 11 years.

## RESULTS AND DISCUSSIONS

When examining patients, the following types of purulent thoracic surgical diseases were detected against diabetes mellitus: lung abscesses in 34 (32.3%) patients; suppurative pulmonary echinococcosis in 23 (21.9%) patients; pleural empyema in 24 (22.8%) patients; abscesses and phlegmon of the chest wall in 17 (16.1%) patients, purulent endobronchial fistula in 7 (6.6%) patients. The localization of lung abscesses on the background of diabetes was as follows: abscess of the middle lobe of the right and left lung in 15 (14.2%) patients; the lower lobe of the right and left lung of the lung in 12 (11.4%) patients and an abscess of the upper lobe of the right and left lung in 7 (6.6%) of patients. Of these, 14 (13.3%) patients had a breakthrough into the right or left pleural cavity. The localization of suppurating echinococcal cysts on the background of diabetes was as follows: unilateral lesion was noted in 19 (18.9%) cases, of which 15 (14.2%) of solitary cysts, multiple-7 (6.6%) combined lung and liver damage in 8 (7.6%) cases. Complicated forms were observed in 14 (13.3%) patients, of which a break in the bronchus with suppuration and hemoptysis in 7 (6.6%) cases, suppurative echinococcosis without a break in 10 (9.5%) cases, a break in the pleural cavity in 7 (6.6%) cases and pulmonary hemorrhage in 5 (4.7%) cases. Giant cysts met in 9 (8.5%) cases. Most often, echinococcal cysts were located in the middle lobe of the right or left lung, which amounted to 9 (26.4%) of the total number of operated, the lower lobe of the lungs - 8 (23.5%) and the upper lobe of the lungs was 6 (17.6%) .

The clinical manifestations of acute abscess were dependent on the stage and period of the disease. As a rule, lung destruction does not develop suddenly. This was always preceded by acute, protracted pneumonia of various etiologies. Abscess of the lung markedly worsened the condition of the patients. At first, they were worried about weakness, malaise, and the appearance of low-grade fever. Later, in 67% of patients, chest pains intensified on inhalation,



unproductive cough. With the progression of the infectious process and an increase in the volume of destruction, the body temperature became hectic, its rises were accompanied by heavy sweats. Unproductive cough intensified, which was painful in nature. Intoxication, respiratory failure increased. Such a picture was observed in 72% of the examined patients with lung abscess without diabetes. However, in patients with a similar pathology against the background of diabetes mellitus, lung abscesses proceeded with scanty symptoms. Because of this, about 20% of patients were diagnosed a month or more after the occurrence. The clinical picture of the disease did not always correspond to morphological changes. So in 56% of patients with acute lung abscesses, weakness, malaise, the appearance of low-grade fever, and slight chills were observed.

When examining patients with acute lung abscess against diabetes mellitus, pallor of the skin with a grayish tinge, cyanosis of the lips and nail beds were noted. Due to pain in the chest, breathing is shallow. As a result of intoxication, respiratory failure and chest pain in patients, tachycardia is determined, hypotension is possible. All patients underwent a comprehensive examination: clinical blood and urine tests, a biochemical blood test, a coagulogram, a blood group and a Rhesus factor, panoramic x-ray of the chest and abdomen, ultrasound, tomography, ECG and consultation with a physician for patients older than 50 years. In a general blood test, 78% of patients revealed pronounced leukocytosis, a neutrophilic shift in the formula, and an increase in ESR. Clinical blood counts did not always correspond to morphological changes: in 62 patients (59%), leukocytosis was lower than  $9.0 \times 10^9 / l$ , and in 54 patients (51.4%) the percentage of stab forms did not exceed 10, which in most cases was observed in patients of advanced and senile age and, possibly, this is due to the body's reactivity during this period of life and due to the presence of diabetes mellitus. The maximum values of these indicators in the remaining patients reached: leukocytosis -  $26.4 \times 10^9 / l$ , metamyelocytes - 2%, stab - 32%, toxic granularity ++.

Of the biochemical parameters, creatinine, urea, ALT and AST increased most often in 27 patients (25.7%). Total bilirubin increased in 16 patients (15.2%) to  $32.8 \mu\text{mol} / L$ .

To confirm the clinical diagnosis of lung abscesses, polyposition fluoroscopy and chest x-ray were performed to confirm the diagnosis and determine the localization of the process. In acute lung abscess, prior to its communication with the bronchial tree, a regular rounded homogeneously darkened cavity with perifocal infiltration was determined (Fig. 1).

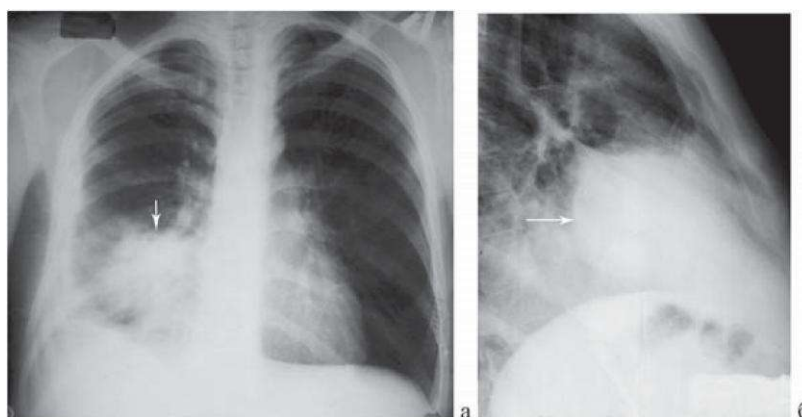


Figure 1. Abscess of the middle lobe of the right lung.

Chest x-ray in a direct (a) and right (b) lateral projection

After emptying the abscess into the respiratory tract - a cavity with a liquid level

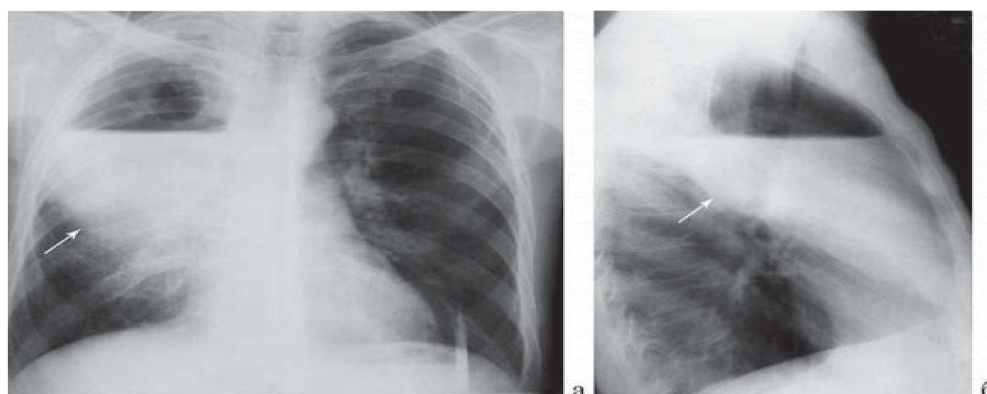


Figure 2. Abscess of the upper lobe of the right lung.

Chest x-ray in a direct (a) and right (b) lateral projection.

X-ray examination was performed several times with the aim of dynamic observation before and after surgery.

The volume of operations consisted of thoracotomy, debridement and drainage of abscesses in 19 (55.8%) patients. In addition, in 6 (17.6%) patients with regional location of lung abscesses, the puncture method of rehabilitation and drainage under the control of fluoroscopy was used. In cases of breakthrough of abscesses in the right or left pleural cavity, we performed thoracocentesis and drainage of the pleural cavity in 14 (41.1%) patients of them in 5 patients with subsequent thoracotomy. Having examined the distribution of sepsis among various etiological groups of lung abscesses, it turned out that the most common severe forms of sepsis were found in patients with diabetes mellitus.

The volume of surgical interventions for suppurating echinococci of the lungs consisted of thoracotomy under general anesthesia followed by echinococectomy using one of the known methods, taking into account the anatomical location, size and stage of parasitic cysts. In all cases of combined lesion of suppurating echinococcosis of the lung and liver, we performed a two-

stage operation of echinococectomy, taking into account the dominant focus. In three (13%) cases, echinococectomy of the liver and then lungs first, and in 6 (26%) cases, echinococectomy of the lungs and then liver first. In 7 (30.4%) cases of the total number of patients operated on, we performed a lobectomy of the middle or lower lobe of the lungs. Thoracocentesis, debridement, drainage of the pleural cavity followed by washing with antiseptics were performed on all patients with pleural empyema 24 (22.8%) on the right or left. During bronchoscopy, 7 (6.6%) of the total number of examined patients had ligature fistulas with a picture of purulent endobronchitis. In our opinion (apparently) the ligatures are torn away from the residual cavity and accumulate at the mouth of the segmental bronchi. At the same time, during a bronchoscopy, a whole lump of ligatures is revealed on the bifurcation of segmental bronchi. In all patients, the ligatures were removed by a bronchoscope. Of the total number of patients, 105 (30.1%) revealed diabetes mellitus of varying severity. So of them in 49 (46.6%) patients with mild diabetes, in 34 (32.3%) moderate and in 22 (20.9%) patients with severe complications.

Severity	Glycemia (mmol / l)
Mild (49)	8,3 – 9,9
Average(34)	10,1 - 16,7
Heavy(22)	16,7 – 20,5

We distributed patients into three groups according to the clinical course: mild, moderate, and severe diabetes with a combined pathology with purulent thoracic surgical diseases. With a mild degree of diabetes, patients with purulent thoracic surgical diseases experienced pain in the chest area in 61% of cases, cough with poor sputum production in 48%, chills in 42 to 56% of cases, hyperthermia in 67% of patients, weakness and decreased performance.

With moderate severity, severe hyperthermia, chills, chest pain, cough with thick sputum, difficulty breathing, heavy sweat, irritability, irritability, weight loss of 20% or more were observed. Tachycardia pulse 100-120ud in 1min.

In severe diabetes mellitus, patients with purulent thoracic surgical diseases experienced severe intoxication, cough with fetid sputum, difficulty breathing, heavy sweat, shortness of breath, chest pain, hyperthermia up to 40-42 degrees, chills, fever.

A sharp drop in hemodynamics, a decrease in bcc, dehydration. Complete loss of performance. Weight loss by 50%, tachycardia, pulse more than 120 beats per 1min, arrhythmia, heart failure. Damage to the liver. Psychoses, delusions and hallucinations. In microbiological and serological examination of patients, the predominant pathogens were Streptococcus Pnevmoniae (33.4%) KlebsiellaPnevmoniae (13.4%) Streptococcus aureus (13.4%). Less common were Haemophilusinfluenzae (8%) Mycoplasma Pnevmoniae (7.9%) Enterobacteraerogenes (1.3%). Along with clinical manifestations, hyperglycemia indicators were analyzed. At the same time, persistent hyperglycemia and glucosuriawere detected in these patients. In patients with a mild form of the disease, glucosuria did not occur. In severe diabetes mellitus, the development of a purulent process was accompanied by an increase in temperature to 39-40 C. In some patients, consciousness was obscured. The purulent process proceeded with high hyperglycemia, expressed by glucosuria, ketonuria. Pronounced functional impairment of the kidneys and liver, a

significant increase in the number of leukocytes in peripheral blood, and an increase in ESR were also found.

All these disorders exacerbated the course of purulent thoracic surgical diseases, which was manifested by severe intoxication, exhaustion of patients, decreased immunity, and a slowdown in the purification of purulent cavities and healing processes. Traditional therapy in this category of patients without diabetes consisted of empirical antibiotic therapy based on data on the polymicrobial etiology of pleuropulmonary infection, prescribing the results of a microbiological study of the contents of ulcers. However, with the combined pathology of purulent thoracic surgical diseases with diabetes mellitus, it is necessary to correct hyperglycemia before and after operations. To the traditional treatment of these patients with the aim of correcting hyperglycemia, simple insulin was added taking into account the indicators of hyperglycemia. In moderate diabetes, daily administration of up to 60 units of insulin per day or its substitutes was required. Patients with a severe form of the disease needed the introduction of more than 60 units of insulin per day. Patients of this group often had complications of diabetes (retinopathy, diabetic nephropathy, angiopathy, etc.).

In the study of purulent thoracic surgical patients, a high treatment efficiency was revealed, where hyperglycemia was corrected by using simple insulin in the complex traditional therapy for diabetes. These advantages were mainly reflected in the improvement of the general condition of patients, reduction of ketoacidosis and intoxication, acceleration of purification of purulent cavities from infection, timing of resorption of infiltrate, early appearance of reparative processes than in patients in the complex of treatment of which hyperglycemia correction was not carried out. As a result, the average stay of the patient's bed decreased.

Thus, our retrospective analysis of the treatment of patients with purulent thoracic surgical diseases associated with diabetes mellitus revealed: a large percentage of the occurrence of purulent thoracic surgical pathology against the background of the most formidable endocrine pathology of diabetes. It is known that systemic damage to the body in the pathogenesis of diabetes negatively affects and complicates the treatment of this category of patients, which indicates the need for further scientific and practical research aimed at solving this problem.

## CONCLUSION

1. Purulent thoracic surgical diseases in up to 30.1% of cases occur against diabetes mellitus.
2. Diabetes complicates the treatment of patients with purulent thoracic surgical diseases.
3. The development of new methods for treating patients with purulent thoracic surgical diseases, taking into account concomitant endocrine pathology (DM), is an urgent problem in surgery.
4. Independent risk factors for mortality in purulent surgical diseases associated with diabetes mellitus are: persistent hyper or hypoglycemia, severe ketoacidosis, intoxication, extensive foci of necrosis, septic shock, inadequate drainage of purulent cavities and high levels of serum urea.
5. To maintain a good result after surgical operations in patients with purulent thoracic surgical diseases associated with diabetes mellitus, it is necessary to solve a number of really existing organizational and medical diagnostic problems. This requires: Regular monitoring of glycemic tests and biochemical factors in these patients and timely correction. Collaboration with an endocrinologist is required.

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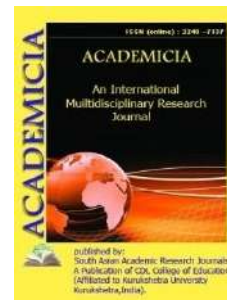
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DOI: **10.5958/2249-7137.2020.00583.2**

## **EQUITY PORTFOLIO CONSTRUCTION FOR INVESTOR'S IN INDIAN CAPITAL MARKET WITH SPECIAL REFERENCE TO PHARMACEUTICAL, LOGISTICS AND TELECOMMUNICATION SECTORS.**

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### **ABSTRACT**

*This paper focus an optimal equity portfolio construction with reference to pharmaceutical, logistics and telecommunication sectors based on Sharpe's index model. To illustrate the model, a real portfolio selection problem is presented. The study is carried out to fulfill the objectives like (i) to construct an optimal portfolio by implementing Sharpe's index model. (ii) To know the proportion of each security in the optimal portfolio. This paper aims at developing an optimal portfolio of equity of Pharmaceutical, Logistics and Telecommunication sector, through Sharpe's Index Model. For the study, five companies in each sector traded in NSE were taken and the optimal portfolio was constructed with total 15 companies.*

**KEYWORDS:** Risk, return, residual variance, Sharpe index model and market variance, etc.,

### **INTRODUCTION**

These global trends have far reaching implications for Indian pharmaceutical companies across the entire value chain, from generic players like Dr. Reddy's to contract manufacturers like Piramal Healthcare. With the growth in US and developed economies expected to taper off, emerging economies like India are expected to drive future growth. The key growth drivers in these countries are increasing per capita income, growing insurance penetration, better health awareness, higher government expenditure, adherence to IPR norms and shift in disease profiles. The Indian market was estimated at USD 8 billion in FY2008 and is expected to grow at 10-12% CAGR for the next five years.

The growth in the Indian economy in coming decade is likely to be driven by the increased activity in the manufacturing and retail sectors. Logistics companies can leverage further economies of scale when operations are expanded. This may require industries to collaborate with logistic service providers to nurture their businesses, possibly in a way the automobile industry in India nurtured the auto-component companies. The future is bright for the logistics industry in India- the expectation is that a tipping point for the industry will soon be reached which will propel it to greater heights.

India's telecommunication network is the second largest in the world based on the total number of telephone users (both fixed and mobile phone). It has one of the lowest call tariffs in the world enabled by the mega telephone networks and hyper-competition among them. It has the world's third-largest Internet user-base with over 137 million as of June 2012. Major sectors of the Indian telecommunication industry are telephony, internet and television broadcasting. Telephone Industry in the country which is in an ongoing process of transforming into next generation network, employs an extensive system of modern network elements such as digital telephone exchanges, mobile switching centre's, media gateways and signaling at the core, interconnected by a wide variety of transmission systems using fiber or Microwave radio relay networks.

### NEED FOR THE STUDY

The three sectors taken in this paper for the construction of portfolio (Telecommunication, Pharmaceutical and Logistics) have a very good opportunity in future. The selection of companies by the investors to invest in it should be carefully selected so that they will get maximum return with minimum risk. They should split their money and invest in different baskets. The investors should get rid of the image of the company among public and should make some analysis before investing in it. So a study has to be made on which scrip the money has to be invested and how much percentage of money should be invested in each scrip.

### OBJECTIVES

- To study the relative market performance of 15 companies belonging to Pharmaceutical, Logistics and Telecommunication sectors listed in National Stock Exchange (NSE).
- To construct an optimal portfolio by implementing Sharpe's index model.
- To guide the investors to get optimal portfolio i.e., maximum return with minimum risk.
- To know the proportion of money to be invested in each of the security in the optimal portfolio.

### LIMITATIONS

- Only 15 companies in 3 sectors were taken into consideration for constructing optimum portfolio. If more companies from different sectors were taken, it would have given an accurate optimum portfolio.
- Stock prices considered were restricted to only five year's data. When considering many years' data, it would have given an accurate optimum portfolio. So time constraint is there.

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## REVIEW OF LITERATURE

- Klement Joachim, Greenrod James, O'Neil Jay in their paper described how strong preference for domestic equities can erode the wealth of Australian private investors over the long term and proposed an optimal allocation to domestic equities for Australian investors. Private investors around the world tend to have an excessive preference for shares of companies based in their home country. This home bias may be further strengthened if domestic equities receive preferential treatment by local tax laws. Australia's franking credit system is one example of preferential treatment for domestic equities. Franking credits reduce investors' tax liability on the dividends received from domestic companies but not on those from foreign companies. This tax advantage, and the solid performance of the Australian equity market over years, has led to very high, even excessive, allocations to domestic equities in the portfolios of Australian investors.
- Madura and Abernathy (1985) also examined the performance of global stock portfolios prescribed by ex post models. Using weekly stock market index returns for eight countries for the period, January 1978 to January 1981 the authors segmented the data into five sub-periods of equal length and for each period; a mean variance algorithm was used to generate ex post efficient portfolios. The ex post optimal portfolio weights then formed the basis for investment in the subsequent ex ante period. Thus all information for the ex ante strategy was developed from the previous period. Madura and Abernathy (1985) considered the performance of three mean-variance efficient portfolios. A low-risk portfolio which exhibited the least variance in an ex post basis, a high risk-portfolio produce which showed the highest expected return, and an intermediate risk portfolio which displayed the highest ex post return per unit risk Sharpe Ratio (Sharpe, 1966, 1994). For the ex ante strategy to be described as effective, it was expected to outperform a naive portfolio of the international stocks and the US index. In constructing these ex post optimal portfolios Madura and Abernathy (1985) observed that the returns and standard deviations in each country performed differently in the various sub-periods. In other words the data was not stationary. Consequently performance of the ex post based efficient portfolios behaved poorly in subsequent periods. In particular on an ex ante basis the analysis showed that neither the naive nor the mean-variance international portfolios produced consistently higher returns relative to the US index. While in terms of risk, the mean-variance low risk portfolio was the only strategy, which consistently exhibited a lower standard deviation than the US index. Also no single strategy could be distinguished as superior when the risk-adjusted performance of the various strategies was compared. The authors concluding that the difference between "potential gains from an ex post analysis" and "realized gains from an ex ante analysis" may be substantial. Robichek Alexander A, Cohn Richard A, Pringle John J (1972) computes ex post rates of return and correlation coefficients for twelve alternative investment media for the period 1949-69 inclusive and analyzes the implications of the results for portfolio construction. Most of the prior work in the area of portfolio construction has focused exclusively on common stocks and the "riskless rate of return." Studies of rates of return on other investment media, such as bonds, real estate and commodities, generally have not included an investigation of covariance with other media. Maller Ross A, Durand Robert B, Jafarpour Hediah (2010) an approach that enables us to assess ex ante how close a given portfolio is to this ideal. It illustrates applications of the theory by analyzing a large

sample of US companies, comparing constant-correlation and momentum strategies with the optimal strategy. Simulations based on this data are also given for illustration. Choosing a portfolio from among the enormous range of assets now available to an investor would be facilitated if we could locate the return-risk ratio of a particular allocation along a spectrum of possibilities. A comparison between portfolio choices can tell us, for example, whether it is better to select a sub-optimal portfolio from a large class of assets or to perform a Markowitz optimal procedure on a subset of the assets. A common criterion for this assessment is the expected return-to-risk trade-off as measured by the Sharpe ratio. Given that the ideal, maximized Sharpe ratio must be estimated.

- Varadharajan P (2011), said to construct an optimal equity portfolio with help of the Sharpe index model. Portfolio construction is an important process of the investors for investment in the equity market. A good combination of portfolio will give maximum return for a particular level of risk. In this research, Banking and Information Technology sectors have taken into consideration for construction of equity portfolio. Five companies were selected from each sector and ranked them based on excess return to beta ratio. The cut-off point was calculated and highest value is to be taken as a base for calculation of money to be invested in each stocks. This research findings and suggestions would be helpful to investors. Kallman James(2003) Since 1952, financial analysts have known that each risk must be understood relative to the entire portfolio of risks. The failure to take this holistic perspective can result in the misallocation of scarce resources including money, people and time. The beauty of portfolio theory like many other valuable management tools is that it is surprisingly simple. Essentially, it states that adding non-correlated risks together decreases the portfolio's risk. Risk mapping and portfolio evaluation is taking risk management into a new dimension. It draws on well-understood financial principles and computer simulation to describe, both with mathematics and powerful graphics, an organization's portfolio of risks. When the portfolio is understood at this level, it empowers risk managers to provide advice on the optimal combination of risks and the optimal control of risks. The yield is more confidence in attaining the organization's financial and qualitative goals. Debasish Dutt in an article published in "The Management Accountant"- November 1998, found that all the stocks selected are bank stocks .He used Sharpe single index model in order to optimize a portfolio of 31 firms from BSE for the period October 1, 2001 to April 30, 2003 and used BSE 100 as market index. Asmita Chitnis optimized two portfolios using single index model and compared them and he found Portfolios tend to spread risk over many securities and thus help to reduce the overall risk involved. "The greater the portfolio's Sharpe's ratio, the better is performance". Weilin Zhao, Chihiro Watanabe (2010), investigated that, India, famous for its software outsourcing service, has achieved high growth rates in software exports in recent ten years. The figure of Indian software export destination shows that the US has been the dominant destination for more than a decade. From the perspective of risk management, this paper provides to give some suggestions for software outsourcing service vendors by means of the portfolio analysis of India's software export market constitution. Though it is a simple two-market portfolio analysis model, the implications are significant for raising outsourcing service vendors' awareness in risk management, future market strategy and industrial development.

## RESEARCH METHODOLOGY

This is a descriptive study on the construction of optimum portfolio using Sharpe index model. The data for this research was collected from various websites such as National stock Exchange (NSE), Reserve Bank of India(RBI) and from the database Proquest. Therefore, secondary research has been done. Random sampling is done and 5 companies were selected from 3 sectors namely Telecommunication, Pharmaceutical and Logistics . Therefore, the sample size of the study is 15. For the construction of optimum portfolio, five year's data (September 2008 to September 2013) has been considered.

## STATISTICAL TOOLS USED

### Return

It is the total gain or loss of a security in a given period. It is calculated by difference between the today's market price and yesterday's market price to yesterday's market price.

### Beta Coefficient

A measure of the volatility, or systematic risk, of a security or a portfolio in comparison to the market as a whole

Where,  $r$  = Correlation Co-efficient between individual stock and Market.

= Standard Deviation of Individual Stock

= Standard Deviation of Market

### Risk-free Rate of Return (RF)

Risk-free rate of return is the return on a risk free asset i.e. Government securities like 91 days T-Bill rate, 182 days T-Bill rate, 364 days T-Bill rate, 10 year bond rates, etc. Here 10 year bond rate has taken into consideration for risk free rate of return.

### Excess return to Beta ratio

It is the returns in excess of the risk-free rate.

Where,  = the expected return on stock  $i$

= the return on a riskless asset

= the expected change in the rate of return on stock associated with one unit change in the market return.

**Cut-Off Point**

This is the point at which an investor decides whether or not a particular security is worth purchasing. The formula is given by Sharpe model as follows:

$$\frac{R_i - R_f}{\sigma_i} \geq \frac{R_m - R_f}{\sigma_m}$$

Where,  $\sigma_m^2$  = variance of the market index

$\sigma_i^2$  = Residual variance i.e. variance of a stock's movement that is not associated with the movement of market index.

$$R_i = R_f + \beta_i (R_m - R_f) + \epsilon_i$$

Where,

$\beta_i$  is the proportion of investment of each stock

$$R_i = R_f + \beta_i (R_m - R_f) + \epsilon_i$$

Where,  $R_f$  = the cut-off point.

**ANALYSIS & DISCUSSIONS**

The first step is to calculate the return for each stock which indicates the total gain or loss experienced on an investment over a given period of time. Then, standard deviation and beta are calculated to measure the risk. The expected return on each stock ( $R_i$ ) is also calculated.

**TABLE 1.1 RETURN, BETA AND VARIANCE OF EACH STOCK**

Scrip Name	Beta $\beta$	Return $R_i$	Variance $(\sigma_i)^2$
Ranbaxy	0.2605	42.6959	8.4916
Biocon	0.3590	42.2804	8.2761
Cipla	0.2814	77.9879	3.2972
Dr Reddy	0.2449	154.8051	3.4613
Sun Pharma	0.2382	17.8961	11.1748
Aegischem	0.4342	51.9482	13.9017
Allcargo	0.1909	-122.6493	11.3462
Concor	0.0806	34.1789	3.3108
Jet Airways	0.6271	44.7893	16.1118
TCI	0.1973	-2.3012	9.2043
Airtel	0.1942	-43.9233	8.2876
Idea	0.5189	114.4812	7.8870
MTNL	0.4054	-178.3790	7.9948



Reliance	0.6170	-26.8537	13.7119
Tata Docomo	0.4125	-55.8334	6.8383

From Table 1.1 The companies which has beta value less than 1 shows it is less risky when compared to market risk.

**TABLE 2. EXCESS RETURN TO BETA RATIO**

Scrip Name	(Ri-Rf/ $\beta$ )	After Ranking
Ranbaxy	137.4	Dr Reddy
Biocon	98.54394	Concor
Cipla	252.6641	Cipla
Dr Reddy	603.9885	Idea
Sun Pharma	46.16026	Ranbaxy
Aegischem	103.7448	Aegischem
Allcargo	-678.527	Biocon
Concor	338.3258	Jet airways
Jet Airways	60.41915	Sun Pharma
TCI	-46.6395	TCI
Airtel	-261.7	Reliance
Idea	207.3169	Tata Docomo
MTNL	-457.03	Airtel
Reliance	-54.7057	MTNL
Tata Docomo	-152.074	Allcargo

From Table 1. 2: The excess return to beta ratio is found and it is ranked from largest to smallest (i.e. 1 to 15). Dr Reddy stands in the 1<sup>st</sup> rank whereas Allcargo stands in the 15<sup>th</sup> rank. The excess return of any stock is directly related to its excess return to beta ratio. The ratio provides a relationship between potential risk and reward. The Risk free rate of return (Rf) which is taken from RBI website which is 6.9% is used to calculate the excess return to beta ratio.

**TABLE 1.3. CUT-OFF POINT CALCULATION OF 15 COMPANIES**

New Scrip Name	(Ri-Rf)* $\beta$ / $\delta e_i^2$	$\sum (Ri-Rf)*\beta$ / $\delta e_i^2$	$\sigma m^2*\Sigma(Ri-Rf)\beta$ / $\delta e_i^2$	$1+\delta m^2*\Sigma\beta^2/\delta e_i^2$	Ci
Dr Reddy	10.4640	10.4640	28.3461	1.0469	27.0754
Concor	0.6643	11.1283	30.1456	1.0523	28.6487
Cipla	6.0660	17.1942	46.5778	1.1173	41.6884
IDEA	7.0782	24.2725	65.7522	1.2098	54.3508
RANBAXY	1.0982	25.3707	68.7272	1.2314	55.8111
Aegischem	1.4071	26.7778	72.5389	1.2682	57.1998
Biocon	1.5349	28.3126	76.6967	1.3104	58.5310
Jet airways	1.4747	29.7874	80.6917	1.3765	<b>58.6217</b>
Sun Pharma	0.2344	30.0218	81.3267	1.3902	58.4984
TCI	-0.1972	29.8245	80.7924	1.4017	57.6392

Reliance	-1.5188	28.3057	76.6780	1.4769	51.9182
Tata Docomo	-3.7843	24.5214	66.4266	1.5443	43.0137
AIRTEL	-1.1909	23.3305	63.2004	1.5566	40.6006
MTNL	-9.3950	13.9355	37.7501	1.6123	23.4135
Allcargo	-2.1800	11.7555	31.8447	1.6210	19.6448

From Table 1.3: The highest value is taken as the cut-off point ( $C^*$ ). From the table 3, it is evident that Jet Airways has the highest cut-off rate  $C^*=58.6217$ . All the stocks above the  $C^*$  value can be included in the portfolio.

**TABLE 1.4. SELECTION OF STOCKS AMONG 20 COMPANIES**

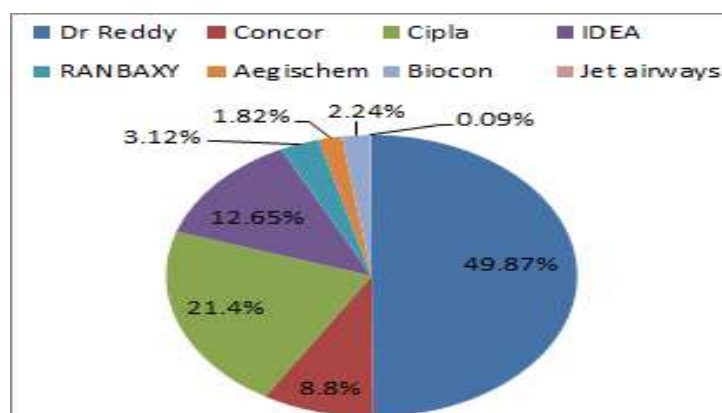
Script Name	Ci
Dr Reddy	27.0754
Concor	28.6487
Cipla	41.6884
Idea	54.3508
Ranbaxy	55.8111
Aegischem	57.1998
Biocon	58.5310
Jet airways	58.6217

From table 1.4: These are the 8 stocks which are selected for the optimum portfolio. The proportion of amount to be invested is calculated for these 8 stocks.

**TABLE 1.5. PROPORTION OF INVESTMENT IN EACH STOCK**

Script Name	Proportion of investment
Dr Reddy	49.87
Concor	8.80
Cipla	21.40
IDEA	12.65
RANBAXY	3.12
Aegischem	1.82
Biocon	2.24
Jet airways	0.09

From Table 5: The proportion of money to be invested in each stock is clear. The highest proportion of money (49.87%) is to be invested in DR REDDY and the lowest proportion of money (0.09%) is to be invested in JET AIRWAYS

**Figure 1.1: Proportion of Investment using Pie chart**

From figure 1.1 It is evident that 49.87% of the money is to be invested in RANBAXY followed by Cipla, Idea, Concor, Ranbaxy, Biocon, Aegischem and Jet Airways. The lowest proportion of money is to be invested in State Bank of India (SBIN).

## FINDINGS

When considering the three sectors, the performance of Pharmaceuticals sector is higher than that of Logistics and Telecommunication sector. Out of the 8 stocks in the optimum portfolio, four stocks are to be selected from Pharmaceuticals sector, 3 from Logistics sector and one from Telecommunication sector. The stock which has the highest return will definitely have high risk. The optimum portfolio which is constructed using Sharpe index model will help the investors for their investment decisions.

## RECOMMENDATIONS

Three sectors namely Pharmaceuticals, Logistics and Telecommunication sectors are considered for the construction of optimum portfolio. Using Sharpe index model, the top 8 companies out of 15 companies are selected for the portfolio. Of which, highest proportion of money (49.87%) has to be invested in DR REDDY, 21.4% in CIPLA, 12.65% in IDEA, 8.8% in CONCOR, 3.12% in RANBAXY, 2.24% in BIOCON, 1.82% in AEGISCHEM and 0.09% in JET AIRWAYS. Thus the investors are advised that the stocks of Dr Reddy, Cipla, Idea, Ranbaxy, Aegischem, Biocon, Concor, Cipla and Jet Airways should be held long.

## CONCLUSION

In this paper, the sectors considered for the construction of optimum portfolio are Pharmaceuticals, Logistics and Telecommunication sectors. The number of stocks considered for the construction of optimum portfolio was 15 stocks (5 from each sector). But, the optimum portfolio is constructed with the top 8 stocks with the help of Sharpe index model. The top 8 stocks which took place in the optimum portfolio are Dr Reddy, Cipla, Idea, Ranbaxy, Aegischem, Biocon, Concor, Cipla and Jet Airways. Out of the 8 stocks in the optimum portfolio, four stocks are to be selected from Pharmaceuticals sector, 3 from Logistics sector and one from Telecommunication sector. The optimum portfolio using Sharpe index model will be

helpful for the investors to make proper investment decisions and to get the maximum return with the particular level of risk.

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DOI: **10.5958/2249-7137.2020.00600.X**

## PERSONALITY-ORIENTED APPROACH TO MORAL CONSCIOUSNESS IS THE BASIS OF THE MODERNIZATION OF THE SYSTEM OF EDUCATION AND UPBRINGING OF THE YOUTH OF THE REPUBLIC OF UZBEKISTAN

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### ABSTRACT

*The article deal with the problems of the formation of the moral consciousness, which is the integral part of education harmoniously advanced generation and is a basis of modernizational system of education. It is necessary to introduce in educational process a new information and pedagogical technologies, to encourage the work of teachers and instructors. By a word, the system of education and bringing up is necessary to lift on a new qualitifed level.*

**KEYWORDS:** *Modernization Of The Education System, Personality-Oriented Approach, The State Program "Year Of Harmoniously Developed Generation" Of The Republic Of Uzbekistan, The Formation Of Moral Consciousness, The Humanistic Basis Of The Impact On The Pupil, Self-Actualization Of The Personality.*

### INTRODUCTION

Political and socio-economic reforms in the country have put forward new requirements for the education system. The role and place of education in the development of the country increased, which was reflected in its reforms. In matters of education reform including its quality is based on updating the content and raising the qualifications of teachers, as well as at the expense of the priority of the educational factor, especially on the formation of the moral consciousness of the new generation of the country.

President of the Republic of Uzbekistan Sh.M. Mirziyoyev saying about the goals of consistent and effective implementation of the youth policy, full support for young people, fundamental reform of the system of protecting their rights and legitimate interests, and taking into account the opinions and suggestions of the general public, especially representatives of the youth of our

republic, he noted, "In the years of independence, certain work was carried out in our country to educate young people in the spirit of patriotism, respect for national traditions and values, and spiritually developed and physically healthy generation, protecting the rights and interests of young people. At the same time, an analysis of the situation and the measures taken in the field shows that the work being done to resolve topical issues affecting broad sections of young people, especially to create decent conditions for unorganized young people to gain their place in life, to provide young people with all-round support, ensure their professional orientation and employment, stimulating its initiatives, is not organized at the required level ..."

The Law of the Republic of Uzbekistan "On State Youth Policy" adopted with the aim of fundamentally improving activities in this area has created a solid legal basis for bringing up harmoniously developed, independently thinking, enterprising and energetic young people who are able to take responsibility for the future of our country, to tap their potential in the name of interests of the people, as well as the realization of their intellectual and creative potential"<sup>1</sup>- and so, the President raises the system of education and upbringing in the field of policy at the national level. Ways of development of moral consciousness, based on the highest spiritual and universal values, should become a source of wisdom and strength in the noble work of educating and upbringing the young generation in the spirit of patriotism, loyalty to their land and Motherland.

According to the first President of the Republic, I.A. Karimov, "the need to educate our children in the spirit of patriotism," since "the idea of love for the Motherland" should be the priority in strengthening our independence in the worldview of our people, and love for the Motherland can solve any problem, and is able to win everything."Here, the first President stresses," the national idea, based on the highest spiritual and universal values should become a source of wisdom and strength in the noble work of educating the young generation in the spirit of patriotism, loyalty to their land and Motherland. "I.A. Karimov speaks of" adherence to universal values ", "strengthening and developing the spiritual heritage of our people, "claiming that" our spirituality will turn into all the overcoming force. The President of the Republic believes that new pedagogical personnel are needed - the cadres of the "new generation, with new thinking", speaks of the "new system of professional education, on qualitatively new curricula and programs." "And a person who is called to teach, educate others, should be comprehensively developed person by himself".

The President emphasizes that it is important to "ensure the spiritual and moral development of a person as an individual", which also requires "careful attitude to the cultural heritage of nations", "mutual respect for national cultures", and education of students on "harmony of national and universal human values". The President recalls: "The spiritual foundation of our home is the pillars of the future of our state — very ancient and very strong," the foundation of our people is the spiritual heritage left by our ancestors, which in itself is an invaluable treasure, and it must be used wisely, not allowing nationalism: "National dignity, national pride, pride that has nothing to do with nationalism or chauvinism, pride that gives strength in the struggle for belonging to this country, to this people, should be at the heart of any affair," "only with the proud of our past and future, we must educate the future generation, build our own national state".<sup>2</sup>

The issue of formation of moral consciousness is a priority among the most important socio-political tasks of the Republic of Uzbekistan.



The formation of moral consciousness is an integral part of the education of a harmoniously developed generation and is the basis for the modernization of the education system.

The State Program “Year of harmoniously developed generation” of the Republic of Uzbekistan (2010) notes that the issue of harmoniously developed generation is associated with the rational and efficient use of the material and technical base already created by significant forces and means in the field of education and upbringing. It is necessary to improve state, educational standards, curricula and textbooks, revision of educational areas and specialties in the system of higher and secondary specialized education, taking into account the requirements of today.

The focus should also be on issues of widespread introduction into the educational process of new information and pedagogical technologies, encouraging the hard work of teachers and mentors who bring up children in harmoniously developed personalities. In short, the system of education and upbringing must be raised to a qualitatively new level.

It is especially important to consider the formation of the moral consciousness of young people in the modernization of the education system.

The term morality comes from the word moral. In Latin, manners were called like *moralis* - morality. “Morals are those standards and norms that guide people in their behavior, in their daily actions. Morals are not eternal and not immutable categories, they are reproduced by the power of the habits of the masses, supported by the authority of public opinion, and not of legal provisions.”

At the same time, moral requirements, norms, morals receive a certain justification in the form of ideas about how a person should live, behave in society, etc.

Morality implies the voluntary acceptance by the majority of members of society of the rules of existence in it, ensuring the stability of society, the preservation and enhancement of material and spiritual values, and care for their own perspective.

History shows that in many cases the collapse of once prosperous states began with the destruction of the moral stronghold of society. And, on the contrary, it was possible to preserve the state, and in it themselves with their traditions, cultural values, those peoples whose moral principles constituted one of the main determinants of existence.

Awareness of the importance of members of the society mastering moral consciousness and behavior led to the creation of public institutions, formal and informal organizations of people whose task was the awareness, formulation and transmission of the norms of behaviour to the community.

This includes primarily the field of education. Its tasks include the implementation of the educational process. The efforts of collectives of educational and research institutions, public and political figures, the best representatives of all segments of the population are devoted to the achievement of this dual goal.

Moral education is carried out not only thanks to the official public institutions, but also in the depths of society itself: the family, the closest human environment, informal groups, teams, in everyday contacts with many people, through the media is carried out. Each of these groups of subjects of the educational process has its own arsenal of means of pedagogical and psychological impact on the person.

In the development of moral consciousness, the decisive importance is the activity, the real actions that a person performs in combination with their assessment of others and self-esteem.

Moral behavior is largely shaped by the example.

In educational institutions there are favorable conditions for solving a number of tasks of moral education.

First, in educational institutions there is the possibility of carrying out systematic work connected to the relative long-term stay of a particular student in them.

Secondly, the study is a reasonable activity that requires considerable effort, and, moreover, carried out in the background of cognitive interest. All this constantly creates objectively significant, problem situations for the individual. They represent a good material for educational influences.

Thirdly, educational work is carried out in groups, where meaningful relationships for a student's personality arise between peers, as well as with teachers, other training personnel, where there are representatives of different generations, people with different mentality, education, and interests.

In the course of moral education of young people in educational institutions the following tasks are solved:

**1. The formation of moral concepts and beliefs.** As it is known, students often vaguely imagine the essence of moral concepts. Often, negative actions are done precisely because the adolescent follows his ideas about what is right, proper, "legitimate" action.

The collective responsibility in group performance of antisocial acts is presented to students as following the laws of the partnership, physical punishment of a comrade as a measure of correcting his behavior is seen as quite acceptable, opposing himself to the group's assets, masters and teachers - as "heroism".

**2. Developing students' skills and habits of socially approved behavior.** It is known, however, that the significance of the norms of social behavior does not mean that a person will be guided by them in their actions. Moreover, often self-serving people demagogically use concepts denoting high moral categories to achieve personal goals. That is why it becomes necessary to organize the daily life of students in such a way that the norms of behavior are strictly observed; manifested not only in words but also in acts, even the most insignificant.

**3. Character development.** Character development Involves the formation of students' positive and overcoming negative character traits. The positive ones primarily include: discipline, integrity, dedication, initiative, persistence, ability to overcome difficulties. Among the negative traits most often faced with selfishness, deceit, rudeness, disrespect for elders. To solve educational problems various methods of educational influence are used. Some of them represent a relatively broad group and are used continuously, for a long time, often in accordance with a specific plan. It includes the methods of moral education. In other cases, it requires the use of a private method of exposure, which is situational and, as a rule, individual. These are methods of pedagogical influence. Together, they form a kind of complex that allows the fulfilling of the educational process. The following methods are used in the teaching to moral qualities:

conviction, schooling and exercise, an example as a method of education, encouragement and punishment.

**Methods of persuasion** affect pupils' consciousness, will, and feelings in order to form their positive moral qualities and eliminate negative ones. These include conversations, lectures and reports, debates and readers' conferences on ethical themes. In lectures and reports, the questions having been put before them find wider coverage. They can be accompanied by movies, slides, listening to sound recordings, organizing photo exhibitions and other expositions related to the subject of lectures. Here having information and emotional brightness is very important, on which the interest of the listeners and the measure of the psychological impact of the material largely depend. It is necessary the closely monitor of the organization of such events: the preparedness of the premises, the clarity of the work of technical means, and the observance of order when accommodating students in the hall.

**Dispute** is the effective way of moral education. In the course of the discussion of all the questions the pupils are involved. The dispute activates the person very much, encourages him to think, to search for arguments and the validity of his position. The truth is not always found in the course of the dispute. Often the discussion gives impetus to further reflection and conclusions.

**Teaching and exercise** are the repetitive activities and actions of students organized during the educational process, leading to the formation of the skills and habits of behaviour. *Means* of solving this problem can be various activities: educational, productive work, sports events, etc. In this regard, teachers and the administration should impose rather strict requirements on students.

Unfortunately, students are sometimes reluctant to accept the requirements of maintaining discipline, cleaning the premises, the conduct of duty. Fulfillment of these requirements at first is not their internal necessity.

Meanwhile, **conscious discipline** is one of the most important moral qualities. From the level of discipline depends on the effectiveness of the educational process. In turn, the clarity and organization of work in all parts of the teaching staff largely determine the discipline of students.

Formation of moral consciousness among young people will be effective if the teacher fulfills the following conditions:

- rely on positive age needs and interests, which create the effect of relevance;
- ensure the emotional richness of common activities; organize joint collective efforts and experiences that unite its participants;
- create an atmosphere of emotional volitional tension which lead to success;
- to affirm the joyous, major lifestyle of the collective and each person;
- take into account the positive impact of public opinion (interesting, important), performing the function of emotional infection;
- take care to create an atmosphere of friendly understanding.

It should be noted that if teachers show perseverance at the very beginning of training, this will quickly lead to the formation of necessary habits and greatly facilitate the organization of the educational process and then you can achieve:

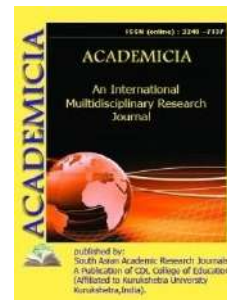
- the formation of moral concepts and beliefs;
- developing skills and habits on youth of socially approved behaviour;
- character development;
- more active and positive relationships with others;
- the ability of quick adaption to new situations;
- higher results in education and upbringing;
- active and interested attitude to various fields of science, to the education.

The social order for education, the modernization of the education system, a person-centered approach to training and education, in which each person would have the opportunity to develop self-actualize individually and at the same time personal growth and direction of activity would be in the public interest is formed in the view of social attitudes of education. The principles establish the social orientation of education, the humanistic basis for influencing a pupil, taking into account the psychological requirements for the educational process and its organizational basis.

These principles should guide not only the staff of educational institutions, they should be reflected in the minds of every citizen.

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DOI: **10.5958/2249-7137.2020.00601.1**

## HISTORIOGRAPHIC APPROACH TO THE STUDY OF UZBEK PUBLIC PEDAGOGY

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### ABSTRACT

*The article deals with the problems of the high educational system in Uzbekistan, especially the attention is paid to the interrelations between the people and society. The thoughts of great scientist about the upbringing of harmoniously developed personality are analyzed in the article as well.*

**KEYWORDS:** *National Pedagogy, Historiography, Ethnography, Pedagogical Historiography, National Education, The History Of Education, The History Of Pedagogy, Peculiarities Of National Pedagogy, Customs, Rituals, Traditions, Science, Anonymous Pedagogy, Areal Pedagogy.*

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### INTRODUCTION

Today the high school is one of the most important components of the system of continuous education. Changes in society have led to the significant steps of priorities in the higher structure of education. Here, the problem of personal development takes the first place.

Among the main directions of the educational policy of Uzbekistan, the leading and fundamental ones put forward the development of education, and in this process - the individual, therefore - the society and, thus, the country as a whole.

Reforming the system of education and upbringing, recognizing it as an authoritative direction of the state policy of the Republic of Uzbekistan, identified specific tasks, including the area of improving the training of future teachers.

The tasks of the Academy of Public Administration are defined clearly. Decree of the President of the Republic of Uzbekistan Sh. Mirziyoyev on measures for the further development of the system of training, retraining and advanced training of managerial personnel in the Academy of Public Administration under the government of the President of the Republic of Uzbekistan points the necessity of: "... the organization of the study of the disciplines of the specialty, history and national values of Uzbekistan, the work of national poets and writers, a foreign language and information and communication technologies." (2017, Resolution of the Republic of Uzbekistan #5119)

At the same time, careful attitude to the cultural heritage of people, mutual respect for national cultures, education of students in harmony of national and universal values is necessary. The spiritual foundation of our home - the pillars of the future of our state - is very ancient and very strong, the foundation of our people is the spiritual heritage left by our ancestors, which in itself is a priceless treasure. It is with this sense of pride in our past and future that we must educate the future generation, build our own national state. Studying and consciously understanding the works and pedagogical heritage of the great thinkers of the East to bring the spiritual revival of the people, the development of culture, science and education depends on the situation in other spheres, depends on how effective the general cultural level of human development in the system of education and upbringing will be the moral-aesthetic formation of the younger generation in all branches of the historical development of society has always been the object of research by scientists in various fields of science: philosophy, sociology, psychology, art history, pedagogy. This is due to the influence of the huge role of art on the formation of a developed personality, since moral and aesthetic formation is a multifaceted process of personal development. It includes the formation of moral, aesthetic views, tastes and ideals of active fighters for the beautiful in life, a systematic sequence to see the beauty in everyday life.

In order to cultivate a harmoniously developed personality that meets the new conditions, purposeful activity is needed, based on the ideas of national pedagogy and the experience of scholars and teachers.

The first President of the Republic of Uzbekistan Islam Karimov stressed the need to introduce the foundations of national pedagogics into the modern pedagogical process: "A new democratic concept of education is to be developed and implemented, in which the national, historical and cultural traditions, the moral experience of the Uzbek and other peoples living in the republic are would be originally included in the system of training and education" (Islam Karimov: Uzbekistan. National Independence, economy, politics, ideology. 1996, p.47)

The National Training Program emphasizes that "... the basic principles of the functioning of lifelong education, along with priority, democratization and humanization of education, is the humanization of education - the formation of students of an aesthetically rich worldview, high spirituality, culture and creative thinking, as well as the national orientation of education, which consists in its organic unity with national history, traditions and customs, preservation and enrichment of cultures s of the peoples of Uzbekistan, recognizing education as an essential tool for national development, respect for the history and culture of other nations." (National program on training cadres. 1996, p.45)



I would like to note that after the 90s a new scientific liberty began in Central Asia in the areas of national pedagogy of an ethnic character, and national pedagogy of historiographic nature, in the field of science of pedagogy. Nowadays, the solution of any national-pedagogical problems is impossible without a sober and realistic view, on the one hand, on the holistic panorama of the pedagogical culture of human society, on the other, on the ethnic characteristics of the pedagogical system of each nation.

And so, the historiographic and systemic-cultural approaches are essentially not used in the study of the moral and aesthetic education of national pedagogy, which makes it even more obvious that the problem of the moral and aesthetic education of national pedagogy in historical pedagogy is still insufficiently developed. Thus, the contradiction between the achieved level of study of national pedagogy and the needs of pedagogical science and practice in this study is deepening.

The solution of this problem sets before us the goal - to reveal the process of development of historical and pedagogical knowledge about national pedagogy in Uzbekistan and promising approaches to its further study. And so the solution of this goal we need to define the following tasks:- to identify and characterize the main stages of the development of historical and pedagogical knowledge of moral and aesthetic education about the national pedagogy of Uzbekistan;- to analyze the process of formation of scientific trends and directions in the

historiography of the moral and aesthetic education of national pedagogy, the dynamics, problems and geography of research;- to reveal the genesis and development of the concepts of “moral-aesthetic upbringing”, “national pedagogy”, “pedagogical culture”, “pedagogical historiography”;- consider the prospects of moral and aesthetic education in Uzbek national pedagogy as a component of the culture system in the light of the concepts of national and traditional household culture;- to substantiate the organic connection between the study of the moral and aesthetic education of national pedagogy and the general problems of the typology of pedagogical culture.

In the implementation of this problem, we need to find the source base, which is the work of scientists in this direction before the revolution and before the independence of the Republic of Uzbekistan, as well as foreign philosophers, cultural scientists, educators, historians, ethnographers on the topic of research. The main body of sources of research is the historical and pedagogical work of moral and aesthetic education about national pedagogy.

The results of the study expand the sphere of knowledge of the moral and aesthetic education of national pedagogy, enriches it with historical analysis of the experience of studying national pedagogy in Uzbekistan, as well as analyzing the general properties of pedagogical national and traditional household culture.

In addition, in Uzbekistan, the first research was carried out (by me) for the academic degree of a candidate of pedagogical sciences on the subject “Scientific theoretical problems of the historiography of Uzbek national pedagogy (1956-2001)”.(Sokhibov.A 2004, p.21. Scientific and Theoretical problems of national Uzbek pedagogy )

In the dissertation substantiated the process of formation and development of modern historical and pedagogical knowledge of Uzbek national pedagogy and developed perspective areas of pedagogical historiography. The research was based scientifically:-for the first time in

pedagogical science, the problems of studying Uzbek national pedagogics from the historical and pedagogical points were developed;-the notion of “national pedagogy” is scientifically differentiated and its features are defined;- identified the stages of development of ethno pedagogy;-principles of periodization of the historiography of national pedagogy were developed;-the role of national pedagogy in the formation of the ideology of national independence was clarified scientifically.

So, the study of national pedagogy in the historiography aspect gives the information about the results of activities done by scientists in the field of pedagogical science of national pedagogy. This gives researchers the right

approach to open branches in the field of pedagogical science of the study of Uzbek national pedagogy.

Practically, the study about the scientific work on national pedagogy are analyzed, systematized and summarized and methods for using their results in the system of university teaching are developed.

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DOI: **10.5958/2249-7137.2020.00602.3**

## CULTURAL LIFE IN UZBEKISTAN DURING THE SECOND WORLD WAR

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### ABSTRACT

*The article about development cinema and theatre in Uzbekistan at years of the Second World War. The First, cinema and theatre developed in Uzbekistan at soviet years. Come up for the last years of XIX age cinema thereafter and before present-day day alongside with increasing mankind was used for influence on thinking and consciousness of the person or as optimum facility of the material enrichment.*

**KEYWORDS:** Cinema, Art, Project, Uzbek's Film, Soviet Power, Film, Cinema Product, Cinema Production, Cinema Studio.

### INTRODUCTION

The Second World War formed a new generation of people capable of alternative, critical thinking. An internal spontaneous protest against the regime increased. It was possible to suppress it only by cruelty. The repressions weakened in the war renewed with renewed vigor in the second half of the 40s. The ideological basis for them was the decisions of the Central Committee of the All-Union Communist Party of Bolsheviks / On the magazine Zvezda and Leningrad (1946), On the repertoire of drama theaters, On the film Great Life, On the Opera of V. Muradeli Great Friendship '(1948). This became the basis for freezing the creative democratic development of literature and art, a new round of etching dissent.

The writers and poets of Uzbekistan, covering the ancient history of the people, were accused of idealizing the past, they were labeled "nationalists". Poets and writers were arrested on charges of "anti-Soviet nationalist activity." Thus, the names of Uzbek writers Aybek, Abdullah Kakhkhar, M. Babayev, U. Rapgadov, Mirtemir, M. Sheikhzadeh, and editors of the magazines

Shark Yudduzi and Star of the East were blamed. The "harmful" practice of creating and propagating opera, ballet, musical and dramatic performances on legendary folklore plots: "Farhad and Shirin", "Leili and Majnun", "Tahir and Zuhra", "Alpamysh," Tuland was condemned. the culture of the Uzbek people was immorally destroyed. Repressed art, science, and culture became innocent victims of lawlessness and arbitrariness during the totalitarian regime. After Stalin's death, the crackdown on repressions was suspended, and after the XX Congress of the CPSU (1956) there was a period of "thaw" when they began to rehabilitate innocent convicts. The restoration of violated law was proclaimed in political life. Some functions previously belonged to the center were delegated to the Union republics. Parts of the deported peoples (Chechens, Ingush, etc.) were allowed to return to their homeland. There was a revival in public life, culture, art. However, the processes of some liberalization in public life did not last long. In the mid-60s ideological pressure intensified again.

However, despite this, in the period under review there have been shifts in the field of culture. The republic expanded its network of educational schools, opened music, sports schools, schools of fine and applied art. In the 1975-76 academic year, the republic mainly completed the transition to universal secondary education. The number of teachers in 1970-75 amounted to more than 200 thousand people, the proportion of people with higher education increased.

The restructuring of the public education system has affected higher and secondary specialized educational institutions. During the period under review, a number of universities were opened, the network of research institutes expanded in the system of the Academy of Sciences and outside it, the number of employees increased. If in 1960 there were 222 doctors of science, then in 1975 there were 745 of them. The number of academicians and corresponding members of the Academy of Sciences of Uzbekistan has reached 96 people. The works of Uzbek writers were published: Askad Mukhtar "As if there is peace in the storms"; Gafur Gulyam "Steppe Violets", "Immortality"; Adyl Yakubov "Treasures of Ulugbek", "Conscience"; Mirmukhsin "The son of the caster", "Architect", "Chatkal tiger"; S. Ahmad "Horizon"; P. Kadyrov's "Starry Nights"; J. Abdullakhanova "Barca Kelmes" and others.

The Uzbek poets worked fruitfully: Zulfiya, R. Babadjan, A. Mukhtar, Shukurullo, A. Aripov, G. Nurullaev, E. Akhunova; playwrights: Ibrahim, Izzat Sultan, U. Umarbekov, K. Lshen; publicists: Sh. Rashidov, Uygun, N. Safarov, H. Nazir, T. Tula, U. Khashimov, J. Dzhabbarov. Uzbek artists Ch. Akhmarov, R. Akhmedov, R. Charyev, D. Umarbekov, B. Dzhalalov and others were well-known. A number of Uzbek specialists worked in 50 countries of the world. The ambassadors of Uzbekistan worked at the national economic facilities of Siberia, the Urals and the Non-Black Earth Zone of Russia. Machines and equipment with the brands of the plants of Uzbekistan were sent to Afghanistan, India, Algeria and other countries.

The public of Uzbekistan maintained cultural contacts with 117 states. Conferences and symposia were held in Uzbekistan. In 1979, an exhibition dedicated to Uzbekistan was exhibited in Sri Lanka. Friendship days passed between Uzbekistan and Syria (1971), Iraq (1975), Libya (1979), etc. Since 1968, the International Film Festival of Asia, Africa and Latin America was held every 2 years in Tashkent.

In the development of the culture of peoples, art, including cinema and theater, plays an important role. Especially, after the establishment of Soviet power, in the Turkestan region, where a violent policy was pursued for a long time, cinema and theater art were fruitfully used to

introduce ideological concepts such as party spirit and class, which completely contradict national traditions, into the consciousness of the population.

As the First President I. A. Karimov noted, "... The Soviet socialist state was forcibly introduced into our lives, from the side. The form and essence of this state was based on a system that did not correspond to the spiritual and psychological values of our people. "

It is well known how these events took place in our area in 1920-1956. It can be noted that in Turkestan, cinema and art were called "shaitan photographs" among some religious strata. They believed that these "Shaitan shots" were contrary to Sharia, and urged people not to attend movie shows, as this is an unforgivable mortal sin.

People were very attracted to art, later traveling cinema even penetrated into remote villages and auls. Thus, the popularity of cinema grew, and it turned into the most beloved form of art. Films promoting the Soviet ideology and its advantages began to be shown in the created cinemas. Women could attend movie theaters for free. The steady increase in the number of viewers gave impetus to the opening of new cinemas in Uzbekistan. Thus, cinemas have become places of recreation for people.

During this period, amateur actors, professional actors from neighboring republics worked on various roles, then became famous as a director, screenwriter and cameraman Nabi Ganiev, Sulaimon Khodjaev, Ergash Khamroev, Kamil Yarmatov, Yuldash Agzamov, Malik Kayumov and others. Films they shot today are of great interest to the audience.

During the Second World War, cinema and theatrical art continued to develop, and the figures of theatrical and musical art of Uzbekistan joined the ranks of active fighters against fascism.

In those years, 51 theaters operated in Uzbekistan, including the Khamza Academic Theater (now the Uzbek National Academic Theater), the A. Navoi Opera and Ballet Theater, the Mukimi Musical Drama Theater, M. Gorky Russian Drama Theater and other theaters . On the stages of these theaters, such performances as "Death to the Invaders" and "Oftobhon" by K. Yashen, "Flight of the Eagle" by I. Sultan, "Mukann" by H. Alidjan, "Alisher Navoi" by Uygun and I. Sultan and etc. In general, from July 1941 to 1944, 203 new productions, 13568 performances and concerts were staged in theaters of Uzbekistan [1].

Despite the war, many artists, namely theatrical groups of Uzbekistan, masters of the arts, actively participated in the work of military patronage, visited military units, hospitals, manufacturing enterprises, dekhkan farms and raised the morale of soldiers with their performances.

During the war years, art workers of the republic, consisting of more than 30 brigades, gave more than 35 thousand concerts at the fronts in active units of the army. These concert teams included Tamarakhonim, Halima Nosirova, Sora Eshonturaeva, Mukarram Turgunboev, Abror Khidoyatov, Olim Khuzhayev, Gavkhar Rakhimova, Muhiddin Kori Yakubov, Karim Zokirov, Shukur Burkhonov and other figures of Uzbek art.

The basis of musical art, cinema and theatrical art is patriotic themes. Patriotism remains a leading topic in both documentary and art cinema. During the war, Uzbek cinema workers created a series of short films - film short stories, film stories, essays, satirical sketches, and also



special films for warriors on the fronts - concerts - "Friends on the front", "Gift of the Motherland" and others.

Famous cinematographic figures Y. Protazanov, L. D. Lukov, E. Gabrilovich, I. E. Kheifits, N. A. Zarkhi and others were engaged in creative activities in the Tashkent studio. Together with major Uzbek directors I. Agzamov, N. Ganiev, K. Yaramatov, S. Mukhamedov, they created 10 sound feature films that are included in the golden cinema fund of the republic. Among them, such films as Sukhe-Bator, Two Fighters, Nasruddin in Bukhara, Tahir and Zuhra won the most popularity [2].

So the head of our state I. Karimov writes about this in his book "High spirituality is an invincible force": "If we take for example the most popular form of art - cinema, then it can be noted with satisfaction that in our time a kind of creative school. "

At the suggestion and initiative of the head of state in one of the beautiful corners of Tashkent on the Yunusbad massif, on the banks of the Bozsu canal, a memorial complex "In memory of victims of repression" was opened. Citizens of the republic were infinitely satisfied that on May 12, Friday, 2000; the opening ceremony of the memorial took place. So, in 1937, the times of terrible repressions here, in a place called Alvasti Kuprik (Besovsky Bridge), at midnight, a number of fighters for the freedom and happiness of the people, the best representatives of culture, literature and art, their like-minded people were shot by Stalin's killers .

Now there is a place of worship, people who have come here, remember their ancestors, pay tribute to them. Now this square has become a saint for us. From the first years of independence, the head of our state pays close attention to the revival of our national values, respect for national history, traditions, and the initiator of this work is the President of our country.

As the head of our state I. Karimov noted: "The support of our people - the legacy of our ancestors is a great treasury. We must use it rationally. We must be faithful and worthy of the instructions of our ancestors"[3].

Indeed, today we cannot imagine our life without the world of cinema. For it has the power to influence the psychology of man, his spirituality. So, at present, there is a great need for films aimed at improving the spirituality of youth, calling them to selflessness, serving as an example.

To summarize, we can say that our cinema and theatrical art over the past years have faced numerous tests. Our outstanding cultural figures have done much to preserve the cultural values of our people in their original form. It should be noted that the territory of Uzbekistan and Central Asia from the 1860s to 1991 remained colonies of Russia. The negative trail left by this period in the spirituality of the peoples of Central Asia can be said and removed. And even in such a problematic time, we have not lost our national pride, our Uzbek values, spirituality, culture and art. The age-old dream of our people - independence has always lived in our hearts.

A scientific study of the history of Uzbek cinema and theater during the Second World War suggests paying attention to the following important aspect: all the complex facets and problems are reflected in Uzbek cinema and theater.

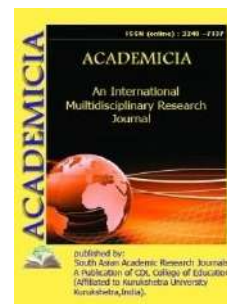
For, no matter what time cinema and theatrical art are created, no matter what topic they are dedicated to, they remain a chronicle of events from the time of their creators.



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DOI: **10.5958/2249-7137.2020.00603.5**

## DEVELOPMENT OF CREATIVE ABILITIES OF FUTURE PRIMARY SCHOOL TEACHERS IN THE PROCESS OF TEACHING PRACTICE

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### ABSTRACT

*The article is devoted to the consideration of interactive teaching methods and their role in the formation of key competencies among future specialists in the transport systems of the aviation industry. The proposed content of training primary school teachers in the aspect of pedagogical creativity, implemented using innovative pedagogical technologies, non-traditional forms, active teaching methods, in our opinion, will contribute to improving the quality of this training. Often the stereotypes of pedagogical thinking of primary school teachers do not provide a trinity of teaching, educational and developing functions of the modern education of primary school students.*

**KEYWORDS:** *Business Games, Simulation Games, Interactive Teaching Methods, Case Study Method, Stage Method, Incident Method, Case Study Method, Training.*

### INTRODUCTION

In the conditions of modernization of the educational space, the problem of training highly qualified creative primary school teachers, capable of ensuring the comprehensive development of the child as a holistic personality, the development of her creative abilities and talents and enriching the intellectual potential of the people, their spirituality and culture, and the formation of a citizen of Uzbekistan, is becoming important. The effectiveness of solving these problems largely depends on the professionalism of the teacher in building such a learning process in elementary school and, above all, in mathematics lessons, which would strengthen the child's interest in learning, discovering new things, ensure the strength and reliability of acquired knowledge, and at the same time time, contributed to the formation in each child of rice of cognitive activity, a real and creatively thinking, self-critical personality [2].

Pedagogical science and practice convincingly prove that only a creative person can bring up the same creative person. It follows that the relevance and importance of vocational training of primary education teachers to develop the creative abilities of primary school children in mathematics is stimulated by modern scientific achievements, as well as changes in the socio-economic sphere of public life.

Orientation of modern educational reforms to the formation of a professional specialist places high demands on the preparation of primary school teachers, especially in the aspect of professional and pedagogical creativity. At the same time, priority is given to the creative development of the future teacher, his openness to innovations, experiments, pedagogical artistry, the ability to self-knowledge, self-development and self-actualization in professional activities [1].

Creativity in pedagogical activity requires the formation of future teachers of primary grades a wide range of professional and creative, professional and methodological skills, abilities and abilities. However, as school practice shows, the elementary school teacher's readiness for the original design of educational material, the use of non-standard forms, teaching and upbringing methods, their combination and implementation in educational and extracurricular activities of primary school students, the ability to cooperate, collaborate, create with different subjects of the educational process is not always sufficient, which could negatively affect the creative development of students. Therefore, the identified contradictions between:

- changes in the content of the pedagogical activity of an elementary school teacher, due to the reform of the modern education system, and the content and forms of its preparation in educational institutions of higher education;
- the existing and required levels of readiness of future elementary school teachers for professional and creative activities for the development of students' creative personality have updated the direction of our scientific research [2].

Analysis of studies related to the problem of creativity, creative personality, its creative abilities and creative activity, allows us to state the significant interest of scientists in its various aspects. The studies of D. Epiphany, L. Vygotsky, V. Molyako, A. Meneghetti, V. Nikolko, Y. Ponomarev, V. Romenza and others are devoted to the nature, essence and content of creativity. The formation of the teacher's creative personality is studied in the scientific works of N. Guziy, V. Zagvyazinsky, I. Zyazyun, S. Konovets, N. Kichuk, M. Nikandrova, O. Pekhoty, S. Sysoeva and others. Professional and pedagogical training of future teachers has become the subject of research of scientific works of N. Demyanenko, O. Dubasenyuk et al.

However, despite the significant achievements of scientists in this direction, we believe that the question of the readiness of future primary school teachers for professional and creative activities to develop the creative potential of elementary school students and their creative abilities is still being partially solved. Often the stereotypes of pedagogical thinking of primary school teachers do not provide a trinity of teaching, educational and developing functions of the modern education of primary school students. Traditionally, the efforts of teachers are focused on the formation of knowledge, skills, solving purely educational problems and absolutely insufficient attention is paid to the development of creative thinking of younger students, their ability to originality of reasoning, ingenuity, the generation of new ideas, development of imagination, fantasy, intuition, and the ability to find the optimal. There are several possible solutions, etc. ..

So, an analysis of the scientific literature shows that most scientific studies focus on improving the quality of teacher training for professional and pedagogical duties, but insufficient attention is paid to the creative component of this preparation [3].

The presentation of the main material of the article. A generalization of scientific psychological and pedagogical literature on the problem of creativity allows us to state that creativity is a process of creating a new, previously non-existent one. In most cases, the concepts of “creativity” and “creative activity” are identified. However, pedagogical creativity has its own characteristics in comparison with the general meaning of this concept.

In scientific research, pedagogical creativity is recognized as the most important criterion for the qualitative formation of the personality of a teacher in a modern school, which is manifested primarily in the social need for creative work. Pedagogical creativity is determined: activities aimed at the formation of the personality of the student as a subject of life creation; integrative quality of the teacher’s personality, the structural components of which are: professional orientation, professional self-awareness, professional thinking, diagnostic culture; activities related to the study of pedagogical experience, pedagogical skills of teachers, self-knowledge, self-development, self-improvement. So, pedagogical creativity is a mutual creative activity of the main subjects of the educational process of the institution of higher education (teacher and student) in their interconnection and interdependence, the results of which lead to their development and self-development [2].

Professional and pedagogical activities of primary school teachers are diverse. The student must master all its types while studying at a higher pedagogical institution, in particular:

- Subject - to know the subjects that are taught in elementary school, master the methods of teaching them, understand the place of each subject in inter subject communications;
- Pedagogical - to design the content of subjects, to conduct classes; plan extracurricular activities, individual work with students, etc.;
- Innovative - transfer the innovative experience of other teachers to their own; to develop innovations; conduct a pedagogical experiment;
- transfer their own innovative experience;
- Collective self-government - maintains a favorable climate in the team; ensure the effective work of methodological associations;
- ensure the work of problem groups of teachers; participate in the development of collective decisions, etc.;
- Self-development - to be ready for professional, general cultural self-development, etc. [3].

All these types of pedagogical activities require a high level teacher of pedagogical skill from primary school teachers. “Pedagogical mastery,” notes I. Zyazyun, “is a complex of personality traits that ensures self-organization of a high level of professional activity on a reflexive basis” [2]. At the same time, the important characteristics of the teacher’s personality are the humanistic orientation of his activity, professional competence (professional knowledge, a high level of professionalism in pedagogical activity), pedagogical abilities (ability to quickly improve

himself), as well as pedagogical techniques based on knowledge and abilities, which allows revealing the inner potential teachers, harmonizing the structure of pedagogical activity).

For the modern requirements for the training of specialists in the pedagogical industry, the master teacher should be a creative person, characterized by a high degree of development of orientation towards pedagogical activity, a desire for self-realization in this profession, the development of professional qualities, creative skills that contribute to success in pedagogical activity. It is professional mastery in unity with pedagogical competence, the primary creative skills of primary school teachers that largely determine the effectiveness of his leadership in shaping the student's creative personality. Creativity in teaching requires the teacher:

- The ability to modify, combine the content of educational material in a non-standard direction;
- Readiness to develop original approaches to the planning of the educational process with students in educational and extracurricular educational activities;
- Possession of methods, techniques, non-standard forms of organization of creative educational and extracurricular educational activities of students;
- Readiness of pedagogical experimentation - to search for ways to improve the educational process in order to develop the creative potential of students, etc.

So, in order for the elementary school teacher to be able to act creatively, he must have a number of properties, professionally important qualities that ensure the professional self-development of his personality and through him the development of the student's personality.

We consider the preparation of future primary school teachers for creative pedagogical activity, on the one hand, as the ability and willingness of a teacher to contribute to the formation of the schoolchild's creative personality, the development of his creative abilities, and on the other hand, as constant self-improvement, raising the level of creative pedagogical activity. The emphasis on self-improvement involves self-education, self-upbringing, self-determination, which is the whole development of the personality of the future teacher.

We understand the process of preparing primary school teachers for creative pedagogical activity as an objective creative process, which should correspond to modern trends in the development of higher education in the republic, taking into account integration into the European educational space, the achievements of psychological and pedagogical science and pedagogical practice, predetermined by the specificity and patterns of the process of personality development and self-development. We consider this process as a phased process, which is carried out by students mastering the educational program. An analysis of the curricula for the preparation of future primary school teachers of the educational and qualification level "Bachelor" showed that the courses of disciplines that make up their structure have significant potential for the creative development of the personality of the future teacher, but are fragmented and fragmented. A clear orientation of students to the formation of the creative personality of the student and teacher and the mutual development of their creative abilities is aimed at mastering by students the discipline course "Pedagogical excellence". The content of preparing primary school teachers for creative pedagogical activity includes: theoretical and methodological substantiation of the basic concepts of pedagogical creativity and the nature and specificity of creative pedagogical activity of primary school teachers; determination of the structure of the creative personality of a primary school teacher, stages and levels of development of his creative personality; the study of the

main directions of scientific research of pedagogical creativity; determination of the creative qualities of the student's personality, their content and assessment criteria; identification of psychological and pedagogical conditions, factors of success of creative development of primary school students; substantiation of the characteristics of the activities of primary school teachers in the creative development of students; study and improvement of pedagogical experience; the use of pedagogical technologies as the creativity of primary school teachers [1].

The implementation of the content of the course is based on the phased formation of professional and creative knowledge, skills and practical skills of students.

Stage I is informational and indicative. The goal is to ensure students' awareness of the laws and laws of pedagogy of creativity as a branch of pedagogical knowledge about the creative development of the individual.

Stage II - meaningful and active. Goal: students to master the technologies of development, self-development, self-improvement, self-education of the individual's creative abilities; consolidation of practical skills in planning, organizing and creating favorable psychological and pedagogical conditions for the creative development of students.

Stage III - control and reflexive. The goal is control, generalization, assessment of the level of students' preparation for pedagogical creativity.

In our opinion, it is advisable to prepare for creative pedagogical activity on the principles of:

- Humanization of education - providing the student with the opportunity of constant self-development, self-improvement, development of creative abilities in pedagogical activity;
- Organization of interaction with students on a dialogical basis - orientation to the comparison of different points of view, tolerant attitude to other thoughts;
- Creation of situations of creative cooperation, co-creation, community;
- professional and creative orientation - generalization and synthesis of psychological and pedagogical knowledge, professional practical skills of students, the formation of readiness to optimally and creatively use them in professional and pedagogical activities on the basis of a theoretical understanding of the essence of the pedagogical process as an integrated system;
- innovation - the continuous updating of the content of professional and pedagogical training of future teachers by the achievements of pedagogical science and practice, the results of pedagogical creativity;
- The use in the training of future specialists of innovative pedagogical technologies with an orientation on the creative development of the student's personality.

Preparing students for the development of creative abilities of elementary school students provides for an active research position in the classroom in order to critically analyze, comprehend and evaluate the effectiveness of studying all professional disciplines, professional activities during teaching practice; the formation of future teachers's attitude towards themselves as an actor, which manifests itself in the ability to change (modernize) the learning process and education of primary school students, to weigh and evaluate the consequences.



Of particular importance is the creation by students of individual projects, the assimilation of the content of the programs of the relevant disciplines, the acquisition of skills in the application of innovations in educational work in practice, participation in scientific and practical, scientific and methodological conferences, seminars, olympiads, the creation of their own innovative pedagogical technologies, the implementation of course , theses, etc., That is, the active involvement of young people in scientific activities. So, preparing a teacher for the development of students' creative abilities in mathematics lessons is a specially organized and focused process that involves changing the fundamental, general scientific and vocational training of future teachers, organizational and methodological reorganization of educational activities, a special selection of content, forms, methods and means of vocational training , as well as the creation of special psychological and pedagogical conditions that would activate the mechanisms of personal and professional development of each student and teacher.

## CONCLUSIONS

So, the modern requirements for training specialists in the field of education, especially primary school teachers, require improving their readiness for creativity in professional pedagogical activity. The proposed content of training primary school teachers in the aspect of pedagogical creativity, implemented using innovative pedagogical technologies, non-traditional forms, active teaching methods, in our opinion, will contribute to improving the quality of this training. Prospects for further research in this direction are enriched in the study of the problem of continuity in the work of preschool educators and elementary school teachers to develop children's creative abilities.

Creativity is an integral element of the teacher's pedagogical culture. The preparation of an elementary school teacher for the development of creative abilities of primary schoolchildren is based on the methodological recognition of the priorities of the student's personal development, his needs, motives, goals, abilities, and individual psychological characteristics; involves the restructuring of the pedagogical process in the direction of its focus on increasing the professionalism of the student, the formation of the teacher's professional and creative personality, the development and self-development of the subjects of pedagogical interaction, the development of psychological and pedagogical mechanisms for their self-improvement and familiarization with the creative process.

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DOI: **10.5958/2249-7137.2020.00604.7**

## MODERNIZATION OF MOTHER TONGUE EDUCATION THROUGH IMPROVEMENT OF STUDY TASKS

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### ABSTRACT

*This following article deals with the role of improved questions and assignments in the development of native language education, as well as classifies and interprets the types of assignments according to their function. In recent years, a number of scientific and methodological researches have been conducted on the methods of teaching the native language. Including Sh. Yusupova<sup>2</sup> and N.Yuldasheva<sup>3</sup> and others in their research promoted the teaching of the native language on the basis of new pedagogical technologies. When the task is used in the native language teaching methodology, speaking skills and competencies begin to develop faster. Existing exercises are used in existing textbooks and manuals.*

**KEYWORDS:** *Questions, Assignments, Tests, Knowledge, Skills and Competencies, Assignments, Teaching Materials, Exercises, National Methodology.*

### INTRODUCTION

While the process of globalization is accelerating in the world, the issues of language preservation, improvement and teaching are becoming more urgent. Today, various interactive methods of language teaching are widely used in practice. The basis of any teaching methodology is a system of learning tasks, ie questions and assignments. The scientific literature on the teaching of English, French, German and other advanced foreign languages pays special attention to the quality and diversity of assignments and the effective use of questions in the educational process. In the world experience, learning assignments are characterized by a variety of sections or topics. The questions and assignments given in the current textbooks and manuals do not adequately shape the student's life speaking skills.

The teaching of languages in the world is based on a competency-based approach, and the formation of linguistic competencies in the classroom leads to the development of speech

competencies. The levels set out in the native language are also applied. Listening, speaking, reading and writing skills are formed on the basis of these requirements for language learning. Using this approach creatively, it is also possible to effectively organize native language classes.

In most countries, native language teaching is based on a competency-based approach. Improving the content of educational tasks in the general secondary education system, the formation of the necessary speaking skills in students, as a result of which to increase communicative literacy is one of the most pressing issues at the level of public policy today. It is necessary to develop creative thinking skills in students through native language teaching. "We will mobilize all the forces and capabilities of our state and society for the development and happiness of our young people as independent thinkers, with high intellectual and spiritual potential, who will not be idle to their peers in any field around the world," said Shavkat Mirziyoev<sup>1</sup> and emphasis is placed on the urgent task of educating the youth of our country as independent thinkers who are able to express themselves freely and competently, both orally and in writing. In this sense, there is a need to improve the methodological support of teaching materials on phonetics in general secondary education through the teaching of the native language to fully develop students' speech and linguistic competencies, in particular, literary pronunciation skills, spelling literacy, vocabulary and independent thinking.

In recent years, a number of scientific and methodological researches have been conducted on the methods of teaching the native language. Including Sh. Yusupova<sup>2</sup> and N.Yuldasheva<sup>3</sup> and others in their research promoted the teaching of the native language on the basis of new pedagogical technologies. A.Gulyamov<sup>4</sup>, M.Saidov<sup>5</sup> and N.Alavuddinova<sup>6</sup> and conducted researches on the methodology of independent work, creative thinking skills through mother tongue teaching.

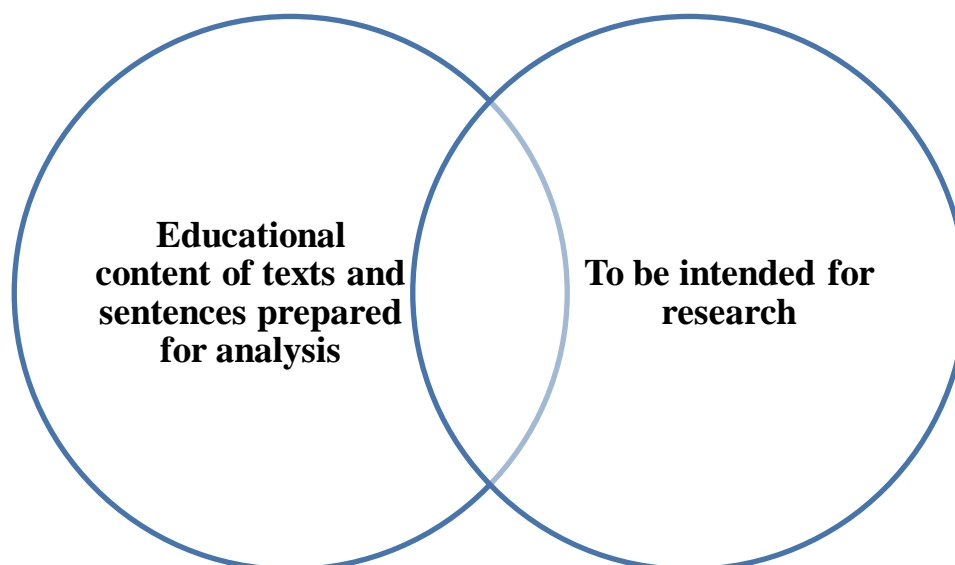
In his research work on the tasks and methods of using them in the process of teaching the native language in the 5th grade of Uzbek schools, M. Saidov partially touched upon the issue of teaching the "Phonetics" section of the native language, as well as "Introduction" and "Vocabulary". In the process of teaching phonetics, it is mainly aimed at developing exercises and assignments for the development of thinking. However, the primary function of mother tongue teaching, i.e., teaching literary pronunciation, pronunciation exercises, and the effect of pronunciation on spelling, has been neglected. The aim of this study is to improve students' creative thinking, respect for the mother tongue, correct and appropriate use of words, the formation of a culture of communication by improving the content of teaching materials, which are the content of native language teaching materials.

In teaching practice, such assignments in textbooks are not universal, but it is not possible to build the required skills and competencies based on them. Learning assignments are not designed to be easy to evaluate based on clear criteria. If the assignment is simply unstructured, well thought out, purposeful, and versatile, the lesson time will be used effectively. If the task is focused on building a single skill, it is difficult to fully meet today's demand. The time has already come to form multiple skills while completing a task. Exercises and assignments are not used effectively in most textbooks and manuals. That is, one task is enough.

In our opinion, giving more than one task at a time is more effective:

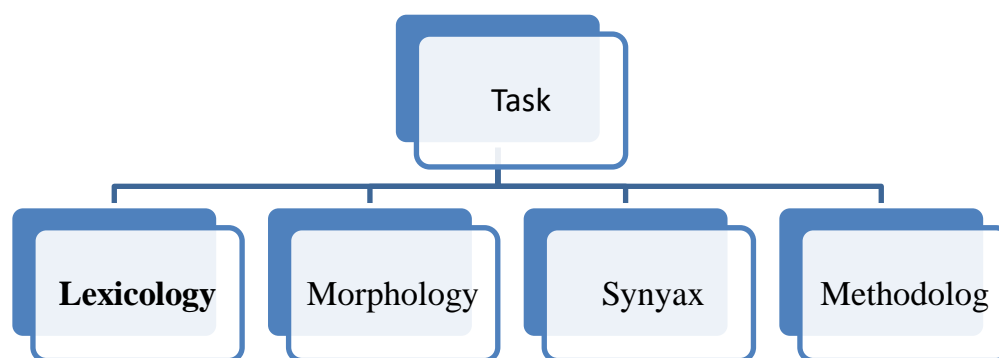
- First, it expands the use of language;

- Secondly, it is not difficult for students to ask questions about other subjects taught at school, including Mathematics, Physics, Chemistry. This is because she will be accustomed to performing tasks that are often encountered in this form of problem-based assignment in mother tongue classes and are tasked with a step-by-step solution. It is advisable for any assignment to have the following two features:



Assignments mainly serve to form linguistic competence, acquire knowledge, develop students' independent thinking skills, so it is also necessary to identify their areas of application.

More assignments should be relied upon in teaching the following sections:



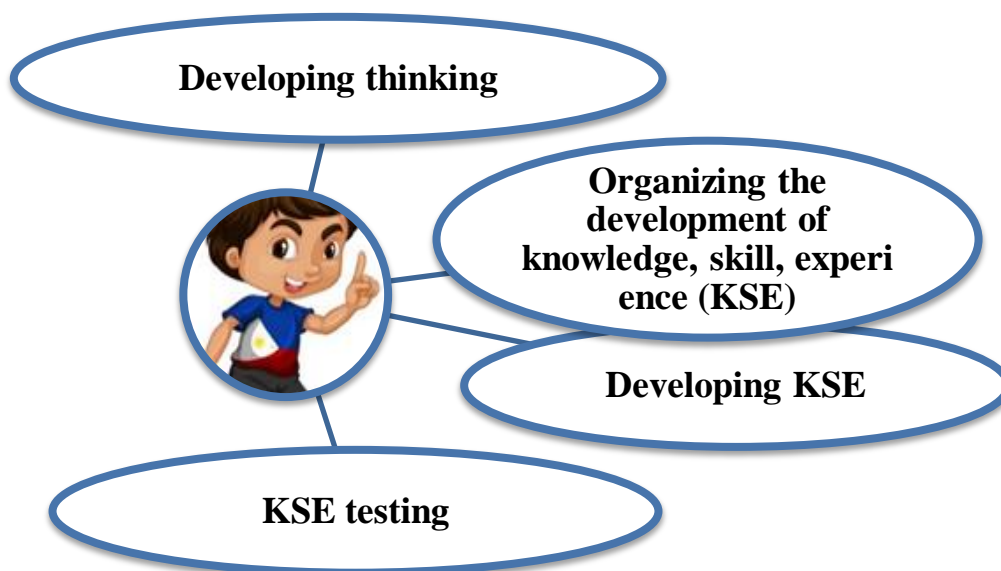
**Figure 2.Places of application of the task.**

In teaching the following sections, it is important to keep in mind that there is a greater need for exercise than for homework to form effective speech types, as well as *orthography*, *orthoepy*, *spelling*, *punctuation*, and, of course, *calligraphy* in lessons related to calligraphy.

Different types of assignments are used in the education system. In particular, the adaptation of native language teaching methods to modern requirements is vital, but the use of teaching tasks is often outdated. Forming a single skill through a whole head task is lacking from today's perspective. In modern textbooks, assignments act as a device for memorizing information.

Without enriching the student's thinking and vocabulary, it is impossible to talk about his fluent, logically coherent, effective speech. Tasks such as "Write a text", which are widely used in the classroom today, no longer justify themselves. Because the reader, with his helpless vocabulary, narrow-mindedness, cannot write the required content at the expected level. Important, useful, influential information related to the same topic in the reader is scarce or non-existent. In this sense it is possible to obtain the necessary information through assignments, only if it is used appropriately.

Tasks have several forms in terms of their functions in the educational process, but in the national methodology they are still used in combination without classification. It is expedient to conditionally classify the tasks used in the methodology of teaching the native language as follows:



In the national methodology, assignments, unlike exercises, can perform a variety of tasks based on their content. In the history of native language teaching, exercises have always been a priority over assignments; in fact, assignments should include exercises and lead. When the task is used in the native language teaching methodology, speaking skills and competencies begin to develop faster. Existing exercises are used in existing textbooks and manuals. The basic exercises that form the basis of repetition first form the knowledge-related skills acquired by the student, and then the skills. Questions and assignments enrich knowledge, strengthen, develop thinking skills, and most importantly, knowledge that is neglected in Uzbek language teaching methods to determine the level of formation of skills and abilities performs the task of testing. Purposeful and effective use of questions and assignments leads to quick and easy formation of verbal competence.

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DOI: **10.5958/2249-7137.2020.00605.9**

## SCRIPTURES OF EASTERN SCIENTISTS ON SCIENCE

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### ABSTRACT

*The following article deals with the views of Eastern scholars on science and intelligence. We have examined the views of Eastern Renaissance thinkers. The scholar emphasized that the best way to study a thorough and in-depth science is to combine the learned knowledge with practice. In doing so, he interprets the human mind as the basis of activity, which, in turn, goes far ahead of his contemporaries, arguing that this activity is the basis for the creation of new knowledge. The Arabic translation of the works of ancient Greek philosophers on philosophy and logic aroused great interest among al-Ma'mun and all the scholars of the time. The country, where the ruler gathered ignorant ministers around him, was in a state of unspoken decline. Kaykovus said this in the "Kobusnoma" about knowledge and wisdom.*

**KEYWORDS:** *Eastern Renaissance, Hadith, Bayt ul-Hikma, Ulugbek Academy, thinker, knowledge, science, intellect, education, wise man.*

### INTRODUCTION

In our country with an ancient history, the attitude to science has been various at different times. In the past, any natural phenomenon was miraculously spread by people, while in the days when religious fanatics held leading positions, the rise of science was equated with satanic deeds. All pre-Islamic artifacts were religious. Therefore, very few examples of science, art and culture have survived from ancient times.

As the representatives of Islam achieved their goals, the scholars gradually began to manifest themselves. Now not only religious but also secular sciences have become a necessity for mankind. Caliph Harun al-Rashid was founded in Baghdad in 766-809. Bayt ul-Hikmat (or "Khizonat ul-Hikmat") was a scientific institution that unites scholars. Al-Ma'mun Baba al-Mansur multiplied the number of books collected in the palace by his father Harun al-Rashid.

The library in the palace was called Bayt al-Hikma during the time of Harun al-Rashid. He then left the library to work as a translator. As a result of al-Ma'mun's constant attention was paid to the Bayt al-Hikma, his name has always been associated with historical sources.

In Uzbek works it is called "House of Knowledge" or "House of Wise Men". It should be noted that most of the sages gathered in the Bayt al-Hikma were scholars from Khorasan and Central Asia. They met al-Ma'mun in Marw and later moved to Baghdad at the invitation of the caliph. In the palace of Al-Ma'mun - among the Central Asian scholars studied Muhammad al-Khwarizmi, Yahya ibn Abu Mansur, Habash al-Hasib al-Marwazi, Khalid al-Marwarrudi, al-Abbas al-Jawhari, Ahmad al-Farghani. 'teeth are possible. In general, al-Ma'mun paid a great attention to science led to a number of achievements in almost all the sciences of the time, including Mathematics, Astronomy, Medicine, Chemistry, Geography, Philosophy, Logic, Literature, and religion. The Arabic translation of the works of ancient Greek philosophers on philosophy and logic aroused great interest among al-Ma'mun and all the scholars of the time. Muslim authors began to write commentaries, commentaries, and abbreviations on these works, and as a result, they published new works on Philosophy, Logic, and Theology.

It should be noted that the work of Central Asian scientists in Baghdad has made a significant contribution to the development of Humanities. In particular, the names of such scholars as Muhammad al-Khwarizmi, Abu Bakr al-Razi, Ahmad al-Farghani, Abu Nasr al-Farabi, Ahmad as-Sarakhsi, Ahmad as-Saghani are mentioned with deep respect all over the world. Indeed, Central Asian scientists took part in the revival of the ancient sciences, systematizing a number of natural sciences with their works, shaping them as a science and enriching them with new ideas.

It is obvious that in our past not only scientists but also the immortal stars of the scientific pick have matured.

The following ideas about knowledge and acquisition of knowledge are stated in the hadiths:

"Striving for knowledge is both an obligation and a duty for every Muslim."

" Study from the cradle to the grave."

"One hour of study is better than one night of prayer."

"If a scientist does not speak enthusiastically when asked about his knowledge, he will be put on fire on the Day of Resurrection."

"Be a scientist first! At least be a student or a listener, a lover of science. "

"The advantage of charity is that a Muslim learns knowledge and then teaches it to other Muslim brothers."

**Abu Rayhan Biruni** said the following about knowledge: For example, "Monuments of Ancient Peoples" (original name "Alosar al Baqiya an alqurun alholiya") - the work tells about almost all areas of knowledge, passing from science to science. : "The goal is not to prolong the sentence, but not to bore the student. Because constantly looking at the same thing leads to boredom and impatience. As the student moves from science to science, it is like walking in different gardens. Before managing to do one thing, the other begins, and the person is interested in seeing and

wanting to see them, as it is said, "Every new thing has its own flavor." One thing is tiring, it is tiring to remember. "

Beruni said that a good idea is "ignorant" even for those who do not implement it. It is useful to argue that "riding on ignorance and arguing with someone who keeps his word will not benefit the owner of the goal or the goal".

"Ignorant people are prone to superstition."

"Knowledge is the fruit of repetition and revision".

#### **Abu Nasr al-Farabi said about science and scholars:**

1. "Education is about words and learning."
2. "Education is done through practice, that is, through experience will be increased".
3. "Whoever speaks of knowledge and wisdom, let him start from his youth, let him keep his word, let him abstain from evil deeds, let him stay away from betrayal, deceit and trickery, let him be pious, let him not deprive himself of knowledge and the people of knowledge".

#### **Ahmad Yugnaki's Hibbat al-Hakayik echoes these ideas.**

Knowledge opens the way to happiness, so

Be knowledgeable, seek the path of happiness.

The following remarks of Yusuf Khas Hajib are also noteworthy.

He reads intelligently, he knows knowledge,

Achieves an educated, intelligent wish.

All goodness is due to knowledge. It is as if knowledge leads to the sky. The word came down from the green sky. Man glorified himself because of his word.

The IX-XII and XIV-XV centuries were not the golden age of scientific development of the East. Although many scientists were born and left an indelible mark on the history of mankind with their discoveries before and after it in our country. Encyclopaedic scholars, who had a place in world civilization during the Golden Age, worked for centuries to appear. Only Ibn Sinna's Laws of Medicine (Al-Qanun fit-tibasari) were used in the world's leading medical schools until the 19th century. Mirzo Ulugbek's book "Ziji Jadidi Koragoniy" was a necessary guide for astronomers. They are just like a drop in the ocean. Bobur's book was not only geographical, but also ethnographic, biological, and educational.

From time immemorial, science has been likened to a lamp that illuminates the path of humanity, and scientists have been the pioneers carrying the torch. In particular, if the horns gathered wise ministers around them, the state prospered. The country, where the ruler gathered ignorant ministers around him, was in a state of unspoken decline. Kaykovus said this in the "Kobusnoma" about knowledge and wisdom.

While glorifying the importance of knowledge and intellect, Kaykovus puts the knowledge above than wealth: It is better to be intellectually rich than to be financially rich, because one can accumulate wealth with one's mind, but one cannot learn wisdom with one's wealth. Know that

the mind is a mold that cannot be stolen by a thief, that it does not burn in fire, and that it does not flow into water”.

Nizomulmulk wrote in his “Siyosatnoma” (Policy) the following.

"It's a public event, and it's the right thing to do".

"If the news spreads in the country that the king will receive the oppressed for two days, punish the oppressors, punish them and listen to the words of the people and punish the oppressors, then the oppressors will not commit atrocities for fear of the consequences".

This is evidenced by the fact that our ancestors paid great attention to the justice of the state.

However, there were cases when scholars refused to create important works. Ibn Sina, who did not want to live in the Sultan's palace, went to Khorasan in search of knowledge, and Beruni went on a trip to India.

Given the vast potential of the scholars of that time, they were given the rank of encyclopedic scholar.

For example, the works of Ibn Sina that have come down to us. (Various sources state that he wrote more than 450 works, but 242 (160) of them have come down to us. Of these, 80 are related to philosophy, 43 to medicine, and the rest to logic, psychology, nature, and astronomy. However, not all of these books have been studied by scholars in the same way.

The state flourished during the reign of Timur and the Timurids, because the kingdom was enriched with scientists and artists brought from other countries. In the Middle Ages, Movarounnahr and Khursan were remembered not only for their architectural monuments, but also for their high scientific development. Leading scientists of the world began to hold scientific conferences at the Ulugbek Palace. In particular, the great astronomer and historian Mirzo Ulugbek created a unique school of astronomy in Samarkand. Along with Ulugbek, the famous mathematician and astronomer of his time Kazizoda Rumi (Salahiddin Musa ibn Muhammad), Giyosiddin Jamshid Kashiy, a student of Ulugbek, "Ptolemy" of his time! Ali Kushchi (Alouddin ibn Muhammad) and others, who became famous by the name of, carried out scientific research together and made a significant contribution to the world's scientific treasury. The famous philosopher Ali ibn Muhammad Jurjani, the famous physician Mevlana Nafis, the poet Khayali Bukhari, the author of the epic "Yusuf and Zulayho" Durbek, the well-known representative of the genre of kasida, Uzbek poet Sakkoki Calligrapher Abdurahim Khorezmi and others lived and worked in Samarkand under the auspices of Ulugbek. Also, many famous scientists, poets and scholars of the East often visited Samarkand. During Ulugbek's reign a unique school of historiography appeared. Well-known historians of the 15th century, the author of "Zubdat at Tavorix" (upper part of the history) Hafiz Abror Matla as-sadayin and the complex al-Bahrain "(The union of two seas and the melt of two blessed stars) Mirkhand, the author of "Gardens of Paradise", Khandamir Ulugbek, the author of "Habib us siyar" (Letter to a friend) and a number of other works. they grow up in a cultural environment. The cultural center of the Ulugbek period, later renamed the Ulugbek Academy, was first recognized by the famous French writer and scientist Voltaire (1694-1778). After the Mamun Academy, founded in 1010 in the history of our ancestors, Uugbek academy emerged as the second academy in Central Asian history.

At a time when Ulugbek and other scholars were working in Samarkand, Shahrukh Mirzo and Gavharshod Begim were collecting the world's rarest books in Herat.

In the second half of the 15th century, the heirs of this scientific heritage did a lot of work. The names of Gadoi, Atoi and others were also known and popular.

Speaking about the importance of science, Abdurahman Jami explained the role of the book in the acquisition of existing knowledge and the virtues of the book. For example:

Turn to the book, O my dear child,

Enjoy the book, listen to me.

Munising in solitude, if you know, is a book,

It is a book that shines on the dawn of wisdom.

The scholar compares the book with a "skin-covered scientist". Abdurahman Jami emphasized the need to acquire knowledge from a young age. At the same time, he condemned ignorance and pits the wise and the ignorant against each other:

First of all, child, enjoy knowledge,

Get out of the land of ignorance, the path to knowledge.

**Navoi in his work "Nazm ul-javohir" describes the following about education:**

Whoever is a scholar, at the right time,

When a party is held, paradise is absolute.

Anyway, at least I didn't go down without explaining myself first.

If it's Urn in the meeting, it's time to fly.

In the content of these verses, he is knowledgeable: a wise man overcomes any difficulty in achieving his goal, and if he takes the perfect as his support, he will never stumble, because science serves to ensure human happiness. The idea is reflected.

Hussein VoizKashifiy emphasized that "Knowledge is necessary for living, not for gaining wealth and the world". The scholar emphasized that the best way to study a thorough and in-depth science is to combine the learned knowledge with practice. In doing so, he interprets the human mind as the basis of activity, which, in turn, goes far ahead of his contemporaries, arguing that this activity is the basis for the creation of new knowledge. In particular, in "Ethics of Muhsini" was emphasized the interaction between mind and activity of speaking connection, all people feel the need for the mind, and the mind feels the need for the organization of practical activity. In the eyes of the scientist, action was as a mirror of the mind.

Wars over the throne destroyed the two great empires, so in the early 16th century, another educated heir to the throne, Babur, renounced his homeland and was forced to wander in foreign lands. If that was not happened maybe TajMahal would have adorned one of the cities of Movarounnahr!

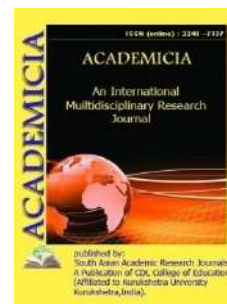
In conclusion, we can say that the Eastern Renaissance became a force that significantly satisfied people's scientific faith and thirst for knowledge. The Middle Ages made a significant

contribution to the awakening of the sleeping West. The works of ancient Greek, Roman and other ancient scholars, which had almost reached the point of oblivion, saw the world for the second time and have now become a vital necessity. Thus, the East truly became the cradle of Western science and scholars.

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DOI: **10.5958/2249-7137.2020.00606.0**

## VIDEO CONTENT AS A TECHNOLOGY FOR THE FORMATION OF PROFESSIONAL COMPETENCE OF A FUTURE GERMAN LANGUAGE TEACHER

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### ABSTRACT

*The article discusses video content as a technology that allows the formation of the professional competence of a future German teacher, built on authentic, audio-visual symbols and capable of programming the thinking and behavior of a future teacher in a certain way. The use of non-standard forms of learning through technology using ICT in the classroom. Developing the creative potential of the imagination of future teachers with the help of skills in working with films and fragments of films of various genres, adaptation of literary works, social advertising, interviews.*

**KEYWORDS:** The Use Of ICT In The Classroom, Future Teacher, Video Content, Audiovisual Media, The Development Of Creativity, Critical Thinking, Motivation, The Function Of Video Content.

### INTRODUCTION

The current stage is characterized by the impact of technological acquisitions of modern communication resources (computer technology, video, Internet, television), which require a “radical improvement of the system of teaching the younger generation the German language, in the training of specialists who are fluent in them, by introducing advanced teaching methods using modern pedagogical and information and communication technologies and on the basis of creating conditions and opportunities for their wide access to the achievements of world culture and world information resources, the development of international cooperation and communication.” [1]

The foregoing directs the state policy of our Republic to "training highly qualified personnel in accordance with the modern needs of the labor market, increasing the availability and quality of educational services." [2]

The qualified training of future teachers is inextricably linked with their training in higher pedagogical educational and the process of their preparation for professional and pedagogical activities. In this regard, the need arose "to radically revise the entire system of our education, expand the opportunity for mastering professional knowledge, and strengthen the orientation toward training specialists who are able to work in new conditions, using new, modern technologies". [3]

Such a new condition is "information support of the pedagogical process based on information technologies, computerization, Internet information in educational conditions" [2], which allow future specialists to independently learn the German language according to modern requirements, independently analyze the necessary information, be able to put it into practice in order to communication, the ability to conduct a dialogue of cultures, to experience aesthetic satisfaction in the process of studying works of art and in the development of media texts with aesthetically valuable content.

Modern communication technologies, including video, computer technology, the Internet and mainly in the form of foreign media texts, contribute to a more active and fruitful cultural dialogue.

There was a need for future teachers to develop competencies aimed at independently obtaining the necessary information with the ability to analyze and synthesize it. The aforesaid necessitates teaching future teachers of the German language to practice various types of media, perceiving their "language", studying the large flow of information recommended by video content, applying it for pedagogical purposes, determining the manipulative effect of video content, and expressing oneself on the basis of video content.

"The use of modern information technologies in the educational process will significantly increase the effectiveness of teaching methods and will improve the work of teachers to improve their pedagogical skills" [4].

Researcher Sh.Kh. Kadyrov notes that "the active use of information and communication technologies in vocational education not only provides a fresh look at the pedagogical process, but also provides the necessary scientific and methodological basis for its analysis and updating." [5]

"Information technologies have methodological functions and certain didactic properties that allow their introduction into the learning process." [6]

Professor L.T. Akhmedova believes that "the meaning of the new educational approach is in the free creativity of teachers and students working using new teaching technologies, and not in strictly following the algorithm of certain techniques." [7]

Video content - content work with video when creating your own videos, the process of creating video material, one of the non-standard forms of learning through technology using ICT in the classroom.

The use of video in lessons is “one of the most effective means of optimizing the educational process, developing the creative potential of a person, as well as ensuring the possibility of effective self-realization” (EA Pepelyaeva, V.I. Pisarenko, S. A. Valetko).

According to G.K.Selevko, in order to make a lesson rich and interesting, simply viewing and analyzing a literary text is often not enough, other forms of educational activity should be involved. In this case, the use of visual materials, including videos, is suitable for developing the creative potential of future teachers. It should be noted that if the video is created by future teachers themselves, there will be much more benefit from the pedagogical point of view. [8]

Video content is an indirect expression of the environment, which is a form of representation of reality that requires decoding. From the point of view of German scientists RöstlerDietmann, Würfel Nicolas “the peculiarity of the media sign system is that the media contain a large number of sign systems: language, non-verbal (clothing, gestures, facial expressions), visual (video, film, television, Internet, graphics, photography), verbal (voice, intonation, articulation)”, etc. Video content, according to German scholars, is a symbolic form of expression similar to other forms of symbolic expression, such as theater, dance, literary works, and musical compositions.

In the course of the study of the problem of training qualified teachers with the help of video content, our attention was drawn to the study of A.P. Zhdanko, dedicated to the problem of using video content in teaching English. A.P. Zhdanko notes that video content helps to penetrate deeply into the content of the text being studied, to better understand its emotional side and its meaning, develop a reflection of the student of a foreign language. Also A.P. Zhdanko believes that the video clips created using video content technology develop the individual characteristics of those who study a foreign language, express themselves and present their culture in a creative way. [nine]

In the context of this work, we consider video content as a technology that contributes to the formation of professional competencies of a future German teacher, based on authentic audio-visual signs aimed at programming the thinking and behavior of a future teacher. Such video content has certain functions.

Analyzing the works of domestic and foreign researchers A. Abdukadirov, U.S. Begimkulov, R. Dzhuraev, H. Sh. Kodirova, O. A Baranova, E. A Bondarenko, S. N. Penzina, Yu. N. Usova, A. V. Fedorova N.F. Khilko involved in the study of information and communication and audio-visual teaching aids, we have identified the originality of video content based on 8 functions: developmental, creative, reflective, informational and communicative, rehabilitative, cognitive-heuristic, aesthetic, recreational and suggestive.

Features of video content are that:

- Video content creates “reality” in a certain way and for a specific purpose (advertising, opinion formation, etc.); (Zhdanko A.P.)
- Each of us interprets video content in its own way: the perception and interpretation of video content depends on factors such as gender, age, culture, life experience, etc. ;
- The axiological approach is traced in video content, i.e. the system of values necessary for studying the culture of native speakers;

- The creation of video content should give an advantage to the future teacher of the German language for creative expression of himself.

Our definition of the types and contents of video content functions and their application for the formation of the professional competence of a future German teacher through video content is presented in the following table below. [1]

TABLE 1.

№	Video Content Features	Content Content Features
1.	<b>Educational and creative</b>	The need for self-fulfillment becomes personally significant for students due to their age-related psychological and pedagogical features. Creative, creative activity provides them with this opportunity. Video content allows you to harmonize your personality, to reveal and develop creative abilities, to unite the team, contribute to the disclosure and realization of the potential and abilities of the future German language teacher.
2.	<b>Information and communication</b>	The future teacher can use images, sound, music as a means of expression and communication. With motivation, communication begins, both verbal and audiovisual. This function of video content is expressed in their dual nature. It is necessary for the future teacher to explain that, on the one hand, a film / video is a work of art in which the author expresses his worldview, attitude to reality, and on the other hand, "screen arts have their own, special language, that this language is different from that which is spoken with him music, art, dance, theater." And any language is a sign system.
3.	<b>Reflective</b>	It develops figurative, associative, logical creative thinking, helps to develop a value attitude to people, develops organs of sensory perception (hearing, sight, smell, touch, taste), sense of rhythm, composition, atmosphere of space; forms the ability to model the plot, contributes to the socialization of the individual. The function of video content is expressed in the creative comprehension and interpretation of visual narration. A feature of the future teacher's perception of the film / video is that they perceive the events of the film and the characters as really existing.
4.	Rehabilitative	The function of video content is to restore spiritual harmony, relieve tension. Art, including theatrical and audiovisual, has a healing, therapeutic effect and helps get rid of neurosis.
5.	Cognitive heuristic	Video content helps to identify the presence of unusual,

		highly specialized abilities and, with their help, to form skills and motives, ways of thinking and activities that can make up an arsenal of a competent reporter, photographer, cameraman, guide, translator in the future. Someone is attracted by the preparation of the scenario plan, and someone will gladly act as an actor, the third is interested in video, the fourth is editing, etc. The function is that video content is a means of knowing the world and self-knowledge. The diverse content of video content allows you to take into account the interests of each student and contributes to the self-determination of the future teacher.
6.	Aesthetic	There is a huge amount of scientific research on the impact of art on the inner world, the development of the future teacher. Developed aesthetic perception has a beneficial effect on cognitive, emotional, motivational development. The function of video content is to form an aesthetic perception and taste, a desire for beauty and creativity. Video art gives a value orientation to a esthetic consciousness.
7.	Recreational	The function of video content involves the use of video content to relieve tension, cultural entertainment, recreation.
8.	Suggestive	Function affects the human psyche. This function is a kind of indicator of one's own importance and need for others. If it is filled well, then the individual's self-esteem is growing. Criticism is perceived calmly.

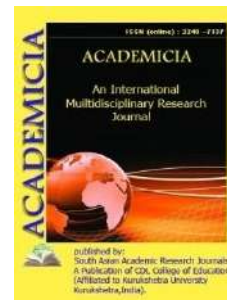
Of no small importance is the principle of authenticity. Authentic video content contains an appeal to the viewer, that is, the ability to enter into dialogue with the characters, the author of the video content; diverse in style and topic, working with them is of interest to future teachers; illustrate the functioning of a language in a form accepted by native speakers and in a natural social context; are the best way to teach the culture of the country of the language being studied contain the most communicatively significant lexical units, common in typical communication situations. must successfully solve communicative problems and achieve a communicative goal, using a foreign language as a means of communication in various communicative situations. "

At the present stage, problem-based learning is an effective teaching technology that forms the necessary teacher competency system for the future teacher, develops the necessary personality characteristics for the future teacher, which are necessary for professional activities such as self-development, self-education, self-education, independence. In the process of creating our model, we relied on the requirements of the State educational standard of higher education, containing requirements for a foreign language for future teachers, based on the theory of "dialogue of cultures" M. M. Bakhtin. [10]

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DOI: **10.5958/2249-7137.2020.00710.7**

## **EFFECT ON CONSUMER PURCHASE BEHAVIOR THROUGH INFLUENCE OF BRAND EQUITY WITH SPECIAL REFERENCE TO CARGILLS BRAND IN JAFFNA DISTRICT OF SRI LANKA.**

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### **ABSTRACT**

*Brand equity is the intangible value added to a product by the effective use of promotion and other marketing tools. On dimensions like image, distribution and physical design, it can provide strong competitive advantages in product categories where most alternatives provide the same benefits. Consumer behavior is an important consideration when constructing a marketing plan. While revenue, sales numbers and all profit generating departments are important, when it comes down to it consumer behavior is a big part of the marketing puzzle. The present study investigates the Influence of brand equity on consumer purchase behaviour. The sample was selected from the population of consumers in Cargills branded products. For the purpose of data collection from the respective consumers, the 200 consumers were selected as sample from consumer's population. Based on the mean value, the influence of the brand equity on purchase behaviour are categorized into two levels. Brand element and brand perceived quality are in higher influence to purchase of Cargills branded products. Brand awareness, brand imagery,*

*brand performance, brand resonance and brand association are in moderate influence to purchase of Cargills branded products.*

**KEYWORDS:** *Brand Equity and Buyer Behaviour*

## 1. INTRODUCTION

Today is consumer face a growing range of choice in the products and services. They can buy; they are making their choice on the basis of their perception of quality, services and values. How the customer choose a brand among many brands depend on the brand behavior. It implies the companies to understand the brand behavior of the consumer in order to attract to buy their goods and services (Kotler, Leong, Ang and Tan, 2005) . The consumer decision-making, regarding purchase and utilization of different products and services, is influenced by many internal as well as external factors. Among the external factors, the most important and significant are the attributes of the product itself, the brand and the package in which it is in cased. Attributes are those descriptive features that characterize a product or service- what a consumer thinks the product or service is or has and what is involved with its purchase or consumption.

Consumer buying behavior is affected by many socio-cultural factors like social class, demographics, personality, and beliefs etc. However, besides these, the product itself also makes their decision for them because of the message it transmits, the visual impact it makes, the significant colours and logo of the brand, the brand image and awareness, and the price. Price is a particularly important attribute association because consumers often have strong beliefs about the price and value of the brand and may organize their product category knowledge in terms of the price tiers of different brands.

A successful brand name is the most valuable resource a company has the brand name encompasses the years of advertising , good will, quality evaluation, product experience and other beneficial attributes the market associate with the product (Philp R Cateora and John L.Graham 2005 ).A brand is a unique and identifiable symbol, association, name or trademark which serves to differentiate competing products or services; it represents not only a physical trigger but moreover an emotional hooks to create a relationship between consumers and the product/service (Blackston 2000).

The creation of an effective brand not only captures a greater share of the market, but optimizes marketing effectiveness as well. Successful branding requires a strategic perspective. Strong and durable brand concepts communicated to well target segments result in favorable brand images which reflect the brands identity. Brands signal a level of quality to consumers and can be effectively used to gain a competitive advantage. Branding has been generally recognized as the key to success in nowadays business, especially in rapidly developing fields. It provides value to the consumer through the buying process and thus assures value to the company by attracting consumers and stimulating loyalty. Brand image represents a set of associations established within the minds of customers, implying a promise to them and representing what the brand currently stands for (Batra & Residencer 2004). Image represents what consumer's think of you, while identity represents who your brand is and what it stands for.

The brand name is quite often used interchangeably within brand, although it is more, correctly used to specifically denote written or spoken linguistic elements of any product or image of company. Brand image are typically the attributes one associate with a brand. Here we want to consider, the brand owner will seek to bridge the gap between the brand image and brand identity. Effective brand names build a connection between the brand personalities as it is perceived by the target audience. Typically, sustainable brand name is easy to remember, transcends trends and have positive connection. Brand identity is fundamental to consumer recognition and symbolizes the brand's differentiation from competitors. Therefore, it is important, to empirically examine the actual impact of brand name on Purchase behavior. Such understanding or finding will help to organization (special reference to Cargills brand products) and customers of the Cargills brand products in Jaffna district to establish the better management of firm –customer relationship and to induce the buying behavior.

### **1.2 car gills in Sri Lanka**

Cargills Food City has been hailed the most valued retail brand in Sri Lanka for 2006, with the company being placed third in the top ten list of the most valued brands behind Dialog Telekom and DCSL. The Brand Index 2006 issued by Brand Finance Lanka has also rated Cargills Food City as AA- for Brand Strength, a rating, which is conceptually similar to company credit ratings. Ruchi Gunawardena, Managing Director Brand Finance Lanka noted that: "Cargills Food City has been rated as the most valuable Retail brand in Sri Lanka for creating value through reinventing retail heritage by bringing super marketing to the masses." Gunawardena added, "Basically Cargills Food City has had the ability to re-invent itself to reach the masses. Their strategic innovation has created great value". Commenting on the rating Ranjit Page, Managing Director of Cargills (Ceylon) Limited said: "We are proud and honoured to have been recognised as the most valuable Retail Brand in Sri Lanka. But our success has not stemmed from expansion alone." Page noted that the business philosophy that has underpinned this success has been simple. "We try to make sure that through our core business we enrich the lives of the masses and empower their livelihoods. We are proud to have masterminded a unique business model enabling the direct purchase of rice, vegetable and fruit from our local farming community. In line with our ethos of fair trade Cargills currently partners over 7000 such farmers guaranteeing them a minimum price, which is about 20% above the cost of production," he said.

Cargills Food City has also introduced the innovative "Best Buy" campaign, which is an unprecedented drive to bring down the cost of living. The year long campaign slashes the prices of over 100 products every month and offers the lowest market price for over 25 essential items and the best price for another 15 items. "We identified that it is meaningless to offer a few gifts to a handful of customers just for the New Year or Christmas. Cargills decided that our offers should be extended to all customers across the board throughout the year. So we use our position as the leading Retailer to get the best price for the consumer," explained Sidath Kodikara, Executive Director, Cargills (Ceylon) Limited. Cargills Food City currently operates 110 outlets spread across 17 districts with its latest addition in Nittambuwa.

### **1.3 Research objectives**

- To study on the influence of brand equity on purchase behavior
- To find out influence of brand element in the Cargills Brand name on purchase behavior.
- To find out influence of brand awareness in the Cargills Brand name on purchase behavior.

- To find out influence of brand imagery in the Cargills Brand name on purchase behavior.
- To find out influence of brand resonance in the Cargills Brand name on purchase behavior.
- To find out influence of brand performance in the Cargills Brand name on purchase behavior.
- To find out influence of brand association in the Cargills Brand name on purchase behavior.
- To find out influence of brand perceived quality in the Cargills Brand name on purchase behavior.

## 2. LITERATURE REVIEW

### 2.1 brand equity

Brand equity has been defined as “outcomes that accrue to a product with its brand name compared with those that would accrue if the same product did not have the brand name” (Ailawadi, Lehmann, and Neslin 2003, p. 1), i.e., the benefits a product achieves through the power of its brand name. Keller and Lehmann (2003) delineate three approaches for assessing brand equity: customer mind-set (e.g. Aaker 1996, Keller 2008), product-market (e.g., Park and Srinivisan 1994), and financial-market (e.g., Mahajan, Rao, and Srivastava 1994). These approaches have different strengths and weaknesses (Ailawadi, Lehmann, and Neslin 2003). While financial-market measures theoretically capture current and future brand potential, they often rely on subjective judgements or volatile measures to estimate future value (Simon and Sullivan 1993). Product-market measures are more closely related to marketing activity but don't capture future potential (e.g., Kamakura and Russel 1993; Swait et al. 1993). More importantly, both approaches have limited diagnostic value. Customer mind-set metrics, on the other hand, identify brand strengths and weaknesses (Keller 1993). While these provide insights for strengthening brand equity, they provide little information about brand performance in terms of market share or profitability.

Keller (2008), and this paper, focus on customer mind-set equity, which Keller refers to as “customer-based brand equity.” According to Keller, the “power of a brand lies in what customers have learned, felt, seen, and heard about the brand” (p. 48), i.e., the customer mindset. He develops a theory that identifies two key elements of mind-set equity (see also Keller and Lehmann 2003): (1) awareness and familiarity, and (2) strong, favourable brand associations. It is therefore imperative that any customer mind-set measure of equity include both awareness/familiarity and brand associations.

### 2.2 Buyer behaviour

The topic of consumer behaviour is one of the massively studied topics by the researchers and marketers in the past and still being studied. Researchers show different reasons as to why consumer behaviour has been the topic of many academics and researchers. One of the common views is that understanding consumer behaviour has become a factor that has a direct impact on the overall performance of the businesses (Kotler and Keller, 2012). Another view suggests that understanding consumer behaviour has become crucial especially due to fierce competition in retail industry in the UK and worldwide (Lancaster et al, 2002). This chapter will introduce some other areas of research background of consumer behaviour addressing the works of researchers and marketers.

It is worth noting that consumer buying behaviour is studied as a part of the marketing and its main objective is to learn the way how the individuals, groups or organizations choose, buy and use

and dispose the goods and the factors such as their previous experience, taste, price and branding on which the consumers base their purchasing decisions (Kotler and Keller, 2012).

One of such studies of consumer buying behaviour has been conducted by Acebron et al (2000). The aim of the study was to analyze the impact of previous experience on buying behaviour of fresh foods, particularly mussels. In their studies the authors used structural equation model in order to identify the relationship between the habits and previous experience on the consumer buying decision. Their findings show that personal habits and previous experience on of the consumers have a direct impact on the consumers' purchase decision in the example of purchasing fresh mussels. They also found that the image of the product has a crucial impact on the purchasing decision of the consumer and further recommended that the product image should continuously be improved in order to encourage the consumers towards purchasing.

Another study conducted by Variawa (2010) analyzed the influence of packaging on consumer decision making process for Fast Moving Consumer Goods. The aim of the research was to analyze the impact of packaging for decision making processes of low-income consumers in retail shopping. A survey method has been used in order to reach the research objectives. In a survey conducted in Star Hyper in the town of Canterville 250 respondents participated. The findings of the research indicate that low-income consumers have more preferences towards premium packaging as this can also be re-used after the product has been consumed. Although the findings indicate that there is a weak relationship between the product packaging and brand experience. However, it has been proven by the findings of the research that low-income consumers have greater brand experience from the purchase of 'premium' products when compared to their experience from purchasing 'cheap' brand products.

### **3. METHODOLOGY**

#### **3.1 Sample selection and Sample size**

The sample was selected from the population of consumers in Cargills branded products. For the purpose of data collection from the respective consumers, the 200 consumers were selected as sample from consumer's population.

#### **3.2 Sampling method**

The study had been organized to collect information from the respective consumers who are currently using the Cargills branded products. Convenient sampling method had been used for the sample selection.

#### **3.3 Method of Data Collection**

It refers to what are data are used to carry out this research study and how the data will be collected. The reliability and credibility of the research is depending on data collection. The study largely depends on the primary and secondary data. The primary data were collected through questionnaires with the respondents of 200 people those who are using Cargills branded products. The data collection has mainly two types. Primary data and Secondary data

#### **3.4 Structure of the Questionnaire**

The questionnaire developed based on two parts namely personal information and research information from 200 samples. In the research one of the ordinal measures called "Likert's five

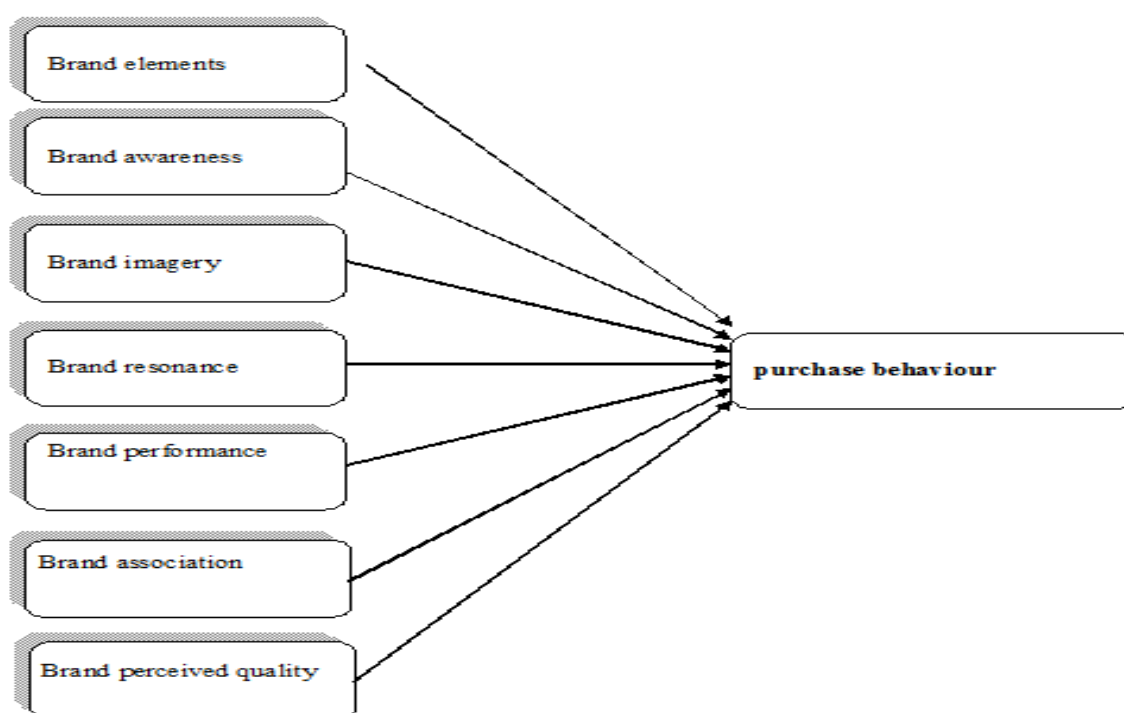


points rating scale” is used to require respondents to order their answers. The questionnaire was designed to measure the influence of Cargills brand on purchase behaviour. Therefore 200 questionnaires were issued to the consumers. The questionnaire consists of two parts, part I intended to collect the customers’ personal information and Part II intended to collect the information regarding research.

### 3.5 Method of Data Analysis

For this study univariate analysis (descriptive statistics) has been adopted using the SPSS (16.0) computer package. The population will be analyzed by central theorem analysis of mean, standard deviation. At the same time data will be presented Based on the values indicated in the questionnaire a mean value for each question is calculated.

### 3.6 conceptual frame work



## 4. Results and analysis

### 4.1 Results of descriptive statistics

The gender distribution represent of the consumers of the Cargills brand products has been represented by out of 200 respondents. Out of these 200 respondents 56% of the respondents were male and remaining 44% were female. Age distribution pattern of the consumers is represented by the out of 200 respondents. Age distribution was categorized into four classes. Among the sample, 29.5% represented the age category of 18-25 years. The high percentage of sample 30% were found between 26 and 45 years. 28.5% represented the age category of 46-55 years in remaining categories, 12% of consumers were found above 56, following table 5.2 shows the age distribution of the sample.



The educational qualification of respondents were classified into six categories in the questionnaire, and out of 200 respondents 5% of the respondents had the qualification of the primary level, and 7% of the respondents had the qualification of secondary level and 18% of the respondents had the qualification of up to O/L, 42% of the respondents had the qualification of up to A/L, 19% of them had a bachelor degree, where remaining 9% of them had some other Professional qualification. Eight groups of respondents according to their nature of designation. 9% of respondents were in professional jobs, 9.5% of the respondents were doing business, 21% of respondents were doing government jobs, 9.5% respondent were Retired persons, 15% respondent were doing Self employment, 13% respondent were officers, 11.5% respondent did not do any other employment but 11.5% were no jobs among the out of 200 respondents.

The monthly income distribution of the consumers of the Cargills brand in Jaffna district has been represented by out of 200 respondents. For the research purpose the monthly income range divided into five ranges. 20.5% of the respondents found to get Below Rs.5000, 27.5% of the respondents found to get 5000-15000 as salary, 23% of the respondents found between the income level 15000-30000, and 17.5% of the respondents were getting 30000-50000 rupees, and 11.5% of respondents were getting above 50000 rupees. The consumer's residence situated close to the particular Cargills food city has been represented by out of 200 respondents. Out of these 200 respondents 39.5% of the respondents were close to the food city and remaining 60.5% were far away from the food city. The consumers work place situated close to the particular Cargills food city has been represented by out of 200 respondents, Out of these 200 respondents 34% of the respondents were close to the food city and remaining 66% were far away from the food city.

#### 4.2. Results of mean value

##### 4.2.1 Brand elements

The average value of the brand name (Mean value is 3.59) indicates that the extent of brand name is high in the Cargills brand in Jaffna district. In addition to this most of the respondents have merely somewhat different opinion regarding the Brand name (Standard deviation is 0.577). This variable includes three indicators which are Publicity, Memorable, and Easy to pronounce; all of these indicators show that the extent of brand name is high in the impact of Cargills brand. These indicators have the mean value of 3.65%, 3.55%, 3.57% respectively.

The Average value of the Brand logo (Mean value is 3.56) indicates that the maintenance of Brand logo is high in the brand of Cargills in Jaffna. Further as far as this dimension most the respondents are given equally different opinion about logo of the Cargills brand. (Standard deviation is 0.884). This dimension includes one indicator which is visible; this indicator show that the maintenance of Logo is high in the Brand in the Cargills. This indicator has the mean value of 3.56% respectively.

The Average value of the Symbol (Mean value is 3.55) indicates that the extent of Symbol is high in the brand of Cargills in Jaffna. Further as far as this dimension most the respondents are given equally different opinion about Symbol of the Cargills brand. (Standard deviation is 0.994). This dimension includes one indicator which is attractively; this indicator show that the extent of Symbol is high in the Brand in the Cargills. This indicator has the mean value of 3.55% respectively.

The Average value of the Packaging (Mean value is 3.56) indicates that the extent of packaging is high in the brand of Cargills in Jaffna. Further as far as this dimension most the respondents are given equally different opinion about Packaging of the brand. (Standard deviation is 0.976). This dimension includes one indicator which is Protection; this indicator show that the extent of packaging is high in the brand name of the Cargills. This indicator has the mean value of 3.56% respectively.

#### 4.2.2 Brand awareness

The Average value of the depth (Mean value is 3.19) indicates that the depth is moderate in the impact of Cargills brand in Batticaloa. Further as far as this dimension most the respondents are given equally different opinion about depth of impact of Cargills brand. (Standard deviation is 0.625) .This dimension includes two indicators which are recall and recognitions; all of these indicators show that the Depth is moderate in the impact of the Cargills brand. These indicators are the mean value is 3.40%, 2.98%, respectively.

#### 4.2.3 Brand imagery

The Average value of the purchases and usage situation (Mean value is 3.04) indicates that the extent of purchases and usage situation is moderate in the brand of Cargills in Jaffna . Further as far as this dimension most the respondents are given equally different opinion about purchases and usage situation of the Cargills brand. (Standard deviation is 0.904). This dimension includes one indicator which is location to use the brand; this indicator show that the extent of purchases and usage situation is moderate in the brand name of the Cargills. This Indicator has the mean value of 3.04% respectively.

The average value of the brand feeling (Mean value is 3.03) indicates that the level of brand name is moderate in the Cargills brand in Jaffna. In addition to this most of the respondents have merely somewhat different opinion regarding the Brand feeling (Standard deviation is 0.602). This variable includes three indicators which are feeling of security of customer, feeling of social approval of customer and feeling of select respect of customer; all of these indicators show that the extent of brand name is moderate in the impact of Cargills brand. These indicators have the mean value of 3.06%, 3.08%, 2.95% respectively.

#### 4.2.4 Brand resonance

The Average value of the loyalty (Mean value is 3.04) indicates that the loyalty is moderate in the Cargills brand in Jaffna. Further as far as this dimension most the respondents are given equally different opinion about loyalty of Cargills brand. (Standard deviation is 0.602) .This dimension includes two indicators which are customer preference and customer loyal; all of these indicators show that the loyalty is moderate in the impact of the Cargills brand. These indicators are the mean value is 2.87%, 3.22% respectively.

The dimension of Attachment includes one indicator is estimation of the brand. That is explained by the following table 5.16. The Average value of the Attachment (Mean value is 2.93) indicates that the Attachment be in the Cargills brand in Jaffna. Further as far as this dimension most the respondents are given opinion about attachment of Cargills brand. (Standard deviation is 0.916) .This Dimension includes one indicator which is estimation of the brand, this indicator show that the procedure attachment is be present in the Brand of the Cargills. This indicator has the mean value of 2.93% respectively.

The average value of the Dimension Community (mean value is 2.98) indicate a moderate level of Community in the brand of Cargills. The standard deviation is 0.752 which indicate quiet different opinions of respondents regarding each statement of this dimension. This dimension includes two indicators which are people's relation with the brand and customer affiliation. All of these indicators show that the procedure is moderately relationship by the Community of the Cargills brand. These indicators have the mean value of 2.98%, 2.98%, respectively.

The average value of the Dimension Engagement (mean value is 2.98) indicate a moderate level of Engagement in the brand of the Cargills. The standard deviation is 0.786 which indicate quiet different opinions of respondents regarding each statement of this dimension. This dimension includes two indicators which are customer learning from Brand and perception. All of these indicators show that the procedure moderately Relationship by the Engagement in the brand of the Cargills. These indicators have the mean value of 2.9%, 3.06% respectively.

#### **4.2.5 Brand performance**

The average value of this Dimension (mean value 3.16) represent that the supplementary features is moderate level the Brand name of Cargills in Jaffna, and . The standard deviation is 0.833 of this dimension. This dimension includes one indicator which is special features. This indicators show that the procedure moderately Relationship by the supplementary of features in the brand of the Cargills. This indicator has the mean value of 3.16% respectively.

The Average value of the style and design (Mean value is 3.24) indicates that the style and design exist in the Brand name of the Cargills in Jaffna. and The standard deviation is 0.864 of this dimension. This dimension includes one indicator which is design aspects. This indicators show that the procedure moderately Relationship by the style and design in the brand of the Cargills. This indicator has the mean value of 3.24% respectively.

The Average value of the brand product price (Mean value is 2.69) indicates that the brand product price is moderate Brand of Cargills . Further as far as this dimension most the respondents are given equally different opinion about Brand product price of Cargills Brand. (Standard deviation is 0.720) This dimension includes two indicators which are Price and frequently adaptation of price; all of these indicators show that the Brand product price is moderate in the Brand of the Cargills. These indicators are the mean value is 3.15%, 2.23%, respectively.

#### **4.2.6 Brand association**

The Average value of the strong (Mean value is 3.18) indicates that the Strong is moderate in the brand of the Cargills . Further as far as this dimension most the respondents are given equally different opinion about strong of the Brand name of Cargills. (Standard deviation is 0.665) .This dimension includes two indicators which are strong relevant and strong consistency; all of these indicators show that the Strong is moderate in the Brand name of the Cargills. These indicators are the mean value is 3.24%, 3.12%, respectively.

The average value of the Dimension favorable (mean value is 3.17) indicate a moderate level of favorable in the brand of Cargills. The standard deviation is 0.665 which indicate quiet different opinions of respondents regarding each statement of this dimension. This dimension includes two indicators which are favorable durability and favorable selection. All of these indicators

show that the procedure is moderately Relationship by the favorable of the Cargills brand. These indicators have the mean value of 3.18%, 3.16%, respectively.

#### **4.2.7 Brand perceived quality**

The average value of the Dimension Brand quality (mean value is 3.60) indicate a high level of Brand quality in the brand of the Cargills. The standard deviation is 0.737 which indicate quiet different opinions of respondents regarding each statement of this dimension. This dimension includes two indicators which are assessment and satisfaction.. All of these indicators show that the procedure high Relationship by the Brand quality in the brand of the Cargills. These indicators have the mean value of 3.66%, 3.54% respectively.

The average value of the Creditability (Mean value is 3.73) indicates that the level of brand name is high in the Cargills brand . The standard deviation is 0.895 of this dimension. This variable includes one indicator which is Innovative aspects; this indicator show that the extent of creditability is high in the Brand name of Cargills. This indicator has the mean value of 3.73% respectively.

The Average value of the Superiority (Mean value is 3.34) indicates that the extent of Superiority is moderate in the brand of Cargills . Further as far as this dimension most the respondents are given equally different opinion about Superiority of the Cargills brand. (Standard deviation is 1.029). This dimension includes one indicator which is Advantages; this indicator show that the extent of Superiority is moderate in the brand name of the Cargills. This indicator has the mean value of 3.34% respectively.

#### **4.2.8 Overall analysis of Cargills brand name on purchase behaviour**

Having completed the Dimension wise analysis of the brand name of Cargills it helps to make analysis of overall Level of the influence of brand name of Cargills on purchase behaviour. Eventually when observe the influence of brand name of Cargills on purchase behaviour , it clearly disclosed that the influence of Brand name are moderately level (mean vale is 3.21) , and most of the respondent's common opinions toward influence of brand name is moderately level and also support to identify the influence of Cargills brand name on purchase behaviour.(standard deviation is 0.360)

### **5.DISCUSSION**

From the results of this research some important features are found on the influence of Cargills branded products on consumer purchasing behavior in Jaffna district. Followings findings have established based on research. When considering the gender, male mostly prefers to purchase the Cargills branded products based on the quality of Cargills branded products is high. Consumers who mostly use Cargills branded products are in the age of 18 to 25 and 26 and 45, because many varieties of Cargills branded products are available their and they are familiar to the products. G.C.E O/L, A/L and degree completed consumers mostly purchase Cargills branded products, because they are much aware of Cargills branded products. Government staffs, self employees and officers mostly purchase Cargills branded products, because the location is much convenient to them. Survey data reveals that most of the consumers are not closed to city, because most of the employees are out of the city and the do purchasing on the way to their residence. Consumers who are earning between 5000 – 15000 and 15000 – 30000 mostly purchase Cargills branded products.

Brand element: - According to the data analyzed, in Jaffna district Cargills name, logo, packaging and symbol are well known among consumers. It is influencing high level on Cargills branded products. Brand awareness: - brand awareness is influencing moderate level on Cargills branded products. brand awareness on Cargills branded products is less among consumers do not know what type of Cargills branded products are available. Brand resonance: - Brand resonance is moderately influencing on Cargills branded products. Male prefer Cargills branded product while purchasing than female. Female visit Cargills food city only for purchasing purpose, not considering Cargills branded products. Brand imagery: - Brand imagery is influencing moderate level on Cargills branded products. Students and secondary educated groups give less important on Cargills branded products. Higher numbers of students visit Cargills food city, but they feel that security, social approval and self respect on Cargills branded product are less, they consume with lack of knowledge and without any idea. Brand performance: - Brand performance is moderately influencing on Cargills branded products. Consumers in the category of above age 56 and secondary education have lack of involvement in Cargills branded products. They do not look in to the special features and price offer and it's frequently adaptation of pricing system. Brand association: - Brand association is moderately influencing on Cargills branded products. All income, occupational and educational groups expressed moderate level on Cargills branded products regarding brand association. Strength and favorable evaluation of Cargills branded products also moderately expressed by both male and female consumers. Brand perceived quality: - Brand perceived quality is highly influencing on Cargills branded products. All groups perceived the high quality of Cargills branded products like Cargills Meats, Cargills Magic, Cargills KIST, Cargills Lanka Milk and Cargills Supremo based on their perception. They satisfied with the products, so they expressed high level of satisfaction.

## 6. CONCLUSION

Based on the mean value, the influence of the brand equity on purchase behaviour are categorized into two levels and discussed in detail with possible causes. Brand element and brand perceived quality are in higher influence to purchase of Cargills branded products. Brand awareness, brand imagery, brand performance, brand resonance and brand association are in moderate influence to purchase of Cargills branded products.

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DOI: **10.5958/2249-7137.2020.00643.6**

## ON THE ISSUE OF THE CHRONOLOGY OF THE HISTORY OF THE BAIHUA LANGUAGE

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### ABSTRACT

*This article discusses the concepts of «Baihua» and «wenyan », their similarities and differences, as well as the burial language of these two realities of the Chinese language. The grammatical and lexical-semantic features of classical Chinese and Baihua, as well as their mutual influence are noted. As it is known, in Chinese before the declaration of Putonghua in standard Chinese, in parallel, there were two realities, this is the classical Chinese language - wenyan , which was relevant in China until the end of the twentieth century, and Baihua "spoken language". Laconic sayings on wenyan, texts of classical works of Chinese literature contain about half the number of hieroglyphs than the same text on Baihua. In wenyan, monosyllabic words (written in one hieroglyph) predominate, while in Baihua, disyllabic words (written in two hieroglyphs) dominate; in the Wenyan texts, transposition is a frequent phenomenon, when many hieroglyphic words in different situations can be different parts of speech; reliance on context is used, in particular, to avoid unnecessary pronominalization (use of pronouns), frequent non-use of subjects in general; no punctuation; no affixation. According to Chinese linguists, the first works on Baihua appeared in the period of the Song dynasties (960- 1279) and the Yuan (1271-1368). The flourishing of Baihua prose falls on the Song-Yuan epoch (10th-14th centuries), when significant changes took place in social and cultural life, reflected in literature as well. One of the most important features of spiritual life is the development of folk forms of culture: folk theater, different types of folklore (narrative genres, narratives). Prose on Baihua , i.e. in the literary language, which is close to the Conversational Speech ( Baihua Xiao Shan ), is one of the most important types of Chinese literature of the Middle Ages and one of the main directions of the creative activity of Writers since the XI century. In the twentieth century, this type of literature became the basis of modern prose (novel, story). The name Baihua Xiao Shan is a*

*concept of a late period, when in Chinese culture the distinctions between two literary languages were clearly designated: the classic "wenyan" and the colloquia "Baihua".*

**KEYWORDS:** Baihua, Wenyan, Classical Chinese, Guoyu, Putonghua, The 4<sup>th</sup> May Movement, Zhongwen, Hanyu, 语法 Yufa, 文法 Wenfa.

## INTRODUCTION

The Chinese language has a history of four thousand years in terms of development and has undergone many changes. The changes are mainly related to the grammar, vocabulary and phonetics of the Chinese language, and have been the subject of much controversy to date. So far, world sinologists, **Bernhard Karlgren, Herbert Allen Giles, Henri Paul Gaston Maspero**, A.A. Dragunov, I.T. Scientific researches of Chinese scholars such as Zograf, S.E. Yakhontov, A and in Uzbekistan Khodjaev, M.X. Maxmudxo'jaev, A.A. Karimov, Sh.I. Shozamonov, Liu Shusyang, Xu Shiyang in China, Hu Shi those who did their investigation on the Chinese historical periods serious attention to the issue and they have tried to study certain aspects of that topic. But over time, their ideas on the chronology of the Chinese language require new approaches to linguistic theory. In fact, to date, there have been a number of studies on the history of the Chinese language in the PRC itself.

Although most of the research is devoted to the history of the Chinese language, it is studied from the perspective of the classical literary language - Wenyan. The lexicon of a known work of art is analyzed. Accordingly, the history of the Chinese language can only be interpreted in terms of the practical development of Wenyan. However, a classical ancient Chinese language only wenyan literary legal works, written in everyday language Baihua works. At this point, the study of the clear distinction between Wenyan and Baihua, the study of the lexical-semantic features of both aspects of a language, the influence of Baihua on modern Chinese Putonghua, determines the relevance of our study.

Much of the work studied has served as a theoretical source in determining the methodology of the topic of the article under analysis. At the time of writing the article, A.A. Dragunov, I.T. The works of Zograf, S.E. Yakhontov, Vanl Li, Liu Shusyang, Xu Shiyi, and Hu Shi were used as sources. The aim was to study the periodization of the history of the Chinese language, the emergence of the Wenyan and Baihua, and their periodicity.

The following have been identified as article objectives:

- 1) A critical study of scientific research on the periodization of the Chinese language;
- 2) Classical Chinese - Wenyan and the language of everyday communication - to determine the periodic boundaries of the Baihua;
- 3) Summarize the views on the periodicity of Baihua.

Article and others that benefit from a number of sources related to Lanier. Accordingly, the lack of coverage of the differences in the historical evolution of the Wenyan and Baihua languages, in contrast to the Wenyan, the lack and incomplete coverage of the history and narrowing of the Baihua determine the novelty and importance of the article.

### 1.1. General theoretical views on the history of the Chinese language

Bernhard Karlgren is the first European scholar to conduct research on the Chinese language using the historical comparative method. His research is devoted to the phonology of the Chinese language, advancing the idea of the phonetic reconstruction of ancient and medieval Chinese. Because Karlgren did not pay attention to the phonological structure of language in his research, his research was rejected by the scientific community. However, his scientific work was the first step in this field [ 1 ] .

Henry Paul Gaston Maspero, mainly engaged in research on the history of Chinese phonetics [ 2 ] . There were many Chinese and European scientists who have carried out scientific research work on chronology on Chinese language. Chinese linguists have taken phonetics as a criterion for analyzing the stages of development of the Chinese language. Continuing this tradition, Maspero also devoted his research to the study of terms of Buddhist teaching.

Russian sinologists have done a tremendous amount of research on this subject. Of these, A.A. Dragunov [ 4 ] , I.T. The scientific researches of Chinese scholars such as Zograf [ 6 ] , S.E. Yakhontov [ 15 ] deserve special recognition. Their research focuses on the history of the Chinese language, historical phonology, and analysis of works in Wenyan and Baihua.

Although the Uzbek school of Chinese studies were formed later than the European and Russian Chinese studies, some research has been done in this area. In particular, A. Articles by Khodjaev [ ] , MH Mahmudkhodjaev [ ] , AA Karimov [ 7 ] , Sh.I. Shozamonov [ ] were published.

In China , the issue of the historical chronology of the Chinese language has received serious attention by Wang Li [ 2 3 ] , Liu Shusyang [ 1 7 ] , Xu Shiyl [ 1 9 ] , and Jiang Lianshen [ 2 2 ] .

#### 1.2. The question of the chronology of the history of the Chinese language

a) The theory of the chronology of Chinese history by Chinese linguists:

In the history of Chinese linguistics, three historical aspects of the periodization of the Chinese language (moreover, in the history of the Chinese language) are distinguished. In particular, the great linguist scholar 王力 Wan Li " 汉语史稿 Chinese history" [ 2 3 ] manuscripts of the ancient Chinese language (wenyan or not Baihua the whole provided by the Chinese) to provide development point of view of the three major periods: 上古期 the archaic period , 中古期 medieval period and 近代期 modern era. 上古期 archaic period before the third period to 商, 秦 and 汉 periods; 中古期 period of the Middle Ages, IV century AD in the XII century, the period that 六朝, 唐 and 宋 periods; 近代期 modern twelfth century to the nineteenth century, the 元, 明, periods.

Linguist Xu Shiyl, in his monograph on the history of Baihua, states: "In their work, the history of the Chinese language is chronology as follows: some use pure pronunciation (phonetics) as a criterion for the chronology of the Chinese language; a number of scholars take the two as the norm, but no definite conclusion has yet been reached on the matter." [17]

The first and lower frontiers of the history of the Chinese language have their own scientific interpretations from a linguistic point of view. In addition, the medieval history of the Chinese language can be said about chronology points: 王力 Wang Li's "古代汉语 Gudang hanyu-ancient Chinese language" in the preface to the booklet two types according to their nature, the ancient Chinese written language system: "The pre-Chin period (the pre -Chin period includes the Chjungo and Zhang period, until 221 BC) was the first Chinese literary language formed on the basis of oral speech, and later the language of works written in imitation of that ancient Chinese (Wenyan); The second period refers to the ancient Baihua language, which was formed on the basis of northern dialects from the reign of the Tang (618-907) and Sun (960-1279) dynasties. However, speaking of the stages of the gradual development of the Chinese language, it interprets the two fronts as a whole, without dividing them into separate periods. However, between the classical literary language and the language of everyday communication, there is a big difference in the use of their lexicon.

江蓝生 Jiang Lansheng, in his scholarly work "古代白话说略 Ancient Baihua Summary, discusses the issue of chronology of Baihua as follows: "Ancient Baihua is inextricably linked with the nationalization of the ancient Chinese language. For a long time, the Chinese language taught in universities was divided only into "ancient Chinese" and "modern Chinese". "May 4 Movement" from the previous "Chinese ancient Chinese referred to as" 2 [2] . In this case, the difference between Wenyan and Baihua was not clearly distinguished and the exact norms of the range of both languages were not specified, and this view was not scientifically based.

胡竹安 Hu Djuan expresses the following opinion on the periodicity of the medieval Baihua language: The views of different linguists on the periodization of the medieval Baihua language are different, but it is necessary to rely on the "lexical-semantic" norm. This issue requires discussion. Because "vocabulary and semantics" are the most vital (especially in oral) language factors " [2 4] .

吕淑娴 Luǐ Shiyang, a Chinese linguist, writes in his book, An Essay on Chinese Grammar: "If the writing of each epoch changes according to the change of oral speech, the people of the 周 Zhōu and 秦 qin periods communicated in their language. They were the records; 唐 Tang and 宋 Song also spoke the language of the period, the people of their records. That would be a reference to the speech of that period. In this case, the issue would have been much easier. However, by the time of 周 Zhōu and 秦 qin , there was a gap between writing and speaking. The authors of the work began to use and imitate the written language of the 周 Zhōu and 秦 qin , period. As a result, " 文言文 wényánwén Wen Yan Wen reproduction of literary language" was formed. 文言 wén yán i.e " 古文 gǔ wén that " - also known as the old written language". Spoken language is called " 白话文 bái huà wén - the language used by the general public" [1 7] .

Relying on the above considerations, the ancient Chinese language chronology 文言 wén yán and 白话 bái huà two research areas, such as Red perfect has an important role. There are opinions of a number of scholars on the chronology of the ancient Chinese language, and each opinion has its own basis. From the above considerations, it is clear that Chinese linguists did

not rely on a clear norm in the chronology of the Baihua language. Although the two fronts, such as the classical literary language and the language of everyday communication, have been in parallel for some time in Chinese, the stylistics of the sources written in them are radically different. At this point, the issue of the periodization of the Wenyan and Baihua languages requires a serious approach.

The differentiating approach to language and speech phenomena was first introduced in the linguistic methods of Arabic linguistics formed in the VIII-IX centuries, and later in V. We find it in Humboldt's "energy" (motion, process, force) and "ergon" (product) in language, in A. Stendhal's "stable essence" and "forces in motion" in language, and in Bedouin de Courtenay's "stability and variability in language." But the scientific-theoretical and practical distinction between language and speech phenomena and their peculiar units; ways of revealing the essence of language and speech units, giving a completely new meaning to the concepts of "language" and "speech" are related to the doctrine created by F. de Saussure and his followers.

F. De Saussure tried to explain the dichotomy of language-speech by the example of the rules of the game of chess. In fact, the 64 squares on a chessboard are divided into two groups of two different colors in an equal position, opposite each other, the pieces in both groups are equal in function and value, the specific order of the pieces and the rules of movement are the same. The rules of the game of chess are mandatory for players, known in advance; they are always stored in the memory of the players. Even if both players have the same chances and follow the same rules of the game of chess, the players themselves will be in a position of one strong and one weak according to their ability to use the opportunities. Whichever chess player is able to consistently subdue opportunities in the path of his goal, he defeats an opponent who has not been able to take advantage of these opportunities. []

When comparing language and chess devices, it should be noted, first of all, that there are general similarities between their units (constituents).

In general, F. de Saussure's analogy of language and chess is widely used in explaining the essence of language and speech.

In modern system linguistics, based on the opposition of language and speech, it is stated that speech activity consists of the following three components: a) language; b) speaking ability (language skills and competencies); v) speech. []

Only when the relationship between language and speech is approached from a dialectical point of view, our perception of it, our knowledge, becomes complete and perfect. To better understand the relationship between language and speech, we must first feel the language itself, what kind of device it is.

Based on this doctrine, if Wenyan is the language of ancient classical Chinese, we can consider Baihua as speech. According to F. de Saussure, language and speech units are divided as follows: language units - phoneme, lexeme, morpheme, construction (device); units of speech - sound, background (letter), syllable, affix, morph, word, word form, phrase, sentence, and micro text.

Language is always changing. Although these changes are not noticeable in a decade, the changes in language are noticeable hundreds of years later. Of course, there have been many changes in the development of the Chinese language, which has a history of more than four



thousand years, which is confirmed by historical facts. These changes in three areas: phonetics, language and speech are reflected in the device binary " [15] .

Hence, in the study of the evolution of a language, it is expedient to interpret it in three main ways. At the same time 吕叔湘 Liu Shusyang found the following in mind, 《魏晋南北朝小说词语汇释》 the brochure at the beginning of the following points: "the mention of the Chinese language, grammar and vocabulary, 秦 Qin period ( er.av.221-207 y ) , and 汉 Han (202 BC - AD 220). Period of previous ancient Chinese language, Chinese, 宋元 (960-1368). A new era in Chinese language after Chinese as the language is no problem. 三国 (220-280). The three branches period to 唐 period (618-907 years) will not be the last days of the seven-year period, distribution, and name? This time, he argues 秦 Qin and 汉 Han period compared to the previous Chinese language course is very different to that of oral, but written speech, the Conservative cause, or some elements of it can be met here, only the late period of the Tang traditional classical literary language, in addition to oral classical literary language to the point you can see that the column " [17] .

Based on the views of 吕叔湘 Liu Shusyang and earlier Chinese linguists, ancient Chinese can be divided into two major systems, the Wenyan and the Baihua. At the same time, 徐时仪 Xu Shi across that ancient and medieval Chinese, approval of a new era in Chinese. Because Baihua language, both ancient and modern period. 汉 Xan and 魏 Wey days of each period Baihua language Baihua a new era, including some of the difference between the words or wenyan belonging to, or belonging to Baihua language, it is a new era Baihua old language of the word " [19] . 徐时仪 Yi Xu, a Shiite promote this idea of ancient Chinese fundamental research, based on the idea of becoming a number of linguists, based on his own personal reasons and Baihua chronology different approach to the language. In doing so, he explores the lexical-semantic development of the Baihua language, the evolution of the Baihua lexicon over time. As a result, 徐时仪 Yi Xu, a Shiite Baihua language of origin period (露头), Baihua language development period (发展) and Baihua language and mature period (成熟) to allocate three periods, and the Periods in the following order:

1. Baihua language of origin period (露头) – 秦- Qin and 汉 Han period to the 唐 Tang period, that is, 207 years BC, AD 618 year period;
2. Baihua language development period (发展)-唐 Tang period, until, that is, the period of 618 years, until 1368;
3. Baihua language and mature period (成熟) - 明 Ming period 清 Qin since the end of the period, i.e. 1368 until 1911.

As a result, the Baihua studied the evolution of language; we have tried to study in detail the views of the Chinese language on this topic, 徐时仪 Yi Xu, Baihua language, the history of



ideas as a science-based. This is because the author admits in his scholarly treatise that the history of the Chinese language refers not only to the history of Wenyan, but also to the Baihua language, which has dominated in all fields since the Sung period, not to mention Wenyan. It is clear from this that Wenyan remained only a classical literary language, and with the development of the state and society, the Baihua language changed and improved.

b) Views of Soviet-Russian Sinologists on the chronology of the history of the Chinese language:

S.E. Yakhontov's "Literary and Conversational Chinese Language VII-XIII centuries. B.C. ", I.T. Zograf's "Medieval Chinese monograph," Gurevich failure "Diachronic aspects analyze of the text different Genres s identical plot line (XIV-XVI vv.): Obtained Results" article shows that the use of resources such as, in this scientific work an analysis of works created at some stages in the history of the Chinese language is given. However, the history of the Chinese language does not contain detailed information about the formation and periodization of the Baihua language. I.T. Zograf only dwells perfectly on the medieval Baihua language. S.E. Yakhontov reveals the peculiar lexical features of the classical literary Chinese language Wenyan and Baihua, Gurevich S.I. also analyze and draw conclusions from the literature of various genres of the three centuries, i.e. the fourteenth and sixteenth centuries. At the same time, the specific lexical features of each work and period reflect the different aspects of the works created in Baihua and Wenyan.

M.V. Sofronov, in his monograph Chinese language and Chinese writing system, also discusses Wenyan and Baihua in detail: "There are two written languages in Chinese, Wenyan and Baihua. While the linguistic basis of Wenyan is ancient Chinese, the linguistic basis of Baihua is medieval Chinese. In the Middle Ages, a language are considerable differences in these two spheres, wenyan literature, philosophy, religion, science, politics styles of "high" art and literature, Baihua "low" genres : drama, novels, stories, novel, such as the works of the world came. " Although the difference between wenyan and Baihua is not clearly stated in these opinions, the author cites the basics of wenyan and Baihua. In wenyan is the main sources of literature, philosophy, religion, science, and politics. This indicates that the wenyan is only active in writing. Baihua points out that since speech is the language of everyday communication, it contains novels, stories, dramas, and narratives.

In the Uzbek school of Chinese studies, Candidate of political sciences Sh.I. Shazamanov and I.N. Bekmuratov's analysis of the language policy and the situation in China (sociolinguistic) " prospectus the following comments: "Some VIII - XV century China Baihua (Baihua) - a simple language, literary language, language and social life of the Polish community had generalized. Baihua relied on the norms of oral speech. It created the main literary genres of that period: short stories (later novels), poetry, and dramas. Hieroglyphs were used in the writing of Baihua texts, just as in Wenyan. Since that time, the tradition of using these two languages has been preserved in China's nationwide internal communication: from Wenyan to the medieval Devonian language and from Baihua to fiction used in literature, culture, and science. The fact that they had a single geographical record ensured their widespread use as a language throughout the country. In oral communication, the tradition of using unwritten dialect is still preserved. Sinologists ideas, combined with the above-mentioned Russian scientists sinology ideas, their ideas once again confirms. However, even in this pamphlet, there is no idea of the exact chronology of the Baihua and wenyan [29] .

### 1.3. The emergence of the Wen language and its role in the development of the Chinese language

Modern research shows that in ancient China there was no significant difference between classical literary language and oral speech. The content of Confucius' "论语 - Conversations and Reflections" was clear when reading. The first differences between oral and written point began to be observed in the II-III centuries AD. As oral language continued to evolve, vocabulary and grammar gradually began to change, while written speech remained, as it were, in shell, in isolation [13].

Until the early twentieth century, Wenyan was used as a literary language, but also as a means of universal Chinese communication, thus serving as a connecting medium between different dialects. This situation is similar to the situation of medieval European Latin, where Latin was known in medieval Europe everywhere, written almost identically in Latin, but with a different pronunciation. Like the Latin in the West, the Wenyan in the Far East<sup>1</sup> was considered the language of culture. National modifications of the Wenyan language have been used as canonical books, the language of elegant literature in countries such as Japan, Korea, and Vietnam. Anyone who knew wenyan could read the literature written in wenyan in any of the above-mentioned states.

Until the early twentieth century China alone there is a delay between the written and spoken language, the wenyan -Latin like a dead language, and has hardly changed over the centuries [6].

In Chinese language old literary language “文言 wényán” and “白话文 báihuà” two sessions.

Moreover, an object itself may be expressed in other words in the present and in the past. For example, the word "eye" of the ancient Chinese 目 mù said, the current Chinese 眼 yǎn the word "foot" is the ancient Chinese 足 zú says, the current Chinese 脚 jiǎo said, "lie" is the ancient Chinese 卧 wò says is now called 躺 tāng the word "to call" in ancient times 呼 hū in modern Chinese it is represented by the word 叫 jiào. Third, changes are also observed in the structure of speech. For example, in the 春秋 Chūnqiū period<sup>2</sup> “爾何知 ěr hé zhī - that is, what do you know?" With that in mind, today's " 你知道什么? style. 宋 Sòng period<sup>3</sup> " “吃不得這就成 chī bù dé zhè jiù chéng - I cannot drink this wine," said, nowadays he is "in the form of used like this. “吃不成这席酒 chī bù chéng zhè xí jiǔ”.

If we do not take into account some changes in the reading of ancient hieroglyphs, i.e., differences in the ancient and modern pronunciation and spelling of hieroglyphs, and from the point of view there is no phonetic nature of Chinese writing, ancient hieroglyphs can still be used today. Therefore, the difference between ancient and modern Chinese hieroglyphs cannot be overstated. However, changes in two major areas of language, such as lexical structure and grammar, are clearly reflected in writing.

Wenyan has undergone a number of changes over its two-thousand-year history. The change of periods is observed first of all in the lexical structure of the Wenyan. There were also certain changes in its grammatical structure. The written language of the Zhou-Qing period maintained a certain connection with oral speech. Consequently, the change of periods and territorial

differences in ancient Vienna were reflected. Wenyan grammar became a bit more complicated and unusual. As a result, the creative mind developed and selected certain rules, imitating the literature of the Zhou Qing period, and standardized the selected rules. However, not all grammatical rules became the norm; some grammatical rules of the Zhou-Qing period became incomprehensible to subsequent generations, and eventually began to fall out of circulation.

As a result of the change of historical periods, a two-pronged approach to language has emerged. Some of the ancestors of the creatures that continued use of the words written language by imitating the ancient word, for example, the military commander 軍長 jūnzhǎng not but 將軍 jiāngjūn in the form of 学生 xuésheng reader word of 生徒 shēngtú form of expression. The works of writers who created in this way were written much closer to the original. This direction could be called "classical wenyan" - 正統文言 zhèngtǒngwényán [15].

By the Zhou-Qing period, there was a gap between written and spoken Chinese. Many poets and writers began to write in their works, imitating the written language of the Zhou Qing period. At the same time, 文言 wenyan - classical literary language has been written. It is also commonly referred to as 古文 "old written language". The written form of the modern language is called 语体文 yutiwen (written form of the living spoken language) or 白话文 baihuawen (the popular written form of the Baihua language) [15].

However, there have been other authors in the past who have been patient about the impact of oral speech on written speech. While they, too, tried to create in their own Wenyan style, they kept pace with the times and incorporated elements of oral speech into written speech.

Accordingly, many examples of personal correspondence and correspondence can be cited. This pattern can be observed especially in business papers and sales contracts. Wenyan this type of 通俗文言 tōngsú wenyan that can be considered "rude" Wenyan. If this "rough Wenyan" is relatively much enriched with living point elements, we can easily consider it as a style of spoken language. This situation can be clearly seen in the literary style of oral discourse, conversations, and sermons in works founded by Buddhist monks and later developed by the Sung and Min neo-Confucians.

#### 1.4. Origin, formation and influence of Baihua language on modern Chinese

From the Sun period (960-1279), two languages existed in parallel: the Wenyan and the Baihua. Wenyan philosophical prose (古文) and novels (传奇). In addition, science, politics, administration, family lar records, medicine, Taoism and Buddhism, literature Wenyan. In turn, Baihua communication between people, along with the city novels (话本), stories (短篇小说), drama (据本) and novels (小说) as the communication [7].

More accurately, 宋 Sung period (960-1279) Baihua written into the circulation, Wenyan, as well as to be used. First of all, this was reflected in the literature, and the Viennese language retained its status as the official language of communication [6].

As the objective world is constantly changing, so is the language it is a reflection of. Since language is a social phenomenon, of course, changes in society are reflected in it. On the other hand, language itself is a "living" system, which changes according to its own internal

laws. Language changes are not a fast-paced process. It changes slowly, consistently over the years. Language changes are faster and brighter at the lexical level. Among the linguistic changes at the lexical level, the change of lexical meaning is a long-term process, and determining the cause, nature, and ways of change is a labor-intensive study. The study of lexical meaning change relies on historical, comparative methods. The change of lexical meaning takes place in national languages in specific ways [12] .

On this subject, 吕叔湘 Liu Shusyang states in his “Statement of the Grammar of the Chinese Language”: “Every human society has its own language. ” 汉语 hanyu ” the people of China, in its written form we call 中文 zhongwen .

When language is spoken as a means of conveying information, literary language is the reflection of that language in writing on paper, while oral speech is the expression of language in the mouth, that is, by speaking. Oral and written speech differs according to the style of language, oral speech develops and enriches with time, and literary language is refined in detail according to the norm. When language is spoken as a communicative medium, it is distinguished as a means of verbal and written information exchange. If spoken language is an oral form of speech, literary language is a written form, but oral speech can also be recorded and expressed in literary language, such as dialogues in dramatic works; on the contrary, literary language can be expressed orally, for example, in the transmission of news. Spoken speech is the language of speech and hearing, the foundation of literary language, as well as the source of literary language; our written speech is based on oral speech, it is a written and visual language, it is a source of information through writing. In general, oral speech is a natural form of language, literary language is a reworked form of oral speech, but literary language is not a reflection of the original form of oral speech, but a reworked form.

By the time of the Sun, Baihua, the language of communication, had gradually become a written language, and in parallel until the early twentieth century, the two languages, Wenyan and Baihua, were treated equally, each with its own distinctive expression in literary genres. By the beginning of the twentieth century, the Baihua language had become the only literary language out of circulation. This situation was first reflected in the literature, while in the official dialogue the Wenyan had not yet lost its influence [ 8 ] .

Liu Shusyang writes in his “中国文法要略 - Essay on Chinese Grammar”: “Language is constantly changing. While these changes have not been felt for decades, they will be felt centuries later. Chinese is a language with a history of three thousand years, sealed in written documents, and has certainly undergone a number of changes. These changes are manifested in three areas: first, in pronunciation: for example , the word 文法 “grammar ” was pronounced as “ muen-bap ” before the Tang period ; secondly, the lexical structure of the language is distinguished by the introduction of new words, such as "electric lamp", "railway", because in the language of the ancients there were no such words, and thirdly, on the contrary, we can give the example of words that were in circulation in antiquity " [17] .

Liu Shusyang also said, “Although the non-phonetic nature of our writing has undergone a number of changes in pronunciation, that is, there are certain differences in the ancient and modern pronunciation of the same hieroglyph, it allows us to use the hieroglyph used today. If we interpret it only on the basis of writing, there is almost no significant difference in the

phonetics of ancient and modern Chinese. However, changes in vocabulary and grammar can be clearly seen in the target language. ” [17]

In this style, we can include the Yuan period dramas, which were created in a highly mixed genre of poetry and prose during the Tang () and Five Dynasties () periods, with narrations accompanied by drums, prose poems of the Sun period, and rhyming texts of folk songs and folk songs. . Almost all of these works contained many elements of Wenyan. An example of such works as the Sun period and legends 平話 píng huà of them. This style works Liu Shusyang 平話體 píng huà tǐ calls. Liu Shusyang admits that the ancient novels were written in this style, and when it comes to Baihua, it is precisely this style that is meant. In the early twentieth century, the Baihua language was used only in popular literature, and in other fields it could not compete with Wenyan. The last years of the twentieth century were a period of great change for Chinese society. Liu Shusyang argues that the biggest reason for the change was its contact with Western civilization, which had a great impact on the Chinese language.

Liu Shusyang, the author of fundamental scholarly works on modern Chinese grammar, calls Baihua grammar 語法 yufa "oral grammar" and Wenyan grammar 文法 wenfa "written language grammar". However, since it aims to describe the general aspects of Baihua and Wenyan grammars, it is difficult because there is no single term that covers Baihua and Wenyan grammars. That is why he uses the term 文法 wenfa when writing his works . The commentary quotes Baihua and Wenyan only where required.

It was not until May 4, 1919, that the period of learning modern Chinese began in China. At this point, we can recognize Professor Li Jin's famous book on the study of the national Chinese language [23]. Now 40-years of the last century, the study of Chinese language and then went to a large-scale implementation of this Liu the same period in Hong Kong, Wan Li, Gao Min-Kay saw the face of the great works of the world [17] .

Zograf I.T.'s pamphlet, The Srednekitayskiy Yazyk, also notes that the term “Srednekitayskiy Yazyk - medieval Chinese” refers to the oral Chinese of the Sun and Yuan periods.

As in every language and in every age, the Baihua also had a dialectal structure. Zograf I.T. analyzing the written monuments that have come down to us distinguishes between two northern and southern native species of Baihua [8]. At this point, the Russian Chinese scholar Zograf I.T. and we can see that the Chinese linguist Xu Shi'yi's views on the Baihua period are the same.

## CONCLUSION

Based on the above, we have come to the following conclusions: Chinese language, according to its formation, has developed and perfected in the mutual harmony of the Ba'athist language, the literary language of Wenyan and everyday communication. Both aspects of a language have played an important role in the formation of this language over the centuries. One formed the perfection of the Chinese language without excluding the other, and vice versa, complementing each other.

Both the classical written form of the ancient Chinese language and the form of everyday communication, both had their own charm and linguistic sources. As there are works recognized in world literature on both fronts, we can understand the features that distinguish Chinese from



other languages in the world by studying the peculiarities and characteristics of the two fronts of one language.

In particular, the Wenyan is of particular importance in the ancient classical Chinese literary language with its brevity and brevity of lexical units, while in the Baihua it is of relative clarity, i.e., the ability to express any concept without explanation. After all, 白话 the Baihua term in the opposite direction to the latter, the Chinese is the arguments in public 老百姓 referred to with the term; it is Baihua arguments to communicate using language the public significance. The works written in Baihua allow us to see the linguistic description of Chinese literature, the language of a certain period, in the vernacular for centuries. In turn, the works written in Wenyan and Baihua remain of special importance in our understanding of the lexical-semantic, grammatical essence of the Chinese language. There are a number of scientific works of Chinese linguists and Russian Chinese scholars in this field.

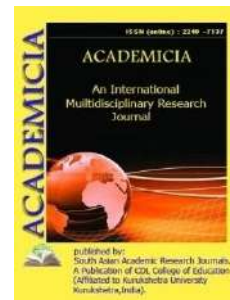
Since Wenyan and Baihua are two facets of the same language, as we have a clear idea of Wenyan history and stages of development, research on Baihua history, its chronology, the role of Baihua in the formation of modern Chinese language - Putonghua, little or no information about the transition from Baihua to Putonghua the absence determines the relevance of this research topic.

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DOI: **10.5958/2249-7137.2020.00645.X**

## METHODS FOR GENERATING KEYS FOR SYMMETRIC ENCRYPTION ALGORITHMS AND THEIR ANALYSIS

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### ABSTRACT

*This paper presents a classification of algorithms for random and pseudo-random number generation methods. A new improved key generation has been developed based on a comparative analysis of key generation algorithms used for symmetric cryptosystems and existing key generation.*

**KEYWORDS:** *Pesdo Random Departures, Encryption, Crypto-Resistant, Generation Of Keys, Symmetric Encryption, Checking For Randomness.*

### INTRODUCTION

The main cryptographic characteristics of the generators generated by PTKK, which form the basis of continuous encryption algorithms, are given.

Shows an analysis of the operations, key length, and crypt currency tolerance of a pseudo-random number generator.

As can be seen from this table, generators based on push operations, displacement operations, and one-way functions are better than others in terms of speed and tolerance characteristics. mainly divided and classified into three different directions.

Such categorization (classification) shows the direction of methods for assessing the cryptocurrency tolerance of newly created continuous encryption algorithms, showing what types of reflections of existing algorithms are based on complex problems [16,25].

Let's analyze the shortcomings of PTSKK generators, ANSI X9.17, FIPS-186 and Yarrow-160, created using one-way functions.

The ANSI X9.17 generator has the following shortcomings [13,14]:

- ✓ Deficiencies in TDES, which is an encryption algorithm, although not proven in practice;
- ✓ Is based on time synchronization and can be generated;
- ✓ Keys used in encryption do not change;

The following methods should be used to address these shortcomings: [14]

Foydalanish use of cryptographic enumerated symmetric encryption algorithms (GOST 28147-89, AES, etc.);

- ✓ Improving time synchronization or replacing this process with another random access parameter;
- ✓ constant updating of encryption algorithm keys;
- ✓ Use of randomly calculated sources when generating a seed parameter.

Disadvantages of the FIPS-186 generator [14]:

- ✓ The use of DES encryption algorithm (currently it is possible to attack this algorithm from a practical point of view);
- ✓ The ability to control the incoming parameter and other shortcomings.

The following changes are recommended to address these shortcomings:

- ✓ Replace the encryption algorithm with another symmetric encryption algorithm that is considered cryptographic;
- ✓ use of cryptographic hash functions;
- ✓ replace the initial input parameters with random system parameters;
- ✓ Replace mathematical operations with cryptographic expressions

Defects in the Yarrow-160 generator were rectified by Bruce Schneier and Niels Ferguson and patented under the new name Fortuna.

The Fortuna generator also retains the existing stages in the yarrow-160, and also includes the following changes:

- ✓ the number of randomly calculated sources is increased, ie all incoming parameters are generated by data collected from system resources;
- ✓ The DES encryption algorithm has been replaced by the AES, which is considered to be the most cryptographic algorithm of the 21st century, and some mathematical expressions have been changed.

The randomness of the initial data (switches) entering the generators is important in the formation of the PTSKK. This is because the primary keys entered by the user are subject to some kind of law or are stored in memory, and as a result, the system may be compromised. In order to avoid this shortcoming, the use of random values from the computer source of the unwanted parameters is highly effective. The durability of this method is determined by the inability to fully control the intruder system. Typically, PTSKK generators can include operating system information, device information, and so on.

For a sequence of numbers defined by a linear and multiplier congruent generators  $z_n, z_{n+1}$  if the bits are known, then it is possible to find the remaining limits of the generated sequence [16, 27].

Symmetrical encryption algorithms based on the problems of number theory (division into multiple factors and discrete logarithm) are useful in the generation of robust keys, because the ability to determine the front or back parts of a sequence using these generators is difficult. is calculated.

The "Xi-square" criterion for checking the randomness of the distribution. All possible cases of the results of an experiment  $y_1, y_2, \dots, y_k$  and their number is equal to  $k$ , so that the experiment is performed  $n$  times independently of each other. That's it  $y_1, y_2, \dots, y_k$  - the problem of estimating the extent to which cases are deviated from the same number of repetitions (from a flat distribution or having the same frequency) in an experiment conducted  $n$  times is considered. To do this, enter the following designations:

$P_s$  - the result of an experiment  $y_s$  probability value;

$Y_s$  - experimental results  $y_s$  number of equivalents.

In this case, this is the criterion of distribution called "Xi-square" in relation to these definitions

$$V = \sum_{s=1}^k \frac{(y_s - n * P_s)^2}{n * P_s}$$

determined by the formula.

Always if the experiment is repeated  $n$  times  $y_1, y_2, \dots, y_k$  - cases are equal  $Y_i$  repeated (evenly distributed or of the same frequency), ie  $Y_1, Y_2, \dots, Y_k$  if so  $p_1 = p_2 = \dots = p_k = \frac{1}{k}$  it is concluded that and

$$V = \sum_{s=1}^k \frac{(y_s - \frac{n}{k})^2}{\frac{n}{k}} = \sum_{s=1}^k \frac{(\frac{n}{k} - \frac{n}{k})^2}{\frac{n}{k}} = 0$$

formula  $Y_1 = Y_2 = \dots = Y_k = \frac{n}{k}$  from an equal distribution  $Y_1 = Y_2 = \dots = Y_k$  - represents the unequal distribution of the average quadratic deviation. This is the final formula  $y_s - \frac{n}{k}$

the expression is bounded by a constant number, i.e.  $\left|y_s - \frac{n}{k}\right| \leq C = \text{const.}$

$$V = \sum_{s=1}^k \frac{(y_s - \frac{n}{k})^2}{\frac{n}{k}} = \frac{k}{n} \sum_{s=1}^k (y_s - \frac{n}{k})^2 \leq \frac{k}{n} \sum_{s=1}^k C^2 = \frac{(kC)^2}{n} \rightarrow 0, n \rightarrow \infty \text{ if}$$

From this last formula, if the period of the pseudo-random sequence generated by a generator is long enough that the distribution of all possible bits, bytes, and part blocks is almost flat (evenly distributed), then the “Xi-square” distribution the value of the criterion relative to this sequence is close to zero, and its degree of randomness is high.

Below we will see how the random generation of a secret key for the standard DES, GOST 28147-89, AES-FIPS-197 and other symmetric encryption algorithms is carried out by Xi-square distribution.

We create the following table for the given key block:

Value (s): 0 1;

Probability ( $p_s$ ):  $\frac{1}{2} \frac{1}{2}$ ;

Tracking number ( $y_s$ ):  $N_0, N_1$ ,

here:  $N_0$  and  $N_1$  zeros and ones, respectively, in the key block,  $N_0 + N_1 = n$ , determines the length of the key through, e.g.  $n = 256$

$$\text{expected number } (n * p_s): \frac{n}{2} \frac{n}{2};$$

According to the Xi-square distribution formula [10]:

$$V = \sum_{s=1}^{k-1} \frac{(y_s n * P_s)^2}{n * P_s} \text{ is calculated}$$

In this case:  $k=2$ ;  $5 = 0,1$ ;  $p_0 = p_1 = \frac{1}{2}$ ;  $Y_0 = N_0$ ;  $Y_1 = N_1$ ;  $n = 256$ ; then we have the following magnitude:

$$V = \frac{(N_0 - 128)^2 + (N_1 - 128)^2}{128}$$

To calculate this magnitude, we need a table called the table of critical points of the Xi-square distribution.

Table xi-square criterion  $v = k: -1 = 2-1 = 1$ , from the line we find the range of values  $v$ . If the value of  $v$  is in the range  $p = 25\%$ ,  $p = 25\%$  of the table column, then the sequence of key block bits generated using a pseudo-random generator is considered random.

Although the sequence of key block bits generated using a pseudo-random generator received a positive response to randomness when tested by the “Xi-square” criterion, the sequence of bits

under consideration to obtain a more reliable and perfect answer is different. existing randomness tests should also be checked. The more positive responses to these criteria, the better the outcome. In addition, the following process also has a significant effect on the positivity of the conclusion drawn in the randomness test, i.e., the process of representing the mean value of the mean square deviation of switches developed using a pseudo-random generator from practically established tolerable switches.

Let's say a key block generated using a pseudo-random generator: here  $k_i \in \{0;1\}$  checked for randomness according to the above criteria and received a satisfactory answer Unbearable keys detected when working with ciphers in practice  $k = k_{n1}, k_{n2}, \dots, k_{nm}$  as we define.

Key block generated using a pseudo-random generator:  $k = k_1, k_2, \dots, k_n = k_1, k_2, \dots, k_{256}$  and found to be intolerable during practice  $k = k_{n1}, k_{n2}, \dots, k_{nm}$  the difference between the keys is considered:

$r_1 = k_{n1} \oplus k = r_1(1)r_2(1) / \dots r_{256}$  (1) the number of bits 0 and 1, respectively, for this difference

$N_0(1); N_1(1);$

$r_2 = k_{n2} \oplus k = r_2(2)r_2(2) \dots r_{256}$  (2) the number of bits 0 and 1, respectively, for this difference

$N_0(2); N_1(2);$

$r_m = k_{nm} \oplus k = r_1(m)r_2(m) \dots r_{256}$  (m) the number of bits 0 and 1, respectively, for this difference

$N_0(m); N_1(m);$  using these quantities, we calculate the following:

$$V_1 = \frac{(NO(1) - 128)^2 + (N_1(1) - 128)^2}{128}$$

$$V_2 = \frac{(NO(2) - 128)^2 + (N_1(2) - 128)^2}{128}$$

$$V_m = \frac{(NO(m) - 128)^2 + (N_1(m) - 128)^2}{128}$$

$$V = \frac{V_1 + V_2 + \dots + V_m}{m}$$

From the table of the criterion "Xi-square"  $v = k-1 = 2-1 = 1$ , we find the range of values V. If the value of V is in the range of  $p = 25\%$ ,  $p = 25\%$  of the table column, then the sequence of key block bits generated using a pseudo-random generator is considered random.

**Random Excursions test.** This test shows the number of iterations of an existing K event within the sum of a given sequence. This sum is added by substituting 0 for 1 and 1 for +1. The random sequence is divided into parts in the area equal to zero, and testing is performed for each part. The purpose of this test is to check in which part of a given sequence the situation in a random sequence occurs. This test is divided into eight intervals. These are: -4, -3, -2, -1 and +1, +2, +3, +4. In this test, the length of the incoming sequence is required to be at least 106. If the value of



the parameter P obtained by the calculations is greater than 0.01, the given sequence is considered random. In the remaining cases, it is considered non-random.

**Random Excursions Variant test.** This test shows the number of repetitions of a particular situation in a random sequence. The purpose of the random visit option test is to find that the number of occurrences of different situations in a random sequence does not eat the same. This test is a set of 18 consecutive tests, consisting of a single test and conclusions for each case (-9, -8, ..., -1 and +1, +2, ..., +9). ladi. In this test, the length of the incoming sequence is required to be at least 106. If the value of the parameter P obtained by the calculations is greater than 0.01, the given sequence is considered random. In the remaining cases, it is considered non-random.

Comparative analysis of randomness tests. Randomness and pseudo-randomness sequences have been tested above. Randomized tests play an important role in the selection of PTSKK. Accordingly, the more randomness tests PTSKK passes, the more cryptographic the generator is considered to be.

The following table provides a comparative analysis of the tests that test this randomness.

TABLE 1

Test/Features	Incoming sequence length Incoming sequence length	Asoslanishi	Purpose	Computing Level
<b>Monobit test</b>	At least 100 bits	To calculate the amount of zeros and ones	Calculate the difference between zeros and ones	Approximate
<b>Block Frequency Test</b>	At least 100 bits	Find the number of ones in m bit length	Calculates the amount obtained as equal to the expected amount ( $m / 2$ )	Approximate, depending on the length of the block
<b>Cumulative Sums (Cusum) Test</b>	At least 100 bits	To calculate the amount of ones and zeros	Calculate the equality of the sum of one and zeros	Approximate
<b>Runs Test</b>	At least 100 bits	To calculate the amount of ones and zeros	Equals the number of intervals of ones and zeros to the expected amount	Approximate
<b>Long Runs of Ones Test</b>	At least 128 bits	To count the number of ones that come in a row	How close the amount of ones in each section is to the expected	Approximate
<b>Discrete Fourier Transform</b>	At least 1000 bits	Discrete Fure Replacement	Check the periodicity	Approximate

<b>Non overlapping Template Matching's Test</b>	1 mil. bit at least	Calculate the number of generated sequences	The amount of invisibility of the selected sequence	Approximately, the part to be checked depends on the bit
<b>Overlapping Template Matchings Test</b>	1 mil. bit at least	Calculate the number of generated sequences	The amount of invisibility of the selected sequence	Approximately, the part to be checked depends on the bit
<b>Approximate Entropy Test</b>	In length	frequency of occurrence of parts	the frequency of occurrence of two parts (mvam + 1 length)	Approximate
<b>Serial Test</b>	In length	frequency of occurrence of parts	Find the level of occurrence in the m-bit check	Approximate
<b>Random Excursions Test</b>	1 mil. Bit	Calculate the number of views of the expected event in the interval	andom part checking of sequences	Exactly
<b>Random Excursions Varian Test</b>	1 mil. Bit	Calculate the number of views of the expected event in the interval	andom part checking of sequences	Exactly
<b>Non overlapping Template Matchings Test</b>	1 mil. bit at least	Calculate the number of generated sequences	The amount of invisibility of the selected sequence	Approximately, the part to be checked depends on the bit
<b>Overlapping Template Matchings Test</b>	1 mil. bit at least	Calculate the number of generated sequences	The amount of invisibility of the selected sequence	Approximately, the part to be checked depends on the bit
<b>Approximate Entropy Test</b>	Great Length	frequency of occurrence of parts	the frequency of occurrence of two parts (m and m + 1 length)	Approximate
<b>Linear Complexity Test</b>	1 mil. bit at least	Sequence Interval Calculation	Calculate the length between similar parts	Approximate, depending on block length

<b>Xi-kvadrat</b>	Great Length PTSKK	Calculate the difference between the results obtained and the expected	Calculate the percentage of PTSKK units and zeros	Approximate, unbearable key connection
<b>Kol-Smirnov</b>	PTSKK	Calculate the difference between the results obtained and the expected	Calculate Small and Large Deviations	Exactly

These randomness testing tests differ in their input parameters and verification method. It should be borne in mind that the Xi-square test is the basis of all tests and a prerequisite for testing.

When using this set of tests to check the randomness of the PTSKK, it should be borne in mind that the more tests a pseudo-random sequence passes, the higher its randomness.

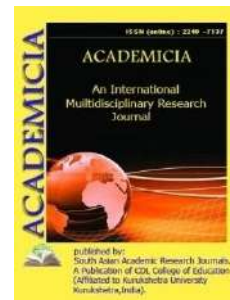
## CONCLUSION

Classification of algorithms for random and pseudo-random number generation methods is given. Comparative analysis of key generation algorithms used for symmetric cryptosystems is given. A one-way function was applied to the key generation process of the .RC4 stream encryption algorithm and it was proposed to use it.

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DOI: **10.5958/2249-7137.2020.00705.3**

## **PRACTICAL FORMS AND METHODS OF "IMPROVING ENVIRONMENTAL EDUCATION TECHNOLOGIES THROUGH PROTECTION OF NATURAL AREAS FOR STUDENTS"**

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### **ABSTRACT**

*Practical application of spiritual heritage of domestic thinkers in ecological education of schoolchildren by protection of natural territories in lessons, study of modern forms and methods of ecological education of schoolchildren in extracurricular activities through protection of natural territories.*

**KEYWORDS:** *Natural Science, Medicinal Plants, Morphology, Type, Epyriology, Autecology.*

### **INTRODUCTION**

Abu Ali ibn Sina, who lived in the Middle Ages, studied the morphology, origin, composition and geography of medicinal plants and left information about them.

Environmental information can be found in the works of Mahmoud Kashgari, who lived in East Turkistan in the 11th century. His books contain ecological, morphological and geographical information on 200 plants.

Botanical and geographical data on plants and animals of Central Asia We meet in the work of Babur.

In the Middle Ages Albert the Great dealt with environmental issues. He studied how plants become inactive.

Data on environmental observations were collected by 18th-century naturalists - K. Linnaeus, J. Buffon. We meet in the works of P.S.Pallas and I.I.Lepyokhina. In the 19 century, the German naturalist A. Humboldt studied the temperature-dependent distribution of plants and gave a classification of life forms.

K.F. Roule, a professor at Moscow University, did a lot of work in animal ecology and left a number of works. It was a species of aquatic and terrestrial as well as other animals. N.A. Lepöxin studied plant distribution in different climates and found that plants growing in high mountains were similar to tundra plants.

Botanist Augustus Pyrama Decandol singled out the science of epirology or outecology as a study of the relationship between plants and the external environment.

One of the scientists who founded the science of ecology is Alphonse Decandol, son of O.P. Decandol. In his book "Plant Geography," he gives a classification of the environment in which plants live, based on heat, light, moisture, and soil. He was the first to show that plants are associated with different soils.

The chapter of Darwin (1859) theory of evolution opened a new era in the history of ecology. In 1877, the German scientist K. Möbius introduced the concept of biocenosis. Worming 's book "The Distribution of Plants under the Influence of the Environment" was published in 1895.

Drought resistance of plants was studied by N.A. Maksimov, Yu.A. S. Gregory learned. The effect of light was studied by N. A. Ivanov, the ecology of photosynthesis was studied by V. I. Lubimenko, A. A. Niciporovich, O.V. Zalenskiy, V.A.Voznesenskiy; G. Plant radiation resistance. A. Genkel, frost resistance was studied by I.I. Tumanov and others. The contribution of L.G. Ramensky, A.P. Shennikov to the development of ecology is also great. Ecology of the population of British scientist C. Developed by Elton (1930). He said that it is necessary to move from studying individual organisms to studying populations, as adaptation processes occur at the population scale. In the development of the ecology of the population. A. Severtsov S. S. Schwartz, H.; P. Naumov P. A. Victor V. N. Sinskaya, T. A. Worknov and A. A. Uranov made a great contribution.

A. In 1935, Tensley introduced the concept of "ecosystem" to science. The concept of "biogeocenosis" was introduced in 1942. N. Kashkarov E. P. Korovin. M. G. Popov K. 3. Zokirov I. Y. Granitov T. 3. Zoxidov A. T. A lot of scientific work was done by Tulaganov and others.

For the first time in the former Soviet Union, Daniil Kashkarov developed a methodology for complex zooecological observations. He left scientific writings that played a role in solving a number of environmental problems. These are "Environment and Communities," Animals of Turkistan, "Foundations of Animal Ecology" and others.

Another founder and organizer of environmental observations in Uzbekistan was E.P. Korovin. He said that in the 1930s the plant community and environment needed to be studied together. Such scientific observations were made at the time at Central Asian State University. At that time, complex expeditions were organized to study desert zone plants and E. P. Korovin and I Y. Under Granitov 's leadership, phytomeliorational works were carried out in the desert zone, and the first experiments were carried out.

In 1950, on the proposal of E. P. Korovin, an ecological laboratory was opened at the Institute of Botany under the leadership of V. A. Burygin. The adaptation of desert and semi-desert plants to drought has been studied. Later, under the direction of Y.S. Gregory, the problems of xerophilization in higher plants were studied in this laboratory and ecological classification of plants was given. In 1967-1987, under the leadership of O.H. Hasanov and R.S. Vernik,



comprehensive environmental observations were carried out in the conditions of the Fergana Mountains. The arid adaptation of plants was first systematically studied by T. Rahimov, and an ecological classification of Adyrian plants was given. This classification serves as the scientific basis for selective planting of feed plants on arable land.

Anthropogenic changes in nature as a result of increased human influence in the second half of the 20th century.

Thus, according to the leading didactic task and structure, education is divided into the following species:

- 1) Combinatorial education (teacher explains, supports, repeats, controls new material);
- 2) study of new material;
- 3) Education to strengthen knowledge, skills and skills;
- 4) Exercises and practical work;
- 5) generalized repetitive environmental education;
- 6) Control, inspection and environmental education of students, in addition to non-standard, innovative forms of education are widely used: conferences, role-playing games, integrated forms of education.

Training for storytelling new material. It informs teachers about work on new material and is successfully used in the study of large and complex materials in middle and high school. Such an educational structure: involvement of students in education, setting educational goals; Brief overview, homework. Enhancement of learned material and development of practical skills and skills are aimed at its deeper understanding and learning, application of practical skills and skills in practice, focusing on repetition of material after study of a certain topic or section in all classes.

The lessons of repetition, systematization and generalization are related to the repetition of large sections of the curriculum and are conducted immediately after the study of the topics or at the end of the school year. Course structure is fundamental in modern pedagogical practice and theory that determines efficiency and outcome in such education.

There are moral and ethical norms based on the protection of natural territories, strict observance of which allows not only to preserve the original natural biocenosis, but is also an important condition for ensuring the safety and health of human life. For this reason, for centuries the relationship between nature and man has been oriented towards achieving its rationality. I am convinced that the issues of environmental education through the protection of natural territories, familiarization with the available geography and environmental resources, responsible approach to environmental education through the protection of natural territories have long been studied. In recent years, a number of studies have been carried out in this field, which show how relevant the problems of nature and society, personality and environmental change are.

The study considered it useful to make some comments on the historical nature of environmental education based on this source, as well as on the views expressed in research and work in this field.

One man committed a crime and was hanged. The king asked him, "What do you want before you die, do you have a wish?" he asked. The sinner said: "I have a dream, I have a desire."

What is harmony? the king asked.

I'm going to lose the heads of three people in the world. the sinner told.

Who are they?

These are the farmers who flooded the road.

The shepherd pasts cattle on the road. It is a point that is digging the way, - said the culprit (R. Usmanov. Saolatnom)

During the construction of the house, the Uzbek people pay special attention to the natural and geographical environment. After all, buildings built on the basis of natural and geographical environment have a unique microclimate. For example, the hotel window was built to the north, so the temperature in such a room was cool in summer and moderate in winter. The window of the room for the children was facing east, contributing to their healthy growth. Consequently, such rooms were directly exposed to the sunlight that heated them. Silent stage bars with several holes were installed on top of the gate to maintain air cleanliness in the house in winter and summer. Such arrays performed a certain function of air purification. It is true that before the development of science and technology, that is, before the last civilization, the population of the world was slightly smaller than today, the level of urbanization was low, and the needs of social actors were not as broad as today. However; In these times, people had a great sense of love for nature, above all, and the sense of nature consumption from consumption, without replacing what was mastered, was not prevalent. II. The sacred book of Zoroastrianism, Avesto, focuses on the relationship between man and nature as well as geographic information. In particular, information is provided on two rivers flowing through Central Asia - Amudarje and Syrdarje, nature, climate, natural resources, plant and animal world, attitude of people to nature and existing countries in the area between them. According to the source, "There are many mountains, pastures and streams. Herds of sheep flock in these pastures. There are many deep lakes and rivers here. "

The play examines the problems of the environment as a whole on the basis of the idea that "a person throughout his life is obliged to contain water, soil, fire and all good things in the world clean and busy."

The source also focuses on cleanliness and storage of land, water, floor, room, body, clothing, food. It contains ideas for creating cemeteries away from towns and villages, surrounding them, maintaining special cleanliness, dressing corpses and spreading land. Stream, ditch, pool or well where a human or animal corpse falls.

Avesto states the following as a means of maintaining a clean environment and preventing disease: 1. Collection of garbage, contaminated areas with soil, stones, ash to bury page. Disaster and distress with fire and cold. Smoke ashes, vinegar, wine, various herbs (Isfand, cloves. Pearls, onions, sandals).

The play also notes the spread of various diseases through birds, animals and birds and their harmful effects. However, although it is recommended to destroy pathogenic animals and insects, it is important to take care of pets.

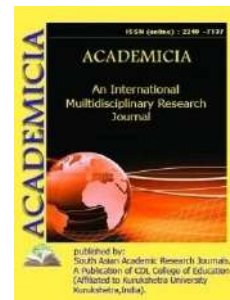
Avesto also refers to heat, cold weather, hunger and bribery, mental suffering, food of spoiled food, poor hygiene, and worms, mosquitoes, and other insects sent by Ariman, as well as bad weather as causes of various diseases.

It can be said that the source's ideas about the relationship between nature and man may have been a specific "ecological concept" of the period. Information on environmental education provided at Avesto is still relevant today. III. Approaches to the use of material and spiritual values from a spiritual and moral point of view, attitudes of social actors to nature are "good," bad, "curses." He was proud of criteria such as "unclean," honest, "majority ownership" ("majority right"), and the weight of these criteria was high. Much attention was paid to the cleanliness and tidiness of dwellings, and built-up places were regularly repaired.

The Qur'an [147] and the Hadith [18-19] also focus on the conservation of nature and man and the achievement of rational relations between them. In particular, these sources place particular emphasis on the issue of human factor (and hence human ecology), and ideas in this regard can be classified by their content in the following areas: Protection of flora and fauna (for example, "God will condemn in hell a man who cuts down a tree using his shadow," God will punish those who torment animals in this world on Judgment Day, "If you have time, plant it." "If your suffering animals are forgiven, many of your things will be forgiven," Don't call it the target of shooting on a living creature, "Sing the body, because it's a blessing,"... about stupid animals. You saw them from Allah. Settle them in a state of massacre, kill them and eat them. "Good is written on the horse's forehead until Resurrection Day. Whoever cares about it will get good," A Muslim who plants a tree or a crop.

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DOI: **10.5958/2249-7137.2020.00646.1**

## TRADITIONS OF ALISHER NAVOI IN THE WORKS OF ERKIN VAHIDOV

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### ABSTRACT

*This article discusses AlisherNavoi's literary-critical views in the preface to the devon of "Badoeul-Bidoya", his demands on the devon and how the "Yoshlikdevoni" compiled by ErkinVahidov meets these requirements. Scientific remarks on the poetic content and order of the "Yoshlikdevoni" are given and information on the tradition of creating thedevon is provided. This article also provides insights into Erkin Vahidov's literary aesthetic views.*

**KEYWORDS:** *Devon, Tradition, the Verse Of Poetry, Alphabet, Theme, Content, Order, Art Tradition Of Creating The Devon.*

### INTRODUCTION

For centuries, literature has been a reflection of human and his feelings. The importance of poetry in this regard is immeasurable. As different forms of poetry reflected emotions from different angles, verses such as aruz, finger, free, and white poetry emerged. At the beginning of the last century, our Jadid poets Fitrat and Chulpon, who specialized in aruz verse, introduced finger and free verse. By the 60s and 70s of the twentieth century the creativity in the aruz verse had declined. Literary critic Abdulla Azam makes the following remarks in the foreword of the book "Khushqadam" by the young poet AlisherMukimov: "The process of forgetting the aruz verse began at the beginning of the twentieth century and by the middle of this century it was almost forgotten. As a result, many people still understand that "a gazelle is a finger-verse poem that is rhymed only in the form of a-a, b-a, v-a-...."ErkinVahidov wrote poems, which were set aside as "obsolete"at that time, and collected them in the "Yoshlikdevoni". ErkinVahidov is also a child of the 20th century and like many others had no knowledge of aruz. It was astonishing that the atmosphere in the house of the future poet's uncle aroused in him an interest in the verse of aruz. If we look at the biography of ErkinVahidov, the young poet, who was orphaned from his parents, grew up in the hands of his uncle.His uncle was an enlightened man,there were

poetry meetings chaired by Alikhan Tora Soguniin their house. In these meetings the theory of aruz was not discussed. But examples of works of such poets as Hafiz, Navoi, Fuzuli, Bedil are told in a aruz tone and there is no doubt that it made the young ErkinVahidov love aruz. Devon was published in 1969. As we read the Devon, we see that the author continued the traditions of HazratNavoi with dignity. Devon's first ghazal is called Debocha. In the same preface, ErkinVahidovcommentedon the neglect of the petition:

Eymunaqqid, seng'azalniko'hna deb kamsitmagil,

Sevgi ham OdamAtodanqolganinsonqonida.

Translation:

O critic, do not despise the gazelle as old,

Love is also in the human blood left by Adam.

As long as love is eternal, so is gazelle, because the meaning of the word gazelle is to speak beautifully to women. So, it was ErkinVahidov, a poet, who created truly modern works in the gazellegenre, in aruz verse, which were considered to be ancient. Abdulla Azamwroteabout it: "The "Yoshlikdevoni" plays an important role in the history of Uzbek literature. He proved that the gazelle genre can also be modern, revived the interest in classical literature and created the basis for the revival of the aruz verse." Indeed, the "Yoshlikdevoni" was born as a modern version of the devons. The variety of topics, humor and word games, which are unique to ErkinVahidov, formed in the student the ability to enjoy and enjoy the classical forms. At the same time, it is worth noting that ErkinVahidov programmed AlisherNavoi'straditions in creating his devon. If you remember, AlisherNavoi also wrote "Debocha" for"Badoeul-bidoya"., He described gazellism, in general, the peculiar rules of formation of the devonin this preface. ErkinVahidov emphasized that the gazelle is non obsolete genre and asked the reader to apologize for his mistakesin his Debocha:

Do'stlarim, shoirdemang, Erking'azalshaydosidir,

Yoshdenguma'zurtutingsahvo'lsa gar devonida.

(My friends, don't call me a poet, I'm – Erkina fond of Gazelle,

Forgive me if I made mistakes in the devon because of my youth).

AlisherNavoi, while writing a preface to his devon, humbly expressed that he was not yet able to arrange the devon in the following verse:

Ishangajunun, manzilangamayxona,

Devon yasamoqni ne bilurdevona?!

(Work is madness for him,his address is tavern,

What does mad know how to do devon?!)

During the acquaintance with "Yoshlikdevoni", we realize that it was created in accordance with classical traditions. It is well known, that in classical poetry there were strict rules for the formation of the devon. According to it, the gazelles on the devon were arranged in order of Arabic alphabet according to the last letter of the verse. "In the East, the creation of devons was a

sign of the poet's maturity, and poets paid attention to the diversity of content and form of their devons. The formation of the Devon began in the X-XI centuries, the period of its formation dates back to the time of Sheikh Saadi." [3; 227]

AlisherNavoi perfected the tradition of creating Devon. After Navoi, our classical poets such as Babur, Nodira, Ogahi continued this tradition. By the twentieth century, poets such as Habibi, Sabir Abdulla, ErkinVahidov created gazelles in the style of aruz and arranged the devon. It should be noted that the first requirement of HazratNavoi in the "Devon" order was the alphabet. For example, the poet emphasizes that the gazelles in the devon should be written not only for the 28 letters of Arabic script, but also for the 32 letters, taking into account the 4 letters added by the Persians to this inscription: "The poets who arranged the devon used not only 32 letters, but also 28 letters of the Arabs. The bride's beauty is perfected by adorning the bride's silk dress with 32 rubies instead of 28 rubies." there are gazelles for all letters of the Cyrillic alphabet, except for the letters "o" and "ŷ (o')" in the "Yoshlikdevoni". Due to the peculiarities of Uzbek language, there are no gazelles ending with the letter "ц (ts)" of the Cyrillic alphabet. Their statistics can be seen in the following table:

Letters in the Cyrillic alphabet	"A"	"G"	"I"	"L"	"M"	"N"	"R"	"U"	"Sh"	"Q"	Gazelles ending in other letters
The number of gazelles ending with the same letter	8	3	3	4	5	10	8	3	2	3	One by one

It can be seen from this table that gazelles ending with "n", "r" and "a" are relatively numerous. This situation can be explained by the lexical and phonetic features of Uzbek language. AlisherNavoi also spoke about the location of gazelles in "Debocha" and said that when placing gazelles, it is necessary to pay attention to their content: Gazelles in the form of praise (praise to God - Sh. S.) and na't (accolade to the Prophet - Sh. S.) should be placed first, then it would be advisable if there were gazelles of the sermon type. "It is inevitable that the Prophet (peace and blessings of Allah be upon him) would not be unaware of a single command in every command, as evidenced by the praise of Allah (peace and blessings of Allah be upon him) or the Messenger of Allah (peace and blessings of Allah be upon him). ... May Devon be found, may our enlightenment not be a gazelle, and may your sermon not be only two line." [2; 11] We did not see Navoi's approach in order of gazelles in ErkinVahidov's collection. If we take into account the period of creation of the "Yoshlikdevoni", the censorship of that period, it is not difficult to feel that it was a great courage to organize this collection. While thinking without deviating from the content of the gazelles, HazratNavoi strongly condemned the change in the content of the gazelles to the praise (the type of gazelles in scattering - Sh. S.). He says that one bayt (two lines) of such gazelles sings spring, one bayt sings autumn, which leads to a deviation from this semantic integrity: "If a verse of a gazelle tells a story, they do not continue the subject until the gazelle is over. But if the content of the two lines to the end of the gazelle sings about the flower ornament from the spring of love, the other two lines humiliate the treasure of separation". While



reading Devon, I became convinced that almost all of ErkinVahidov's gazelles are single gazelles, and some of them are connected gazelles. In general, ErkinVahidov created gazelles that could meet the above requirements of HazratNavoi.

Writing about the structure of the devons, HazratNavoi noted that in addition to gazelles and ode, they should contain musammat types, rubais, qitas, mustazads, fard, muammo, tuyuk, lugz, tarjiband and components, which would ensure the colour of the devon. As for the genre structure of the “Yoshlikdevoni”, there are 61 gazelles, 4 muhammas, 4 comics and 1 poem. We know from the Devonian tradition that gazelle was the leading genre in Devon. Musuammats are placed after the gazelle, and sub-genres are placed after the musammats. All four muhammas are among the tahmismuhammas: the author has linked muhammas to the gazelles of AlisherNavoi, Fuzuli, Bobur and the Kazakh poet JumakentNajmiddinov.

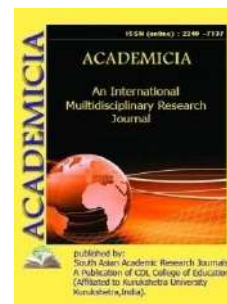
Although Navoi did not mention verse in Debocha, it is clear from “Badoeul-bidoya” or other devons that the great poet created in various circles of aruz. In this sense, if we talk about the verse of the gazelles in the «Yoshlikdevoni», we will see that most of the gazelles were written in the RamalCircle, and the rest in the Muzore and Hazajcircles. If we look at the exact statistics, sixty-one poems in the devon were written in the Ramal, ten in the Hazaj, and nine in the Muzareh. There are, of course, objective and subjective reasons for the abundance of poems in the Ramal. In the last century, the aruz was almost never studied, and the allotted hours were spent to prove that the aruz was outdated and did not meet modern requirements. That is why in one of his discussions with ErkinVahidov, the poet said: “We are taught only the gazelles of aruz that correspond to the circle of ramal”.

Thus, the ramalcircle (foilotun-long, short and two-long syllabic - S. Sh.), Along with its conformity to Turkic words, also served as a key figure in the author's imagination.

Based on the above considerations, we can conclude that ErkinVahidov worked hard to ensure that his devon could meet the requirements set by AlisherNavoi. We can see this in the structure, composition, content and art of the gazelles in Devon. It also influenced the next generation of devons as a first step in modern devonism. For example, Ismail Mahmud Margilani's "Dildavaslingmuddao", FarmonQarnabi's "Devon", young poet AlisherMukimov's "Khushqadam" devons show that significant changes are taking place in modern devonism.

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DOI: **10.5958/2249-7137.2020.00647.3**

## CYCLE OF SONNETS IN THE KARAKALPAK POETRY

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### ABSTRACT

*Mostly, every national literature genres develop due to external influence. The genre of sonnet came to Karakalpak literature in the 1960s and 70s under the impact of West literature and became one of the genres of lyrics. Therefore, any given literary work cannot be considered as a cycle. The cycle has its own principles and theoretical bases. They are the problems which interest literary critics. Every verse in the cycle is a separate independent composition as well as being part of the whole. The independence or freedom of the poems in a cycle depends on whether they have been given titles or not. Six sonnets of these collections are the same, only the last collection having two new ones. However, the collection of poems "Keuildegi keng dunya" (The Wide World of My Soul) included "Sorsha" sonnets, other old sonnets and three new ones all making up one cycle.*

**KEYWORDS:** *Cycle, Sonnet, Garland Of Sonnets, The Lock Of Sonnets, Composition, Emotional Opinion, Didactics*

### INTRODUCTION

Sonnet (from Italian sonetto) is a lyrical genre consisting of fourteen lines. It consists of two quatrains and two triplets, or three quatrains and one couplet. A verse of four lines is called quatrain, while the triplet is called tercet. Quatrains rhyme like abab, abab or abba, abba, whereas tercets rhyme like vgv, gvg or vgd, vgd. The main point is brought up in the first quatrain, the second quatrain develops it, and the first tercet gives the solution to the point, whereas the second tercet draws conclusion on the point [1:188].

Italy is the motherland of sonnet later it was adopted by French, English, Spain, German and Russian literature. In the world literature sonnets were written by Dante, F. Ponsard, W. Shakespeare, I. Goethe, V. Tredyakovskii, A. Sumarkov, A.S. Pushkin, M. Yu. Lermontov, and

in Uzbek literature they were composed by Usmon Nosir, Shukurullo, Mirmukhsin, Ramis Bobojon and Barot Baikabulov [2:45].

The sonnet has a strict form, but the themes are not limited. In the Karakalpak literature this form of poem was developed by the poets I. Yusupov and V. Karabaev. Especially, M. Karabaev enriched this genre by composing garlands of sonnets. They also wrote cycles of lyrical sonnets.

The sonnets by the masters of the genre Petrarch and Shakespeare were improved greatly in the form and content. In Uzbek literature, B. Baikabulov not only developed the genre of sonnet but also was among the first authors who wrote a garland and a cycle of sonnets.

Above we said that sonnet genre is a genre requiring strict form structure. The emergence of sonnets in the Karakalpak literature was its great achievement. M. Karabaev's "Kaspîi sonetlery" (Caspian Sonnets), the collection "Armen guldastesi" (Armen Bouquets) belong to the type of sonnets about travels.

The cycle is combining several works in accordance with one principle. Therefore, any given literary work cannot be considered as a cycle. The cycle has its own principles and theoretical bases. They are the problems which interest literary critics. There are some special research works on cycles, especially on lyrical cycles. For example, V.N. Darvin pays a special attention to the typology of cycles. In the Russian literature the cycle became a leading literary form back in 19<sup>th</sup> century. In the scholar's opinion, the lyrical cycle is the highest form among the genres of this literary style. [4:4].

The lyrical cycle by its nature has its own unique character compared with cycles in other genres. In lyrics, the lyrical character's i.e. "lyrical ego's internal feelings, thoughts, views are reflected. The poet can express his feelings, inner world in all his works. "The main feature of lyrics is the loneliness of the character, his lyricism (the author's trying to act as a character), the prevalence of monological thinking, depicting inner emotional experience, relying on emotional thinking" [1:57]. Therefore, the lyrical works in the cycle develop interactively and logically. One lyrical work seems to be the sequel of another lyrical work or a work completing it ideologically or thematically.

However, lyrical works of different types cannot unite to make one cycle. One common topic or similar emotions of the author play a significant role in uniting several works in one poetic structure. Every work in the cycle completes the intended thought of the poet and will be able to get across to the reader the outlook of the lyrical character as a whole. Every verse in the cycle is a separate independent composition as well as being part of the whole. The independence or freedom of the poems in a cycle depends on whether they have been given titles or not. In free cycles each poem normally has its own title. The independence of the untitled poems, numbered with Roman or Arabic figures or separated with various graphical marks such as asterisks or hyphen, weaken in the cycle. One can easily see the independence of the titled poems in a cycle than that of untitled ones.

The cycle of sonnets "Sorsha" included in the I. Yusupov's collection of poetry "Keulidegi keng dunya" (The Wide World of My Soul) consists of 13 sonnets. The cycle has a general title "Sorsha" and every sonnet in the cycle is numbered with an Arabic figure. Thus, the poet indicated that it is a whole work. "Sorsha" is the name of a large cemetery in Nukus. As the cycle of sonnets was based on a profound philosophical content, the author used the folk

proverb, “When you are in the blues, walk along the flowing water, when you are elated walk in the cemetery” as its epigraph. The epigraph is used to define the main idea of the whole work. In all his sonnets, the poet expresses his philosophical opinion on human’s coming into this world, his living in it and the end of his life. Critic Kh. Orazymbetov said the following about this sonnet of the poet: “He used the unique forms of sonnet genre to convey his thoughts. The opinion started in the first quatrain continues in the second one, a concise conclusive opinion is given in the third one, and the solution to the opinion is given in the last quatrain. The whole content of the sonnet is aggregated in the last quatrain. Therefore it can be named the lock of the sonnet” [2:52].

It is the border between being and nonbeing,  
 Reaching here, traces get lost,  
 The soul thinking arrogantly, ”There’s no world without me”  
 Reenters its own waterskin here.  
 Here flowery lips stop smiling,  
 Tear comes to eyes, mind hesitates,  
 Your friend goes back home without you,  
 Or he can’t follow you when you go back.  
 No soul can escape the death,  
 It never miscounts, nor loses,  
 However, even if it gives orders to spite you,  
 Only one power won’t obey it,  
 Long live fighter, tireless life!  
 If its one branch brakes, it’ll become a thousand [5:91].

In the first quatrain the poet expresses his opinion on the end of man’s life, on the second quatrain he develops further this opinion, and in the third one he continues the first opinion by asserting that the death is the most powerful thing. However, in the last crucial verse he draws a conclusion after giving an artistic feature to the word “life”, the opposite of the notion death. Birth, growing-up, and living- are the dialectics of life. It is the process which has been repeating itself for thousands of years. The quatrains in the sonnet are rhymed as abab, abab, whereas triplets rhyme as vvb, vbv.

In the second and third sonnets of the cycle the poet thinks over the question, “What role does every man play in the life?” In the first quatrain the poet writes, “If a man who pays his last tribute to you, Doesn’t shed a drop of tear”, in the second quatrain he develops this idea even more, “If your death doesn’t make anyone grieve, If the life doesn’t mourn to your death”, in the third verse the idea is strengthened further “If your name doesn’t resurrect like a flower, If your good deeds are not remembered, and in the last fourth quatrain the author concludes, ”So you haven’t lived a normal life”

Thus the poet develops the idea in the first three quatrains and gives the conclusion in the last fourth quatrain which is considered as the lock of the sonnet. When choosing rhymes, the poet pays attention to their impact on the content. The rhyme of this sonnet: abba, abba, vvb, vbv differs from the previous one. In the fourth sonnet the poet believes that the idea of happiness does not mean long living, on the contrary it means living an interesting life, getting old and passing away together with your peers.

In the fifth sonnet of the cycle, with the help of a folk humour, the poet expresses his idea against building too high pompous mausoleums in cemeteries, which are being built by some conceited people. The spiritual counsellor of the main character of Karakalpak national humour Omirbek exclaimed looking at the mausoleum built for him during his lifetime: "My tomb has been built perfectly, and asked him what else should be done?" The poet described this concisely with the answer was : "Only you are needed ...". Such criticizing of pomposity is provided convincingly in the tenth sonnet of the cycle. In fact, the respect for the dead is not shown by pompous mausoleums built to them, but by feeling respect for one another during the lifetime. The sixth sonnet of the cycle is based on the deep philosophy of life. To make it more understandable, we will quote the whole text:

Inscription on the tomb: This man  
 Lived forty days. He was a judge ...  
 "Maybe, I am reading incorrectly?"  
 Afendi asks the wayfarers.  
 "You are not mistaken, we have a custom:  
 Everything will be remembered before dying,  
 The happy days of the life,  
 Should be counted one by one.  
 Only those days will be counted as your life..."  
 Afendi said: "What wisdom it is!"  
 If suddenly I die in your country,  
 My request to you, don't blame me:  
 Write on my tombstone "Poor Afendi  
 Died no sooner had he come to this world" [5:93].

The compositional structure of the sonnet, producing dialogues, transferring each speaker's words into the next quatrain adds a poetic expressiveness to the poem. The introduction to the intended idea is given in the first verse, additional explanations to the first idea are given in the second verse, and in the third quatrain the idea reaches culmination point. The idea finds its solution in the fourth quatrain. The philosophical conclusion of the idea consists of the following: every man's role in this world is measured by his noble deeds, happy days, and his help to others. This opinion is in harmony with the opinions expressed by Eastern classical writers.

The sonnet in the cycle which starts with the words, “Plane tree, how can you live three hundred years,

Standing in one place? Do teach me! ” has ideas with a propound didactic meaning. It turns out that living a long life depends on the man himself. The poet comes to a conclusion that if a man has kindness in himself, and looks only for beauty in the world, is well-educated, humane, and kind to others, he can live a long life. This is revealed perfectly through the image of Plane tree. However, there have been the conceptions of friendship and hostility since man was created. This idea is reflected in the next ninth sonnet. The sonnets in the cycle are closely connected with one another; the idea in one of them continues in the next. There are many nations in the world who live in friendship as if they were born by one mother, and there are some people who argue not finding enough space for themselves in the boundless world. The poet stressed in this poem that the ideas of peace and friendship should be glorified. The eleventh and twelfth sonnets of the cycle are closely connected with each other. This is a story of a good and bad man and what kind of impression they made on people. The last sonnet of the cycle gives a conclusive idea as closing remarks. The lyrical hero describes the situation when he was setting out for a long travel:

So I died. “May he rest in peace! He was a good man ...” say people and carry the coffin.

Thus the first sonnet of the cycle starts with the words, “It is the border between being and non-being”, in the following sonnets the poet depicts the whole life of man, his activities, noble and ignoble deeds, and expresses his opinion on his course of life all the way up to the last breath. “The sonnet has a strict quatrain and rhyme system just like the ghazal. All the same, such strict artistic form cannot prevent from expressing internal feelings and profound philosophical ideas.” [6:123].

Having studied I. Yusupov’s creative work, we notice the fact that the poet was inclined to publish his songs in cycles in his last collections. Some above cited sonnets from the cycle of sonnets were also included in other collections of the poet. For example, his collection “Iosh” published in 1977 had 6 sonnets in the chapter “Sonnets”, the second volume of his collection published in 1979 had eight sonnets gathered under the title “Sorsha”. Six sonnets of these collections are the same, only the last collection having two new ones. However, the collection of poems “Keuildegi keng dunya” (The Wide World of My Soul) included “Sorsha” sonnets, other old sonnets and three new ones all making up one cycle. His poem which starts with the words “Plane tree, how can you” is included in some of his poems alone [7:74]. All the same the content of the sonnet with profound philosophical meaning is revealed more wholly within the cycle. It completes the content of the other poems of the cycle, enters into topical and artistic relations with them. After having analyzed the cycle, we have come to the following conclusion.

## CONCLUSIONS

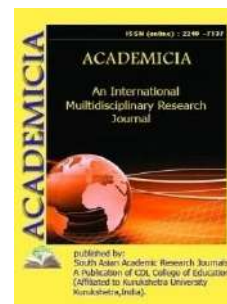
1. “Sorsha” sonnets cycle is considered as forming a cycle according to the structure, because thirteen poems in the cycle are written in sonnet genre, they have two quatrains, two tercets and rhyme as abab, abab, bbv, or abba, abba, bbv, and vbv.
2. Even though the poet did not use the term sonnet, these sonnets are part of one cycle. Because the poet gathered all his sonnets with a similar content in one chapter, named them Sorsha, and numbered them with Arabic numerals.



3. The sonnets in the cycle have a certain ideological and compositional structure. Because the idea of each sonnet in the cycle is continued in the next one.
4. The cycle is united not only in the form but also in the content as it gives connected ideas.
5. Along with it, each poem in the cycle can be a separate creation on its own.
6. The poet's profound philosophical ideas are given in generalized form through all his sonnets.
7. The cycle includes poems of humoristic, didactic and philosophical content.

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DOI: **10.5958/2249-7137.2020.00648.5**

## SCIENTIFIC AND THEORETICAL FUNDAMENTALS OF ECOLOGICAL MANAGEMENT (ON THE EXAMPLE OF THE REPUBLIC OF UZBEKISTAN)

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### ABSTRACT

*The article reveals the scientific and theoretical basis of the rapidly changing system of ecological management in connection with the transition of many countries to market relations on the example of the Republic of Uzbekistan.*

**KEYWORDS:** *Management, Administration, Ecology, Requirements, System Management, Efficiency, Uzbekistan, Cadastre, Control, Expertise, Audit.*

### INTRODUCTION

In the practice of a market economy, words like “management” and “administration” are very common. But a single approach to their understanding has not yet been identified (Table 1).

**TABLE 1 DEFINITIONS OF THE WORDS “MANAGEMENT” AND “ADMINISTRATION” IN THE SCIENTIFIC LITERATURE**

management	The function of an element of organized systems of different nature (biological, social, technical, etc.); keeping these systems in a certain structure, keeping the order of activities in a rhythm, ensures the implementation of their programs and goals [1, 1988].
	The process of regulating and directing the state of the economic system of the business entity; means the purposeful influence of subjects, agencies on people and economic objects, aimed at directing their activities and achieving the desired results [2, 2001].
	Edit something by a particular method or appliance, direct, use [, 1961].
	Method of state administration [4, 2006].
administration	The process of regulating and directing the state of the economic system of the economic object [3, 1961].
	Something Management movement. For example—the management of Public Administration bodies, an organization or an institution, the management of a complex of equipment, the formation of words (syntactic management), human actions in the conduct of Management [4, 2006].

From the table above, it can be concluded that *management* is a *state* and *administration* is a *process*. Ecological management also falls into a social category, i.e. a form of regulating relationships between people. It will need to be nurtured in order to regulate social relations. But one important requirement of sustainable development in ecological management is the principle that "everything is for the benefit of man and his well-being". That is why the phrase "for present and future generations" is of primary importance in the field of "Ecology", in the field of education and practice. Ecological management is a mechanism for applying the powers, functions and methods of implementation of the bodies regulating social relations that protect the environment and ensure ecological security [5, 2020].

### THE MAIN FINDINGS AND RESULTS

Ecologically safe living (living beings) and functioning (human) environment - a clean, healthy and favorable environment for organisms to safely reproduce, grow and develop in certain ecosystems [1, 1988]. *The goal of ecological management is to provide regulation of social relations in ensuring the ecological safety of the living and working environment of living beings.*

In order to achieve the goals of ecological administration, it is necessary to regulate the process of performing the following tasks in *ecological science, education and practice*: formation of a system of training, retraining and advanced training in the field of ecology and ecological protection in full compliance with modern requirements;

- popularization of ecological education, ie training of "ecologically cultured person";

- development of well-known scientific and theoretical bases of ecology, which are inextricably linked with practice;
- determine its history, current status and future prospects on various scales (*global, regional, national, local*);
- accounting, assessment, control and monitoring of natural resources at various levels;
- wide implementation of the requirements of the community, the state and society in the field of ecology and ecological protection;
- establishment of activities in the management of ecological civil society institutions (non-governmental non-profit organizations and public associations);
- establishment of a mechanism for the establishment of ecological control and their widespread use in the management of data of the recommended force;
- improvement of ecological and legal norms, concepts, plans and programs aimed at the future at various levels, depending on the ecological situation, and the creation of a working mechanism;
- creation of a system of inquiry, prosecution and judicial bodies;
- development of a legal system to encourage or motivate ecological relations;
- organization of "ecological ambulance" service of various scales;
- resolving ecologically critical land (such as the Aral Sea, Chernobyl, Central Africa) and water areas (such as the Aral Sea, Balkhash and Lake Chad) through the international community;
- development of ways to prevent ecological terrorism and corruption on various scales;
  - to implement a form of ecological attitude of society towards nature, etc.

If you look closely at the ecological tasks mentioned above, the phrase "on a different scale" has been used a lot. One of the internationally recognized ecological principles is that "ecosystems of different scales are inextricably linked and are not subject to any administrative boundary rules" [6, 1974]. Especially at a time when the process of globalization is expanding, in your neighborhood, district, city and republic, both positive and negative ecological activity will certainly be reflected in the living space, which is at the top of the hierarchy of ecosystems. This should never be forgotten in ecological management. For example, the non-ecological policy of the former Soviet Union on land reclamation and irrigation in Central Asia has led to a global "Aral Sea tragedy". Excessive emissions from countries such as China, India and the United States continue to be the cause of "global warming".

In order to carry out ecological management effectively, it is divided into a number of structured parts (Figure 1). The hierarchical arrangement of the parts of the ecological management system is placed in the strict sequence specified in it and it is implemented [7, 2013].

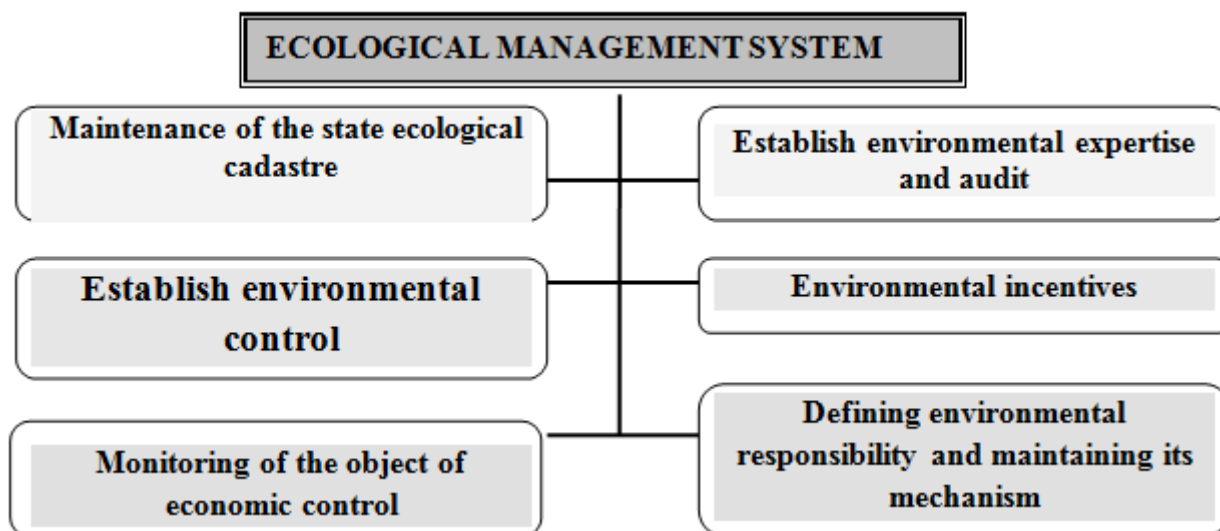


Figure 1. *Parts that serve the ecological management system*

Ecological management begins with the maintenance of the *ecological cadastre*, more precisely, the cadastre of natural objects. Cadastre - in French, "cadaster" - means register, list. Typically, this list does not apply to general objects, but to specific objects, including natural objects. According to Article 3 of the Law of the Republic of Uzbekistan "On State Cadastres" of December 15, 2000, the ecological cadastre is an integral part of the unified system of state cadastres. This unified system will be created as a multi-purpose system designed to ensure a single nationwide accounting and assessment of the natural and economic potential of the republic and its specific regions.

Ecological cadastre is a system of updated (changing) information and documents on the location, legal status, quantity, quality characteristics and value of ecosystems. Ecological cadastre objects are defined differently in different countries. For example, in Uzbekistan, 10 of the state cadastres can be included in ecological cadastre objects (Figure 2).

The ecological cadastre is based on legal principles such as full coverage of the territory, the use of a single system of spatial coordinates, the generality of the methodology, the accuracy and publicity of information. These cadastres are carried out by the executive, specially authorized state and local state authorities, mostly at

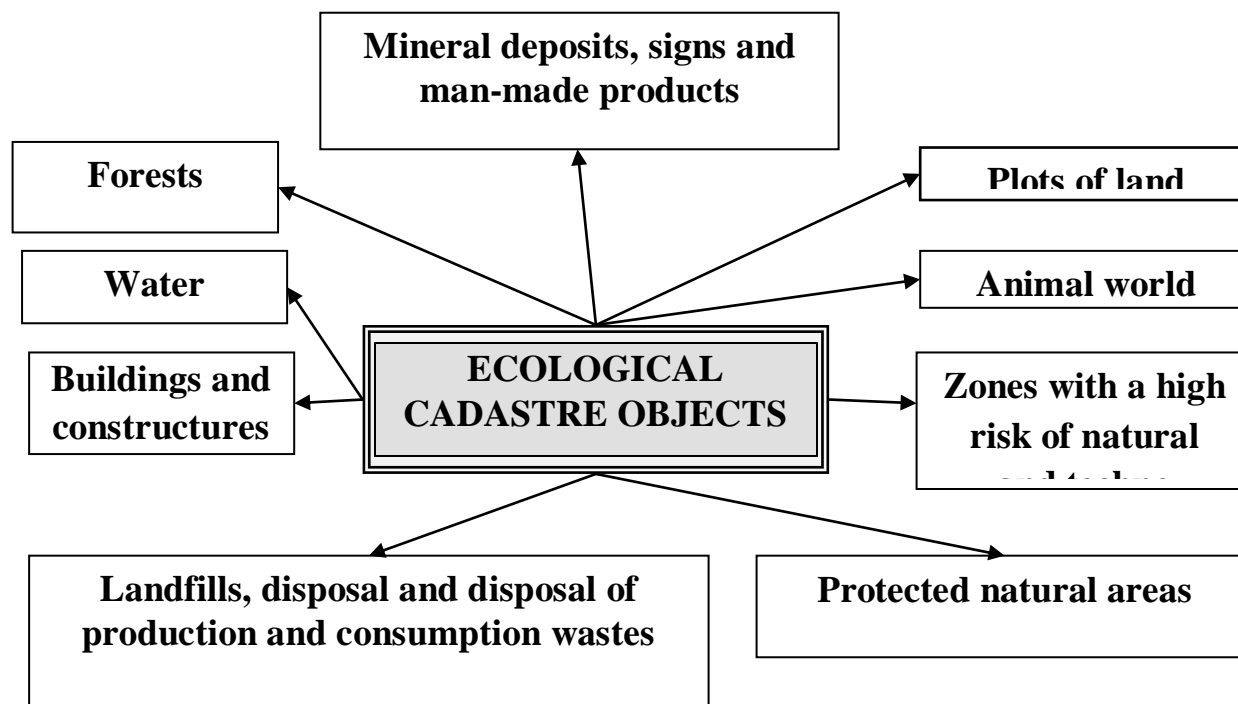


Figure 2. *Objects of ecological cadastre*

Assessment of state ecological cadastre is a natural element and qualitative and value aspects of ecosystems. Documents on the objects of ecological cadastre - documents confirming the right of ownership and other rights to the ecosystem and its components, contain information about the collection folder, map (plan), book, status. Information on ecological cadastre objects is provided to public administration bodies free of charge, and to other legal entities and individuals in the prescribed manner for a fee.

Ecological cadastre can be the economic, social, natural, legal basis of ecological control. In accordance with Article 3 of the Law of the Republic of Uzbekistan "On Ecological Control" dated December 27, 2013: *ecological control is a system of state and public measures aimed at preventing, detecting and limiting violations of the legislation in the field of ecological protection and rational use of natural resources, increasing the effectiveness of nature protection activities.*

According to the Regulation "On the procedure for state ecological control", approved by the Cabinet of Ministers of the Republic of Uzbekistan dated August 5, 2014 No 216, its objects, forms, types and methods are summarized in Figure 3.

**Areas of ecological control in Uzbekistan:** formation and development of ecological control systems; creating a favorable environment for the life and health of citizens; specially authorized state in the field of ecological control (Cabinet of Ministers, State Committees for Ecology and Ecological Protection, Industrial Safety, Veterinary and Livestock Development, Land Resources, Geodesy, Cartography and State Cadastre, Ministries of Health, Water Resources and Interior, Cabinet of Ministers State Inspectorate for Plant Quarantine), local state authorities, state and economic administration, business entities, citizens' self-government bodies, non-



governmental non-profit organizations, organizational and legal mechanisms for cooperation with citizens on ecological protection and rational use of natural resources improvement; development of international cooperation in the field of ecological control.

As we can see from the above, ecological control is a very comprehensive and multifaceted activity. Therefore, it is integrated into a single system.

*The system of ecological control services includes: the service of state ecological inspections; ecological monitoring service; service of state law enforcement agencies; services of internal administrative and production bodies; services of public associations.*

Ecological control inspection is carried out by public authorities and administration, as well as specially authorized government agencies. They are also divided into general and special ecological regulatory state bodies in accordance with their ecological management powers.

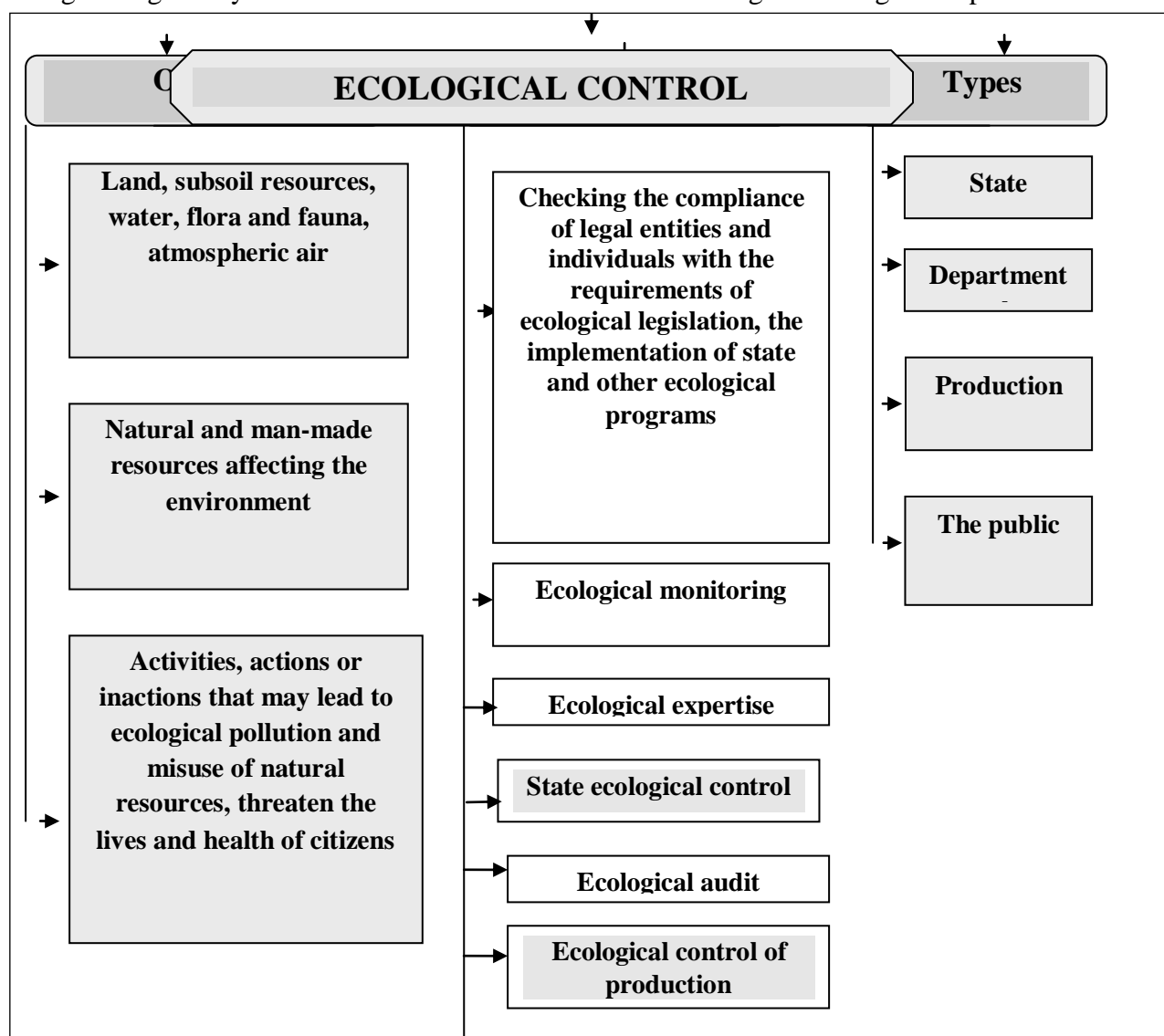


Figure 3. *Objects, forms and types of ecological control*

*Ecological monitoring is the first stage of ecological control, which is a system of monitoring, recording, assessing and forecasting periodic changes in the state of the environment (or rather ecosystems) (based on cadastral data). It is conducted locally, nationally, regionally and globally.*

The national ecological monitoring system in Uzbekistan is carried out in accordance with the principles set out in the 1972 UN Stockholm Conference on Ecological Protection. Its legal basis is Article 28 of the Law "On Nature Protection", the Regulation "On State Monitoring of the Environment", approved by the Cabinet of Ministers on April 3, 2002 No 111, the Regulations of specially authorized state bodies and other by-laws is calculated. However, in Uzbekistan, ecological monitoring is called "ecological monitoring" and it is incorrect to say that it is carried out only by government agencies. Unlike the ecological cadastre, ecological monitoring is a type of control specific to non-governmental organizations and self-governing bodies.

The Ecological Monitoring Service is the basis for the accurate and expeditious conduct of the activities of the specially authorized state inspection service in the field of ecology through the timely provision of information on the state of the environment (ecosystems) to the head of state, authorities and executive bodies. Ecological monitoring data should be conducted in a transparent manner. This information is primarily summarized and evaluated by ecological authorities. Monitoring data on the negative ecological situation is required to be made public immediately.

Maintains the state cadastre of natural resources to take into account the quantity, quality and other indicators of ecosystems, the volume of their use, the principle of order. Objects that may have a detrimental effect on the state of ecosystems, pollutants, their amount, volume and composition of industrial and municipal wastes are also monitored and accounted for by the state.

Governments may not always have staffs who understand ecological rules and regulations. In this case, the supervisors have to get an expert opinion. In science it is called **ecological expertise**. The word expertise is derived from the Latin word "expertus" - "experienced", which means the conclusion of a particular issue by an experienced expert.

For the first time in the ecological legislation of the Republic of Uzbekistan, ecological expertise is covered in Articles 24-27 of the Special Section VI of the Law "On Nature Protection" adopted on December 9, 1992. Article 4 of this law establishes the principle of mandatory ecological review. However, the Law on Nature Protection has only established the imperative (strict) conditions for ecological expertise. Its essence, types, methods, terms, principles and objects were not covered. It is no exaggeration to say that the Law of the Republic of Uzbekistan "On Ecological Expertise", adopted on May 25, 2000 and entered into force on July 1, 2000, has made a significant contribution to the formation and implementation of the legal and ecological mechanism.

**Ecological expertise** is the determination of the compliance of the planned or carried out economic and other activities with the ecological requirements and the feasibility of the object of ecological expertise. The main goals and objectives of ecological expertise are to determine the extent to which these activities may affect ecological requirements, in particular, the health of citizens, as well as measures to protect the environment, rational use of natural resources before

planning and implementing other activities. is to determine whether it is sufficient and scientifically sound to meet ecological requirements (Figure 4).

Development of state programs, concepts, projects for the location and development of productive forces, social and economic sectors as an object of ecological expertise; allocation of land plots for all types of construction, preparation and transfer of documents; preparation of documents for the creation of new types of equipment, technology, materials, substances and products; granting the status of specially protected natural areas and ecological emergency and ecological disaster zones (tegras); the development of urban planning documents, the mechanism of their practical application will also be the object of expertise, and they, of course, need the opinion of experts.

Ecological expertise can also be conducted by *state, public and specialized firms*. However, passing the state ecological expertise is mandatory for all the above-mentioned aspects of human activity. Therefore, it can be conducted by expert units of different statuses of specially authorized bodies. If the business or other business entity (customer) is not satisfied with the conclusion of the state ecological expert commission, it has the right to file a claim for consideration in the general or economic courts.

The timing of the state examination is determined differently. For example, in Uzbekistan its term does not exceed 30 days and in some very difficult conditions can be extended for a period not exceeding 2 months with the permission of the chief state expert. Funding for this expertise is provided by the customers.

Citizens have the right to conduct public *examinations by citizens' assemblies*, self-government bodies, and non-governmental non-profit organizations. From the point of view of ecological expertise, they can conduct ecological expertise at their own expense, independently of the state expertise. Only the conclusion of the public ecological expertise will have the force of a recommendation and will allow to review the conclusion of the state expert examination and to go to court with a claim.

In order to conduct a public ecological review, citizens, citizens' assemblies or public organizations must submit an "Ecological Consequence Statement" to an independent expert commission. In this application, they should cover two issues: *the consequences of ecological degradation, taking into account ecological risks; take the necessary measures to eliminate the consequences of ecological damage, restore and moderate the state of the environment*. The task of the experts is only to prove the correctness or incorrectness of this situation or situation. If the public examination does not correspond to the conclusion of the state examination, the matter shall be clarified by applying to the state body, the prosecutor's office or the judicial authorities appointing the state ecological examination.

One of the peculiarities of market relations is the formation of various types of audit activities. Audit "audit" in English – means "verification", that is, the inspection of accounting books, reports and documents. The legal regulation of the audit activity

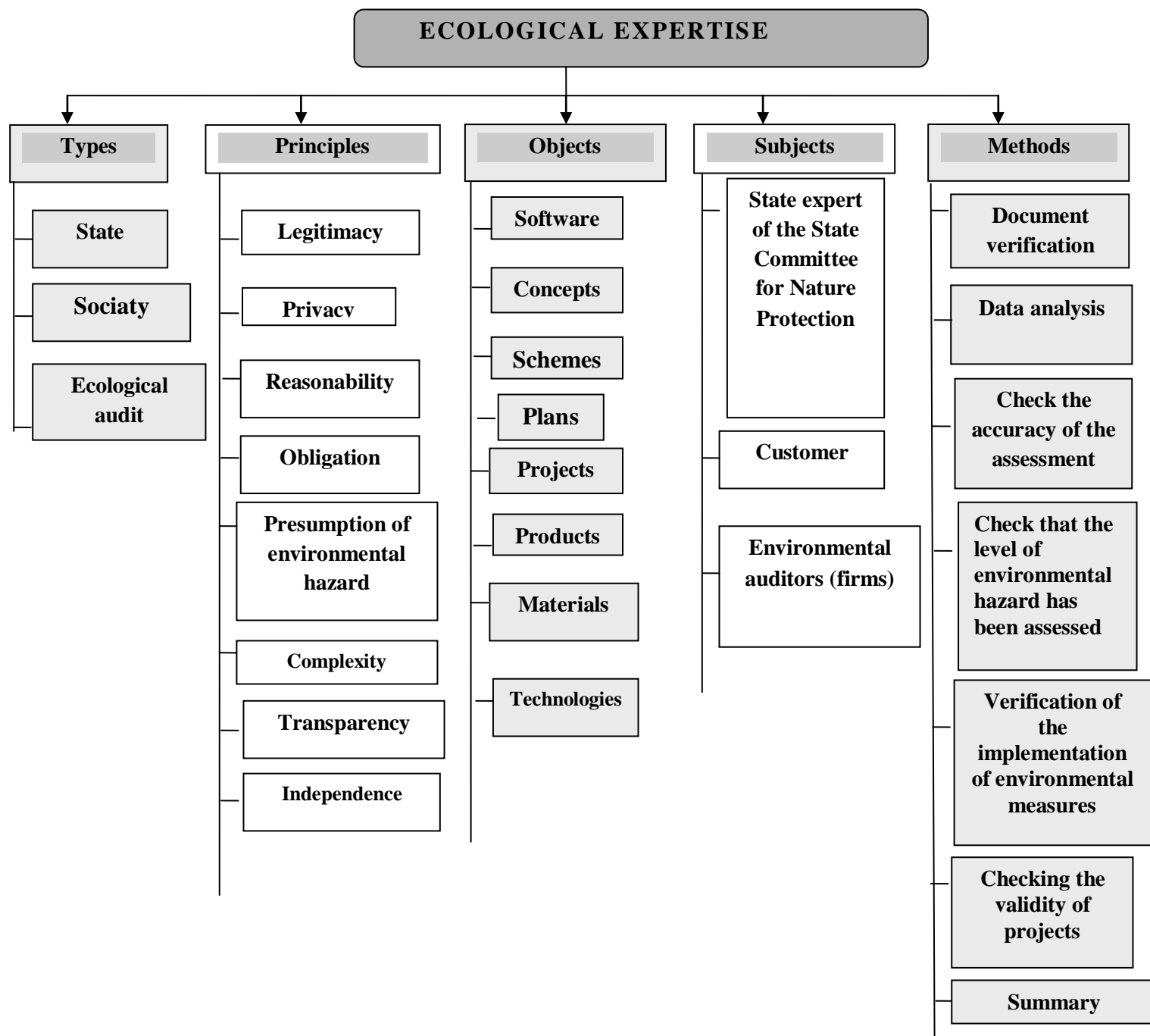


Figure 4. *Types, principles, objects, subjects and methods of ecological expertise*

in Uzbekistan is regulated by the law “on auditing activity” dated 26 May 2000 and the documents adopted on this basis.

Ecological audit is the inspection of accounting books, reports and documents of the subjects of ecological attitude. Auditing activities are carried out by auditors (audit firms) in the form of entrepreneurial activities. Ecological audit has some specific look. Ecological audit three types:

- 1) Ecological expertise in production;
- 2) Regional ecological expertise;
- 3) Conducted in the form of ecological consulting.

*The purpose of ecological audit of production facilities* is to ensure compliance of financial and economic activities of enterprises with the requirements and regulations for Ecological Protection, preparation of recommendations for nature protection measures, as well as verification of expenditure in the use of Natural Resources. Such verification work is carried out before financing and in conflict situations with the supervisory authorities.

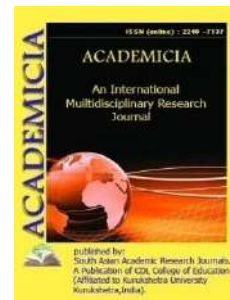
*Territorial ecological audit* is used to assess the natural resource potential of a particular plot of land or territory to determine the impact of adverse natural phenomena and man-made processes on the environment and their types. This type of ecological audit deals with real estate and land transactions; to formulate an initial conclusion and present it to the public; submission of expert opinion and approval by higher authorities; dispute resolution, etc.

## CONCLUSION

To conclude, ecological cadastre, control, expertise and audit are systems that increase the effectiveness of ecological management. Adherence to its sequence has a positive effect on the healthy lifestyle of children and staff in preschool education, regardless of the form of ownership.

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DOI: **10.5958/2249-7137.2020.00649.7**

## REGISTRATION OF NEUROLOGICAL PATIENTS IN PRIMARY HEALTH CARE

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### ABSTRACT

*The effectiveness of dispensary records has been studied by examining ambulance records of 460 patients with chronic illnesses. The following results have been defined: recovered 2.1%, satisfactory 70.2%, stable 2.2%, disability 4.5%, the illness got worse 2.5%.*

**KEYWORDS:** *Neurological Patients, Primary Health Care, Rural Medical Center, Dispensary Records.*

### INTRODUCTION

**Relevance:** The problem of the quality of medical examination in the new economic conditions is one of the most urgent in healthcare. The Concept of Development of Health Care and Medical Science in the Republic of Uzbekistan pay great attention to the quality and effectiveness of the medical examination. In recent years, a number of works [1-3] have been published on certain aspects of the clinical examination of the population, but so far there have been insufficient studies to study its quality.

Clinical examination is a complex of measures, including a medical examination by medical specialists, laboratory and instrumental diagnostic methods carried out in relation to certain groups of the population. The development of all non-communicable diseases occurs gradually and is determined by certain risk factors. Risk factors are conditions under which the likelihood of the onset of the disease becomes higher. Identifying these factors is easier and cheaper than subsequently diagnosing and curing an already developed disease- they can be detected long before the first signs of the disease appear. Also, the influence of risk factors can be significantly reduced, and this can completely prevent the development of diseases. To do this, it is enough to adjust the lifestyle of a person.



The aim of this study was to develop scientifically based recommendations for hanging the quality and effectiveness of medical examination for neurological diseases of the population in the conditions of rural medical centers

The study was conducted in 2015-2019. in three rural medical centers (Geophysics, Zarmanak, Kasri-Orifon) of the Bukhara region.

The quality of the clinical examination was studied based on expert assessment of 460 cards of outpatients with chronic neurological diseases. For the observation unit in the study, a patient who was registered in the dispensary was accepted. In accordance with the purpose and objectives of the study, statistical, expert and sociological methods were used.

A special "Card of expert assessment of the quality of medical examination of the population from 5 to 65 years in rural medical centers " was developed, which included the following sections; regular monitoring of children and adults, completeness and timeliness of laboratory and instrumental studies; quality of the implementation of medical and recreational activities; the effectiveness of the rehabilitation treatment of the outpatient card.

To assess the quality of the clinical examination, the most common nosological forms were identified: migraine, tension headache, radiculitis, discirculatory encephalopathy, neuritis and neuralgia, epilepsy, cerebral palsy, polyneuropathy, acute cerebrovascular accident, etc.

Data on the regularity of observation of patients in rural medical centers are presented in table 1.

The research materials showed that children on average in 23.1% of cases were observed irregularly by district pediatricians, in 38% by district nurses, in more than 68.3% of cases by doctors of narrow specialties. Especially often this happened with migraines, tension headache (33.2%), sciatica (36%), discirculatory encephalopathy (40.7%), neuritis and neuralgia (49.4%).

According to experts, the cause of irregular monitoring in an average of 42.8 cases was the lack of discipline of parents, in 31.6% - the absence of a mother and a child at the place of residence, in 9.2% - the absence of an appropriate neurologist, in 6.8% - an overloaded doctor, in 9.6% - other reasons.

#### Regularity of observation of patients in rural medical centers (% of total)

TABLE 1

Disease	Regularity of observation			
	Local doctor		neurologists	
	resp ec ted	Not com p liant	Res pec ted	Not com plia nt
Migraine,tension headache	66,8	33,2	31,8	68,2
Radiculitis	63,5	36,5	37,6	62,4
Encephalopathy	59,3	40,7	14,5	85,5
Neuritis and Neuralgia	50,6	49,4	35,7	64,3
Epilepsy	88,7	11,3	34,7	65,3
Cerebral palsy	80,5	13,5	18,3	81,7
Polyneuropathy	83,5	16,5	36,0	64,0
Transient cerebrovascular accident	87,3	12,7	26,9	73,1
Acute cerebrovascular accident	88,7	11,3	46,2	53,8

Conditions after transferred	81,7	19,3	45,1	54,9
Convulsive syndromes	86,8	13,2	29,3	70,7
Parkinson's disease	65,4	34,6	27,6	72,4
Average	76,9	23,1	31,7	68,3

The research materials showed (Table 2) that an untimely examination took place on average in 19.9% of cases, in particular with convulsive syndromes in 24.2%, with migraines, tension headache - in 25.7%, with transient disorders cerebral circulation - in 27.3%, with cerebral palsy - in 33%, with radiculitis 34.7%. When analyzing the completeness of the survey, it was found that in 23.6% of cases it was carried out in incomplete volume. Particularly high is the proportion of insufficiently examined migraine headaches, tension headache, radiculitis, cerebral palsy, transient cerebrovascular accident, conditions after a history of stroke (from 27.1 to 34.7%). The reasons for this in 22.5% of cases were the lack of diagnostic equipment and apparatus, in 21% - the lack of control by the doctor, in 15.5% - the overload of laboratories and diagnostic rooms, in 15% - the lack of discipline of parents.

An important aspect of the effectiveness of the clinical examination is the quality and completeness of the implementation of the plan of medical and health measures. At the same time, according to expert estimates, in 17.5% of cases they were carried out inadequately. An expert assessment revealed that in 16.4% of cases the dispensary patients needed planned hospitalization, but it was not performed in 7.5% of cases.

An important indicator of the quality of the clinical examination is the completeness of the use of physiotherapeutic methods of treatment. According to experts, in 24.5% of cases, physiotherapeutic treatment was not prescribed, in 17.5% of cases it was inferior. The reason for this situation in half of the cases was the lack of discipline of the parents, in 22.5% - there was no necessary treatment, in 27% - insufficient control of the healing process by the doctor.

One of the important stages of the clinical examination is the rehabilitation treatment, which, according to experts, was needed by more than 90% of the population. However, in 24.8% of cases it was carried out poorly, and in 13.1% it was completely absent. Particularly high is the proportion of inferior rehabilitation treatment among patients with migraine, tension headache, radiculitis, cerebral palsy, transient cerebrovascular accidents and conditions after a stroke. The main reason in 42.4% of cases was the lack of appropriate types of rehabilitation treatment, in 32% - lack of discipline of parents, in 12.7% - overload of specialists, in 16.5% - lack of control by the doctor.

**TABLE 2 QUALITY INDICATORS OF MEDICAL EXAMINATION OF CHILDREN IN RURAL MEDICAL CENTERS BASED ON EXPERT ASSESSMENT (% OF TOTAL)**

Disease	Timeliness of the survey		Survey volume		Conducting medical and recreational activities	
	timely	untimely	full	incomplete	full	inferior
Migraine, tension	74,3	25,7	74,3	25,7	77,7	22,3

headache						
Radiculitis	65,3	34,7	65,3	34,7	69,2	30,8
Encephalopathy	94,5	5,5	84,5	15,5	94,5	5,5
Neuritis and Neuralgia	82,1	17,9	72,1	27,3	74,8	24,2
Epilepsy	93,1	6,9	87,1	12,9	93,3	6,7
Cerebral palsy	66,6	33,0	66,6	33,4	67,6	32,4
Polyneuropathy	94,5	5,5	74,5	25,5	94,3	5,7
Transient cerebrovascular accident	72,7	27,3	72,7	27,3	74,8	24,2
ONMK	96,0	4,0	91,0	9,0	95,5	4,5
Conditions after transferred stroke	72,9	27,1	72,9	27,1	74,8	25,2
Convulsive syndromes	75,8	24,2	75,8	24,2	77,6	22,4
Parkinson's disease	78,9	21,1	78,9	21,1	80,6	19,4
Average	80,1	19,9	76,4	23,6	82,5	17,5

Equally important in improving the quality of medical examination is the timely consultation of patients with narrow specialty doctors and general practitioners. However, according to expert estimates, in 21.9% of cases, consultations were held out of time. The reason for the untimely or failed consultation in 61% of cases was the lack of a specialist, in 6% of cases the attending physician did not appoint a consultation. An important criterion for clinical examination is the assessment of its quality and effectiveness. For each nosological form, criteria for the effectiveness of medical examination were developed.

In diseases of the nervous system, the following criteria were taken into account: improvement of motor functions and motor skills, increase in the amplitude of movements; reduction in relapse rate; reduction or disappearance of pathological reflexes; reduction in relapse rate; reduction or disappearance of contractures and deformations of joints and bones, etc.

We analyzed the dynamics of the health of the population under dispensary observation in rural medical centers. The following results were obtained: recovery - 2.1%, improvement - 70.2%, no change - 22.8%, transition to disability - 4.5%, worsening - 2.5% of patients. In the "no change" group, the main share falls on patients with cerebral palsy, the state after suffering a stroke, which may indicate an insufficient volume of medical and health measures, including rehabilitation treatment.

It is known that indicators of the cost-effectiveness of medical examination of the population is a decrease in the frequency of cases of temporary disability in connection with patient care.

It is known that the card of an outpatient is a legal document, which can speak "for" and "against" a doctor in case of lawsuit. However, according to expert estimates, in 46.3% of cases defects in the maintenance of this document were noted. In particular, an insufficient description of the medical history was detected in 23.2% of cases, and the absence of a doctor's records.

There was also a lack of data on the outcome of the disease, in some cases, recommendations were not given to patients. The materials of the expert assessment showed that in every third case

there is no continuity in the examination and treatment of patients between outpatient and inpatient facilities.

Thus, an in-depth study of the quality and effectiveness of clinical examination in rural medical centers with expert assessment showed that there are significant reserves for improving the quality of medical examination, which depend primarily on the level of professional training of general practitioners, nurses, the monitoring system for their activities and the availability of methodological recommendations for providing medical examination and quality control.

Identified defects in the organization and quality of the clinical examination indicate the lack of effectiveness of existing systems of departmental and non-departmental control over this process.

Based on the materials of the study, we developed guidelines for improving the organization and improving the quality of medical examination in the conditions of rural medical centers. They, in particular, include organizational and methodological issues of ensuring the quality of medical examination of the population, indicators of the quality and effectiveness of medical examination; methods of analysis and assessment of the quality of medical examination using expert assessments; information support for the quality management process of the clinical examination; continuing education programs for general practitioners and nurses; rational organization of the work of the local therapist; proposals for improving the relationship of general practitioners and narrow specialists.

Clinical examination is a complex of measures, including a medical examination by doctors of several specialties and the application of the necessary examination methods, which are carried out with the aim of early detection of chronic non-infectious diseases (conditions), which are the main cause of disability and premature mortality of the Uzbekistan population and risk factors for their development as well as in order to form health groups and make recommendations for patients.

Regular medical examinations and preventive medical examinations are the most important mass and highly effective medical technologies for preserving health and reducing premature mortality. Regular medical examinations will significantly reduce the likelihood of developing the most dangerous diseases that are the main cause of disability and mortality in our country or identify them at an early stage of development. When their treatment is most effective.

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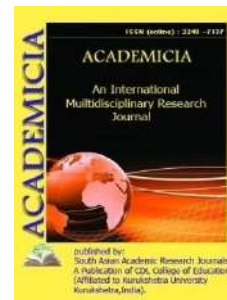
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# ACADEMICA

## An International Multidisciplinary Research Journal

(Double Blind Refereed & Reviewed International Journal)



DOI: **10.5958/2249-7137.2020.00584.4**

### IMPACT OF INFLATION ON CONSUMER BEHAVIOUR TOWARDS GOLD – A STUDY

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#### ABSTRACT

*India throughout its history has always considered gold as a valuable commodity. Indians not only consider gold for the purposes of investment but also as a status symbol. The obsession of Indians for gold is well known around the world. The strong price increase seen for gold in recent years has been the result of a complex of short-term factors including a weak dollar, low real interest rates, and high levels of financial stress and central bank quantitative easing policies, which may have raised the tail risk of high inflation. The researcher has tried to find out the relationship between the purchases of gold with respect to Inflation. For this study we have collected the response of 30 respondents & analysed using simple percentage method.*

**KEYWORDS:** *Gold, Consumer Behaviour Inflation,*

#### INTRODUCTION

Gold has been used as a store of value and form of currency since ancient times. Since the seventeenth century it has been formally traded over the counter in London and by the nineteenth century it underpinned the largest fixed exchange rate system the world has ever known (the Gold Standard). In the twentieth century it was again used as the backbone to a formal exchange rate mechanism (Bretton Woods) but the collapse of the system in the early 1970s left the price to float freely for the first time in over 250 years.

Since 2007 the world has seen a period of striking economic and financial volatility, featuring the deepest recession since the 1930s and steep declines in the value of many financial assets – both traditional ones such as equities and newly developed ones such as mortgage-backed



securities. Against this background, however, gold has performed strongly with its price roughly doubling since the global financial crisis began in mid-2007.

Another article How to invest in gold( Mrs. Shweta B H )states different views of investing; she suggests protecting wealth rather than creating wealth and states that gold is one such investment. The article also states that gold is an asset which has long term intrinsic value which helps to shield from inflation, currency debasement and equity market bears.

Gold, although not specifically mentioned as an artefact, is also a valued possession according to its significant role in Indian culture (Dempster, 2006). Gold is an artefact because the status it holds in the Indian culture designates membership to that culture (Craig and Douglas, 2006).

Gold is unique, however, because it is not necessarily a 'cherished' possession. Cherished possessions carry reminiscences about life and '... create a personal and durable sense of identity' (Price, Arnould and Curasi, 2000, p 187). Initial interest in this study developed from observing gold-buying activities in the Dubai Gold Souk after being introduced to the intricacies of supplying, manufacturing and retailing gold to Indian consumers (Siroya et al, 2005). Possessing gold is firmly embedded in Indian customs and traditions (Dempster, 2006) although little academic attention has been paid to its significance within the consumer culture. Rituals include consumer behaviours as well as occasions such as religious holidays, festivals, and marriage (Craig and Douglas, 2006).

### **Scope and Objectives of the Study:**

The purpose of this research is to find out effect of Inflation on consumer behaviour on purchase of Gold with the objective to get the feedback about various factors affecting consumer behaviour towards the purchase of gold and evaluating gold as an investment decision. This research began with questions whether Indians have distinctive consumer [culture] actions when buying gold. The study narrowed to the question 'have gold-buying activities become ritualized in the Indian consumer culture?' The main objective of the study is to:

- (1) Find out when Indian customer purchase gold,
- (2) Why they buy Gold
- (3) How – described by actions and behaviours do they buy.

### **LIMITATION:**

The study was restricted only to Bangalore. So the results cannot be generalized. Some of the customers were not serious in their responses to the survey and as a result there are some difficulties in reaching to the right conclusion. The results may help people to understand about the factors that influence the satisfaction of customers towards Gold.

### **RESEARCH METHODOLOGY**

The research design used in this study is descriptive research design. In order to fulfil the chalked up objectives a present study of 30 respondents are taken. The present study is based on primary as well as secondary data. In order to receive the responses of 30 people, questionnaire method and personal contact method is adopted.. The secondary data is collected from journals, text books and through internet. Random sampling method is adopted used to select the

consumers for collecting data. The data has been collected and analysed using simple percentage method.

### ANALYSIS & INTERPRETATION

**TABLE 1: DEMOGRAPHIC &SOCIO ECONOMIC CHARACTERISTICS OF RESPONDENTS**

Particulars	No of Respondents	Percentage of Respondents
<b>Age</b>		
Below 30	13	20.63
30-40	23	36.51
40-50	18	28.57
Above 50	9	9.52
<b>Family Income</b>		
41,000-60,000	6	9.52
61,000-80,000	17	26.93
81,000 -100000	21	33.33
1,00000 and above	19	30.16

Table 1 shows the demographic & socio economic characteristics of the respondents. The age of the respondents varies but the respondents of an age group between 30 to 40 years are 36.51% followed by the persons between 40-50 at 28.57% & below 30 at 20.63% respectively.

The above table also portrays that 30.16% of the respondents are in the income group of 81,000 to 1, 00,000 where as only 9.52% are in the income group of 41,000-60,000.

**TABLE 2: TYPE OF INVESTMENTS**

Particulars	No of Respondents	Percentage of Respondents
Stock & shares	15	23.81
Real estate	20	31.74
Gold	18	28.57
Others	10	15.87
Total	63	100

The above table states that the preference of the respondents towards the type of investments they would like to invest. Real estate has the highest percentage at 31.74% ,gold at 28.57%, stock & shares at 23.81% and other avenues at 15.87% respectively.

**TABLE 3: AMOUNT INVESTED IN GOLD**

Particulars	No of Respondents	Percentage of Respondents
Below 30,000	14	22.22
30,000-40,000	26	41.27
40,000-50,000	15	23.81
Above 50,000	08	12.70

The above table shows that 41.27% of the respondents have invested in gold for 30,000 to 40,000. 23.81% of the respondents have invested between 40,000-50,000 where as 22.22% have invested below 30,000.

**TABLE 4: WHETHER THE DECISION TO INVEST IN GOLD DEPENDS ON THE MARKET PRICE**

Particulars	No of Respondents	Percentage of Respondents
Yes	49	77.78
No	14	22.22
Total	63	100

The above table shows that 77.78% of respondents are investing in gold on the basis of the market price where as 22.22% have responded that their decision to purchase is not dependent on the market price.

**TABLE 5: FACTORS WHICH ENCOURAGES OR WOULD ENCOURAGE YOU TO INVEST**

Particulars	No of Respondents	Percentage of Respondents
Appreciation in value	12	19.05
Social status	18	28.57
Cultural values ,Rituals	26	41.27
Others	7	11.11

The above table shows that cultural values or rituals have encouraged 41.27% of respondents to invest in gold where as 28.57% have chosen social status as their reason for investing in Gold. The other 19.05% consider gold as an investment as it appreciates in value.

**TABLE 6: IMPORTANT AREAS TO SEARCH INFORMATION BEFORE MAKING INVESTMENT DECISION IN GOLD**

Particulars	No of Respondents	Percentage of Respondents
Friends & acquaintance	25	39.68
Market analysis	29	46.03
Others	9	14.28

The above table states that 46.03 % of the respondents are taking an investment decision to purchase gold by doing the market analysis through internet, newspapers etc. 39.68% of respondents make the decision to invest on the advice of their friends.

## FINDINGS

- 1) 36.51 % of respondents belong to the age group of 30 to 40years. & the family income ranges between 80,000 to 1,00,000
- 2) 31.74 % prefer real estate investment but 28.57% prefer their investment to be gold.
- 3) 41.27% of the respondents have made an investment of 30,000 to 40,000 in gold.
- 4) The respondents responded favourably at 77.78% to the market price as an indicator to invest in gold.
- 5) 41.27% still consider cultural & social values or rituals as the main factor to encourage gold buying
- 6) 46.03 % of respondents search information from internet, newspapers etc . About the market analysis before making a investment decision in gold.

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**CONCLUSION**

With steep prices in real estate market, gold investment should be encouraged as it is a suitable form of investment to every pocket of an individual. The effect of inflation has reduced the total amount invested in gold but there is a steep increase in the prices of gold in the recent times thus making it a solid investment. Gold is also an accessory and an indicator of social stature. Therefore gold as a commodity is always in demand

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DOI: **10.5958/2249-7137.2020.00576.5**

## TAX SYSTEM ON THE TERRITORY OF KYRGYZSTAN DURING THE KOKAND KHANATE

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### ABSTRACT

*The article analyzes the tax policy in Kyrgyzstan during the period of the Kokand Khanate, historical reasons and the importance of the emergence of an uncontrolled tax system. The author describes the peculiarities of studying the system of taxation in Kokand Khanate. This information is very important for researchers and a wide range of interests about the tax system in Kokand Khanate.*

**KEYWORDS:** *Administrative Development, Auxiliary Tax, Finance, Kokand Khanate, Revenues To The Treasury, Social-Political, Source, Tax System, Tax, Uncontrolled Arbitrary Types Of Taxes.*

### INTRODUCTION

During the Kokand Khanate, the population was subject to various types of taxes. The decrease in landholdings and the inaction of Khan's policy led to a sharp decrease in the volume of revenue into the treasury of the Kokand Khanate. Because of which, the amounts of taxes levied from the population were increased. Politics was governed by the concept of “the highest owner of the land”. The land was the most important possession and wealth of the state and at the same time the government was “the highest owners”.

“Khan is a state” this concept was dominant. This situation led to the emergence of a tax policy that met only the requirements of the feudal elite.

### MATERIALS AND METHODS

Khan and the state are the same, so the treasury of the state was considered as the personal property of the khan. This circumstance led to the emergence of an uncontrolled tax system. The

amount of taxable tax was determined not by legal means (sharia, adat), but in most cases by the need of the khan, hakim and bek. Such a system, instead of sustainable taxation, has created confusion, increased the unjustified taxation of ordinary people.

Archival documents in Russian of that time show that 18 types of taxes were withdrawn from the population in the Kokand Khanate. This can be seen in the records of State Councilor G. Weinberg, as well as in the notes of Kaufman dated November 10, 1874, it was recorded that 18 types of taxes were withdrawn from the population on the territory of the Kokand Khanate. Researchers of the East A.P. Khoroshkin and N. Pantusov in their works divided the collected taxes in the territory of the Kokand Khanate into two groups: main and auxiliary.[1]

These taxes, taking into account the conditions of the sharia, were as follows: The haraj tax for the use and cultivation of land by peasants, this type of tax was taxed by peasants in kind; from irrigated land 1/5 part of the harvest, from baguer 1/10 part of the harvest; tanap - taxation of orchards, seized in the form of money or in-kind from the harvest; zakat - tax taxable from merchants, from artisans the amount of tax was 1/40 part of the money that was received in the form of profit from the production of sales or services. Zakat was also taxed by nomadic tribes. For example, nomads paid taxes on the volume of animals available, from 40 sheep 1 sheep, from 40 horses 1 horse, from 30 cattle 1 cattle, from 5 camels 1 camel [1.2]

Moreover, there were auxiliary taxes that belonged to household taxes and the amount of this tax was determined at the request of the hakim. These taxes belonged to the adat taxes. For example, "Jailoo pulu" - money taxed for the use of pastures, "Kemi pulu" - for the use of fords of river crossings or for the transfer of private land, as well as paid money from trade caravans and herds of animals for the transition of private land. They had a view for passing through the land zakat pool, for using the skeletons seized the "kopuro puluu" tax. As well as taxes "Tagijai pulu" - for the place of trade - were seized from merchants; "Nekahzhanatarikhane Pulu" - taxed upon marriage and when making an inheritance;

"Lukata pulu" is a tax on the property without an owner after the death of the owner; "Pool cockroach" - for the use of measuring instruments or scales and balances during trading; "Tamaki pulu" - for the land used for sowing tobacco; "namak pulu" - a tax taxable for salt extraction. And there were also various taxes in the form of zakat levied for collecting nuts from the wild nut forests of Arslanbap, Sarah-Chelek, Kyzyl-Unkur, as well as for collecting pistachios. [1.3] Taxes were also seized for grazing sheep and cows and for collecting fruit berries in the form of zakat.

Later, Khudayar Khan introduced an additional auxiliary tax "haraj ata" for the use of horses; "Karagai Pulu" - for the wood material sold for construction; "o'tun pulu" - for the cost of firewood intended for sale; "Dallal pulu" - for mediation in the market; "Kuk pulu" - for the use of pastures (jailoo) for grazing; "Suu pulu" - for the use of water for watering and other purposes.

The increase in taxes gave rise to discontent among the population. As a result, poor households that failed to pay taxes to pay off taxes were forced to give their native children to rich people. The entire population living in the Kokand Khanate was subject to the most difficult tax, which was called "kylkuiruk". This tax was imposed on the population before military campaigns. Each settlement was supposed to supply for the army with each family (Tutun) one equipped soldier (chokar) and 2 horses. The heavy tax burden gradually increased the discontent of the population



accelerated the collapse and weakening of the Kokand Khanate. Despite the existence of uncontrolled arbitrary types of taxes, it can be concluded that there was a tax system in Kyrgyzstan, which was an integral part of the unified tax system of the Kokand Khanate. It follows from the above that the taxes under the Kokand Khanate were unrealistic compared to the present one. [2]

At the same time, the lack of a theory of taxation, the recklessness of practical steps led to serious consequences. An example of bad practice can be seen in wars with each other, that is, between khanates. These wars required huge expenses. And the poorest part of the population suffered greatly from the same. The burden of this policy fell on the shoulders of ordinary people. Therefore, repeated uprisings against the ruling system were recorded and liberation movements intensified. If you give the tax system under the Kokand Khanate an assessment in three areas; the following can be seen in political, economic and legal terms:

- The Kokand Khanate ruled an absolute monarchy whose regime was authoritarian.

The legal side of the tax system at the above time did not have a stable structure, being an amorphous entity, which changed depending on the political situation and nomenclature. [3]

For example, during military events, taxes increased prohibitively. The tax system could not accumulate funds for emergencies.

- The economic side of the tax system on the time of the Kokand Khanate shows that it was not effective, because the existing tax system increased the enrichment of the rich part of the population and the impoverishment of the poor part of the population.
- The industry did not develop; the level of artisanal production was at a very low level.
- The legal characterization of the existing tax system shows that the growing contradiction between rich and poor caused strong popular outrage. Especially those segments of the population that were held in the Kokand Khanate with the help of military forces. Repeated uprisings of subdued peoples undermined the power of the khanate.

As we know, the tax system arose and is developing together with the state, at the early stages of the state organization. And of course, one should not think that it was based solely on voluntary principles. Today, taxes occupy the most important place among the sources of revenue to the state budget. We need to know that taxes are mandatory payments levied by the state. Here it is necessary to recall: Taxation policy "When collecting taxes," - he wrote, "they should not be allowed to prove to be a heavy burden on the people or lead the land to poverty. The ruin of the people leads to the impoverishment of the state treasury, which means the weakening of military power and, therefore, to its disunity, which in turn causes the weakening of the state". - Amir Temur. [4] It is necessary to take into account the past historical experience, lessons of our country and other countries. [5]

## CONCLUSION

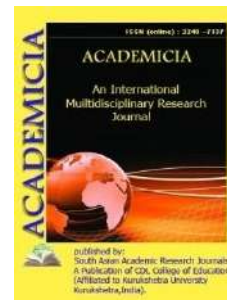
Based on the above considerations, the following conclusions can be drawn:

1. There was a tax system in Kyrgyzstan, despite its uncontrollability and arbitrariness.
2. Taxation on time of the Kokand Khanate on the territory of Kyrgyzstan differed little from previous tax systems of various dynasties, was prohibitively large and did not contribute to the development of economic infrastructure.

3. The dissatisfaction of the population with the policy of taxation of the Kokand Khanate caused contradictions between sections of the population, which is why people's liberation movements and uprisings intensified in Kyrgyzstan, bringing the death of the Kokand Khanate itself closer.
4. Despite a number of negative facts, there are several positive factors, one of them is the integration of the Kyrgyz economy into the international arena.

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DOI: **10.5958/2249-7137.2020.00577.7**

## IN UZBEKISTAN ROOF LANDSCAPING - THE NEED FOR ENVIRONMENTAL HEALTH, CONVENIENCE, BEAUTY

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### ABSTRACT

*The authors propose to use gardens on the roofs which from the ages to modern time's parks were created on the roofs of buildings, and today the application of them, to turn the ecological environment - is considered one of the pressing problems of our society.*

**KEYWORDS:** *Uncomfortable Negative Emotions, Ultraviolet Radiation, Bio-Interior, Megacities, Green Bio Inclusions.*

### INTRODUCTION

Architecture, in accordance with the laws of convenience and beauty, plays a large role in the formation of the material life environment in which a person lives, works and rests. Even more important is the problem of the connection of nature and climate with architecture nowadays, when the most perfect consideration of microclimatic effects on humans becomes one of the important tasks in the design, reconstruction and improvement of buildings and structures. With this relationship, the greening of roofs is a topical moment, because living plants on urban roofs are a wonderful symbol of ecological improvement of the urban environment, unfortunately, is not yet sufficiently and timidly perceived by architects and builders.

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## MATERIALS AND METHODS

The research was based on the following methods: scientific and historical literature on the topic of research, scientific analysis of monuments, study and synthesis of scientific experience.

Huge areas of roofs of industrial, residential and public buildings, underground structures represent an indispensable reserve of urban areas. They can be used in different ways - for car parks, for placing household units, or engineering devices on them. But, at the same time, they can be a kind of artificial basis for gardens, evils and other objects of landscape architecture. On the one hand, landscape inclusions play an aesthetic role in the city layout, and on the other, they protect the roof structures of buildings and structures from damage. Plants, absorbing moisture, protect roofs from destruction, reduce the load of effluents. Plants in the city, which serve as "light," will acquire additional assistants, because modern buildings, overheating, emit heat, and harmful volatile substances, which characteristically worsen the state of the climate in the city. These impacts can be reduced by greening the roofs. German scientists have found that green roofs can reduce air temperature by three times, and in our hot climate it is very relevant.[1,2] Despite the decrease in air temperature, aesthetics and protection of roofs, plants on roofs have other positive sides. They help reduce dust by keeping dust on the surface of the leaves. Even a small lawn holds up to 50% dust in the passing airflow, and when watering, the percentage increases. In our hot climate, we should not forget about ultraviolet radiation, which also decreases when planting plants on the roof. In summer, plants on roofs help to achieve a reduction in noise background, due to foliage, however, in winter this effect does not work.[3,4] Those areas along the highways, or near the airport area, i.e. where noise is much greater, planting of plants on the roof is necessary. Plants clean the air from microbes, absorbing carbon dioxide, dust, saturating the air with oxygen, so they are so necessary to us in the life of megacities, cities and districts. We must also appreciate the effectiveness of roof greening. It remains to assess and determine what extent the garden, square, lawn on the roof meets the needs of people, their psychology, habits, lifestyle. At present, we are more committed to environmentally friendly housing, namely, building houses from natural materials, separating them with modern, environmentally friendly materials, so we need the presence of plants in our bio inter layers. In our interiors, plants can be used in the form of winter gardens on balconies and lodges, used on the facades of buildings. And if we combine plants inside the house, with plants next to the house and plants on the roof, in our opinion, it will be the ideal house of the future, to which man increasingly aspires.

### **Environmental benefits of roof greening:**

A - Greening reduces the temperature of the roof surface and air;

B - Plants absorb dust and toxic emissions;

B - Plants reduce noise with sound-absorbing effect;

D-plants partially absorb rain precipitation, thus protecting roofs.

Current citizens living in apartment buildings, especially on the upper floors, working in offices that lack green bio-connections, are largely deprived of those beautiful contemplations of wildlife.[5,6] The sense of "separation" from the ground can be felt in such premises, and if the apartment or office is located on floors above the previous buildings, people also feel a certain visual discomfort, which arises when viewing non-aesthetic roofs of urban development. What

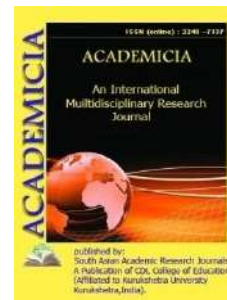
will you say about the green spaces of roofs, to some extent roofs -shades, which by their improvement, by their aesthetic beauty can remove discomfort negative emotions. The improvement of roofs and their greening can be directed to the cultural and educational regime, namely, to use the greening of the roof for the rest, short-term walks, communication, even for some sports, to raise children, and to train them to a beautiful aesthetic moment, which, in turn, will enrich our modern and rapid life with new content. On a properly prepared cover, you can create an attractive corner of the garden.[7,8] General view of the "Spanish" garden "Derry & Tomes" on a multi-storey building in the London Example of a roof garden at a private apartment in one of the terraces of a skyscraper in New York City.

## CONCLUSION

Short-term rest in breaks between work and work among plants will definitely improve the health and will increase working capacity. The architecture will be more progressive and more fully meeting the requirements of creating a full-fledged material environment of society, satisfying practical and aesthetic demands, the more complete and wider a person will enjoy the benefits of nature, armed with the latest scientific, technical and artistic achievements of his time, using not only natural landscapes on the ground but also roofs.

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DOI: **10.5958/2249-7137.2020.00578.9**

## WAYS TO ATTRACT INVESTMENT AND IMPROVE ITS ACCOUNTING

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### ABSTRACT

*The article presents the types and sources of investments and the theoretical foundations of their role in the country's economy, as well as analyzed the structure of investments in the economy of the Republic of Uzbekistan and their impact on the socio-economic development of the country. Proposals and recommendations were made for the correct organization of the accounting of investments in enterprises and their timely accounting, as well as their reflection and improvement in the reporting forms.*

**KEYWORDS:** *Economic Growth, Gross Internal Product, Investment Activities, Investment Policy, Investments, Investments, Labor Productivity, National Economy, Social Development, The Centralized The Decentralized Investments, The Investment Environment.*

### INTRODUCTION

The economy of any country should develop and grow on the basis of economic growth. Because without economic growth, no society, no state can develop, or, to be more precise, there can be no social development. Economic growth fully provides the basic material conditions for social development, and in practice it is measured by an increase in output or an increase in the volume of goods and services created per capita. At this level of growth, the minority is the main economic condition for the transition from the well-being of the population to the well-being of the whole nation.

An investment resource can be the most important additional and effective factor in the country's socio-economic development. It is also important to note that since this resource is directly oriented towards the development of production, it also represents the concept of investing in the economy in a broad sense.



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## MATERIALS AND METHODS

The multifaceted impact of investment on the social and economic development of any country can be seen, firstly, in increasing labor productivity through the introduction of new technologies, and secondly, in creating additional jobs. As a result, new jobs will be created in production and jobs will be provided (the number of workers will increase), and thirdly, new natural resources will be put into economic circulation (production will be provided from natural resources.). It can be seen that the investments involved provide additional capacity to accelerate the movement of all factors of production, which leads to increased productivity and socio-economic growth. "World experience shows that a country that pursues an active investment policy has achieved sustainable growth of its economy. That is why without exaggeration we can say that investment is the driving force of the economy, in Uzbek - the heart of the economy. Along with investments, new technologies, best practices, highly qualified specialists will come to various industries and regions, and entrepreneurship will develop rapidly. " [1] Investment is therefore an important factor in economic growth, and the following challenges can be met. It,

Firstly, the construction of new enterprises that will be in demand on the domestic market - the production of products that will replace imported goods will create new jobs.

Secondly, the expansion of production and the promising development of enterprises operating in the country complement the volume of private capital of national enterprises.

Thirdly, the national economy will undergo technological modernization, and new equipment and modern equipment will be installed in national industrial production, as a result of which national products capable of competing in the world market will be produced.

Fourth, national producers will be able to implement promising projects through loans.

Fifth, the national economy will be integrated into the global economy.

The multifaceted impact of investment on the socio-economic development of any country can be seen, firstly, in increasing labor productivity through the introduction of new technologies, and secondly, in creating additional jobs. As a result, new jobs will be created in production and jobs will be provided (the number of workers will increase), and thirdly, new natural resources will be put into economic circulation (production will be provided from natural resources.). It can be seen that the investments involved provide additional capacity to accelerate the movement of all factors of production, which leads to increased productivity and socio-economic growth. Therefore, attracting foreign investment to the domestic economy and ensuring the development of investment activities requires the creation of a favorable investment climate. It is known that a lot of work is underway in our country on foreign investment and the formation of an investment climate. In this regard, the Foreign Investment Act, adopted in 1998, and the Foreign Investors Guarantees and Measures Act, adopted in 2014, the Investment Activities Act (new version), adopted in 2014, and more than 50 laws. The adoption of documents can be a vivid confirmation of our opinion. Given the current changes and reforms in the field of investment and investment activities, as well as the lack of directly applicable laws in this area, the entry into force of the single law "On Investment and Investment Activities" of January 26, 2020 will improve the investment climate in Uzbekistan. It is no exaggeration to say that the next step towards improvement has been taken.

The process of attracting foreign investment in the Uzbek economy began in 1995, and many production enterprises have now been created. Particularly noteworthy is the ongoing work on attracting investment for the implementation of projects on the structural restructuring of the economy, modernization of industries, technical and technological updating. [2]

As a result of the active investment policy in the country, in 2019, investments in fixed assets amounted to 189.9 trillion soums (21.5 billion US dollars), or 133.9% compared to 2018.

High growth rates of foreign direct investment and loans are a key factor in achieving high growth rates of investment in fixed assets. Compared to 2018, they increased 3.9 times and amounted to 31.0% of the total investment in fixed assets, of which 19.6% (or 3.6 times more) of foreign direct investment. Also, external loans under the state guarantee of the Republic of Uzbekistan - 14.7% (or 142.4%), budget funds - 7.6% (or 117.7%). Analyzing the total volume of investments in fixed assets by region, the main share of total investments in fixed assets in 2019, i.e. 52.5%, in four regions of the country, including Tashkent - 21.8%, Kashkadarya region - 12.4%, Navoi region - 9.4%, and in Tashkent region - 8.9%. The highest growth rate of fixed capital investments in the regions was 195.2% in the Jizzak region (7919.3 billion. Sumov), 194.3% (6129.2 billion. Sumov) in the Syrdarya region, 167% in the Khorezm region. 1% (5566.8 billion. Sumov), in the Surkhandarya region - 148.8% (1,2232.4 billion. Sumov), in the Navoi region - 145.7% (17775.3 billion. Sumov), in Tashkent - 142.5% (41497.9 billion. Sumov), in the Andijan region - 142.3% (8183.7 billion. Sumov) and in the Ferghana region - 140.1% (9164.2 billion. Sumov).

Depending on the direction of investment, it can be financial or non-financial. Financial investments include money, securities, loans, shares of legal entities in the authorized capital.

Investments in intangible assets are capital investments in fixed assets, which include the purchase of fixed assets, their repair, the acquisition of intangible assets (patents, licenses, know-how, land rights and other rights to use, copyright), the creation of material and production reserves and spent on others. In practice, such investments are called real investments, and their importance is growing in the context of the modernization of the current economy. By form of ownership, the sources of investment are:

- state budget funds;
- funds of enterprises and population;
- bank loans and borrowings;
- foreign investment and loans;
- extrabudgetary funds.

Depending on the source of financing, investments are divided into two groups:

- centralized investments - foreign investments and loans, which are directly financed from the state budget and extrabudgetary funds and attracted under the guarantee of the government;
- Decentralized investments - investments financed by households and enterprises, foreign direct investments and loans from commercial banks.

Currently, more than 73% of all investments in fixed assets are formed at the expense of decentralized investment sources, i.e. funds of enterprises and population, foreign direct investments and loans of commercial banks, which are increasingly involved in the investment process. In 2019, 86653.1 billion will be spent in our country. Sumov. At 9.8 billion. The sums, or 2.5 times more than in 2018, foreign investments and loans were made in fixed assets, of which 50686.8 billion. US dollars - from centralized funding sources. The total amount of investments from decentralized funding sources is 139237.5 billion soums (26.6% of total investments) respectively. UAH. Sums (73.4 percent of total volume of investments) made up investments in fixed capital. In the technological structure of investments in fixed assets the share of construction and installation works in the country is 43.3%, purchase of machinery, equipment and inventory - 49.2%, and the share of other expenditures - 7.5%.

The sources of financing of decentralized investments were carried out mainly from direct and other foreign investments and loans (31.0% of the total investment), own funds of enterprises (20.7%). Due to loans from commercial banks and other borrowed funds in the regions, significant investments were spent in the Navoi region - 25.8% of total investments in fixed assets, respectively in the Samarkand region - 22.3%, Syrdarya region - 20.0%, Ferghana region - 16.6% and Andijan region - 16.1%. Foreign direct investment in 2019 amounted to \$ 37171.3 billion or 3.6 times more than in 2018. The share of investment in gross domestic product was 37.1 per cent, indicating a dynamic increase in investment processes in the country. Positive qualitative changes are taking place in the sources of financing of capital investments and their use. Investment policy is one of the important directions of economic development and expansion of production of any state, which requires a new approach in a market economy. As a result of the intensive investments and reforms implemented in the year of social development, the volume of investments in fixed assets increased sharply and amounted to 33.9 percent compared to last year.

Special attention from the government of our country is paid to attracting investments in the economy of the Ferghana region, every year the volume of attracted investments in the economy increases. In particular, the total volume of investments in fixed assets in 2019 amounted to \$ 9,164. 2 billion. the amount or growth rate compared to the corresponding period in 2018 was 140.1 percent. In particular, the total volume of foreign investments and loans in fixed assets in 2019 amounted to 3538.2 billion soums (398.0 million USD), an increase of 2.8 times compared to 2018. In addition, foreign investment in the total amount of attracted foreign funds amounted to 2 708.8 billion soums (303.9 million USD), of which 2 415.9 billion soums (271.5 million USD) of foreign direct investment.

In 2019, the share of foreign direct investment and loans in the private sector in the total volume of foreign investment and loans in the region amounted to 98.5%. Manufacturing accounts for a significant share of foreign investment and credit in economic activity, amounting to 1906.2 billion. Sumov. sum. The share in the total volume of foreign investments and loans is 53.9%, in the mining industry - 786.5 billion sum. The share of total foreign investments and loans in the total volume of foreign investments and loans amounted to 22.2% and 3.7% (130.4 billion. Sumov) of total foreign investment and loans in agriculture, forestry and fisheries. In addition, 42.0 billion sum was spent in the field of information and communications. sums and 18.3 billion sums for water supply, sewerage, garbage collection and collection. sum. According to our analysis, in 2019, the use of foreign investments and loans for these types of economic activities

increased compared to 2018. This, in turn, is the result of the conditions created in our country for foreign investors, in particular, the timely formation of a regulatory framework. From the first days of independence to date, the number of enterprises with foreign capital is more than 10,903 people, of which 668 were newly created foreign enterprises in the first quarter of 2020. It is important to develop and improve it.

## CONCLUSION

Based on the scientific analysis of attracting investments in the transition economy of the country and improving the investment market and accounting for investments in enterprises, we can say that it is necessary to ensure the effectiveness of domestic and foreign investments, to implement the following conclusions and recommendations for improving their accounting:

1. Further economic and legal improvement of measures to prevent inflation, strengthen the national currency and develop products that meet international standards, to increase its confidence in the world market, provide foreign investors with detailed information about the investment climate in the country, create opportunities and encourage them;

Strengthen the attraction of investment funds, solve the problems of energy resources, communications, transport, communications, reduce the cost of goods and services, establish minimum tax rates; [4]

It is necessary to achieve harmonization of the goals of using a foreign investor and his investments and create appropriate conditions for the full use of domestic capital in the economic development of Uzbekistan;

2. We believe that in order to attract large foreign investments, foreign investors should be provided with the following guarantees from the state;

In order to improve state insurance of political, legal and economic risks, remove existing restrictions in order to increase the interest of investors in transferring foreign currency to foreign currency and other countries, as well as to create a favorable investment climate;

Increasing the responsibility of public authorities for damage in case of violation of the rights of foreign investors;

3. The direction of most foreign investments in our economy to the development of small and medium-sized businesses, i.e. technological modernization of small and medium-sized businesses will be beneficial both for the investor and for the future of the enterprise.

In general, increasing investment activity and reducing the cost of products to increase the attractiveness of foreign investments, reducing the amount of raw materials and energy costs in the production of goods will increase national savings and investments in the economy.

With the efficient use of attracted investments, it is important to accurately and fully reflect them in the accounting.

This is due to the fact that accounting and auditing occupy an intermediate link between receiving information and making investment decisions;

1. Identify and leverage opportunities to improve business efficiency;
2. scientific justification of management decisions;

3. Perform all managerial duties;
4. Improvement of the investment mechanism;
5. Economic entities serve as an instrument for the economic education of workers. [3]

In our opinion, it is practically impossible to make sound and scientifically sound investment decisions without improving the accounting and audit of long-term investments.

For this, we consider it necessary to do the following:

- before starting investment activities, it is necessary to calculate the return on investment and its effectiveness;
- it is necessary to organize and keep records when making investments and determine the difference between what is planned and what is not;
- it is necessary to correctly classify and group financial investments;
- accurate and timely assessment of financial investments;
- the status and movement of financial investments must be correct, timely and documented using appropriate source documents;

After investments are made, an audit is carried out on the basis of accounting data, on the basis of which management decisions are made on investment activities. An important condition for the successful development of the country in a market economy will be the correct reflection of the investment activities of business entities in accounting and the deepening of the audit, further development and improvement of its methods.

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DOI: **10.5958/2249-7137.2020.00579.0**

## INNOVATIVE TECHNOLOGIES FOR GRAIN STORAGE OF DIFFERENT CROPS

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### ABSTRACT

*Grain storage is a dynamic process during which it can change its properties. Support of grain mass quality is the main goal of grain storage technology. The technology is selected depending on raw material quality and grain storage type. Its observance allows reducing the volume of natural losses of the product and keeping it in a healthy environment. One of the most important elements in this process will be the preservation of grain by cooling.*

**KEYWORDS:** *Cooling, Grain Breathing, Grain Drying, Grain Storage, Grain, Preservation, Self-Heating.*

### INTRODUCTION

The nature of grain is unique. Under favorable conditions the viability of wheat grain at the level of 40-80% remains for more than 25 years!

Healthy, made and whole grain is reliably protected from external adverse factors by shells. The biological nature of the grain makes it possible to regulate life processes depending on environmental conditions - to include commands and mechanisms that allow the grain to be in a



state close to anabiosis for a long time or to exhibit the highest activity associated with germination.

## **MATERIALS AND METHODS**

From the moment of separation from the ear, the grain becomes an independent unit with all its inherent properties, and getting into the mass, it acquires new qualities, depending on the properties and state of all components:

- the grain of the main crop;
- impurities;
- microorganisms (mold fungi, bacteria, yeast);
- Bread stock pests (insects and mites).

The conditions that determine the breathing intensity of the grain and impurities itself, the vital activity of microorganisms and pests of bread stocks depend on the humidity and temperature of the grain mass. To ensure the safety of the harvest, its humidity should not exceed 14%, clogging 2% and temperature - 10 ° C.

Accordingly, it is necessary to clean, dry the grain mass and further protect it from infestation by insects, mites, moulds and rodents.

## **RESULTS AND DISCUSSION**

As the experience of recent years has shown, grain storage has proved to be almost the most important link in the grain business. The storage itself allows the manufacturer to get a higher price for the grown products. Analyzing the cost of a ton of wheat in terms of several years, there is a clear trend of falling purchase price during harvesting and by the beginning of October. The fall in prices is mainly due to an increase in grain supply from producers who are unable to store grain and/or need financial resources.

Starting in mid-autumn, prices gradually rise, and only then comes the time of the manufacturer. One thing is obvious: if the autumn pair is where to store grain, no real or fictional conspiracy of grain traders will force the manufacturer to sell the whole crop directly from the field. Every year more and more grain producers understand this and repair, build, buy and rent various kinds of storage facilities.

However, storage is also not a simple thing, requiring constant study, improvement and search for new possibilities to ensure that the precious harvest with minimal losses and optimal costs waits for its price. Thus, the question arises not only about the storage itself, but also about its quality.

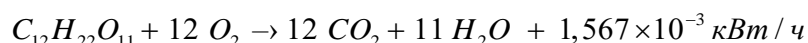
In addition to the traditional technologies and approaches to grain storage that are known in our country, there are new ones. One of them - cooling (cold preservation) of grain - certainly deserves attention. In particular, corn producers and processors will be interested (there is no need to move grain to prevent warming), oilseeds (the process of oil oxidation is delayed), organic grain (allows to exclude fumigation), etc.

Cellular respiration of grain followed by arbitrary self-heating is the cause of spoilage of harvested grain. These processes depend on the temperature and humidity of the grain: the higher the temperature and humidity of the grain, the more intense it breathes. Self-heating causes dry

mass loss and favors the development of pest insects and fungi. It is known that there is significantly less storage loss in temperate zones during the cold season than in the summer months. Preservation by cooling allows to artificially create winter climatic conditions immediately after harvesting.

Due to high humidity and heat, the risk of grain spoilage is particularly high in tropical climate areas. Therefore, it is particularly important to apply cooling preservation in such areas. The features of grain structure and surface, as well as its low thermal conductivity, are the best prerequisites for cooling. Once, the cooled grain mass maintains a low temperature for a long time. The benefits of using this technology will now be described in more detail in this article.

The process of grain ripening reaches its peak by the time of harvest. But even after harvesting, the grain keeps ripening, it breathes. Under the influence of oxygen, the carbohydrates decompose, releasing heat to carbon dioxide and water, which leads to the loss of dry matter. The chemical formula for this process is given below:



Carbohydrates + oxygen - > carbon dioxide + water + heat

Figure 1 shows a diagram of heat emission versus grain temperature and humidity. Next in the table is the formula for calculating the losses, and several possible options (examples) for storing the grain batch. This will allow to estimate dry mass losses during storage.

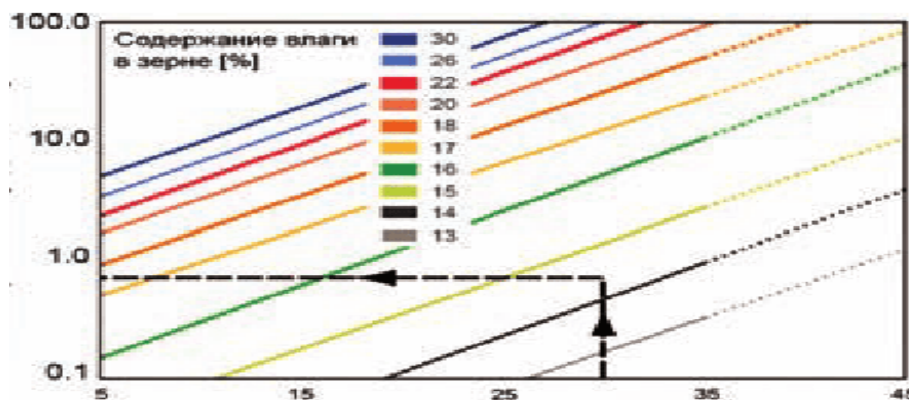
**TABLE 1 GRAIN LOSS CALCULATION FORMULAS**

Data		
Grain	Wheat	
Moisture content	14,5%	
Grain temperature	30°C*	
Grain cost	2 200 000 soum/ton	
Period of storage	4 months	
Quantity	10 thousand tons	
Formula		
Dry weight loss (t) = [heat formation (MJ/t/day) x shelf life (days) x stored quantity (t)]/15000 (MJ/t)		
Result		
	Loss of dry mass, tons	Losses/expenses, sum
Without cooling at 30°C**	64	Twelve thousand eight
Without cooling at 25°C	32	hundred
Cooled at 10°C	insignificant (<1)	6400
		1800 (electricity)***

\* Grain is taken after drying or directly from the field in summer;

\*\* See. the picture above;

\*\*\* Assumptions: 4.5 kWh/t - electricity consumption, 0.04 sum/kWh - its cost.



**Figure 1. Diagram of dependence of heat emission on grain temperature and humidity**

Cooled grain storage technology was originally developed to preserve moist grain before drying. Dry grain is now cooled more often than wet grain - mainly to prevent insect pests from developing. Fig. 2 shows some of the most common insect pests and optimal conditions for their life and reproduction. Some pests are more common in temperate zones, others prefer tropical conditions.

Cooling the harvested crop to temperatures below 13°C effectively prevents losses from insect damage. At sufficiently low temperatures, the insects hibernate and do not harm the granary.

If the temperature and humidity are favorable for insects, there are significant losses from grain damage by pests and from contamination with excrement. These losses grow due to the rapid reproduction of insects under favorable conditions. Most bugs have a very short development cycle - in ideal conditions, the weevil's reproduction cycle takes only 25 days.



**Figure 2. Some species of insect pests and optimal conditions for their life and reproduction**

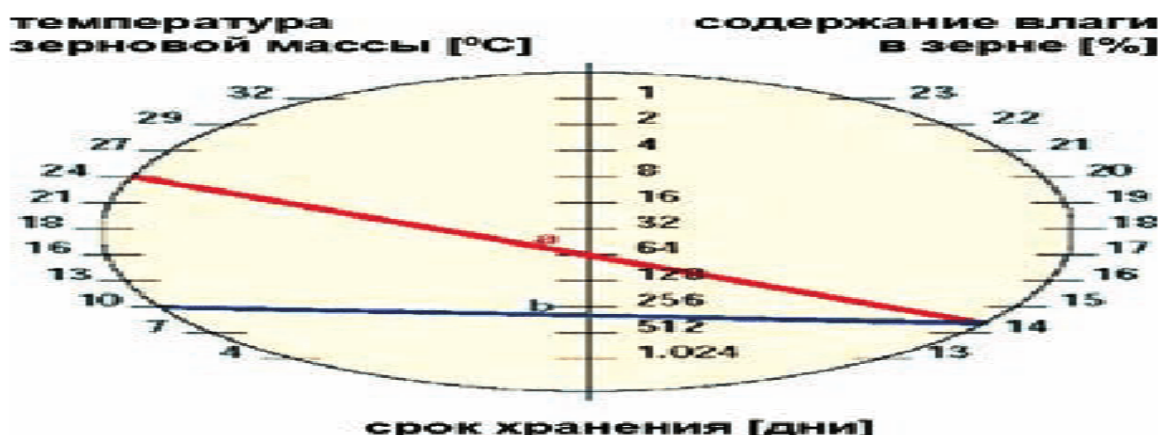
Currently, the chemical processing of grain is strictly regulated. Fumigation creates significant costs for chemical materials and expensive technology. It should also be borne in mind that methyl bromide, often used for fumigation, has been banned in many countries since 2005.

Depending on the weather and crop rotation, damage to crops by Fusarium fungus can occur in a certain area (region) with different frequency and strength.

In addition to significant economic losses, there is a danger of the formation of mycotoxins, which are poisonous to humans and animals. For example, pigs are sensitive to vomitoxin and zearalenone. This is expressed in reduced appetite, reduced grazing and deterioration of animal reproductive capacity.

The development of fungi and their life products - mycotoxins (e.g. aflatoxin) - is accelerated at elevated temperature. Cooling the grain stops these processes (Figure 2).

Wheat after harvesting is dried depending on purpose to 14-16% moisture content. For this purpose, air is heated in a special drying unit. This warm air takes moisture from the grain and takes it out into the atmosphere. The moisture required for normal storage of maize, rice and oilseeds is lower than for wheat.



**Figure 3. Grain shelf life circular diagram**

In conventional storage without cooling, it is often necessary to fill the grain. Mixing and associated intense contact of grain with air leads to elimination of hot spots. For this purpose, a free silage is always required, and at each overflow due to friction, approximately 0.3% of the total grain weight is lost. Plus, we need energy consumption for grain transportation, which can be estimated at 1-3 kWh per 1 ton of grain. Chilled grain does not need to be sprinkled.

The resting grain mass absorbs energy very slowly. The reasons for this are the insulating effect of the air in the space between the grains and the small area of contact between the grains. Therefore, the warm grain remains warm for a long time even at low ambient temperature. Accordingly, the cooled grain remains cold for a long time. The table lists the shelf life of the cooled grain depending on the moisture content and the climatic zone (in months). The calculation of shelf life is shown in the diagram.

**TABLE 2 SHELF LIFE OF COOLED GRAIN DEPENDING ON MOISTURE CONTENT AND CLIMATIC ZONE**

Humidity of grain, %	Temperate zone	Continental zone
12-15	8-12	6-8
15-17	6-10	3-5
17-19	4-6	1-2
19-21	1-4	0,5-1

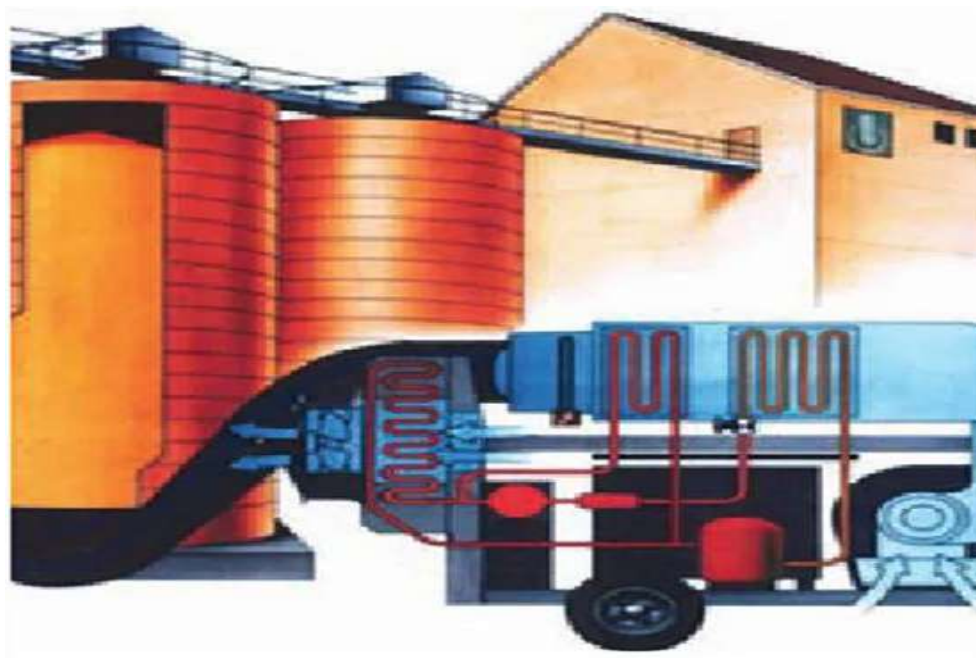
A circular shelf life diagram shows that reducing the grain temperature with a humidity of 14.5% from 24 °C to 10 °C increases the allowable shelf life by about 5 times (points a and b) (Figure 3). In order to obtain values for other conditions, it is necessary to connect the existing moisture content with the actual temperature with a line on the circular diagram. The intersection of this line with the vertical axis of the chart shows the allowable shelf life of the grain. The second point of intersection shows extended shelf life at reduced temperature and given humidity. However, the values given are indicative. In any case, it is necessary to regularly monitor the temperature of the grain and, if necessary, further cool it.

Numerous advantages of cooling preservation are, however, associated with certain costs. In addition to the investment in the cooling plant, electric power is required for its operation. Electricity consumption depends on ambient temperature, relative air humidity, grain moisture content, and grain temperature. Empirical data of power consumption for single cooling of grain and oilseeds are given in Table 3.

**TABLE 3 POWER CONSUMPTION FOR SINGLE COOLING OF GRAIN AND OILSEEDS**

Средняя температура	10 °C	25 °C
Регион	Европа	Азия
Климатическая зона	Умеренная	Жаркое
Потребность в электроэнергии, кВт*ч/т	3-6	11-14

The grain cooler fan sucks in the atmospheric air (Fig. No. 4). This air is cooled to the desired temperature and dried in an evaporator air cooler. Water is released. Then cold wet air is heated in the unit, which reduces the relative humidity of the air.



**Figure 4. Grain cooling technology**



The unit uses energy from the refrigeration circuit and does not require electricity costs. Dry cold air is supplied by hose to air distributor of storage and blown through grain mass. This technology can be used in both floor storage and silo type elevators. Waste air is discharged through holes into atmosphere, bringing with it moisture and heat taken from grain.

## CONCLUSION

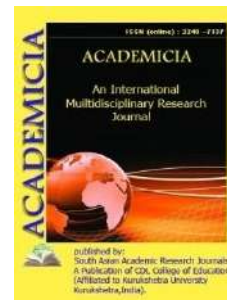
The savings when using cooling preservation are due to the following:

- Each single cooling additionally dries the grain. It reduces moisture content of grain by another 0.5-1.5% when it is cooled by 20K. With high grain humidity (more than 18%), the effect of additional drying is stronger than for dry grain (humidity less than 14%).
- The residence time of the grain in the drying unit can be reduced by optimising drying and cooling; Note here that energy is saved and drying efficiency is increased.
- Reducing drying time and intensity makes this process more sparing for grain; There are fewer cracks and grain damages from drying.

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DOI: **10.5958/2249-7137.2020.00580.7**

## NEW DATA IN THE FIELD OF PALEOECOLOGY AND PALOE LANDSCAPES IN ARCHAEOLOGICAL RESEARCH

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### ABSTRACT

*The article highlights the scientific and practical significance of the activities of international partnership expeditions in our country in the study of the Paleolithic period, as well as the state of new data in the field of paleoecology and paleo landscape in Uzbekistan in archaeological research. Research work carried out on important monuments of the history of our Motherland, and several successes achieved.*

**KEYWORDS:** Angillak, Homo Sapiens, Kolbulak, Kotirbulak, Mousterian Culture, Obirakhmat, Paleoanthropology, Paleoecology, Paleo Landscape, Palaeolithic, Radiocarbon, Samarkand, Stone Industry, Teshiktash 2, Thorium-Uranium, Todahotin, Trasology.

### I. INTRODUCTION

Palaeolithic monuments in the regions of Uzbekistan have long attracted the attention of foreign specialists with their variety and originality. However, only after gaining independence did they have the opportunity to come to our country and establish scientific cooperation with local experts. The Institute of Archaeological Research of the National Archaeological Center of the Academy of Sciences of the Republic of Uzbekistan conducts research with more than 20 international partner groups of archaeologists on various periods of our ancient past. Staff exchange and training with international research centres have been established. Only joint international expeditions to study the Paleolithic period, such as Uzbekistan-Poland, Uzbekistan-America, Uzbekistan-Russia-Belgium, Uzbekistan-France, operate in our country and open important pages in the history of our country.

## II. MATERIALS AND METHODS

As a result of studies of international joint expeditions in our country, new monuments of the Paleolithic period were discovered and studied, such as Angillak, Todahotin, Ahangaron, Teshiktash-2, Ayokogitma, Bukantog. Research work was continued at the monuments of Kolbulak, Kizilolma 2, Obirakhmat, Kotirbulak, Zirabulak, Omonkoton and others. As a result, several world-class achievements have been achieved.

**2.1. In the field of palaeoecology and paleo landscape.** The Obirahmat Cave and its surrounding areas have been explored in this area. The dynamics of occurrence and change of rocks and ecological situation in the Paltov region are fully shown. As a result, it turned out that the Paltov area was gradually filled with layers of Cretaceous, Paleogenic and Neogenic periods. Also in the Quaternary period river terraces and alluvial deposits were formed here. The Loess coatings in the Paltovo basin are not connected with its terraces, and the flat terrain ensures the preservation of the Loess layers. As the terraces age, the Loess pavements thicken [6, 9]. The thickness of the terraces in the Paltov Valley is 50-60 m, and the loess layers are from 0.5-1 to 5-6 m. The microclimate of the Paltov Valley is scientifically justified because it is protected from cold currents by blocking the high mountains on the north side and as a result is covered with less arid vegetation (pine). These studies allow the reconstruction of ancient climatic conditions, as well as paleoecological conditions. It is known that primitive people influenced natural landscapes in terms of living and working conditions. Primitive people showed their anthropogenic impact on the natural flora and fauna, as well as in the process of stone extraction, which is the main raw material for the manufacture of stone tools. The study of these effects today is one of the problems of landscape archeology. From the materials received it is known that in ancient times, the regions of Uzbekistan were rich in natural flora, mega and microfauna. At the same time, the evidence found in the monuments proves that primitive people from an early age had an anthropogenic impact on nature. [22.424-29]

### 2.2. In the field of technical typology.

Thanks to the efforts of international partner expeditions, thousands of monuments have been collected on the monuments of our country. Most typological nomenclatures in these sectors were already known to us. However, there are new ones among them. For instance, a joint Uzbek-Polish international expedition to the territory of Kotirbulak has for the first time identified the type unknown in science - "arrowheads of Kotirbulak type" and introduced it into scientific circulation. In 1995. A joint Uzbek-Polish international expedition has conducted studies of Paleolithic monuments of Kotirbulak and Amankotan in the Zeravshan oasis [2, 3]. As a result, the stratigraphic state of Kotirbulak has been revealed. It was found that the layers of monuments are intertwined due to natural and anthropogenic impacts [21].

For the first time, it became known that basalt stones were mainly used in the Stone Industry of Kutirbulak. Another important aspect of these scientific studies is that a completely new term "Kutirbulak arrowheads" was introduced into the nomenclature of the typology of world Paleolithic studies, which can be gladly defined in Uzbekistan [18, 17]. Now it is natural that this term or genus name is included in all dictionaries of the world. Also, we can give an example of the Tudakhotin 1, 2 space industry, characteristic of the last Paleolithic period, investigated by the Uzbek-Russian joint expedition [9, 92]. These monuments date back to the end of the late Paleolithic era, the presence in their industry of microlithic tools characteristic of the Mesolithic

period makes it possible to clarify the genesis of Mesolithic cultures not only in Uzbekistan but throughout Central Asia. These finds indicate that in our country cultures of the Paleolithic and Mesolithic era developed, and innovations of the Mesolithic era appeared at the end of the Late Paleolithic era. In general, the introduction of microlite weapon types found in the Tudakhotin space requires a review of the genesis of the Mesolithic communities of Uzbekistan [15, 45].

**2.3. In the field of chronology.** In the 2009 season, an Uzbek-Russian-Belgian joint international expedition discovered 18 m<sup>2</sup> of the upper Paleolithic layer of Kolbulak. [10.] Late palaeolithic horizons of the site are located in the second lithological layer and have a pluvial genesis consisting of green-grey clay (soup), sand-gravel mixtures of various sizes. Although this layer is pluvial in nature, archaeological materials in it are rarely mixed. This is evidenced by the presence of a large number of stone fragments among the artefacts of the collection, as well as the fact that stone objects lie horizontally with the stomach. [16]

The materials of the 2nd layer are in a concentrated state in two separated layers, which indicates that during this period people have mastered space twice in a short period. Therefore, the 2nd lithological layer is divided into two, while the upper 2, the 1-cultural layer assimilates in a short time, and the second 2, the 2-cultural layer is intensively inhabited by a primitive person for a long time. According to technical and typological data, the industry of the 2nd cultural layer of Kolbulak can be attributed to the second half of the Late Paleolithic. The complexes of both layers of the monument are unique in terms of cultural identity and genetically close. Also, by the composition of the studied industry, it can be called a workshop for the production of fuel and stone weapons for a long time.

Chronologically, the materials of the upper layers of Kolbulak look younger than the Tudahotin industry. This is evidenced by the fact that the upper layers of Kolbulak do not contain lightning or retouching using stone crushing methods, and this technical tradition is widely used in the Tudahotin 2 industry. It can also be added that in the industry of the upper Kolbulak layers there are no plates without ribs at all, but the rehearsed Kolbulak plates are similar to such objects in the lower layers of the Tudahotin space that were used in the manufacture of pistols. [9] Currently, samples were taken from 2-10 cultural layers of Kolbulak and counted by the OSL method, and results were found relating to the second half of the Late Paleolithic, 24,000 BC. During the expedition to Obirahmat, many stone objects were collected from its cultural layers, and ancient paleoecological conditions were reconstructed. [3, 6; 4,] Excavations at the monument were carried out based on modern archaeological methods, and analysis of each artefact was found in the laboratories of leading countries of the world. The study was conducted with the participation of the "Leakey Foundation", and the exact date of the cave layers of Obirahmat was determined. Analyses based on radiocarbon, EPR, OSL and thorium-uranium methods determined that the date of the monument was between 80-70 thousand years BC and 40 thousand years. [11, 23] Radiocarbon analysis was performed in the scientific laboratories of Arizona, USA. [9, 13,] Two of the samples totalled  $23800 \pm 190$  years (coal remains), and the bone remains obtained from here -  $23600 \pm 330$  years. One of the samples gave a much younger date -  $21850 \pm 180$  years. However, experts do not deny that most of the uranium in the arsenic layers fall out as a result of work on cleaning the spring, carried out in later periods. [2,10] In any case, such a relatively young date seems less likely for rabies. The results of this census were also questioned by the authors. Because there is a possibility that the resulting samples will be contaminated as a result of natural impacts. In particular, the exact date of 14 thousand years,

obtained on the basis of the c-42 method of Anguilla cave probes, is distinguished by the originality of its industry, which has a Mustier appearance. [20, 21, 22]

#### **2.4. In the field of paleoanthropology.**

In the summer of 2003, the remains of a bone of an ancient man from the 16th cultural layer of the Obirahmat cave, dating back 60-70 thousand years, were found. [4, 5, 8, 11] Paleoanthropological finds included 6 individual teeth and about 150 small fragments of the skull. With the help of scientists from Uzbekistan, Russia, the USA and Austria, outstanding results were achieved, computer tomography of teeth and ear bones was carried out at a medical centre in the Austrian city of Insburg and the Institute of Nuclear Physics in Novosibirsk, and a 3-dimensional model was created. The result of this was that the man Obirahmat showed the features of both the Omoneanderthals and the homo sapiens. [8] In paleoanthropological finds, it became known that dental bones are characteristic of a Neanderthal person, and the skull is of a modern type for a person (homo sapiens sapiens). In general, the found remains of an ancient man demonstrate a harmonious image of a person of the modern type with Neanderthals, due to which many of his morphological features are unique and still do not have a paleoanthropological analogue. [6] The scientific community claims that the man Obirahmat is in a hybrid image, but these interpretations are quite contradictory. There are several reasons why, on the one hand, it is difficult to solve the question of whether the individual bone of the skull, found on the one hand, means that it is 9-12 years old, and on the other hand, it is scientifically justified that the age of the find is at least 60 thousand years. It should also be remembered that several such factors prevent the find from being considered the bone remains of a modern type of person, including 6 teeth of an individual - Neanderthal. [14] Consequently, such scientific foundations or interpretations remain debatable. It is difficult to say with complete certainty that the man of Obirahmat today is characterized neither by an anthropological man of the modern type, nor by non-nuclei, nor by the archaic man Homo sapiens. [11] The findings of the Obirahmatian man indicate a revision of existing ideas about the emergence and development of Neanderthals and people of the first modern type, dominating world science.

After the discovery by A. P. Okladnikov in 1938 of the tomb of the famous Neanderthal in the Teshiktash cave, the discovery of the man Obirakhmat is the first anthropological find that allows restoring the physical appearance of the ancient inhabitants of the Stone Age in Central Asia. In practical terms, it was discovered for the first time that the transition industry is associated with a specific physical type of person. Currently, there are practically no such conclusions in the world. Today, the regions of Uzbekistan play a key role in finding solutions to pressing global problems, such as the emergence and spread of modern man, his dependence on the past population and changes in the material culture of people of the Stone Age. As a result of the intensification of the study of the Paleolithic period outside Europe, the scheme in which the development of material cultures dominated primitive archaeology in recent years was associated with changes in anthropological types has lost its versatility. The new data require significant changes in previous concepts. If in the past the appearance of modern man was considered an event that coincided with the transition from the Middle Paleolithic to the Late Paleolithic, then modern materials show that the appearance of modern people, on the one hand, and elements of the Late Paleolithic culture, on the other, is much older. From the Angillak cave, primitive man discovered the remains of one metatarsal bone of his right leg, and now it is difficult to determine whether it belongs to Neanderthals or modern man. [20] However, judging by the

discovery in 2003 of the remains of the 16th cultural layer of the Obirahmat cave and a hybrid man of more than 60 thousand years, Angillak man can also be attributed to Homo sapiens.

### **2.5. In the field of trasology.**

Despite the fact that the materials of the Samarkand region, which is the main monument of the Paleolithic period of the Zeravshan oasis, are well studied, this still attracts the attention of specialists. Tracological studies of M. J. Jurakulov and the Russian scientist G. F. Korobkov on these materials deserve high praise. [7] As a result of this study, it was found that the Samarkand space was dominated by a complex and specialized economy based on deep mineralogical and economic knowledge, which at first glance seemed simple. According to him, the stone industry of Samarkand has a much more complex appearance than we know, the primary raw materials are skillfully selected in accordance with its morphological appearance, primitive savings and quality and morphological structure of raw materials in the technique of lightning and weapons production. [7] These studies allow us to imagine the economic life of the population of Samarkand, the development of stone processing technologies and the impact of primary raw materials on this development.

The studies of M. J. Jurakulov and G. F. Korobkov proved that for the first time in paleolithology of Uzbekistan, based on the materials of the Samarkand site, it is possible to combine formal typological and tracological methods and obtain maximum information from the Kalmyk stone industry. Tracological studies were also carried out in the Obirakhmat cave industry. As a result, the functional value, relative time and characteristics of monumental stone tools were determined. [1]

### **III. The practical relevance of international studies**

Since the independence of our country, as in all spheres, the path to scientific research has opened up great opportunities for the most advanced schools in the world. With the help of foreign partners, our young researchers were trained on a grant basis in various European research centres and improved their skills, which, in turn, has a significant impact on the development of scientific work in our country. With the help of foreign partners, our young researchers are trained on a grant basis in various scientific centres in Europe, which, in turn, has a significant impact on the development of scientific work in our country. In 1997, with the participation of Professor T. Sh. Shirinov and the head of the joint Uzbek-French expedition, Professor F. Grene, the signing of an agreement between A. de Lumley, a professor at the National Museum of the History of Material Culture in Paris, was one of the important steps in this direction. [17] To develop such responsible competence, researcher B.Q. Sayfullayev was elected. B. Sayfullayev improved his knowledge and skills in several laboratories dating back to the Paleolithic period in France. He carefully studied the advanced de Lumley system of the Bord research method and was translated into Russian for the first time. [18] At the same time, this method of research was successfully used in the study of Zarafshan, Akhangaron oases and Kyzylkum palaeolithic materials in our country. As a result, the number of new data was obtained. B. Sayfullayev also conducted peer-to-peer studies together with Uzbek-Russian, Uzbek-Polish and Uzbek-French international joint expeditions and used the knowledge and skills that he acquired in Europe. Currently, the specialist teaches young scientists the secrets of Stone Age archaeology. The study of the Paleolithic crafts of the Zeravshan oasis has reached a new level based on modern methods used by B. Saifullayev in the study of archaeological



materials. In particular, since 2007, in addition to research work as part of a joint Uzbek-Russian expedition, the educational project "School of Field Research of Students and Researchers" has been successfully implemented. [6] The mission of the school is to actively involve young specialists in research in order to integrate science and higher education, provide local scientific schools with a ready and highly qualified world-class young generation and develop international cooperation with students, researchers and young specialists. Young researchers from Uzbekistan, Russia, Kyrgyzstan, Kazakhstan, Germany, Spain, South Korea, Iran and China took part in the research work of this school. The School of Field Studies teaches the younger generation the principles and methods of archaeology, as well as the latest methods and results of absolute, relative counting and reconstruction of the paleoclimate. Also, leading scientists organized scientific reports on primitive archaeology on current problems of that time. Due to the international nature of the expedition, young specialists established mutual scientific contacts for further study. Many representatives of the youth of the republic took part in the expedition. In particular, young specialists directly involved in the Paleolithic period were trained. These include such talented young people as Z. Shodiev, A.A. Muhammadiev, A.Razhabov, X.B. Hoshimov. [17] Currently, they conduct independent research, as well as participate in international expeditions.

The study of the Angillak site in Kashakadarya was carried out by an international Uzbek-American student scientific archaeological expedition. [19] In addition to students, teachers and students of the National University of Uzbekistan, as well as specialists of the Department of Anthropology of the University of Colorado, the excavations were attended by employees of the Institute of History and Archeology of the Academy of Sciences of the Republic of Uzbekistan. As a result, strong links have been established between the above-mentioned research centres and our country's young researchers. In addition, our young scientists are improving their skills in this international and interdisciplinary study.

#### IV. CONCLUSION

In conclusion, it is worth noting the following:

- The activities of international partnership expeditions have acquired both scientific and practical significance in the study of the Paleolithic period in our country. Although from a scientific point of view new aspects of paleolithology of our country were discovered, in practice, the efforts of international expeditions attracted many prestigious foreign grants to study the palaeolithic of Uzbekistan, as well as several young specialists.
- As a result of these studies, it was possible to restore the paleoecological conditions of the Stone Age in Uzbekistan.
- New information on the paleo-landscape of Uzbekistan was obtained based on the materials received.
- As a result of research, world-class innovations in the field of paleoanthropology were made.
- Important innovations in the field of technology and typology, including the most important of them - a completely new term "Tips of arrows of the Kotirbulak type" was added to the nomenclature of the typology of world paleolithology.
- As a result of a comprehensive study of important innovations in the field of chronology, new archaeological materials were extracted from the stratigraphic layers of ancient monuments of the Stone Age, as well as samples were taken to count its layers. Based on the

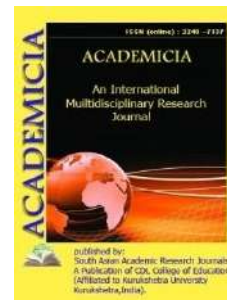


involvement of modern and natural sciences, new analyses were obtained to obtain new information on the history of Paleolithic monuments of Uzbekistan.

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DOI: **10.5958/2249-7137.2020.00581.9**

## FOREIGN EXPERIENCE IN THE FORMATION OF PERSONAL QUALITIES OF PRESCHOOL CHILDREN IN COLLECTIVE RELATIONS

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### ABSTRACT

*This article provides information on attention to the system of preschool education, on the content of the formation of personal qualities of preschool children in collective relations, on the importance of using traditional and foreign experience in the formation of personal qualities in preschool children and on the participation of the teacher in this matter.*

**KEYWORDS:** *Attitude, Collective Relations, Collective, Education, Educator, International Experience, Personality, Preschool Children.*

### INTRODUCTION

Currently, the only goal of a constantly developing independent State is to create a humanistic, democratic and legal society, as well as to increase the level of socio-economic and cultural development, the realization of noble goals aimed at a worthy place in the ranks of the world community. This depends on the quality of education given to the younger generation. Today, in our country, the system of continuing education pays special attention, more than ever before, to one of the main links of the preschool education system. After all, the knowledge transferred to the younger generation is improved in the activities of the child, is embedded in the formation of his skills and skills, the basis of personality formation is formed, first of all, in the system of family and preschool education.

### MATERIALS AND METHODS

As a basis for the organization of large-scale work carried out in this area, we can indicate all regulatory acts related to this area. All these normative legal acts are aimed at developing and further improving the system of preschool education in the Republic, providing this system with qualified educators - teachers, and most importantly, forming preschool children as comprehensively mature people and fulfilling other tasks. In particular, the development of

organizational and methodological support for the development of preschool education based on advanced foreign experience is currently of great importance. As stated in the Presidential Decree "On measures to fundamentally improve the management of the preschool education system," "... preschool education is a primary part of the continuing education system, which plays an important role in the upbringing and preparation of a comprehensively healthy and harmoniously developed child. The analysis of best practices of foreign countries is characterized by the focus of modern preschool educational institutions on creating conditions for the development of children of preschool age, aimed at demonstrating the possibilities of positive socialization of the child, his comprehensive personal, moral and conscious development, developing initiative and creative abilities based on the corresponding types of activities of preschool age, revealing opportunities for cooperation with adults and peers in the framework of dialogue". The formation of a socially active and comprehensively developed person, as well as his ability to find his place in society in accordance with individual abilities and capabilities, is an urgent social need. The identity of the child is manifested directly in conditions close to him. The characteristic of the manifestation of individuality is determined, on the one hand, by the characteristics of the group, on the other hand, by the characteristics of the child. He strives to ensure that the group has such a situation that it must provide him with recognition, assistance, support, protection in a sense in the children's team, and at the same time he seeks to take a position demonstrating his individual abilities and talents. The child especially needs a team as a basis and as a factor that stimulates individual development than adults who have managed to find their way, profession. The team needs the child's life to cope with the difficulties in his path, "show what he is capable of." The child must still find his place in life. Of course, helping smart, smart and sensitive people in these studies is very important, but ultimately helping adults is helping older people, which can be good advice, guidance, and sometimes prohibition. And community support is recognition or recognition of personality by the public. This is a direct basis for the younger generation, able to find its way in life and look for its correctness. The value that always belongs to individuals does not serve to enrich the team.

For example, the spiritual values of one child will not be the property of the children's community. They can remain closed in an individual and individual space. This can happen either in the conditions of the teacher's reaction to the indifference and inaction of the teacher, or because of the inability to reveal the wonderful features of his pupil, or because of the reluctance to perceive him as a whole.

How to determine the degree of education of personal qualities in a child? This is usually determined by the environment in which the child grows and how much this environment contributes to his comprehensive development, supports and improves his personality. The formation and development of personal qualities, their manifestation in activity is an important pedagogical task. The formation of the personality of each child is an important indicator of quality for the child to come of age and achieve his goal. Our own experience in this regard is that when forming personal qualities in a child:

- a) the formation of moral feelings;
- b) proper communication with the children's team, family members;
- c) diligence;

- d) paid particular attention to the correct allocation of free time and the acquisition of other positive qualities of the content.

Also, one of the factors for achieving the goal is the study of foreign experience and the use of personal qualities in the child in the desired places of content. In foreign countries, special attention is currently being paid to the maintenance and socialization of the personal qualities of preschool children. Teachers of developed countries of the world, including Japan, the USA, England, France, propose to individually approach each age period in the development of personal qualities in children and use certain methods of upbringing.

In Germany, which is one of the developed countries, every child begins to pay serious attention to the formation and development as a person, mainly at the age of 3. They attach great importance to the development of the communicative abilities of children in the German state. Therefore, German mothers take their children to special development groups from the very beginning. The main goal of special development groups is to adapt children to the team environment through playing the team, realizing individual abilities, and developing communication skills in children. German parents send their children to kindergartens precisely after visiting these special groups. Because by this time, the child will be able to easily adapt to the conditions of kindergarten. Also, children feel free in an educational institution. In German gardens, children are taught to behave mainly in a team, to be disciplined, lean, with attention and responsibility to the world around them. These qualities are strictly taught based on ethical standards. In Germany, children are taught their rights from childhood. In the minds of children, it is absorbed that they cannot be hit, intimidated, offended.

In Japan, the child's hidden abilities and human qualities play a key role in finding the content of the child's personal qualities. That is why the Japanese use specific methods of raising preschool children. The purpose of kindergartens is to develop the mental and physical abilities of children, to develop the skills of independence and internal routine, to teach the right attitude to the events of society. The Japanese emphasize various problems of education at different ages. For example, in 1 year, a child has a feeling of self-confidence, in 2 years - a manifestation of practical artistic work, in 3 years - an upbringing of a sense of duty, in 4 years - training in distinguishing between good and evil, educating him a sense of knowledge of skills of a careful attitude to the world around him, and in 5 years - attention to raising the child leadership qualities, independence, drawing up plans and their implementation.

In the process of activity, individuality implies free consciousness, emotions, behaviour in the child, including taking into account his abilities, but personal freedom is formed depending on the environment. Since a preschool child is among peers in a preschool institution, it will be necessary to study issues related to the "children's team," the team and find the best ways to interact with this team and the child. It is important that a person realize his abilities, develop his moral potential and help form collective relations. We can observe this on the example of one of the developed foreign countries on the example of the United States. In the United States, the trust and freedom afforded to a child in the search for the content of a child's personal qualities are recognized as the main method of upbringing. At the same time, in their relationship with the child, they widely use the word "Eng" in expressing confidence in him. The smartest and... this way of raising, of course, forms the child's independence. In the United States, they ignore the



need to allow the child to search for the content of personality qualities in the child. In the tribe, "blind, trying again" is given the opportunity.

This approach in the US parenting method creates the basis for the full use of the child's opportunities.

Unlike other foreign countries, Sweden prefers the method of convincing children of their personal qualities in searching for content. Therefore, in Sweden, their children are treated as mature people. Also, Sweden does not deny their rights and obligations when forming a child as a person. If the child has a human attitude towards himself and others, the child has a psychophysiological disadvantage among friends, comrades of the artaf, then the view of him on the principle of tolerance is absorbed into the consciousness of the younger generation from childhood. This is the leading method of socializing a child. Indeed, awareness of one's own activity, assistance to another person can be an indicator of the child's readiness for collective relations, an indicator of the moral development of the person, and the moral basis of collective relations. Mutual assistance is provided in the process of sympathy and sadness in the joint activities of preschool children.

The French state occupies a leading place in adapting children to a command environment, gaining their independence. In France, parents give their children to kindergarten from childhood, and this is typical of the French. In this state, parents never raise their children. Their most important function is to pay attention to the healthy development of the child. In France, children from a young age go to kindergarten to adapt to the environment, their community, their place of residence, where they find education, act independently, solve their problems. For this reason, French children from 6-7 years old independently attend school, easily seclude themselves in their home, acquire a culture of free trade.

In the UK, they unusually approach the development of personal qualities of children. English parents advocate the gradual upbringing of their children. They pay serious attention to how the child ripens and ripens. Since the British needs to treat their children from 2-3 years old, first of all, how to behave in a family environment, around the table, correctly treat those around the child, raise their feelings in the child (joy, law, crying, laughter, etc.), It is important that children treat community relations...) teach to hide from others. An example of this will be the English mothers who will lead as an example. Mothers will not pursue their children in front of the majority, in public places. In England, kindergarten teachers pay special attention to educating adolescents as an independent person.

## CONCLUSION

In summary, it can be said that a distinctive feature of the child's upbringing in the development of his personal qualities is that he is an adult who organizes a positive ethical experience, and children should be his assimilators, bearers of moral values. At the same time, each of the educators is a special child who expects a separate attitude towards himself, and the educator must skillfully use this circumstance. As a result of closer attention to negative things than to positive in the behaviour of the child, comrades cannot always give him an objective and objective assessment. Only the teacher can quickly notice the uniqueness, greatness of the child. It is for this reason that the status of her wonderful child should be formed by the teacher. Only an adult can see the desire and ability for creativity, which is a condition for active social development. The creative activity of a child largely depends on the social environment in which



he falls. To use traditional and foreign experience in the education of personal qualities in children of preschool age, the teacher must pay attention to:

- Be able to enjoy their people and their spiritual heritage;
- Tolerance towards the child;
- Takes into account the possibilities of the child;
- humanity.

After all, one of the tasks of pedagogical science is the development and improvement of the content of the life of children, various elements of the life of children, the upbringing of each of them personal qualities that correspond to the current state of cultural development of society.

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DOI: **10.5958/2249-7137.2020.00582.0**

## CURRENT PROBLEMS OF INCREASING SOIL FERTILITY

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### ABSTRACT

*The article covers the development of zonal systems for managing soil fertility and the productivity of agro ecosystems in intensive agriculture with an increase in the productivity of arable land in Uzbekistan. It is proposed to develop principles and create reclamation systems that ensure, in conjunction with agricultural measures, a high increase in soil fertility, uniformity of the reclamation background and environmental cleanliness of the environment.*

**KEYWORDS:** *Agricultural And Land Reclamation Activities, Clay Soils, Climate, Drainage Network, Global Change, Heavy Loamy Soils, Increasing Soil Fertility In Agriculture, Irrigation System, Land Resources, Meliorative Systems, Rational Use, Conservation, Water Quality.*

### INTRODUCTION

Effective implementation of reforms outlined in the Strategy of Agricultural Development of the Republic of Uzbekistan for 2020-2030, ensuring the rational use of land and water resources, the widespread introduction of market mechanisms in the sector. At the same time, we must recognize that in agriculture, first of all, there are great opportunities to increase soil fertility, agro-technical, modern agro-technologies, further development of selection and seed production, labor organization and incentives.

Indeed, today the problem of maintaining and increasing soil fertility in agriculture, especially in cotton, has become a pressing issue. Due to the introduction of crop rotation in recent years, the

problem of introducing short-term crop rotation systems remains an important task in cotton growing.

However, at the same time, efforts are being made to increase the yield of cotton, wheat and other crops at the expense of mineral fertilizers and other chemicals. As a result, their negative impact on soil fertility leads to reduced yields and poor quality crops.

According to the data, the amount of humus in the soils of irrigated lands of the country has been decreasing recently. Farms use 700-800 kg of cotton fields, 400-500 kg of wheat fields, sometimes 800 kg/ha to increase productivity. mineral fertilizers are added to.

It is necessary to apply local and mineral fertilizers to get the desired yield from crops. This is because the crop removes a very large amount of nitrogen from the crop. Hence, the decrease of organic matter in the soil, in turn, leads to the deterioration of the physicochemical properties of the soil and a decrease in fertility. Therefore, it is necessary to apply high-yield measures in agriculture, reducing the number of mineral fertilizers.

Also, in the experience of introducing crop rotation systems, it was noted that in some years the amount of humus increased or was optimally maintained. The data show that the introduction of repeated and intermediate crop rotation in the current system of short-term crop rotation in the current crop rotation is one of the most important issues in cotton growing.

## METHODOLOGY

Scientific research was continued in a new field each year in a short rotation (1: 1) system in crop rotation. Therefore, experimental options were conducted in 2007–2011, depending on the type of crop. (Table 1) In the experiment, winter wheat “Kroshka”, “Pobeda-104”, soybean “Orzu” and cotton Navruz and Andijan-36 varieties were planted. The experimental options were carried out according to the system given in Table 3, with 3 repetitions. Scientific research was continued in a new field each year in a short rotation (1: 1) system in crop rotation. Therefore, experimental options were conducted in 2007–2011, depending on the type of crop. (Table 1) In the experiment, winter wheat “Kroshka”, “Pobeda-104”, soybean “Orzu” and cotton “Navruz” and “Andijan-36” varieties were planted. The experimental options were carried out according to the system given in Table 3, with 3 repetitions. In the experiment, phenological observation, soil and plant sampling were carried out in accordance with the manuals "Methods of field experiments" (Dospekhov) "Methods of state varieties of agricultural experiments" and "Methods of field experiments".

Quantities of humus in soil samples, general and mobile types of NPK were carried out in accordance with the methods "Methods of the agrochemical, agrophysical and microbiological research in polyvinyl cotton fields" and "Methods of agrochemical analysis of soil and plants of Central Asia."

**TABLE-1 LOCATION OF CROP VARIETIES IN TIME AND TIME IN PRACTICE**

Number of sequences	I-field	II-field	III-field
1	Autumn wheat 2007–2008y	Autumn wheat 2008–2009y	Autumn wheat 2009–2010y
2	Reproductive crops 2008y	Reproductive crops 2009y	Reproductive crops p 2010y

3	Cotton stalk 2009y	Cotton stalk 2010y	Cotton stalk 2011y
years	2007–2009	2008–2010	2009–2011

## EXPERIMENT

Also, the reduction of nutrients in the soil leads to negative environmental and economic consequences. With the depletion of land resources, their deterioration (degradation) leads to a significant decrease in nutrients, decreased crop yields, reduced soil moisture capacity, heat and water permeability, and increased water and wind erosion. Among soil microorganisms, worms are also important. They significantly improve soil properties. Their quantity and size fluctuate considerably under the influence of mineral and local fertilizers.

The above factors have a major impact on fertilizer efficiency and therefore on crop yields. Therefore, one of the most important factors in increasing the economic efficiency of agriculture is to ensure the optimal ratio of chemical fertilizers to the use of local fertilizers, as well as to replace plant protection in agriculture with environmentally friendly means and combine their protection with biological methods.

In particular, there are a lot of nitrogen reserves in the atmosphere. According to the data, nitrogen columns are weighing 8 tons per square meter of the globe. One hectare of land holds 80,000 tons of nitrogen, and if used properly, the available nitrogen reserves can reach one million years. Crops are constantly in need of nitrogen they cannot absorb it as they grow among nitrogen, in other words, free nitrogen in the air is useless for the plant.

Today, maintaining and increasing soil fertility is one of the most pressing tasks for all human being. Therefore, it is necessary to introduce a system of biological conservation of soil fertility in farms and ranches.

## RESULTS AND DISCUSSION

If cotton, wheat, corn reduces the amount of humus (humus) in the soil, it depends on the annual legumes (soybeans, moss, beans), alfalfa and other perennial grasses enrich the amount of humus and nutrients [1].

Soybean is the most important crop in the transition to the biological method of increasing soil fertility. Since the soybean plant planted after winter wheat grows without mineral fertilizers, a favourable environment for the survival and growth of microorganisms in the soil microflora is created. Soybean roots absorb biological nitrogen from the atmosphere with rhizobium bacteria and provide the plant itself with pure biological nitrogen during the growing season, resulting in partial removal of harmful chemical salts and other elements from the soil layer. The liquids in the soybean root make the phosphorus salts, which are insoluble in the soil, ready for plant absorption.

In our study, mosh crop also had a positive effect on maintaining and increasing soil fertility. Our farmers will be able to sow moss as a secondary crop and get a yield of 19.3-20.6 ts/ha per hectare, leaving an average of 1.8-2.8 tons of roots and stalks in the soil. According to the results of agrochemical analysis, 1 ton of roots and stalks of moss contained 27.5 kg of nitrogen, 13.2 kg of phosphorus and 27 kg of potassium. Thus, the average organic residue of moss is 2.3 tons per hectare, while the average return of 63.2 kg of nitrogen, 30.3 kg of phosphorus and 62.1 kg of

potassium per hectare has been proved. According to the researches of A.A. Iminov[5] B.M. Xalikov, F.B. Namazov, and X. Bazarov, as a result of growing legumes as a secondary crop in autumn wheat, the agrophysical and agrochemical properties of the soil changed positively, the humus content in the topsoil (0-30 cm) increased by 0.008-0.012%, the total nitrogen content increased by 0.006-0.010%. The total amount of phosphorus increased by 0.007–0.010% [2].

**TABLE 2 SYSTEM OF EXPERIMENT**

Option sequence	Autumn wheat			Reproductive crops				Cotton stalk			Terms of application of mineral fertilizers in cotton										
	Annual norms of mineral fertilizers kg/ha										In the field		2-3 real leaves	In honing		In blossom					
	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Types of crop				N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	N	N	K <sub>2</sub> O	N	P <sub>2</sub> O <sub>5</sub>	
Andijan-36																					
1	180	120	90	Not planted(control)				200	140	100	100	50	50	75	50	75	40				
2	180	120	90	Mung bean	25	80	60	200	140	100	100	50	50	75	50	75	40				
3	180	120	90	Mung bean	50	80	60	200	140	100	100	50	50	75	50	75	40				
4	180	120	90	Soy	60	90	60	200	140	100	100	50	50	75	50	75	40				
5	180	120	90	Soy	90	90	60	200	140	100	100	50	50	75	50	75	40				
Navruz																					
6	180	120	90	Not planted(control)				200	140	100	100	50	50	75	50	75	40				
7	180	120	90	Mung bean	25	80	60	200	140	100	100	50	50	75	50	75	40				
8	180	120	90	Mung bean	50	80	60	200	140	100	100	50	50	75	50	75	40				
9	180	120	90	Soy	60	90	60	200	140	100	100	50	50	75	50	75	40				
10	180	120	90	Soy	90	90	60	200	140	100	100	50	50	75	50	75	40				

Many scientists have studied and conducted many scientific types of research on soybean crop which is one of the legumes that improves and enhances the structure of the soil. In particular, Isroilov I. [3], H.S.Romanov, K.M.Mirzajonov, R.T.Tolibulin [4], A.A.Iminov.

It is also possible to expand the use of municipal and industrial waste to the manure exchange system, for which municipal waste is collected in a centralized manner and buried in the ground.[6.7.8.9.10] The following year, the rotten waste is cleaned of various solids and waste, i.e., sieved and used as a manure.

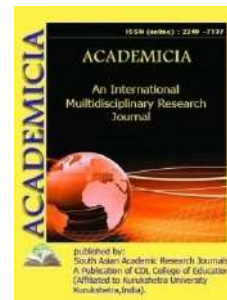
## CONCLUSION

As a conclusion, it was of the most important economic, social, and spiritual importance facing farms today. It will be necessary to carry out the responsible tasks of increasing soil fertility through the introduction of more efficient and rational methods of land use. As a result, the total amount of nitrogen in the stems and roots will reach an average of 60-70 kg of nitrogen, 25-28 kg of phosphorus and 40-45 kg of potassium per hectare in an average of 3 years. We are confident that farm managers will use their knowledge, experience and entrepreneurship to fulfil these lofty and responsible tasks.

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DOI: **10.5958/2249-7137.2020.00711.9**

## TO STUDY THE LEADERSHIP SKILLS OF THE PRIMARY MULTIPURPOSE COOPERATIVES SOCIETIES BOARD DIRECTORS IN GAMBELLA, ETHIOPIA

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### ABSTRACT

*Now a day cooperatives act in a very different environments. The need to compete in an open and globalized market has obliged them to rationalize structures and professionalize many boards of directors. The most important reason for the down fall and dormancy state of many multipurpose cooperatives in the region currently is the absence of effective leadership qualities and skills among their cooperative leaders. With this backdrop, the study investigated the leadership skills among the leaders of multipurpose cooperatives. Out of 31 primary multipurpose cooperatives operating in the town, 16 primary cooperatives were selected purposively as the study units. By adopting census method all the 128 board of directors representing from 16 primary multipurpose cooperatives were selected as study population. The study was heavily dependent on primary data which was collected from the board of directors by administering structured questionnaire. Econometric model viz., binary logistic regression was used to assess the determinants of leadership skill among the board of directors. The results of binary logistic regression analysis shows that variable such as: age, access to training, leadership experience, media exposure, leader member relations and government interference were found to be the major variables that strongly determines the leadership skills. Those variables such as: age, and leader member relations were found to have negative significant effect whereas leadership experience, media exposure, access to*

*training, and government interference were found to have positive significant effect on leadership skills. Based on the findings it is suggested that the leaders of cooperatives need to be given training on leadership qualities, skills and on the functionalities of cooperatives.*

**Keywords:** *Board of Directors, Cooperatives, Leadership, Leadership Skills.*

## INTRODUCTION

### 1: Background of the Study

In an increasingly globalized world, cooperative organizations are more needed than ever, as a balance to corporate power and as anchor to the grassroots level of society. Cooperatives hold the potential of being a driving force in the developing world; they can operate in a democratic environment. For the poor around the world, cooperatives can provide much needed opportunity for self determination and empowerment (ICA, 1963). Cooperatives are ideal vehicles for democratization and economic empowerment in developing countries: they instil basic democratic values and methods; foster self reliance through collective action; and shape relationship between institutions and civil society that encourage participation and conflict resolution.

Now a day, agricultural and rural cooperatives are facing new challenges in response to institutional restructuring, rapidly changing technology, and the rapid concentration of the agro food industry. Not unlike other cooperative organizations, agricultural and rural cooperatives sometimes fail as cooperatives, disenfranchising their members, even though they may be viable businesses. Members' interests may be increasingly non-homogenous so that leading process becomes more difficult (Fulton M, 2001). At the same time, there is evidence that co-operative conversions are rarely members-driven indicating the need for greater cohesion between members and leadership interests. Generally speaking, agricultural cooperatives face numerous challenges, since they serve more than one purpose, often with a transaction. Multipurpose cooperatives have multi-dimensional objectives and management of diverse, multipurpose organization is that much more difficult (Cook, 1994).

Within this context, leading cooperatives would benefit from innovative strategies that incorporate leadership skill in to different areas decisions. In Ethiopia, Cooperatives are challenged by problems sourced from different angles: low capacity of cooperative leadership and management, inadequate capacity building support by agencies, literacy gap from the cooperative leaders, and low interest of the management committee due to low incentives (Bezabih E.2012). In fact, leading a cooperative is not easy task; it will be challenging and difficult. It involves not only managing resources and business operations, as in other businesses, but also dealing with problems stemming from the cooperative's distinctive characteristics.

Different writers and scholars of the field have justified the cause for the poor performance of cooperatives in Ethiopia from different perspectives. The causes are interventions at local level, rampant embezzlement by the leadership, weak and passive management, and lack of access to credit, illegal and unethical competition from private traders (GRSO, 1990). It is also noted that poor member participation, poor leadership, poor accounting and record keeping system, poor bargaining power are common problems that sluggish Ethiopian cooperative movement (Chogo, 2008). All writers mentioned leadership problem inter alia contributing to low performance and

in efficiency of Ethiopian cooperatives. Cooperative leaders in the country were identified as weak, passive and ineffective. Since leadership plays a significant role in voluntary member drive organizations like cooperatives, it is crucial to answer the question why cooperative leaders are inefficient, weak, and passive by identifying different variables associated with cooperative leadership skills. Therefore, the study on determinants of leadership skills among the board of directors of primary multipurpose cooperative societies was initiated.

## **2: Statement of the Problem**

Cooperative organization is one form of social enterprise and considered as a mechanism for country's economic and social development (Prabhu, 1999). The cooperative model is utilized for all kinds of social and economic enterprise. It also agreed by scholars the importance of cooperative as a mechanism for social and economic growth for many countries worldwide. Especially, for country striving to escape from poverty the expansion of cooperative society has dramatic implication in changing the living standards of members and citizens (Befikadu B, 2009). In order to survive and serve their members, cooperative organizations need to have a strong, dedicated and vibrant leadership with basic leadership skills. Because it is believed that above all the successes of cooperative societies depend on the skill level of leadership they possess. But, today's cooperative leaders are facing many competing forces which emanates from stakeholders interest, democratic nature of cooperative organizations, and competitive environment in order to reconcile these competing forces, cooperative leaders should recognize and incorporates cooperative practice with its own professional people centered ethic as core part and with cooperative principles and values as fundamental to its practice.

Cooperative leaders must recognize their leadership role as one of "Servant Leader", whose source of power comes from their superior professional qualification and skill but from the cooperative purpose for which their leadership is exercised (Devis, 2004). In countries where cooperative movement is weak and ineffective, the absence of dynamic leadership is one of the major causes (ICA, 1963). These indicate that there is strong and direct relationship between cooperative leadership skill level and cooperative performance. Because members mobilization, internal harmony, better external relation with the government institutions, key suppliers & promoters and generally overall smooth internal & external relationship of cooperative organizations are depends on leadership skill of cooperative leaders. On the other hand, the issues in cooperative organizations such as board of member's manipulation, weak leadership, poor supervision, mismanagement, financial outrages and failure of democracy have been revealed by scholars (Banishree Das, 2006). As a special purpose of organization, cooperative need effective board members to lead the cooperative and their members. Reflected in the issues, it is suggested to encourage effectiveness and skilled board of directors in managing cooperative. But, what are the effective leadership skills to be practiced for cooperative? What factors determine the leadership skills of board of directors of cooperatives are not yet known owing to dearth of empirical findings in the context of Ethiopia in general and study area in particular? Hence this study was undertaken to answer the intended research questions.

## **3. Empirical studies on determinants of leadership skills in cooperatives**

Franklin (2006) categorized all factors affecting leadership into four major types. They are: leaders related factors, follower related factors, organizational related and external factors. The leader related factors are those factors originated from the leaders personal characteristics. These

are the leader education, Behavior and leadership style (Franklin, 2006). Those factors can determine the cooperative leadership skills. The other factors are follower related factors, are those that out of followers that mean members in cooperatives situation. Member's relationship with leaders can determine the effectiveness of leadership in cooperative organizations. Organizational factors that affect the effectiveness of an organization are significant to organizational characteristics. The nature of task performed, linkage among committee members and incentive policy of the society are the major ones. Every organization has its own internal policies and capabilities up on which the payment and benefit depends. The nature of the task performed in an organization also determines the type of technology needed to perform the task. The degree of the functional interdependence among the different departments of cooperative organization, enhance the extent of exchange of ideas and experiences through training enhances the effectiveness and quality of the task performed and thereby contribute to the quality of the leadership. The External and environmental factors like government interference and extent of competition from outsiders (especially private organizations) can also determine the quality of leadership in cooperative organization, so that part of the factors are included in the study.

Dwaraki and Subburaj (1990) in their analysis of the factors promoting the selection of cooperative leaders in Tamil Nadu (India), identified factors that affect leadership as; size of land holding, social participation, knowledge of cooperatives, participation of cooperative organization and preferred leadership attributes.

Perusal of available literatures on leadership and related aspects, it is understood that there are few studies undertaken in the field leadership skills in general, and in particular to cooperatives, and that too conducted in other countries. No attempt has been done to analyze determinants of cooperative leadership skills in Ethiopian context. The researcher found this research gap, and investigation was made to analyze the determinants of leadership skills level among multipurpose cooperative leaders.

#### **4: Objectives of the Study**

The main objective of this study is to assess the determinants of leadership skills among the board of directors of primary multipurpose cooperatives societies in Gambella Town.

#### **5: METHODOLOGY**

As the study is empirical in nature field survey method was adopted. The study population includes all the board of directors and control committee members of the sample primary multipurpose cooperatives in Gambella Town.

##### **5.1: Sampling design**

As far as sampling design is concerned, two stage sampling technique was used. At first stage, primary multipurpose cooperatives in Gambella town were selected purposively as study unit as these cooperatives are found more in number in the Region as well as in the town. At present there are 31 PMCs in Gambella town. But, among these the researchers' selected 16 cooperatives that were only established before or in the year 2005 E.C. These cooperatives are spread throughout 5 major Kebeles (Villages) in the town. At second stage, 128 total numbers of BODs and control committee in these cooperatives that stood to be 80 and 48 respectively (Table 1) had been selected by census basis representing PMCs in all Kebeles of the town.

**TABLE 1: SELECTION OF BOARD OF DIRECTORS**

No. of Kebele	Sample PMCs	Male BoDs	Female BoDs	Male Control Committee	Female Control Committee	Total Respondents
Kebele 1	02	10	00	06	00	16
Kebele 2	03	12	03	08	01	24
Kebele 3	05	21	04	13	02	40
Kebele 4	03	13	02	09	00	24
Kebele 5	03	10	05	07	02	24
<b>Total</b>	<b>16</b>	<b>66</b>	<b>14</b>	<b>43</b>	<b>05</b>	<b>128</b>

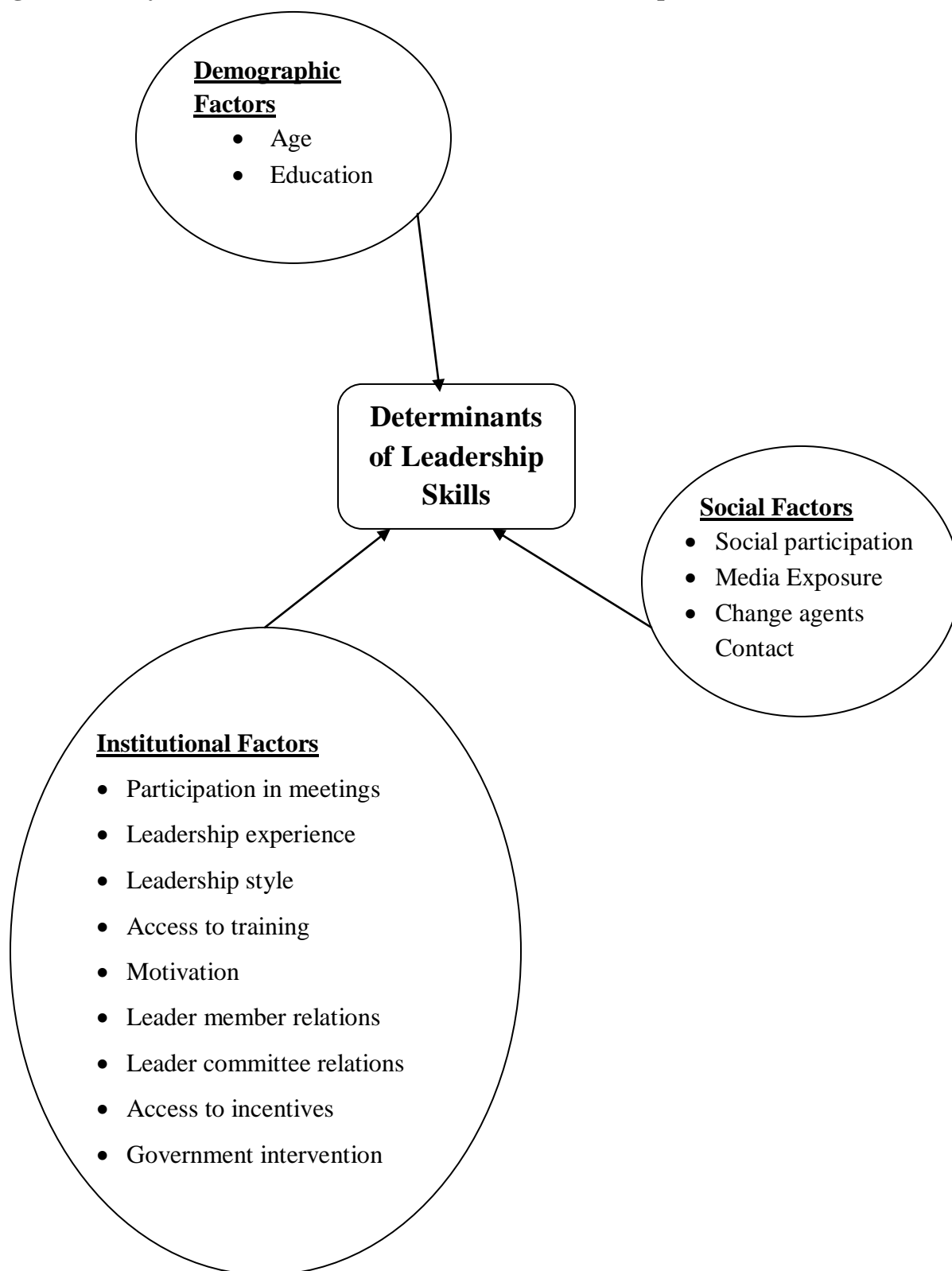
*Source: Gambella Town Agricultural Development Office, 2016*

**5.2: Sources of Data:** For this study purpose, both qualitative and quantitative data were utilized from primary data source. Primary data was generated by distributing questionnaire to the respondents.

**5.3: Tools and Methods of Data Collection:** A well structured questionnaire was used to get the needed information from the board members and control committee members of the selected primary multipurpose cooperatives. The questionnaire was pretested on other cooperatives in the same area to control the clarity of the questionnaire to those leaders for whom the real questionnaire was prepared.

## **6: Method of Data Analysis**

Data collected from selected respondents were organized in such a way that quantitative data were analyzed using descriptive statistics through the use of the statistical software called SPSS. In order to assess the determinants of leadership skills among board of directors, binary logistic regression model was used.

**Figure 1: Analytical framework for determinants of leadership skills**



## 7: Results and Discussion

To assess the determinants of cooperative leadership skills, first the relationship between independent variables and dependent variable was analyzed one by one using *Chi-square* test in order to identify their independent relationship.

**TABLE 2: RELATIONSHIP BETWEEN INDEPENDENT VARIABLES AND THE LEADERSHIP SKILLS**

Independent variables	Leadership skills	
	$\chi^2$ cal	P value
Age	40.185	0.000
Education	52.193	0.000
Participation in committee meetings	10.966	0.061
Leadership experience	57.587	0.000
Social participation	65.736	0.000
Media exposure	70.282	0.000
Contact with change agents	69.096	0.000
Leadership style	06.875	0.083
Access to training	16.439	0.011
Motivation	10.639	0.065
Leader member relations	91.909	0.000
Leader-committee relations	72.876	0.000
Access to incentives	02.620	0.106
Government intervention	65.987	0.000

Source: Field survey, 2016

It is evident from Table 2 above that the association between each independent variables and dependent variable was conducted by cross-tabulating each predictor variables against the outcome variable. Determining variables were categorized under different factors and they were analyzed one by one using *Chi-square* test in order to identify their relationship with leadership skills. For this purpose fourteen relevant independent variables were identified through review of literature and tested one by one using *Chi-square* test. Among them eleven variables were also found to be significant and further examined their cumulative effect by binary logistic regression.

In order to further examine the relative importance or net effects of each independent variable binary logistic regression was carried out. Before using the model, multicollinearity problem among the independent variables was tested using contingency coefficient and it was found that there was no such problem among the variables.

**TABLE 3: OMNIBUS TESTS OF MODEL COEFFICIENTS AND MODEL SUMMARY**

<i>Chi Square</i>	<i>Df</i>	<i>Sig.</i>	<i>Cox &amp; Snell R Square</i>	<i>Nagelkerke R Square</i>
130.6***	1	.	.483	0656
	1	0		
		0		
		0		

Source: Field survey, 2016

The *Chi-square* result ( $\chi^2=130.6$ ,  $df=11$ ,  $p<0.001$ ) from the model summary in the Table 3 above indicates that the overall model is significant when all independent variables (age, education, leadership experience, social participation, media exposure, contact with change agents, access to training, leader member relation, linkage between committees, access to incentive and government intervention) are entered. The “pseudo”  $R^2$  estimates indicates that approximately 65.6% of the variance in leaders leadership skills can be predicted from linear combinations of the eleven independent variables.

According to binary logistic regression output in the Table 4 shows that, out of eleven variables which were included in the model, six predictors were found to have significant effect on leadership skills of cooperative leaders. Furthermore, since it has no value to present insignificant variables (education, social participation, contact with change agents, linkage between committees and access to incentive) the following few paragraphs describe only the significant variables.

**Age of the Leader:** This variable has a significant negative influence on leadership skills at 1%. As the age increases by one year, the probability of giving good leadership skills to the society will decline by 0.449. This is because the older the age of the leader, the less they are active in managing the affairs of cooperative. Even though elder leaders had ample life experience that is beneficial for the societal decisions, the success of modern cooperative management inclined towards leaders who are active in shouldering responsibility and tasks of the organization. It was confirmed that historical background of cooperatives movement in the past regimes that was based on compulsion and coercion also created a “bad image” in the minds of the senior parts of the society (Zemen, 2005).

**TABLE 4: THE EFFECT OF INDEPENDENT VARIABLES ON THE LEADERSHIP SKILL**

Independent variables	$\beta$	S.E	Wald	P Value	Odds Ratio
Age	-0.8000***	0.294	7.400	0.007	0.449
Education	0.496	0.280	3.121	0.077	1.641
Leadership experience	0.713*	0.301	5.615	0.018	2.040
Social participation	-0.349	0.280	1.556	0.212	0.705
Media exposure	0.819**	0.298	7.564	0.006	2.268
Contact with change agents	-0.171	0.301	0.324	0.569	0.843
Access to training	0.764*	0.333	5.254	0.022	2.147
Leader member relations	-1.150***	0.268	18.479	0.000	0.317
Leader-committee relations	0.186	0.315	0.347	0.556	1.204
Access to incentives	0.597	0.340	3.083	0.079	1.816
Government intervention	1.121***	0.287	15.215	0.000	3.068
Constant	-5.402	2.508	4.639	0.031	0.005

Source: Field survey, 2016 \*\*\* Significant @ 1% level; \*\* Significant @ 5% level; \* Significant @ 10% level

**Leadership Experience:** The number of years leaders worked as cooperative leaders has a positive implication on their leadership skill at 10%. The odds ratio result of the logit model shows that an increase in year of leadership experience will increase the probability of

success in leadership skill by 2.040. In line with this finding, Franklin (2006) argue that experience had over guides for decision making through helping decision makers to discriminate and generalize past situations in their process of decision-making. In cooperative organizations, the duration limited to be 3-6 years in the Proclamation (FDRE, 147/1998) would hamper the probabilities of using genuine leaders.

**Media Exposure:** It has a significant positive influence on leadership skills at 5%. As the frequency of exposure to mass media increase by one unit, the probability of rendering good cooperative leadership skills marginally increased by 2.268. That means the more the leader has exposure to mass media, the more the leader have information to make conscious decisions. Because mass media create awareness among the leaders about the market price for their products, business opportunities in the environment and other aspects regarding the direction of the government and other aspects that are important to uplift their decision making capacities.

**Access to Training:** Cooperatives are managed specially at primary level by group of dedicated leaders who are willing to serve their members at free of cost. In relation to this finding, the logit model shows that, access to training has a positive influence on leadership skill at 10%. Thus, getting training would increase the probability of success in cooperative leadership skills by 2.147. This was due to the fact that lack of leaders training in critical areas, such as how the cooperatives perform their role, responsibility, duty, function, business management skills, financial management and general administration would contribute to poor leadership skills.

**Leader Member Relations:** Leader member relationship has a significant negative influence on cooperative leadership skill at 1%. That means an increase in the level of relationship among leaders and members by ten units; it will decrease the probability of success in cooperative leadership by 0.317. Since, the more the leaders have a close relationship with their followers, the more the chance to depend on existing good relationship rather than on their leadership skills. Therefore, as to the findings of this study only moderate level of relationship is required so as to deliver an effective leadership skills in cooperative enterprises.

**Government Interference:** This variable has a positive influence on cooperative leadership skill at 1%. That means increasing the degree of government genuine participation would increase the probability of success in cooperative leadership skill marginally by 3.068. Genuine participation of government is important to cooperative especially in the areas of training, financial and administrative assistances although it contradicts.

## 8. CONCLUSION

Concerning the factors that determine leadership skills, the binary regression model shows that leader's age, leadership experience, media exposure, access to training, leader member relations and Government interferences are the major significant determinant factors that affect the leadership skills in the selected primary multipurpose cooperatives of Gambella Town. The variables such as leader's age and leader member relations have negative influence on leadership skills. While leadership experience, media exposure, access to training and government interventions have positive significant influence on leadership skill.

## 9: Recommendations

1. The cooperative agency at the Regional and Zonal level need to provide continuous, reasonable and standardized trainings to improve the existed undesired conditions of leadership skills and qualities among cooperative leaders. Besides this, the cooperative change agents need to undertake a serious follow up on cooperatives through inspection, auditing and legal advices.
2. The concerned authority for cooperatives' growth and development must also create strong and continuous trainings for cooperative leaders in order to improve their existed lower understanding levels about cooperative leadership attributes, functions and roles for modern leadership development in cooperatives.
3. For better quality and skillful leadership the multipurpose cooperatives' members must take the age of leaders in to account when they go for election to choose matured and skillful leaders for reasonable decision makings.
4. The multipurpose cooperatives need to take in to account the significance of leadership experience for leadership positions and must elect their leaders based on this criterion.
5. The cooperative change agents need to inform the cooperative leaders seriously about the advantages of regular follow up of media for cooperative business and leadership skills development in multipurpose cooperatives.
6. The cooperative leaders need to understand thoroughly about the importance of strong and close linkages with cooperative members. But, when they relate to the members they should realize that, the more they relate to the members, the more chance for them to lose full confident on their leadership skills during decision making.

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DOI: **10.5958/2249-7137.2020.00588.1**

## EFFECTS OF STIMULATORS ON THE GROWTH AND DEVELOPMENT OF SILIC SWEET SEEDS

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### ABSTRACT

*Based on the data obtained, we conducted laboratory experiments to determine the dependence of the degree of salinity of the soil using various biostimulants on the seeds of smooth licorice. In the laboratory, its germination was improved by the effective use of Geogumat Aminomax IFO and Califos IFO biostimulants.*

**KEYWORDS:** *Geogumat, Aminomax IFO And Califos IFO, Seeds, Seedlings, Licorice, Meadow – Alluvial;*

### INTRODUCTION

Today, one of the urgent tasks is to conduct scientific research on the effect of stimulants in the cultivation of medicinal smooth licorice (*glycyrrhiza glabra* L) from seeds in the grassland-alluvial soils of the Aral Sea.

The aim of the study was to determine the optimal timing and criteria for the use of geogumat, aminomax IFO and caliphos IFO biostimulants in order to propagate smooth licorice from seed in the saline soils of Karakalpakstan.

**Research methods:** Studies have been performed on the germination of smooth licorice seeds with various biostimulants in the laboratory. An experimental system conducted in a laboratory setting is given. The effects of Geogumat Aminomax IFO and Califos IFO biostimulants on licorice seed germination were studied.



Laboratory experiments were carried out in three repetitions, 100 per days seeds were sown on demand for each variant, and the degree of germination of seeds sown in the soil in the greenhouse for three days was determined and phenological observations were made.

**Experimental results:** Sweet licorice seeds germinate in 4-5 days when sown in spring when the soil temperature reaches 10-15 degrees. However, the young shoots that sprout are very thin in the first period, and with a slight change in conditions, many of them die (A.J. Kuziev, 2000). Due to the fact that the data on the germination of smooth licorice seeds obtained sufficient results in the laboratory, we conducted experiments on the effect of stimulants Geogumat, Aminomax IFO and Califos IFO on the optimal growth and development of smooth licorice in the field.

The soil of the experimental field is of the grassy alluvial type and is mechanically sandy to the depth of 0-50 cm, layered downwards. For the field experiment, saline leaching was carried out in the autumn at a rate of 3500-4000 m<sup>3</sup> / ha. Before the experiment, when we determined the water-soluble salts, the field soil was found to be low salinity, pushed to a depth of 28-30 cm and pressed three times.

In the field experiment, smooth licorice seeds were sown with Geogumat, Aminomax IFO, and Califos IFO stimulants, while in the first year when the full-blown side branches benefited, and during flowering they were sprayed at different rates with stimulants.

When the effect of stimulants is detected in 3-4-leaf cycles in the first year of smooth licorice, Geogumat, Aminomax IFO and Califos IFO stimulants are found to increase the survival and resistance to adverse conditions of licorice seedlings. Rapid growth and development of the plant was observed. On June 1, we observed that the sweetener grew 4.3-7.1 cm in height using a biostimulator.

In the experiment, the growth and development of the first year smooth stimulant of the stimulator was observed on July 1 and August 1. According to the data obtained, Geogumat, Aminomax IFO and Califos IFO stimulants had different effects on the growth and development of smooth sweetness. On July 1, the control version had a smooth sweetness height of 38.3 cm, Geogumat stimulator 56.7 cm, Aminomax IFO stimulator 50.5 cm and Califos. As a result of the IFO stimulant effect, it reached 44.5 cm. In the observations made on August 1, the check was 48.5-cm :, 65.7-cm :, 50.7-cm :.,

Before collecting the smooth candy 15 X. When we performed X-observations, the control variants were 56.7 cm. It was 83.7 cm when we sprayed the geogumat stimulator, 78.5 cm when we used the Aminomax IFO stimulator, and 70.5 cm when we used the Califos IFO stimulator.

In studies, the effect of a stimulant on dry mass accumulation during the first growth and development of smooth licorice was studied at the end of the growth period.

According to the data obtained in the control variant, the dry mass of the rhizome of licorice is 24.7-31.1 g, the stem is 28.5-35.5 g, the leaves are 15.4-33.9 g and the total dry mass of one plant is 121.7-144.6 grams were higher than the year-end dry mass control of the plant in the variants in which the stimulants were used. In particular, at the end of the first year of growth of sweeteners in the variant treated with Geogumat stimulant was 144.6 g, in the variant using Aminomax IFO stimulator 121.7 g and in the variant using Califos IFO stimulator 136.1 g (Table 1).

In the second year, the growth and development of the smooth sweetness was good, and during the ripening and flowering periods, it was treated with Geogumat, Aminiomax IFO and Califos IFO stimulants.

In the study, smooth sweeteners were treated with Geogumat, Aminiomax IFO and Califos IFO stimulants during the application period, in the first flour day of June in height control variant 58.4 and on stimulants 62.5-58.9-51.6 cm respectively on height stimulator on July 1. respectively 82.3 ;, 71.4 ;, 68.2 cm and 71.3 in the control variant. On August 1, the height was 82.1 in the control variant, 97.5 ;, 90.4 ;, 83.2 in the stimulator, and on September 1, the height in the control variant was 91.7; , 4 ;, was found to be 98.2.

Plants grow well in the third year of the terrestrial part. There was also a difference between the options. (Table 2)

**1-TABLE THE EFFECT OF STIMULANT ON SMOOTH GROWTH IN THE FIRST YEAR GROWTH AND DEVELOPMENT (2017)**

№	Option types	Power thickness	H e i g h t \ s m				The dry mass of a plant\gr			Total plant mass\gr	Total surface dry mass\gr
			1.06	1.07	1.08	1.09	stem	leaves	root		
1	C o n t r o l	102,5	15,6	21,7	38,3	56,7	28,5	15,4	24,7	121,7	30,7
2	G e o g u m a t	105,7	28,1	34,6	56,7	83,9	35,5	33,9	33,9	144,6	42,5
3	Aminomax IFO	110,6	20,7	31,7	50,5	78,5	32,6	28,7	30,5	134,0	40,4
4	Caliphate IFO	101,9	18,6	29,6	46,4	70,5	30,0	20,5	28,6	128,6	38,6

**4.2.3-TABLE THE EFFECT OF STIMULANT ON SMOOTH GROWTH IN THE SECOND YEAR GROWTH AND DEVELOPMENT (2017)**

№	S t i m u l a n t s	1-order side branches, pcs	H e i g h t \ s m				The antlers of a flower	Top 3 antlers dry mass, g
			1.06	1.07	1.08	1.09		
1	C o n t r o l	8,5	58,4	71,3	82,1	91,7	5,7	17,7
2	G e o g u m a t	12,5	62,5	82,3	97,5	107,5	8,4	20,1
3	Aminomax IFO	10,4	58,9	71,4	90,4	100,4	7,6	18,6
4	Caliphate IFO	9,7	51,6	68,2	83,2	98,2	6,5	18,0

#### 4.2.3-TABLE THE EFFECT OF STIMULANT ON SMOOTH GROWTH IN THE THIRD YEAR GROWTH AND DEVELOPMENT (2019)

№	S t i m u l a n t s	H e i g h t \ s m					The antlers of a flower	The number of pods per plant
		1.05	1.06	1.07	1.08	1.09		
1	<i>C o n t r o l</i>	56,7	68,7	90,7	100,5	105,6	5 , 6	2 1 , 5
2	<i>G e o g u m a t</i>	75,4	84,9	101,5	110,7	118,6	7 , 8	3 2 , 3
3	<i>Aminomax IFO</i>	70,2	76,1	95,6	103,6	110,9	7 , 0	2 8 , 5
4	<i>Caliphate IFO</i>	62,5	74,3	93,2	100,7	110,1	7 , 0	2 6 , 4

However, with the placement of the stimulator, the smooth sweetener enters the generative phase and affects the accumulation of the flowering crop. According to the data obtained, the use of stimulants influenced the growth and development of smooth sweeteners in the third year. (Table 3)

**CONCLUSIONS:** The germination of smooth licorice seed was improved under laboratory conditions using Geogumat, Aminomax IFO and Califos IFO stimulants. That is, seed germination in Geogumat soils was 87.3%, Aminomax IFO 73.5%, and Califos IFO 68.7%. In field experiments, the germination rate when planted with a Geogumat stimulator was 80.7%. Meadow-alluvial soils of the Republic of Karakalpakstan require the introduction of non-traditional crops in agriculture.

The effectiveness of optimal norms and ratios in improving the militar condition of moderately saline soils was determined by increasing the soil fertility of the stimulant seeds and mineral fertilizers by germinating the sweet licorice from the seeds.

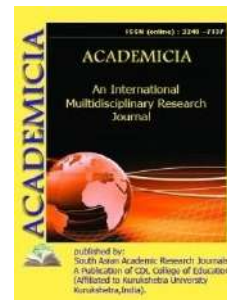


Pic 1 Grinding of smooth licorice seeds under the influence of stimulants

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DOI: **10.5958/2249-7137.2020.00589.3**

## CULTURAL HERITAGE IS ONE OF THE MAIN WAYS OF CULTURE

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### ABSTRACT

*Appeal to the cultural heritage allows you to better understand the features of culture in different periods of human existence, allowing you to answer many questions. Therefore, the problem of preservation of cultural heritage is particularly relevant now in Uzbekistan.*

**KEYWORDS:** *Culture, Heritage, Protection, Threat, Monument.*

### INTRODUCTION

Considering the great cultural heritage inherited by us, President of Uzbekistan I. Karimov at the first session of the Oliy Majlis said: "Preserving and restoring unique historical monuments created by the Uzbek people and being a national treasure is an essential part of our spiritual program. This national wealth was inherited from our ancestors. It means that we also need to take care of it like the pupil of the eye and pass it on to future generations."

Uzbekistan became a full member of the UNESCO international organization, the following monuments located in the Ichan-Kala reserve in Khiva in 1991 and the historical center of Bukhara in 1993, monuments of architecture of the Temur and Temurids in Shahrisabz in 2000, monuments in the city of Samarkand in 2001, included in the list of the World Cultural Heritage.





Fig. 1.Oksaroy Palace

Cultural heritage is one of the main ways of culture. During his life, a person manages to master only a small part of the entire cultural heritage, acting as a common heritage for all mankind. This circumstance may be updated subject to its preservation. Therefore, the preservation of cultural heritage coincides with the preservation of culture in general.

Appeal to the cultural heritage allows you to better understand the features of culture in different periods of human existence, allowing you to answer many questions. Therefore, the problem of preserving cultural heritage is particularly relevant now in Uzbekistan. As a culture scientist Yu. M. Lotman notes: "Culture is memory. Therefore, it is always connected with history, always implies the continuity of the moral, intellectual, spiritual life of a person, society and humanity. And therefore, when we talk about our culture, modern, we, perhaps without knowing it, we are talking about the great way that this culture has passed. This path goes back thousands of years, transcends the boundaries of historical eras, national cultures and immerses us in one culture - the culture of humanity".

The architectural monuments located on the territory of our country reflect the history of the development of science, art and culture of the epochs of their construction. The study of historical monuments, their careful preservation and restoration is our duty to our descendants. Recently there has been an intensive destruction of these structures, the cause of which is a long service life, atmospheric, seismic, man-made impacts, etc.

In the scientific works of academicians Ya.T. Gulyamova, I.Muminova, BAkhmedov, G.A. Pugachenkova, A.Askarov, doctors of sciences, Professors P.Zakhidov, M. Bulatov, A. Uralov, K. Ahmedov, and others. Issues of archeology, architecture, art history, the history of the epochs



of historical monuments are well enough reflected. Analysis of the above-mentioned scientific works, archival materials shows that the work on the study of the design features of these structures that are carriers of all loads, on which the strength, stability, seismic resistance and durability of structures mainly depends on insufficiently studied.

Therefore, the task of identifying, eliminating or reducing the influence of these factors on the state of the structure is relevant in solving the problem of ensuring the durability of architectural monuments. From a practical point of view, it allows more efficient use of funds allocated for repair and restoration work.

Many of the outstanding monuments of the end of the 14th century and the first half of the 15th century, the era of the highest flourishing of medieval architecture, are preserved in Shakhrisabz.

The city of Shakhrisabz is Timur's birthplace. His development as a person is connected with Shakhrisabz and the palace Oksaroy was built on his initiative and under his leadership. The palace served as the government residence of the ruler of Amir Temur. Currently, the Palace of Oksaroy is listed in the UNESCO International Organization as one of the greatest creations of mankind.

The first of the Europeans who mentioned the unfinished palace of Oqsaro in his work is the ambassador of the Spanish king Ruy Gonzales de Clavijo, who visited him in 1403. After the conquest of Central Asia by Tsarist Russia, in 1870 A.Kun visited the remains of the palace. In 1928, B.N. Zasyupkin, Bachinsky A.M. conducted the first survey of the monument. In 1936, the architect MF Mauer attempted to study the facade and foundation of the pylons of the Oksar, in 1942 M. Masson and GA Pugachenkova were engaged in the study of the palace[3.42].

In the early 1950s, repair work was undertaken on the monument, which touched the liner of its basement parts. Subsequently, in different years, research work of the foundations was carried out according to specially designed programs. In particular, the opening of the pits was established depth of the foundations, their material, groundwater level, etc.

According to the descriptions of contemporaries, the palace with its scale, size and grandeur shook the imagination of contemporaries, it was a vast complex consisting of public and residential buildings. At present, only two separated pylons of the entrance portal, which were once connected by the arch, which was the largest by the standards of that time, have survived from the majestic palace.

The surviving portal testifies that the palace was made in the typical forms of Temur, which amaze the viewer not only with the scale, but also with the sophistication of the architectural decor, samples of which can be seen on the portal.

The effect of grandeur was achieved by the solidity of brick masses, decorated entirely, over the entire surface of the main facade, with mosaic ornaments. Large planes of the vault of corner minarets are clad with brick mosaic shells.

The catastrophic consequences of a number of strong earthquakes of recent years have revealed a number of problems that require more detailed study and an urgent solution to increase the seismic resistance and reliability of the supporting structures of architectural monuments.

Especially, recently, for various reasons, the condition of architectural monuments has greatly deteriorated.

Under these conditions, care for their conservation and restoration is of particular relevance. At the same time it is necessary to ensure first of all the seismic resistance and reliability of their supporting structures. In this connection, architectural monuments of Shakhrisabz, erected in the epoch of Timur and timurids (the palace of Oxara,), Samarkand, Bukhara and Khiva are accepted as objects of research.

According to prof. GP Gorshkov "The intensity of modern tectonic processes within Central Asia is higher than anywhere else on the Asian continent (with the exception, perhaps, of some parts of the Himalayas). When seismic vibrations of the soil in buildings and structures occurs along with the translational and torsional vibrations. They can appear not only in the presence of an eccentricity between the center of gravity and the center of rigidity of the structure, but also in its absence. One of the reasons for the occurrence of torsional vibrations of buildings can be the fact that the direction of displacements and accelerations of a seismic wave can coincide with the direction of wave motion, and be perpendicular to it.

In this case, the forces that act in addition to the translational displacement will tend to turn it around the center of gravity will act on the monuments of architecture. If, moreover, the length of the building is commensurate with the length of the seismic wave, then the torque caused by the action of inertial forces can reach a significant value. Research prof. I.L. Korchinsky found that the additional loads from torsional vibrations can reach up to 20-25% of the main seismic loads. In the works devoted to engineering analysis and inspection of the effects of earthquakes are the actual data on the significant effects of torsional vibrations on buildings and structures

The behavior of various buildings and structures during earthquakes suggests that it is not always possible with the necessary accuracy to describe one-dimensional calculation schemes.

Seismic impact is a multicomponent motion of the soil, propagating the final velocity. The last factor determines the angular displacement of structures of monuments relative to the vertical axes. The presence of this factor requires a transition to calculations using complex computational models, which take into account the real properties of structures and seismic effects.

The seismic reactions of high-rise structures in a non-uniform impact field are not well understood, and for this reason the existing regulatory documents do not contain sufficient guidance to ensure their seismic resistance. The solution to this problem requires the study of new types of seismic reactions, which are not always considered essential. Therefore, the study of issues such as the influence of the final velocity of seismic waves in the ground on the magnitude of seismic effects and the nature of the stress state are very relevant.

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DOI: **10.5958/2249-7137.2020.00618.7**

## KHOQAND AND INDIA: THE ROLE OF ULEMA IN DIPLOMATIC RELATIONS

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### ABSTRACT

*Some scholars have traced the earliest diplomatic relations between the Khoqand Khanate and India to 1825, but the archival documents and manuscripts reveal important information about diplomatic relations which were actually established much earlier. While there were several key factors that contributed to the development of these relations, the primary concern of the rulers of Khoqand was to establish a close relationship with India that could be used to their advantage within the Central Asian region. However, despite the historical importance of these diplomatic relations, the relations of the Khanate with India (especially with the Maharajah of Djammu and Kashmir), and the role of religious leaders ('ulemas) as ambassadors has remained poorly studied. In many sources belonged to the 19<sup>th</sup> century it was established that the Khoqand Khanate actively pursued diplomatic relations with India. Written sources also contain information about embassy missions led by religious leaders. Miyan Khalil Sakhibzada, Tash Khodja sudur and Khodja Bek led an embassy mission sent to India by the Khoqand Khanate. Written sources and archival documents dedicated to the history of the Khoqand Khanate contain information about their activities as ambassadors. This paper aims to study these issues and to analyze the dynamics of the embassy missions between the Khoqand Khanate and India.*

**KEYWORDS:** Khoqand Khanate, India, Relations, Diplomatic Relations,

### INTRODUCTION

It is true that in Central Asia were formed and developed several states and they faced to crisis with the influence of some factors. However, countries obliged to governing the existed political, socio-economic life and used several means of statehood to implement their duties proficiently.

Particularly, they tried to solve some problems appeared in political, socio-economic life through establishing international relations. One of these states was the Khanate of Khoqand which formed in Central Asia in 1709. In the beginning its territory consisted of only the Fergana valley. Later, some territories of modern Kirghizstan, Tajikistan and Kazakhstan were united under the Khanate.

Each country used the talented and capable statesmen, merchants and religious leaders in establishment of own diplomatic relations. In partly, rulers of the Khanate of Khoqand tried to hold diplomatic relations with neighboring countries for developing political, military, trade-economic and cultural spheres.

It was fixed in written sources that the Khanate conducted diplomatic relations with China concerning Eastern Turkestan in the 18<sup>th</sup> century. Since the 19<sup>th</sup> century, Khoqand started to adjust diplomatic relations with other countries also. Certainly, these processes were promoted by some reasons. *The first*, in this time elements of the statehood has been rather generated in the Khanate, and the state strengthened own political and economic status, recognized by other countries. *The second*, Tashkent borrowing strategic and special place in the trade of Central Asia has been joined to the Khanate, *and the third the* Russian empire threatened to the sovereignty of the state.

Despite the fact that the history of diplomatic relations between the Khanate of Khoqand and India was poorly studied, researches only studied trade and cultural relations of two countries on the basis of data of the National archive of India and the Ottoman archive, and activities of ambassadors are not explicitly learnt. Also, it were not enlightened in those works main factors and results of the establishment of diplomatic relations, the role of personalities such as Sufis, religious leaders and others took part in embassy missions.

Scholars who studied the history of the Khanate paid more attention to its foreign relations. They especially investigated the relationship of the Khanate with the Russian Empire, Ottoman Empire, China, Eastern Turkistan, the Emirate of Bukhara and the Khanate of Khiva. However, relations of the Khanate with the India begun and developed in the first half of the 19<sup>th</sup> century was left out of the sight of scholars.

Historical compositions, official correspondences and archival documents written in the 19<sup>th</sup> century show that religious leaders actively took part in establishment of these relations. Sufi leaders got more results in their ambassadorial activities than merchants and political leaders. Historical compositions also contain information about that religious leaders led embassy missions. Religious leaders studied in *madrasahs* and had perfect knowledge and skills. Also the tolerance of *Hanafi* trend and its strong influence on the ethics of religious leaders have led to positive results in their activities.

### **Reflexion of relationships between the Khoqand Khanate and India in legends**

It is known that the rulers of the Khoqand Khanate tied their genealogy with Zahiriddin Mukhammad Babur through the legend of "Golden Cradle" ("*Oltin Beshik*"). The question of legitimating the authority of the Khoqand Khanate learnt by Uzbek and foreign historians like Miyon Bukruk Solikhov, A.Qayumov, T.Beisembiyev, Kh. Bobobekov, A. Erkinov, S. Levi and others. Some of them suggested that rulers of Khoqand in fact were descendants of Babur. And others concluded that it was a fiction invented to justify the right of rulers to the political

authority. According to the legend of the “Golden Cradle” when Babur went to India in 1512 and he became a father. To protect his son from the dangers of the road, he leaved him in banks of *Nayman-say* (little river in the Fergana valley) which flowed from the south side of Khoqand. Representatives of Uzbek tribes found this baby who was wrapped in gold and precious things. They cast lots and divided the found things among themselves. As a result the tribe of *Ming* got this baby and called him as *Oltin Beshik-Khan*. Babur after creation of own Empire in India sent his ambassadors to Khoqand in order to bring his son. But the tribe of *Ming* which brought up the child sent their representative to Babur asking about that when *Altin Beshik-Khan* grows up to make him their ruler. Certainly this story connected with the genealogy of rulers (Khans) of Khoqand took an important place in ideology of the Khanate which was formed in the 18<sup>th</sup> century and shows that the dynasty of *Ming* tried to tie their first state relationships with India.

### **Citizens of the Khoqand Khanate and India**

Ways of Hajj Pilgrimage had a significance in the lives of Muslim people and political processes determined directions of the road. A part of Khoqand citizens went to pilgrimage to Mecca through territories of India in the 18<sup>th</sup>-19<sup>th</sup> centuries. It is known that there were three directions of the way of the Pilgrimage from Central Asia to Mecca: the *first* through India, the *second* through Iran and the *third* through territories of the Ottoman Empire. Data of archival documents show us that among these three ways the way through the Ottoman Empire was often used by citizens of Khoqand. But Hajj pilgrimage travelers written by pilgrims about their pilgrimage stories give us information about that some of citizens of Khoqand went to Mecca through India also. In the 18<sup>th</sup> – 19<sup>th</sup> centuries, the way through Iran did not used at all by reasons of religious conflicts between Sunni and Shia confessions.

The Hajj pilgrimage way took an important place in the integration of various cultures. Here we could give as an example coming the Naqshbandia-mujaddidia Sufi order to Central Asia especially to the Khoqand Khanate from India. Relationships between Indian and Central Asian Sufi orders learnt by scholars like Stephen Dale, Alam Payind, Jo-Ann Gross, Scott Levi, T.Beisembiev. In the beginning they studied an extension of the Naqshbandia-mujaddidia Sufi order in India in their works, then they analyzed the spread of the order in the territories of Central Asia from India at the second half of the 17<sup>th</sup> - the 18<sup>th</sup> centuries. Here should be emphasized that the Naqshbandia-mujaddidia order spread in the Bukharan Khanate from India as a result of activities of famous Sufi leader MusaKhan Dakhbedi. Musa Khan Dakhbedi went to the pilgrimage to Mecca through India, and in Kashmir, he met Miyan Abid who was descendants of famous Sufi leader Akhmad Sirkhindi. MusaKhan Dakhbedi became his murid (follower) and after returning to Bukhara founded here a branch of the Naqshbandia-mujaddidia order. But there are not special works which studied the spread of the Naqshbadia-mujaddidia order from India to Central Asia. In our article dedicated to the role Sufi leaders in diplomatic relations within the framework of the topic we try to tell something about the extension of Naqshbadia-mujaddidia order in the Khoqand Khanate from India.

The first cultural interrelations between the Khoqand Khanate and India connected with first processes of the extension of the Naqshbandia-mujaddidia Sufi order in Fergana valley, in part with the activity of the traveler from Margilan Sayyid Abdullah Khan Tura. The Japanese scholar Yayoi Kawahara wrote that Abdullah Khan Tura went from Kashgar to India in order to get an education from Miyan Abid. Then Abdullah-Khan with the recommendation of Miyan



Abid came back to Margilan and lived there. As a result of lack of written information related the activity of Abdulla Khan Tura Yayoi Kawahara in her article called oral data about him as a legendary But Abdullah Khan Tura brought from India the unique copy of the Holy Quran and this copy now is stored by his descendants. Yayoi Kawahara learnt the unique copy of the Holy Quran and suggested that indeed it made in India. She did not ignore the story of bringing of the Holy Quran to Khoqand, visit of Abdullah Khan to India and becoming a follower of the leader of naqshbandia-mujaddidia Sufi order sheikh Miyan Abid.

The wide spread of the Naqshbandia-mujaddidia Sufi order in Khoqand connected with the activity and life of Miyan Khalil Sakhibzada Ishan in Khoqand. Also Miyan Khalil Sakhibzada took an important place in establishment of diplomatic relations between the Khoqand Khanate and India. First interrelations between two countries began in 1825 with initiative of the ruler of Khoqand Mukhammad Ali-Khan. According to the local historical sources of Khoqand Mukhammad Ali-Khan sent special embassy to India and through it asked Miyan Khalil Sakhibzada to come and live in Khoqand. But the sources did not indicate the date of sending of ambassadors. However, it is known that Miyan Khalil Sakhibzada came to Khoqand in 1826.

### **The role of Miyan Khalil Sakhibzada in relationships between the Khoqand Khanate and India**

Little diplomatic ties were established between the Khoqand Khanate and India, thereby only the work of Muhammad Anwar Khan contains brief information about them. (Since the work of Mukhammad Anwar Khan was not dedicated to Khoqand-Indian relations, and it highlights relationships between Central Asia, Russia and England). The most detailed study on the relationships of Central Asia and India carried out by Professor Mansoura Haidar.

In diplomatic relations of Khoqand Khanate took an important place the ambassadorial activity of Muhammad Khalil Sakhibzada, who was from descendants one of leaders of the naqshbandia-mujaddidia Sufi order – Imam Rabbani Akhmad al-Sirkhindi. In the sources, which contain information on the history of Khoqand Khanate his name is fixed as Sakhibzade Khazrat, Khazrati Sakhib, Khazrati Ishan Sakhibzada, Miyan Khalil Sakhibzada and etc. In the archival documents, the full name of this person was Muhammad Khalil Sakhibzada, and the people called descendants of Miyan Khalil Sakhibzada and Imam Rabbani as *Miyans*.

Miyan Khalil Sakhibzada Ishan arrived to Khoqand in 1826 by the invitation of its ruler Muhammad Ali-Khan. In the written historical sources there are different data on his native place. In one copy of the manuscript of the composition of “Tarikhi Shakhrukhi” (the History of Shahrukhi) of Niyaz Muhammad Khuqandi it was fixed that he came to Khoqand from Bukhara, and in other copy it was written that he came from Peshawar. Also Pulatjon Qayumi in own composition of “*Khoqand tarihi va uning adabiyoti*” (History of Khoqand and its literature) wrote that this person came to the Khanate from Delhi. But it should not be confused him with the person, who was famous with the name of Sakhibzada kalon, who came into Bukhara and was a *pir* (patron, spiritual guide) of Amir Khaidar. The name of Sakhibzada Hazrat was Miyan Fazl Akhmad Sakhibzada and both of these two persons were representatives of one dynasty.

There is some information about Miyan Khalil Sakhibzada below. He was born in 1785 and died in Khoqand in 1869. This person was a patron of the Naqshbandia-mujaddidia Sufi order in the Khoqand Khanate and had a lot of murids (followers) not only in Central Asia, but also in



Russia. Moreover, Miyan Khalil Sakhibzada got a title of *naqib* in the Khoqand Khanate and played certain role in the state administrative system.

What was a reason for the invitation clerics and leaders of the Sufi orders by Khoqand rulers to own country or the country has not such people. It is impossible to assume that this kind of persons did not live in Khoqand. Of course, in Khoqand lived own domestic Sufi scholars. But Khoqand rulers (Khans) more trusted to ancestors of Imam Rabbani in foreign affairs, rather than local leaders of Sufi movements. Below we offer assumptions on this issue.

Descendants of famous Khodja Akhrar and Makhdumi A'zam lived in Khoqand Khanate before coming there Muhammad Khalil Sakhibzada and they occupied various administrative posts in the Khanate. In part, Ma'sum Khan Tura who was a grandson of Ortiq Khodja from descendants of Makhdumi A'zam and Jahangir Khan Tura who was from descendants of Khodja Khidoyatulloh (Afaq Khodja) lived also in Khoqand. But Khoqand rulers Umar-Khan and Muhammad Ali-Khan tried to control of the activity of Jahangir Khan Tura. Main reasons for this kept normal relations with China. This factor was fixed in written sources. Khoqand Khans got the right for privileges for free trade and levying of custom duties on behalf of themselves on the territory of Eastern Turkestan thanks to the tight control of the descendants of Afaq Khodja and not giving them permission to leave the territory of Khoqand. If we pay our attention to other side of the problem Bukharian ruler Amir Khaidar (1800-1826) was a murid (follower, adherent) of Miyan Akhmad Sakhib (Sakhibzade Kalon) who was from descendants of Imam Rabbani. It is known that interrelations between Khoqand Khanate and Bukhara emirate were not good. Khoqand ruler Muhammad Ali-Khan through being a *murid* (follower) of descendants of Imam Rabbani and involving them into social-political life tried to not complicate interrelations with Bukhara emirate. Also Central Asian Sufi branches' (*tariqat*) leaders honored descendants of Imam Rabbani. Bukharian sheikh Khusain when he was informed on that Muhammad Khalil Sakhibzada was ordered to his followers Azim Khodja Ishan and Jalaliddin Khodja, who finished their study in Bukhara and were returned to local place to not entering Khoqand as a sign of respect for the sheikh. Azim Khodja Ishan and Jaloliddin Khodja were sheikhs (leader, schoolers) of the Nashqbandia Sufi order. Moreover, it is fixed in written sources that Azim Khodja Ishan took an important place in social-political processes in the Khanate in 1840-1842.

Miyan Khalil Sakhibzada was one of the persons, who took an important place in social-political life of the Khanate and below we can try to analyze his ambassadorial mission. Written historical sources on the history of Khoqand contain data about his activity. The first embassy mission of this person to the Russian empire begun in August of 1841. Khoqand ruler (Khan) Muhammad Ali-Khan (1822-1841) appointed him as an ambassador for a reason. Firstly, Muhammad Ali-Khan respected him as a person, secondly the name of leader of the Naqshbandia-mujaddidia Sufi branch Imam Rabbani Akhmad Sirkhindi was famous in all part of Central Asia, including Muslim regions of the Russian Empire and Ottoman Empire. In part Muhammad Yunusjan shigovul who took a position in administrative system in that time wrote in his work "Tarikhi Aliquli Amir-i lashkar" that "this person have a lot of followers (*murids*), pupils and friends among *noghays* who are under Russian ruling and others people". These data fixed also in "India office letters" stored in the British library. In part, it is written in them that this person has a lot of followers among Kypchak, Kazakh and Kyrgyz tribes.

### New step of Khoqand-Indian relations

We met certain difficulties in the investigation of the topic due to the fact that Khoqand-Indian relations hardly been studied. K. Warikoo wrote that the first embassy mission from Khoqand to India sent in 1837. But he did not describe the aim of this diplomatic mission and did not give information about ambassadors. By us were discovered archival documents in the Ottoman archives in Istanbul, which contain important data about relationships of the Khoqand Khanate with India. Khoqand ambassador Mukhammad Zakhid Khodja was sent to Istanbul in 1837 and who was from descendants of Juybar Sufi leaders (*sheikhs*) presented to the Ottoman sultan Makhmud II (1808-1839) the letter of Khoqand ruler which contained information about Khoqand-Indian relations. Mukhammad Zakhid Khodja told about that, military specialists came from India to Khoqand a year before and conducted military exercises with Khoqand soldiers using modern methods. So, it can be assumed according to Ottoman documents military specialist came from India to Khoqand in 1836 and before it perhaps in 1835-1836 Khoqand sent diplomatic mission for this purpose. Since the Khoqand Khanate to improve, its military system tried to establish diplomatic relations with the Ottoman Empire and India, which is confirmed by documents stored in “the Ottoman archive” and “National archive of India”.

Also Ottoman sultan Makhmud II (1808-1839) asked Mukhammad Zakhid Khodja about that with which countries the Khoqand Khanate established friendly relations. The Ottoman sultan offered to the ambassador of Khoqand to strengthen diplomatic ties with India, and through it with Great Britain. Despite the fact that this diplomatic mission was established between the Ottoman Empire and the Khoqand Khanate, it raised Khoqand-Indian relations to new step and the activity of Muhammad Zakhid Khodja Ishan, who was the representative of the dynasty of Juybarid Sufi leaders (*sheikhs*), took an importance in the development of relationships.

In 1854 the Khoqand ruler Khudayar-Khan (1845-1858) sent to India next embassy mission and written sources of Khoqand did not enlightened it. However documents stored in Indian National archive contain full information about this diplomatic mission. In documents kept in Indian archive the name of chief of this embassy mission was given in two variants: in some documents was written as Shahzada sultan and in others as Shahzada Sultan Mukhammad-Khan. But we could not find a person with the name of Shahzada Sultan among representatives of the ruling dynasty in Khoqand. There is a possibility to assume that the name was changed for security purposes. It should be emphasized that names of some rulers of Khoqand were differential in written sources and in their seals. In part, the name of Sherali-Khan (1842-1845) was written on his seal as Sher Mukhammad Ali-Khan. Also the name of Miyan Khalil Sakhibzada was written in the form of Mukhammad Khalil Ishan naqib in the letter sent to the Russian Emperor and these things show that the official names of famous person and their names spread among the people were differential. The funds of the National Archives of India has also kept the English translation of the letter of Khoqand ruler. The letter shows us the main purpose of the Khoqand Khanate from sending this embassy mission. The Khoqand Khanate asked India to send specialist which can work with chemical substances and metals for increasing its military power.

In 1864 from the Khoqand Khanate to India went two consecutive embassy missions: the *first* embassy led by Mulla Khodja Bek *udaychi* came to Lahore and the *second* led by Tash Khodja *sudur* went to Kashmir. The sources related to the history of Khoqand gave little information about these embassy missions in part only the work “*Tarikhi Aliquli Amir-i lashkar*” of

Muhammad Yunusjan Shigovul briefly described it. Also archival documents contain data on the activity of Mulla Khodja Bek as an ambassador, but embassy mission of Tash Khodja *sudur* is not described in details. In general, both of Tash Khodja *sudur* and Mulla Khodja Bek were influential religious leaders in the Khoqand Khanate. Processes of their destination as ambassadors after can help us to clarify some facts. Muhammad Yunusjan Shigavul which we have mentioned above took a post of *shigavul* in 1863-1865. *Shigavuls* were responsible for nomination of the candidates for leading embassy missions to the ruler (Khan) and for acceptance and safety of foreign ambassadors in the Khoqand Khanate. According to his composition "The history of Aliquli Amir-i lashkar" (*Tarikhi Aliquli Amir-i lashkar*) the candidacy of influential Sufi and religious leaders of Khoqand and Tashkent was nominated by Mukhammad Yunusjan for general (*mingbashi*) of Khoqand Aliquli Amir-i lashkar in 1863-1865. In part Mukhammad Yunusjan emphasized that the Sufi leaders performed their mission more successfully in compare with other ambassadors and gave examples of supporting his position. As the Sufi leaders were respected not only by the common people, as well as by government officials, which could lead their ambassadorial missions to successful outcomes. Here as an example he told about the diplomatic activity of Miyan Khalil Sakhbizada. Thereafter on behalf of the ruler (Khan) of Khoqand Sultan Sayyid-Khan chief vizier Aliquli Amir-i lashkar sent Tash Khodja *sudur* to Kashmir in 1864 and Mulla Khodja Bek to Lahore. Main purpose of the Khoqand government from this embassy mission was to find allies in its struggle against annexation of its territories by the Russian empire. In response to this, the embassy mission led by Gulam Rabbani sent from Peshawar to Khoqand in 1865. Naturally, for Khoqand these were hard times since the Russian Empire began military campaigns in the northern territories of the Khanate (Tashkent and southern Kazakhstan). According archival documents of the British library Miyan Khalil Sakhbizada gave information about that Gulam Rabbani lived in Bukhara. In our opinion by reason of the beginning of annexation of the Khoqand Khanate by the Russian Empire Miyan Khalil Sakhbizada Ishan wanted to send the ambassador Gulam Rabbani to Bukhara to keep him from falling under the influence of the Russian Empire or to ensure his safety. But some documents gave us information about that Gulam Rabbani in 1867 was in Khoqand.

In its turn some ambassadors sent to Khoqand by India were representatives of the Naqshbandia order. In part, the ambassador Khodja Akhmed shaikh was from very influential leaders of the Naqshbandia Sufi order. He came with special diplomatic mission into the Khoqand Khanate from India, on behalf of British administration in India.

We could not find documents, which contain data about the life and activity of Khodja Akhmed sheikh. Thereby we continue our researches concerning with the activity of Khodja Akhmed sheikh and hope in the future we can find new facts about him.

## CONCLUSION

Analysis of the data of written sources show that ambassadors sent for diplomatic missions specially selected and had noble origins. In letters were written their statuses and titles in the Khanate also that they fixed as *sayyids*. Thereby ambassadors, who were selected from representatives of religious leaders, highly were respected by the population and rulers of every country. In addition we can say that Sufi leaders appointed as ambassadors took special place in

Islamic world and Khoqand rulers (Khans) tried through them to solve regional problems in foreign affairs.

The purposes of sending of embassy missions from the Khoqand Khanate to other countries were differential. In partly, if through sending diplomatic missions to India and to the Ottoman Empire Khoqand rulers (Khans) attempted to rely on its spiritual aid and strengthen the military power, so diplomatic missions to Russian Empire were connected with trade relations of the Khanate. Activities of Sufi leaders as ambassadors took an importance in the development of these relations.

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DOI: **10.5958/2249-7137.2020.00619.9**

## **MONOESTERS OF ETHYLENE AND DIETHYLENE GLYCOLS AS PHAGOSTIMULANTS OF ANACANTHOTERMESTURKESTANICUS**

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**ABSTRACT**

*The influence of the structure of monoesters of ethylene and diethylene glycols on their phagostimulating activity for Turkestan termite (*Anacanthotermes turkestanicus*) was studied. The phagostimulating activity of ethylene glycol monomethyl, monobutyl ethers and diethylene glycol monoheptyl ether is shown. The obtained experimental data allow us to recommend using of diethylene glycol monobutyl ether as a slow acting toxicant in the matrix of termite baits.*

**KEYWORDS:** *Trail-following pheromones, anacanthotermes turkestanicus, ethylene glycol monomethyl ether, ethylene glycol monoethyl ether, ethylene glycol monobutyl ether, diethylene glycol monoethyl ether, diethylene glycol monobutyl ether, diethylene glycol monoheptyl ether, diethylene glycol monoheptyl ether.*

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**1 INTRODUCTION**

Baits containing slow-acting toxicants and insect growth regulators (IGRs) to control termites are promising both in terms of efficacy and minimizing environmental impact. The amount and rate at which these compounds enter a termite colony, however, are not easily controlled. The effectiveness of baits depends on termites locating the bait and the rate at which they consume and distribute it to other colony members. Consequently, a considerable amount of research over years has focused on devising more attractive baiting systems and bait matrices [1-10]. Baiting systems are more effective if termites feed more regularly on the baits[11-13].

There are two species of termites populated in Uzbekistan, *Anacanthotermes turkestanicus* and *Anacanthotermes ahngerianus*. They are among the most dangerous pests that cause enormous damage to buildings and structures, including historical cultural monuments.

Termites press their abdomen parts against the substrate and release trail-following pheromones which is secreted by sternal glands. Such pheromone encourage foragers to leave the nest and locate them approach the food source [14,15]. Several authors found specific substances that cause a trail- following reaction in termites. Some of glycol ethers [16], might cause a trail-following behavior in many types of termites.

It was indicated that diethylene glycol monoethyl and monobutyl esters can cause trail-following behavior in 36 species from the families *Mastotermitidae*, *Kalotermitidae*, *Termopsidae* whilst monoethyl ether and monobutyl ethers of ethylene glycol - in 16 species from the families *Mastotermitidae*, *Kalotermitidae*, *Termopsidae*.

Shatov K.S. [17] have conducted trail-following behavior bioassay on *Anacanthotermes ahngerianus* by using glycol ethers which were causing trail-following reaction in other species of termites. Six substances have been tested including diethylene glycol monomethyl ether and ethylene glycol monoethyl ether. However, none of them was effective in relation to the species *Anacanthotermes ahngerianus*.

We were first to study some of glycol ethers as the phagostimulants for the Turkestan termite species *Anacanthotermes turkestanicus*. The aim of our study was to understand the phagostimulating effect of monoesters of ethylene and diethylene glycols as the potential components of a matrix of bait termite against the species *Anacanthotermes turkestanicus*.

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## MATERIALS AND METHODS:

We have conducted several trail-following bioassays for the study of trail-following behaviour of *Anacanthotermes turkestanicus* to monoesters of ethylene glycol and diethylene glycol (ethylene glycol monomethyl ether, ethylene glycol monoethyl ether, ethylene glycol monobutyl ether, diethylene glycol monoethyl ether, diethylene glycol monobutyl ether, monogethyl ether, diethylene glycol monobutyl ether. In our experiments, it was established that the monoesters of ethylene glycol and diethylene glycol did not cause any a trail- following reaction in both *Anacanthotermes turkestanicus* as well as *Anacanthotermes ahngerianus*. [18].

However, glycol monoesters are used in termite baits, among other chemicals as components or solvents in US Pat. No. 5,024,832 Omata et al. [19] patented the use monoethyl ether, diethylene glycol monobutyl ether. These substances enhance the effect of trail-following pheromone for termites of *Japanese subterranean*. In the patent No. 20100292323 Fujii et al. [20] upon formulation of microemulsions containing pyrethroids, acetates of ethylene glycol monoesters and diethylene glycol were used as solvents. The resulting microemulsion was effective against various types of insect pests, including termites.

Termites were collected in the Navoi region, Khatirchi district, in the farmer association named after E. Abdievin 2012 spring. In order to investigate the reaction behavior of termites on ethylene glycol and diethylene glycol monoesters, the technique [22] was adapted for our conditions. Small discs of brown hygienic paper (2.5 cm in diameter) have been cut in half and both halves were weighed. One half was immersed in a 2% solution of the substances, and the other half was immersed in distilled water. They were dried out at room temperature for 24 hours and then weighed up again.

Both halves of the disk were placed on the bottom of a plastic Petri dish (inner diameter 2.5 cm). Plastic cups with discs were placed in a plastic container (25 × 15 × 10 cm), where 100% humidity was maintained all throughout the process. The discs were in the container for 24 hours before the test.

Ten worker termites of the same size and weight were placed in each Petri dish. Termite Petri dishes were covered with lids, maintaining high humidity, and kept in the container for 5 days. Appropriate controls were used to check mortality additionally. Five repeats were implemented for each concentration and each substance. of bait composition comprising, as a main ingredient, a trail- following pheromone (3Z, 6Z, 8E) dodecatrienol and components that increase its inducing effect, including ethylene glycol monomethyl ether, diethylene

On the fifth day, termites were removed. Both halves of the disk were separated, carefully brushed from fecal material and dirt on them, and dried for 24 hours. The halves of the discs were weighed again.

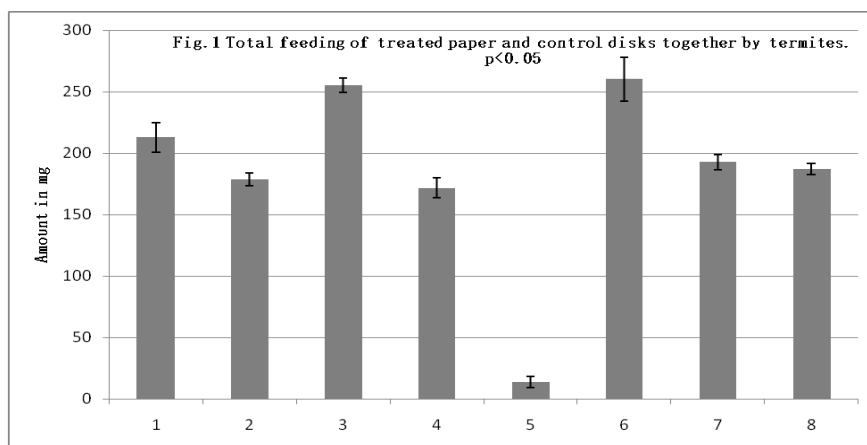
**Synthesis of diethylene glycol monobutylether.** 5.6 g (0.1 mol) of potassium hydroxide grinded in a mortar, 10.6 g (0.1 mol) of diethylene glycol, 30 ml of dry acetone and 2 g of potassium iodide were placed in a three-necked flask 15.07 g (0.11 mol) of butyl bromide was added dropwise over 1 hour with stirring. The reaction mixture was refluxed at room temperature for 4 hours. The residue was extracted several times with ethyl ether, then the ether extracts were combined and dried with Na<sub>2</sub>SO<sub>4</sub>. The solvent was removed and the residue was distilled in vacuum. Yield 9.72 g (60%), R<sub>f</sub> = 0.85 (acetone- benzene 2: 1), n<sub>D</sub>20 = 1.4315.

Obtained substance has been separated with column chromatography (Chemapol L 100/250 silica gel, 2: 1 acetone-benzene system. The NMR spectrum was recorded in a deuteromethanol solution on an NMR- UNITY 400+, ICPS spectrometer. A methyl group triplet is located in the field of strong fields ( 0.96 ppm), multiplets of methylene protons (1.41 ppm and 1.55 ppm). All signals of oxymethylene protons are located in a narrow range of 3.7-3.4 ppm.

Diethylene glycol monoethyl ether has been prepared similarly. Yield 65%,  $R_f = 0.87$ ,  $n_{D20} = 1.4263$ . Diethylene glycol monoheptyl ether. Yield 30%,  $R_f = 0.84$ ,  $n_{D20} = 1.4412$ . Ethylene glycol monoethylether. Yield 55%, because = 1330C,  $R_f = 0.87$ ,  $n_{D20} = 1.4065$ . Ethylene glycol monobutylether. Yield 45%,  $R_f = 0.65$ ,  $n_{D20} = 1.4179$ . [23]

## RESULTS AND DISCUSSION

Paper disks immersed to 2% diethylene glycol monobutyl ether were practically never tasted by termites, possibly due to its toxicity and the death of all termites (10 pieces) in the first three days. In case of the 0.2% solution of diethylene glycol monobutyl ether for paper disks (10-fold dilution), the disk edibility was at the standard level, and termite mortality was nevertheless quite high (30%), while the average mortality for other monoesters and standard was 10-30%.



1. Ethylene glycol monomethyl ether 2%. 2. Ethylene glycol monoethylether 2%. 3. Ethylene glycol monobutylether 2%. 4. Diethylene glycol monoethylether 2%. 5. Diethylene glycol monobutyl ether 2%. 6. Diethyleneglycol monoheptyl ether 2%. 7. Diethylene glycol monobutyl ether 0.2%. 8. Control

**TABLE 1.AVERAGE MORTALITY OF THE TERMITES**

№	Name of the compound	Mortality%					Total, %
		1 <sup>st</sup> day	2 <sup>nd</sup> day	3 <sup>rd</sup> day	4 <sup>th</sup> day	5 <sup>th</sup> day	
1.	Ethyleneglycol Monomethylether 2%.	10	10	-	-	-	20
2.	Ethyleneglycol Monoethylether 2%.	-	-	-	-	20	20
3.	Ethyleneglycol Monobutylether 2%.	-	10	-	-	-	10
4.	Diethyleneglycol Monoethylether 2%.	10	-	-	-	-	10

5.	Diethyleneglycol Monobutylether 2%.	30	-	70	-	-	100
6.	Diethyleneglycol Monoheptylether 2%.	-	-	-	-	30	30
7.	Diethyleneglycol Monobutylether 0.2%.	10	-	-	-	20	30
8.	Control	20	-	-	-	-	20

It should be pointed out that only in the case of afore-mentioned monoester termites preferred to eat untreated paper. In other cases, termites prefer to eat treated semi-disks, which confirm the phagostimulating activity of monoesters of ethylene and diethylene glycols.

According to that, it is necessary to conduct field tests of diethylene glycol monobutyl ether as a toxicant in the matrix of termite bait in the field

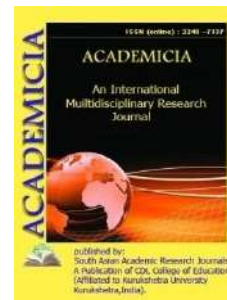
## CONCLUSION

As conclusion, the results of the experiments, suggest that the phagostimulating effect of monoethyl ethers of ethylene and diethylene glycols is at the standard level, that is, untreated paper disks. Ethylene glycol monomethyl, monobutyl ethers, diethylene glycol monoheptyl ether have a pronounced phagostimulating effect and can be recommended as components of the termite trap matrix.

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DOI: **10.5958/2249-7137.2020.00620.5**

## CURRENT TRANSPORT MECHANISMS IN ANISOTYPE HETEROJUNCTIONS $p\text{-Cu}_2\text{ZnSnS}_4/n\text{-Si}$

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### ABSTRACT

*Anisotype heterojunctions  $p\text{-Cu}_2\text{ZnSnS}_4/n\text{-Si}$  were fabricated by sulfurization of metal precursors which were deposited on a poly-Si substrate. Current - voltage characteristics are discussed and the dominating mechanisms of current transfer are determined: at a direct bias tunnel recombination processes prevail with participation of defect states on interface of heterojunction, when voltage increases Newman's tunnel mechanism dominates. The reverse current through the heterojunctions under investigation was analyzed within the tunnel mechanism.*

**KEYWORDS:** Heterojunction, Silicon, CZTS, Current-Voltage Characteristic, Current Transport.

### INTRODUCTION

The interest in quaternary compound semiconductor  $\text{Cu}_2\text{ZnSnS}_4$  (CZTS) having grown up in recent years is associated with the prospect of their use in solar cells (SC) [1-3]. CZTS components are common, easily accessible, non-toxic and cheap items. This compound has an optimal band gap (1.5 eV) [1] and a high absorption coefficient in the visible range (about  $10^5 \text{ cm}^{-2}$ ) [2], making it promising for making an absorbent layer for SC. Based on hetero structures  $\text{CdS/Cu}_2\text{ZnSnSe(S)}_4$  we obtained solar cells with an efficiency of 12.6% [3]. However, given the toxicity of cadmium, in recent years the search for substituting material for CdS in heteropair [4,5]. While obtaining semiconductor heterostructures the choice of substrate material is very important. For combining with the other components of semiconductor electronics one needs structures on silicon based substrate. CZTS and Si have well matching lattice parameters [6].

Heterostructures  $\text{Cu}_2\text{ZnSnS}_4/\text{Si}$  are also promising for the making thin film solar cells [7]. Further improvement of their parameters is impossible without understanding the physical processes that determine characteristics of heterojunctions.



In this paper, we study the electrical properties of anisotypichetero structures p-Cu<sub>2</sub>ZnSnS<sub>4</sub>/n-Si obtained on a substrate of monocrystalline Silicon.

### EXTERMINATE SECTION

To create p-Cu<sub>2</sub>ZnSnS<sub>4</sub>/n-Si heterojunction, synthesis of CZTS layers is carried out through sulfurization of base metal layers. Initially, on a silicon substrate basic component layers - copper, zinc and tin in different sequences - were formed by vacuum deposition. The process was carried out in vacuum of order  $5 \cdot 10^{-5}$  mm Hg. The ratio of components in the initial sample was taken in accordance with the stoichiometric composition of the compound. In the next stage of the process we carried out sulfurization of the metal layers from unlimited source in a closed evacuated volume. To do this, samples of silicon with deposited components of compound on surface were placed in vacuum ampoule evacuated to  $2 \div 3 \cdot 10^{-5}$  mm Hg. For saturation of growing film with sulfur and prevention of its evaporation from the sample, sulfur was placed in ampoule in the amount necessary to provide the appropriate vapor pressure during the synthesis of compound. The synthesis of CZTS films was carried out at 550°C over 45 minutes.

We measured the electrical parameters of the films. All samples obtained without special doping had p-type conductivity. It seems that during the formation of films structural defects appear such as vacancy of copper atoms -  $V_{Cu}$  and its substitution of zinc knot -  $Cu_{Zn}$  [8]. These defects with shallow acceptor levels determine the type of conductivity of obtained films.  $V_{Cu}$  ionization energy is  $\sim 0,02 \div 0,08$  eV, the ionization energy of  $Cu_{Zn}$  is  $\sim 0,10 \div 0,15$  eV [8]. The surface resistance of CZTS films was within 20-50 Om.kv.

Stationary current-voltage characteristics (CVC) of obtained heterojunctions were measured at different temperatures. The ohmic contacts to the structures were obtained by depositing eutectic alloy of indium-gallium.

### RESULTS AND DISCUSSION

In general, the direct current of HJ consists of above-barrier, recombinationary current in the space charge region and tunneling current [9]. As follows from CVC of p-Cu<sub>2</sub>ZnSnS<sub>4</sub>/n-Si (1) HJ, the voltage at which rapid increase of current occurs decreases with increasing temperature, which indicates the decrease in the potential barrier height when the temperature rises.

The height of potential barrier  $\phi_k$  corresponding to different temperatures was determined by extrapolation of linear sections of the CVC. Temperature dependence of  $\phi_k$  (T) is described by the following expression:

$$\phi_k(T) = \phi_k(0) - \beta_\phi T, (1)$$

where  $\beta_\phi = 3,2 \cdot 10^{-3}$  eV/K is the temperature coefficient of the potential barrier height,  $\phi_k(0) = 1,55$  eV is the height of the potential barrier GP at absolute zero temperature. Significant difference in the value of  $\beta_\phi$  compared with a temperature coefficient of band gap width of silicon ( $\beta_{Eg} = 2,3 \cdot 10^{-4}$  eV/K), apparently due to surface defects in the interface of SC p-Cu<sub>2</sub>ZnSnS<sub>4</sub>/n-Si. CVC of HJ upon application of direct voltage in semi-log coordinates for different temperatures is shown in Fig. 1.

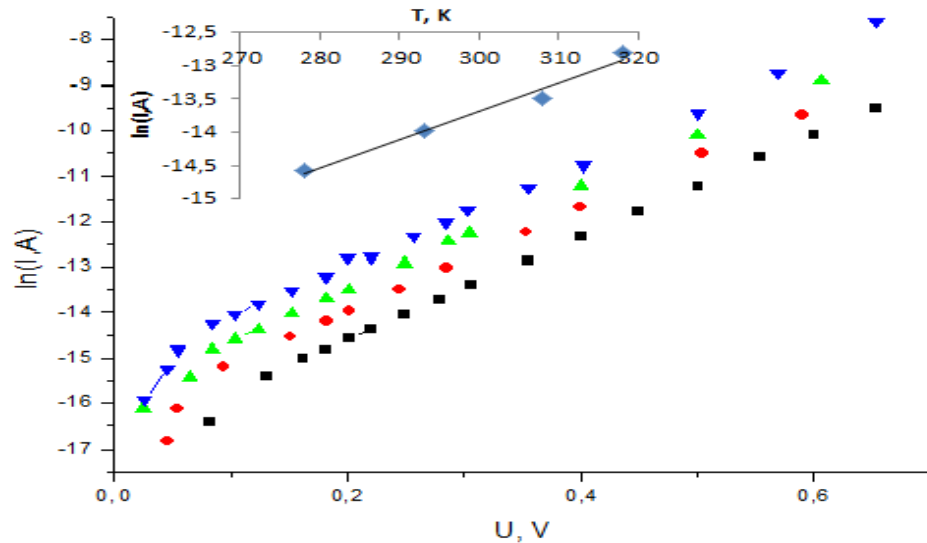


Fig. 1. Direct current-voltage characteristics of heterostructure branches in semi-log scale ( $3kT/e < V < 0,7\text{eV}$ ). T, K: —■— 278, —●— 293, —▲— 308, —▼— 318. Temperature dependence of the current cutoff is in the inserted figure

It can be seen that for voltages  $U > 3kT/e$ , CVC has straight sections, indicating at the exponential dependence of current on voltage. In the voltage interval  $3kT/e < U < 0,7\text{ V}$ , the slope of the dependence is not related to temperature, therefore we exclude the possibility of studying current transfer on the basis of generation-recombination processes in space charge area [10].

Constant slope of  $\ln I = f(U)$  at different temperatures is evidence for the tunneling mechanism of current transfer. However, at low voltages width of the transfer region is still thick for tunneling. Although, the existence of sufficient number of discrepancy dislocations on the interface HJ p-Cu<sub>2</sub>ZnSnS<sub>4</sub>/n-Si suggests that one can assume that the basic mechanism of current transfer is tunnel-recombination processes involving surface states. In this case, the dependence of current on voltage is given by [10]

$$I = B_0 \exp \{-\alpha [\varphi_k(T) - eU]\}, (2)$$

where  $B_0$  is the value which weakly depends on temperature and voltage,  $\varphi_k$  is height of potential barrier.

We rewrite expression (2) as

$$I = B_0 \exp [-\alpha \varphi_k(T)] \exp (\alpha eU) = I_0 \exp (\alpha eU), (3)$$

where  $I_0 = B_0 \exp [-\alpha \varphi_k(T)]$  is current cutoff, which is independent of voltage. As can be seen from the expression (3), tilting  $\Delta \ln I / \Delta U$  initial sections of the CVC (Figure 2) determines the value of  $\alpha$ , which is equal to  $9.5\text{ eV}^{-1}$ .

Substituting equation (1) into the expression cutoff current we obtain

$$I_0 = B_0 \exp \{-\alpha [\varphi_k(0) - \beta_\varphi T]\} = B_0 \exp [-\alpha \varphi_k(0)] \exp (\alpha \beta_\varphi T) = I_c \exp (\alpha \beta_\varphi T),$$

where  $I_c$  is constant.

The inserted figure in Fig. 1 shows  $\ln I_0 = f(T)$  in a semi-log coordinates. The coefficient  $\alpha$  can be determined from the slope of the linear dependence  $\ln I_0 = f(T)$ :

$$\alpha = (\beta_\phi)^{-1} (\Delta \ln I_c / \Delta T) = 9,8 \text{ eV}^{-1}, (4)$$

Relatively close values of coefficient  $\alpha$  determined from various dependencies confirm the accuracy of the analysis of the initial portions of CVC for p-Cu<sub>2</sub>ZnSnS<sub>4</sub>/n-Si structures in the framework of multi-tunnel-recombination mechanism of current transfer involving local states at the interface of HJ.

At voltages  $U > 0,8 \text{ V}$  the dependence of  $\ln I = f(U)$  is described by Newman formula for the tunneling current [11]:

$$I \sim \exp(AU) \exp(BT), (5)$$

where A and B are constants, independent of voltage and temperature. From Fig. 2 we can see that the slope  $\Delta \ln I / \Delta U$  of primary areas of straight branches of CVC is determined by coefficient A (5), and  $A = 1.9 \text{ V}^{-1}$ . Based on the slope of the temperature dependence of the tunneling current the value of B is determined,  $B = 2,7 \cdot 10^{-2} \text{ K}^{-1}$ .

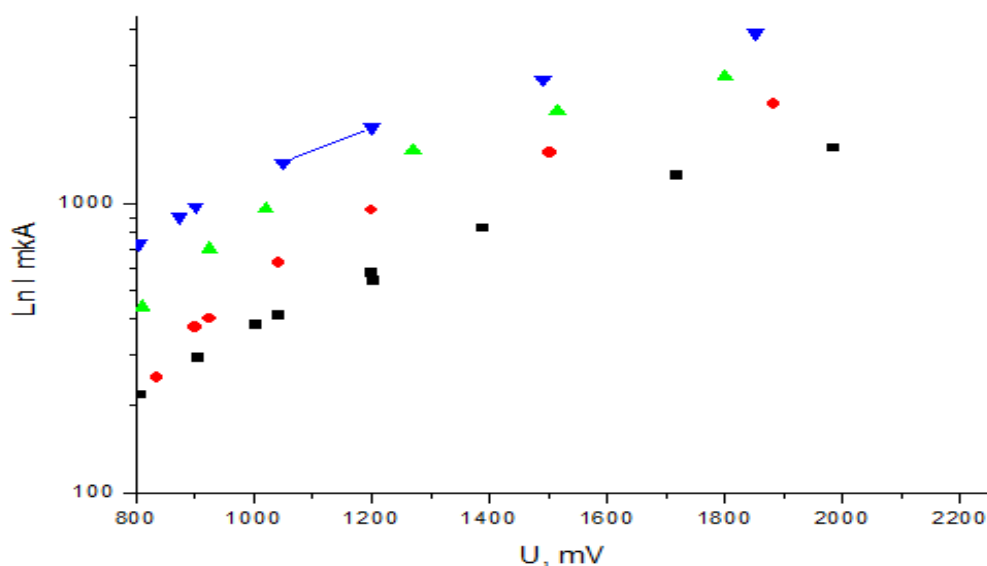


Fig. 2. Direct branch CVC HJ in semi-log scale ( $U > 0,8 \text{ V}$ ). T, K: —■— 278, —●— 293, —▲— 308, —▼— 318. Temperature dependence of the current cutoff is in the inserted figure

Consider the mechanism of current transfer through HJ p-Cu<sub>2</sub>ZnSnS<sub>4</sub> / n-Si under reverse bias. Figure 4 shows the dependence of  $\ln I_{\text{rev}(t)} = f(\phi_k - eV)^{-1/2}$  for different temperatures.

The magnitude of tunneling current at sharp heterojunction under reverse bias is expressed by the formula [12]

$$I_{\text{rev}(t)} = a \exp [b/(\phi_k - eU)^{1/2}], (6)$$

where a and b are coefficients that do not depend on voltage. As one can see from Fig. 4, dependencies  $\ln I_{\text{rev}(t)} = f(\phi_k - eU)^{-1/2}$  are composed of linear segments with certain slopes. Therefore, we can assume that the mechanism of current transfer in HJ p-Cu<sub>2</sub>ZnSnS<sub>4</sub>/n-Si under

reverse bias ( $3kT/e < |U| < 1,0$  V) is the tunneling through a potential barrier with deep energy level in the metallurgic boundary of HJ [10]. At higher reverse voltages one ( $|U| > 2,5$  V) observes soft breakthrough.

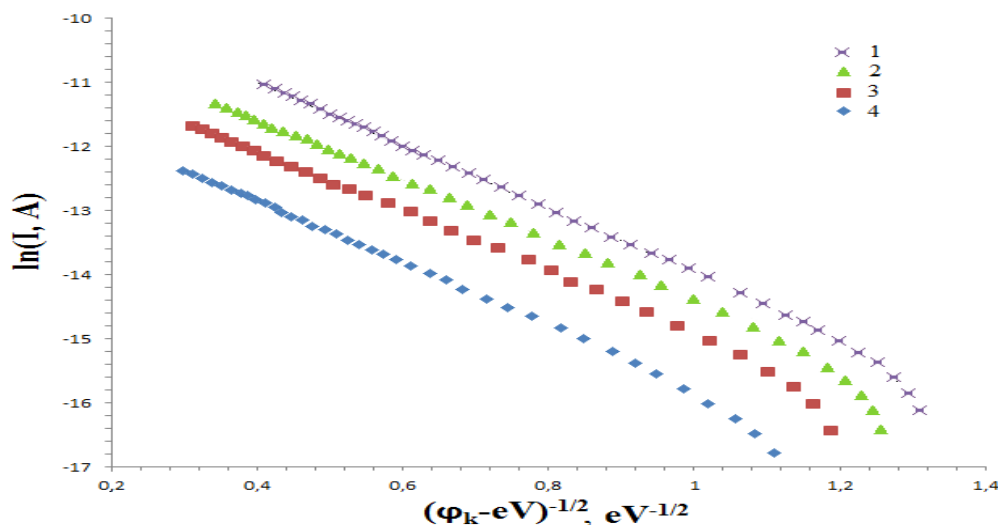


Fig. 3. Inverse branches of CVC p-Cu<sub>2</sub>ZnSnS<sub>4</sub> / n-Si at T, K: 1- 278 K, 2 - 293 K, 3 - 308 K, 4 - 318 K

## CONCLUSION

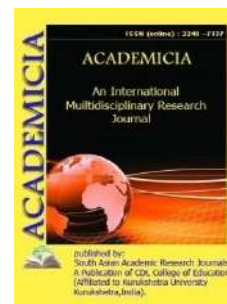
We studied electrical characteristics of HJ p-Cu<sub>2</sub>ZnSnS<sub>4</sub>/n-Si obtained by sulfurization of base metal layers deposited on a silicon substrate. Based on analysis of the temperature dependence of the straight branch of HJ p-Cu<sub>2</sub>ZnSnS<sub>4</sub> / n-Si CVC we found that at low voltages ( $3kT/e < U < 0,7$  V) the main mechanism for transferring current is staged tunnel-recombination processes involving defect states at the interface of HJ. For voltages  $U > 0,8$  V tunneling mechanism of Newman prevails.

In the case of reverse bias ( $3kT/e < |U| < 1,0$  V) the main mechanism of current transfer through HJ is tunneling through the potential barrier with deep energy level. At reverse voltages  $|U| > 2,5$  V soft breakthrough is observed.

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DOI: **10.5958/2249-7137.2020.00590.X**

## AIR TRANSPORT: STRUCTURE, ACTIVITY, SHAPE

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UZBEKISTAN

### ABSTRACT

*This article covers the organization, structure, types, functions, activities of air transport, as well as materials on the history of air transport of the Republic of Uzbekistan. One of the types of transport widely used in air transport is a helicopter. A helicopter is a heavy-duty flight from the air that rises and descends vertically, in which one or more (most often, two) shoulder screws bring the lifting force into the body. Aviation is divided into civil aviation and military aviation. Civil Aviation is used in the transportation of passengers and cargo. It is intended for Transport, sanitary service, educational and sports and special works, as well as in agriculture, communications, geological-exploration works, there are species used in fishing. The most important and main part of the airport is the airfield. The structure of the airfield includes corridors for risk-free flight and landing of aircraft and helicopters (poles), as well as land sections specially prepared for their maintenance.*

**KEYWORDS:** Aircraft, Aircraft, Helicopter, Airport, Airfield, "Open Sky" Mode.

### INTRODUCTION

The XX century gave mankind great discoveries and inventions. For centuries, the seemingly impossible flight of a man on a winged car became a reality, and this aroused the dream of an impenetrable flight for humanity. Most of the flights that have been going on for several centuries have ended tragically, finally in the last century a person has found a way to fly higher and longer. As a result, he developed as a separate sphere. As a common name, it was called aviation.

Aviation is a frantic word aviation, latin avis – bird, that is, the concept associated with the flight in the air space around the Earth (atmosphere) in heavy flying apparatus from the air. In aviation, planes, helicopters, planers are used. The organization (service) that uses the same apparatus for



flight (flight) is also called Aviation. Aviation is divided into civil aviation and military aviation. Civil Aviation is used in the transportation of passengers and cargo. It is intended for Transport, sanitary service, educational and sports and special works, as well as in agriculture, communications, geological-exploration works, there are species used in fishing. To ensure constant transportation of passengers and cargo, the composition of Civil Aviation includes a fleet of aircraft and helicopters, various services that provide flight, airfield and airport. Originally entered Uzbekistan as a mode of transport in 1924. As for military aviation, it acts together with the onshore troops, the naval and air defense forces, as well as performs independent tasks.

The main task in aviation is assigned to aviationortorti. The basis of the aircraft is an aircraft and a helicopter.

The plane in Russian means " Sam " – myself and letat – fly, and also Aeroplan-Heavy flight from the air. Depending on the location of the wings of the aircraft in one or two planes, the monoplane (wing in one plane) and the biplane (wings in two planes), depending on the number of engines, 1, 2, 3 and 4 motors (sometimes, five and six motors); depending on the type of engines, helical (piston and turbovintli), reactive engine, one, two and multi-seats, depending on the number of seats There are types of aircraft-amphibians, that is, gidrosamolyot equipped with a wheeled chassis), which can rise from landslides, water (gidrosamolyot), as well as from both water and landslides. The aircraft is the fastest moving air transport in all types of transport, the speed of its passage without landing at a long distance is 900-1000 kilometers per hour. The main feature of air travel is a large speed of aircraft, a reduction in passenger, mail and cargo transportation time. The aircraft is also produced in Uzbekistan.

At the Tashkent Aviation Plant (later on the place of "Tashkent aviation Production Association" state Stock Company, now "Tashkent mechanical plant"), ИЛ-14, АН-10, АН-8, АН-12, АН-22, "Антей", superlayner ИЛ-76 and ИЛ-114 aircraft were produced. During the years of independence, Boeing 767/757, A-310, RJ-85 aircraft were used on international flights. The national aviation company "Uzbekistan Airways" started the commercial exploitation of "linliners" from 2016.

On July 27, 2017, the first continuous flight from Tashkent to New York was carried out for the first time in the history of our national airline. Today, modern and comfortable airliners of Uzbekistan fly to more than 40 cities of Europe and Asia and carry out charter flights from Alaska to New Zealand.

One of the types of transport widely used in air transport is a helicopter. A helicopter is a heavy-duty flight from the air that rises and descends vertically, in which one or more (most often, two) shoulder screws bring the lifting force into the body. The helicopter rises from the standing position, descends to the steep, can hang in one place in the sky, bend around the vertical axis to the desired side, can fly in the desired direction correctly. In 1956, the first two MI-4 helicopters were adopted by the aviators of Uzbekistan, one of which was the first helicopter pilot Uzbekistanis B.M.Borisov managed. Today, it is widely used in the rescue work, from the helicopter to the people's farm (fighting with agricultural pests, transporting passengers and cargo), carrying out geological exploration work, gravimetric photographing, tracking glaciers, extinguishing fires in the forest, transporting and installing large equipment, construction, carrying doctors to inaccessible places.

The basic technical operating instructions of aircraft and helicopters include capacity, load carrying capacity, flying speed and flying without landing masofasi. Flight distances, depending on the capacity of passengers and the carrying of cargo, passenger carriers are divided into pilot aircraft on the trunk and local air routes.

Airports are one of the enterprises of air transport and are engaged in passenger, cargo and postal transportation and reception, preparation of aircraft for flight and organization of flight. Airports can include airfields, special engineering buildings and facilities of shokbekat, as well as landing areas of helicopters. Airports are divided into airports that, in their function, serve as pilots on international, CIS domestic highway routes and domestic routes. Special attention is paid to the development of airports in the Republic of Uzbekistan.

In particular, on June 12, 2020, the order of the minister of transport of the Republic of Uzbekistan on the introduction of the “open sky” regime was signed at the airports of the Republic of Uzbekistan. This order was developed in order to increase the effectiveness of the reforms carried out in the spheres of Civil Aviation and tourism of the Republic in accordance with the decrees of the president of the Republic of Uzbekistan “on measures of radical improvement of the system of Public Administration in the field of Transport” № PE-5647 and “on measures of further development the”open sky” regime will be introduced from August 1, 2020, using the right of “fifth airspace” in the Airports of the Republic of Uzbekistan against Nukus, Termez, Bukhara, Navoi, Urgench, Andijon, Fergana, Namangan and Samarkand, with the possibility of changing the conditions or setting it for a period of two years until the end of the “winter 2022/2023” season. According to the order, the “open sky” mode: Karshi, Nukus, Termez, Bukhara, Navoi and Urgench without any restrictions at the airports; Taking into account their technical capabilities to the airports specified in Andijon, Fergana, Namangan and aviacompanies of the member states of the International Civil Aviation Organization at the airports in the city of Samarkand, with the right to carry out “fifth airspace” and passenger airspace in the directions not used by the carriers appointed by the Republic of Uzbekistan without restrictions on the number In accordance with this regime, foreign aircraft carriers are granted the rights up to the “seventh airspace” in order to carry out cargo transportation at the airports in Navoi and Termez. Foreign aircraft companies interested in opening new air routes or planning to increase the number of flights should submit the necessary documents to the aviation agency under the Ministry of Transport and the Air Transport Development Department in accordance with the established procedure.

The most important and main part of the airport is the airfield. The structure of the airfield includes corridors for risk-free flight and landing of aircraft and helicopters (poles), as well as land sections specially prepared for their maintenance. According to the classification of airfields: it is divided into regular operatives, seasonal, fast-acting. According to its functions, it is divided into primary, intermediate and most recent airfields, as well as reserve airfields for landing in emergency situations.

A terminal is a building or a building where air transport passengers are served and cargo operations are carried out in airports, complex. The structure of the air terminal includes the reception area of the railway station (along with the city transport parking area), the apron in which the aircraft stands, the apron-technical service buildings, the food preparation complex for passengers on board the aircraft, hotels, a set of basic facilities including the command-

dispatching punktini. As a rule, these buildings and structures are built together with the building of the air terminal. There will be a variety of Air Terminal Services for domestic and international lines. In the provision of services to passengers in the air terminal includes the following: the sale and registration of tickets; reception of cargo on the flight, formalization, fastening and sending of cargo to the flying passengers; providing information on the flight and landing of aircraft, including the provision of postal, household, medical services. The size of the air terminal depends on the size of the passenger transportation of the airport. The air terminal at the Tashkent airport is part of the major air terminal. In order to facilitate the work of the air terminal in large cities, a city air terminal is built, which is connected with the airport by means of the city transport.

In conclusion, the study of the history of transport communications, especially air, plays an important role in the development of democratic legal state and civil society in Uzbekistan as a topical subject of ensuring sustainable social development through the implementation of the fundamental goals of the National Action Strategy. Since the aviation network is a problem that has not yet been worked out in the historical sciences from the point of view of industry and production, it is necessary to carry out a thorough analysis and interpretation in the context of issues related to the development of the airspace, relying on historical sources.

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DOI: **10.5958/2249-7137.2020.00591.1**

## FEATURES PRODUCTIONS REACTIVE POWER ON SYSTEMS ELECTRICAL SUPPLY WITH RENEWABLE SOURCES ENERGIES

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### ABSTRACT

*The demand for renewable energy in Uzbekistan is high. This article discusses the basics of calculations for introducing renewable energy sources into power supply systems. In the work results are shown below materials research sensors that were considered the main one components, providing devices and equipment signals monitoring systems and management define uninterrupted operation work of sources electrical supply.*

**KEYWORDS:** *Sensor, Converter, Reactive Power, Power Supply, Synchronized Compensators, Capacitor Bank, Electric Power Transmission Network.*

## INTRODUCTION

In today's event time renewable sources energy is entered into practice and at the same time, attention is paid to great value control and management electric power station energy and its use change, via devices conversions electrical values and sensors on the generated data in sources energy. In systems electrical supply (Sea) element and the device monitoring and management energies renewable energy sources source includes sensors, allowing reliable monitoring and providing services managers signals. Sensors that were considered the main one components, providing devices and equipment signals monitoring systems and management define (install) uninterrupted operation work of sources electrical supply, reliability, a number of technical features and economic ones indicators [1-3].

In same practice electrical supply system (Sea) one of the main problems — uninterrupted operation, reliability, efficiency and accuracy changes signals remain up-to-date. Today's date time in our city state annual volume the main ones consumers electricity, consumed data municipal services consumers it makes up To 11.5-12.0 billion kWh.h [3].

General quantity consumers electricity generation of this type moving over 6.5 million, out of of which more than 2.5 millions live there cities (annual consumption electricity generation Of 5.5-6.0 billion kWh.h) and 4.0 million consumers they live in rural areas localities (annual consumption electricity generation 6.5-7.0 billion kWh.h) [4,5].

Analysis results research they showed that you can allow it a number of problems production, transfer to distance, distribution and consumption electricity generation using usage renewable sources energy (solar, vetryanoy, hydroelectric power station etc.), as well as with the use of special features sources reactive ones capacity [5].

On figure 1.1. shown basic information scheme of the complex applications in sea, renewable sources energy and reactive materials capacity.



*Fig. 1.1. basic Information scheme of the complex applications in the sea renewable energy source and reactive ones capacity.*

On individual territories regions of the Republic (for calculations expenses on installation devices renewable sources energy efficiency (RES) for 4.0 million consumers sources electricity, installation equipment it will cost 1 kW by 8.2 million soums, if you count it average power one

user 16.4 million soums, then for consumers 4.0 million consumers and there will be more make up 64 trillion soumsor 7.8 billion Yandex units. This indicator during production electricity generation it makes up quantity saving 8000 MW active power [5-8].

In addition information, provided above is necessary consider the following preferred ones renewable energy facilities [9-14]:

- ♦ Small need large area for construction purposes;
- ♦ Small need for the device substations, power lines and the other equipment with large ones by size;
- ♦ Minimum requirements maintenance costs (maintenance electrical installations, cleaning panels and others.);
- ♦ Little loss of electricity;
- ♦ Uninterrupted operation software electricity household consumers;
- ♦ Availability features complete deactivation consumers from centralized ones networks in summer or on peak days consumption electricity generation;
- ♦ Cost-effective sources natural gas and electricity (2.7 billion cubic meters per year natural gas or 402.0 million Yandex units
- ♦ In reduction account consumption energy reduction specific consumption for generating data electricity generation;
- ♦ Creation features for collection electricity generation;
- ♦ Education small businesses for installation renewable sources energy and their properties technical support maintenance;
- ♦ Small waste to the atmosphere

Availability peculiar ones disadvantages Renewable energy sources:

- ♦ Generating companies electricity based on a constant RES current is not they produce reactive part of the electricity supply;
- ♦ In systems where applied RES, limited features regulation voltage drop (performed mostly via centralized users sources electricity generation);
- ♦ Cheap pricing plan for electricity generation and long-term ones deadlines for payback period;
- ♦ When individual installation electrical supply with RES (at scale one subscriber adjusted for consumption electricity generation for monthly payments payment terms payback period very few installations big ones;

In as the main ones disadvantages considered the fact that RES does not generates reactive power and capacity resolution disadvantages leads to improvement working conditions electrical equipment not just for home use equipment, i.e. compensated reactive ones power factor in the entire system electrical supply based on regulation voltage drop electrical supply improving indicators quality assurance electricity.



For RES compensation reactive capacity has great value, it is a the main one from <url> to increase your sales Efficiency, improvements economic factors and high-quality ones indicators systems. Currently growth time reactive the power factor is that's enough high than growth of active capacity, in individual businesses reactive the load is relative active power 130%. Transmission reactive capacity on the long distances via ad networks transfers power lines results in deterioration technical and economic aspects indicators electrical supply systems.

In systems electrical supply active power mostly with generator sides centralized electrical supply systems and renewable energy, and reactive power generated cosine function condensing system with a battery, generators power stations synchronous compensators, synchronous propellers, line, sources thyristor devices reactive ones capacity.

When process design features electrical supply systems improvement indicators the coefficient reactive capacity responds delivered goals. Quantity the coefficient reactive user capacities defines technical and economic aspects indicators electrical supply systems, that is correct resolving the issue compensation reactive capacity provided by efficiency how the system works electrical supply, inclusive includes consumers, transmission networks electricity, installations distributions electricity, transformers, generators, control sensors and monitoring [14-18].

Systems electrical supply with RES transmitting a reactive program capacity via transmission networks electricity generation and transformers results in additional energy losses, increase voltage losses on line and at increase expenses on systems [14]:

1. When it appears on transmission networks electricity generation and on transformers it's happening additional losses active power and energy losses. If via a line that has active resistance —  $R$  the active line will flow —  $P$  and reactive —  $Q$  capacity, at this is a loss factor active power calculated by the formula [14]:

$$\Delta P = I^2 R = \left( \frac{S}{U} \right)^2 R = \frac{P^2 + Q^2}{U^2} R = \frac{P^2}{U^2} R + \frac{Q^2}{U^2} R = \Delta P_a + P_p \quad (1.1)$$

In the result jet transfers power electric power station sea energy via ad networks electricity, transformers it's happening additional information active loss capacity ( ),  $\Delta P_p = \frac{Q^2}{U^2} R$  her the value is direct proportionally square  $Q$  — reactive power. On this basis you can conclude, what about generators power stations inappropriate pass it on reactive power.

2. During transmission electricity generation with the active one capacity —  $P$  and reactive capacity —  $Q$  through Sea consisting of from elements active —  $R$  and reactive —  $X$  resistance levels (transformer, lines and so on further) losses voltage drop defined by the formula [14]:

$$\begin{aligned} \Delta U &= IR \cos \varphi + IX \sin \varphi = \frac{UI \cos \varphi}{U} R + \frac{UI \sin \varphi}{U} X = \\ &= \frac{P}{U} R + \frac{Q}{U} R = \Delta U_a + \Delta U_p \end{aligned} \quad (1.2)$$

where  $\Delta U_a$  — voltage losses, related to transmission active power;

$\Delta I_r a$  — voltage losses, related to transmission reactive power consumption.

In conclusion you can say, what is the result jet transmission what's going on additional features voltage losses ( $\Delta U_p = QX/U$ ), her number is directly proportional to jet power —  $Q$  and reactive resistance —  $X$ .

3. Upload from a large number reactive capacity *Sea* with *RES* results in increase cross-section cross-sections of air lines and cable systems transmission networks *Sea* and selection of transformers with magnification capacity. It is known that cross section wire cross section *Sea* and capacity transformers accepted rated current —  $I_x$  and full power —  $S_x$ .

$$S_X^2 = P_X^2 + Q_X^2, \quad (1.3)$$

$$I_X^2 = \frac{P_X^2}{U_X^2} + \frac{Q_X^2}{U_X^2} \quad (1.4)$$

In conclusion it can be stated that what are the values *Sh* va *IX* additional information they increase at the expense of  $Q$  and as a result why reactive power flowing using elements *Sea* reduces pass rate ability elements *Sea*.

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DOI: **10.5958/2249-7137.2020.00592.3**

## METHODS OF TEACHING STUDENTS TO CLASSIFY MATHEMATICAL PROBLEMS

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### ABSTRACT

*In this article, mathematical tasks: problem-solving tasks are described. The mathematical tasks are classified according to their teaching purpose and these tasks can provide students with opportunities to learn new mathematics and to develop mathematical processes including problem-solving strategies. The classification of mathematical tasks will help teachers to understand more about the purpose and characteristics of the diverse types of tasks so that they can choose appropriate tasks to enhance the students' mental structures and to assess the various aspects of their learning.*

**KEYWORDS:** *Mathematical Task, Problem Solving Tasks, Mathematical Problem, Teaching Math, Teaching Purpose.*

### INTRODUCTION

It is known that Math teachers must know the differences between the types of mathematical tasks how to use them in order to develop the various aspects of the students' mental structures since different tasks are used to cultivate different types of skills and thinking skills. It is crucial task for all math teachers to understand the differences between the tasks according to their teaching purpose, so that they can choose more suitable tasks for their students.

### MATERIALS AND METHODS

#### What is a mathematical problem?

Many Math teachers use the word 'problems' to describe the tasks in mathematics textbook. However, are they really problems? According to Henderson's and Pingry's (1953), there are three necessary conditions for a situation to be a problem for a particular individual:

"1. The individual has a clearly defined goal of which he is consciously aware and whose attainment he desires.

2. Blocking of the path toward the goal occurs, and the individual's fixed patterns of behavior or habitual responses are not sufficient for removing the block.

3. Deliberation takes place. The individual becomes aware of the problem, defines it more or less clearly, identifies various possible hypotheses (solutions), and tests these for feasibility." (p. 230)

There are three criteria in the first condition to clearly define the goal towards encouraging the students to do mathematical tasks. If the student is unable to solve the tasks, are they still problems to him or her? This has a serious pedagogical implication. If these tasks are not problems to the student, the math teacher does not have to do anything to help the student. However, from the perspective of the student these tasks are still problems as he or she has to solve the problem. It would seem that interest on the part of the person is not a criterion to determine whether a situation is a problem to him or her.

According to Macmillan English Dictionary for Advanced Learners, the word 'desires' means 'wants' and a person may want something out of necessity or responsibility rather than out of interest. In the classroom, an uninterested student may want or need to solve the tasks, be it willingly or unwillingly, and so if we interpret the word 'desires' as 'wants' or 'needs' in Henderson's and Pingry's (1953) first condition and a situation will still be a problem to a person if he or she *wants* or *needs* to attain the goal but is unable to do so. It is a problem as "a situation in which a person *wants* something and does not know immediately what to do to get it".

The second condition is that the person must "be *unable to proceed directly* to a solution". According to Lester (1980) and Reys (2004), this difficulty must require "some creative effort and higher-level thinking" to resolve. Due to Schoenfeld (1985), the "difficulty should be an intellectual impasse rather than a computational one". Schoenfeld gave the example that inverting a  $27 \times 27$  matrix would be a tedious task for him but inverting a matrix was not a problem to him. So *tediousness* in applying a computational procedure is not a factor in determining whether a situation is a problem. But what if a student does not know how to invert a  $27 \times 27$  matrix? Students might have learnt how to invert a  $2 \times 2$  matrix but not many of them are aware of how to invert a square matrix of higher dimensions. So the problem can still be a *procedural* one.

The third condition is that the person must "make a *deliberate attempt* to find a solution". According to Lester (1980), what happens if the person does not attempt the task? For instance, if a person tries to run away from his or her problem instead of trying to resolve it, does it mean that the situation is no longer a problem to the person in real life? Imagine an ostrich which buries its head into the ground when it senses danger. As long as the ostrich does not see the source of the danger, is the danger still a problem to the bird? What is worse is that the danger may even cause the ostrich its life. There are two different perspectives here. From the viewpoint of the person or the ostrich, the situation is not a problem to the person or the ostrich. But from another viewpoint, the problem is still there. Which perspective you take depends on the situation itself. If the situation is serious, then taking the first viewpoint may not be so helpful to the person although it may so happen that the situation just resolves by itself after some time. If the situation does not concern the person, then taking the second viewpoint may not be so helpful. For example, there are many questions on physics that we cannot answer. Taking the second viewpoint that these questions are problems to me will mean that I have a lot of problems in my life and I may feel so burdened by them when these questions do not actually concern me.

Thus whichever perspective you take depends on whether the situation concerns you or how serious it is.

In the classroom, if a student does not attempt the tasks set by the teacher, then from the first viewpoint, these tasks are not problems to the student. But is this perspective helpful to the student? Let us look at it from the perspective of a teacher. When a teacher designs or chooses a task for his or her class, the teacher will usually target the task difficulty at the level of the average students in the class. But if the average students are not interested in doing any work at all, then the task will not be a problem to these students and so does it mean that the teacher can set a very difficult task since it will pose no problem to these students? From the viewpoint of the teacher, in deciding whether a task is suitable for the class, it may be more useful to just use Henderson's and Pingry's (1953) second condition that a task is a problem to a person if he or she is unable to proceed directly to a solution. Whether the students want to do the task or actually make an attempt on it should not be a factor when deciding whether the task will be a problem to the average students in the class. Of course, if the students do not want to do the task, then it will still be a concern for the teacher but it will be an entirely different problem for the teacher.

## RESULTS AND DISCUSSIONS

**Tasks: *Solve mathematic thinking and reasoning sum in small groups.***

### **1.The table shows some exchange rates.**

£1 is worth 1.80 American dollars
£1 is worth 200 Japanese yen

Shoira buys a camera in America and pays 270 dollars. Sherzod buys a similar camera in Japan and pays 20 000 yen. In which country is the camera cheaper and by how much? Give your answer in GBP (£).

2. Maria earns \$3.00 an hour for her first hour of work, \$7.00 for her second hour, \$11.00 for her third hour, \$15.00 for her fourth hour and so on. How much money will she earn in her 12th hour of work?

The main purpose of these tasks is for the solvers to make use of some problem-solving strategies, such as looking for patterns and to solve it. These tasks require some problem-solving strategies and not just a direct application of a procedure.

The phrase 'problem-solving tasks' can be misleading as the term 'problem-solving' suggests that the task is a problem to the person when it may not be so. Nevertheless, this phrase will still be used to emphasise the problem-solving strategies involved in this type of tasks, even if they may not pose a problem to some people.

Teachers usually tell their students to 'solve' such 'problems' although the term 'practise procedural tasks' may be more appropriate, especially if such tasks are not problems to the students and their main purpose is for them to practise procedures learnt in the class earlier. The classification according to purpose helps teachers to see that practising procedural tasks and solving 'word problems' are just two of the many different types of mathematical tasks.

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**CONCLUSION**

There are many kinds of mathematical tasks that help students to learn new mathematics or to develop mathematical processes which are useful and essential for students to solve unfamiliar mathematical and real-life problems. If the Math teachers classify the mathematical tasks according to their teaching purpose and these tasks can provide students with opportunities to learn new mathematics and to develop mathematical processes including problem-solving strategies.

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DOI: **10.5958/2249-7137.2020.00593.5**

## **A WAY TO WORK CREATIVELY ON MULTIPLE SOLUTIONS USING INFORMATION TECHNOLOGIES**

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### **ABSTRACT**

*This article describes ways to create a problem that has a single solution by changing the context of the multi-solution problem with using information technologies. As the pupils will be able to create a problem based on the information provided and prepare it for solution in the future.*

**KEYWORDS:** Multi-Solution Problem, Single-Solution Problem, Problem Condition, Problem Question, Change Problem Condition, Change Problem Question, Create A New Problem From The Problem.

### **INTRODUCTION**

It is known that the problem solving is one of the most important parts of an elementary math course. By solving problems, pupils form and develop the properties of arithmetic operations, different relationships between numbers, the essence of geometric concepts, different quantities, their units of measurement and the relationships between quantities.

In elementary school, a great deal of attention is paid to teaching problem-solving and problem-solving in elementary school. As the pupils will be able to create a problem based on the information provided and prepare it for solution in the future.

Here are some suggestions on how to create or change the problem.

Change the problem question, problem condition, numerical data in the problem, create a similar problem (mathematical model is the same), create an inverse problem, create a problem based on

the illustration (picture and diagram), solve the problem according to the given solution (according to the numerical expression)

## MATERIALS AND METHODS

Providing an initial notion of multi-solution problem (non-single-solution) problems, especially in the elementary school will help pupils to gain new knowledge in mathematics in the future.

In this article, we will focus on some of the ways to create problems that have a single solution from multiple solutions by changing the condition and the question. Here are some examples of how to change a question and a condition.

Problem1. Karim has 6 notebooks and Salim has 2 less. How many notebooks does Salim have?

Solution:  $6 - 2 = 4$  Answer: 4

Let's change the subject.

Masala 1 (a). Karim has 6 notebooks and Salim has 2 more. How many notebooks does Salim have?

Solution:  $6 + 2 = 8$  Answer: 8

Let's change the question.

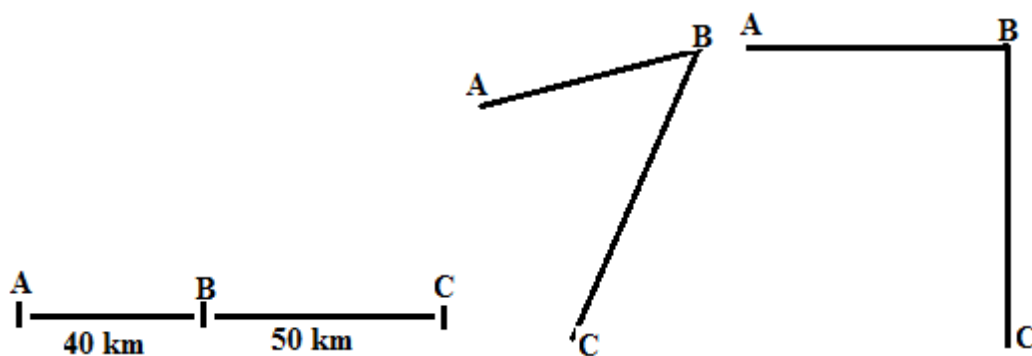
Masala1 (b). Karim has 6 notebooks and Salim has 2 less. How many notebooks do they have in total?

Solution:  $6 - 2 = 4$ ,  $6 + 4 = 10$  Answer: 10

Now let's look at a few ways to turn a problem with multiple solutions into a problem with a single solution. We explain this by the following issues:

Problem 2. If the distance between cities A and B is 40 km and the distance between cities B and C is 50 km, find the distance between cities A and C.

There is no single solution to this problem, as cities A and C may be located differently.



We will change the terms of the issue so that this issue has a unique solution.

Problem 2 (a). The distance between cities A and B is 40 km and the distance between cities B and C is 50 km. If you go to city C through city B, what is the distance between cities A and C?

Solution:  $40 + 50 = 90$  km Answer: 90 km.

There is only one solution by changing the question...

Problem 3. Anwar, Sarvar and Akmal have pigeons. If Sarvar's pigeons are 7 and Akmal's are 5 more than his, how many Anwar, Sarvar and Akmal's pigeons are there?

This problem does not have a single solution. As there is no information about Anwar's pigeons.

We will change the question so that this issue has a unique solution.

problem 3 (a). Anwar, Sarvar and Akmal have pigeons. If Sarvar's pigeons are 7 and Akmal's are 5 more than his, how many Sarvar and Akmal's pigeons are there?

Solution:  $7 + 5 = 12$ ,  $7 + 12 = 19$  Answer: 19

In some cases, it is possible to create a problem with a unique solution by changing both the condition and the question.

By changing both the above condition and the conditional question, we create a problem that has a unique solution.

Problem 3 (b) Anwar, Sarvar and Akmal have pigeons. If Anwar has 6 pigeons, Sarvar has 7, and Akmal has 5 more than Sarvar, how many pigeons are there in all?

Solution: How many pigeons does Akmal have ?  $7 + 5 = 12$ ,  $6 + 7 + 12 = 25$  Answer: 25

From the above problem it can be seen that in some cases it is possible to create problems with a single solution by changing the condition of a multi-solution problem or by changing the problem question or by changing the condition and question at the same time.

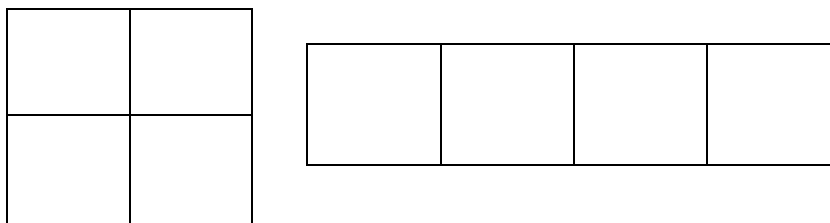
## RESULTS AND DISCUSSIONS

It is not possible to specify the exact number of solutions to the above multi-solution problem.

In some cases, it is possible to enumerate the number of solutions to a multidisciplinary problem. Here are some examples of such issues.

Problem 4: You can make a rectangle out of 4 squares with a roof of 1 cm.

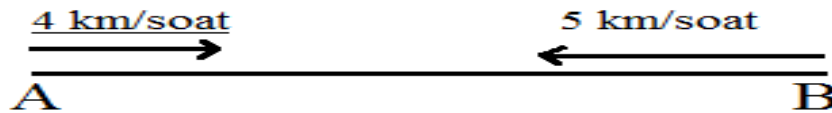
There are 2 solutions to this problem.



Problem 4: Two passengers set out on foot from two villages at a distance of 25 km at the same time. If the speed of the first passenger is 4 km / h and the speed of the second passenger is 5 km / h, what is the distance between them in 2 hours?

The solution to this problem is 4 depending on the direction of passenger traffic.

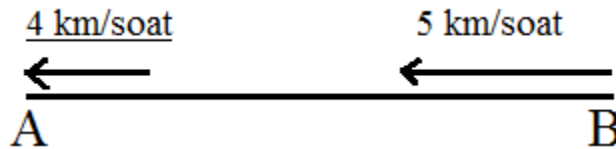
a) If the passengers are moving towards each other, then the solution is as follows:



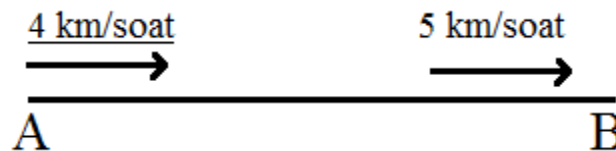
Problem 4. Two passengers set out on foot from two villages at a distance of 25 km at the same time. If the speed of the first passenger is 4 km / h and the speed of the second passenger is 5 km / h, what is the distance between them in 2 hours?

- a) The solution to this problem is 4 depending on the direction of passenger traffic.  
 b) a) If the passengers are moving towards each other, then the solution is as follows:

1-situation



2-situation



1 situation:

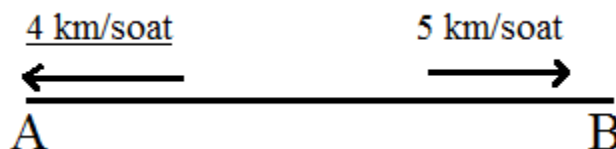
- 1) How far does the first passenger travel in 2 hours?  $4 \cdot 2 = 8$  km;
- 2) How far does the second passenger travel in 2 hours?  $5 \cdot 2 = 10$  km;
- 3) How far is the second passenger from A?  $25 - 10 = 15$  km
- 4) Distance between passengers  $15 + 8 = 23$  km

Answer: 23 km

2 situations:

- 1) How far was the first passenger B from the village?  $25 - 8 = 17$  km
- 2) What is the distance between them?  $10 + 17 = 27$  km
- 3) Answer: 27 km

c) if the passengers are moving in the opposite direction, then the solution is as follows:



- 1) How far did the first passenger travel?  $4 \cdot 2 = 8$  km
- 2) How far did the second passenger travel?  $5 \cdot 2 = 10$  km;
- 3) What is the distance between them?  $25 + 10 + 8 = 43$  km

Answer: 43 km

From the above, there are 4 possible solutions.

This means that in order to turn problem 4 into a single solution, it is necessary to specify the directions of movement of passengers.

From the above considerations, it follows that while many of the problems to be solved can be infinitely, it is possible to specify the number of solutions to some.

In short, creative work on multifaceted issues prepares pupils to find solutions to a variety of problems that arise in life in a market economy.

*The following questions may be suggested to pupils:*

Which of the following problems has multiple solutions or a single solution? Turn multiple problems into single problems.

*Problem 1:* Two passengers from cities A and B set off in opposite directions at the same time at a speed of 15 km / h and 14 km / h, respectively. What is the distance between them in 4 hours?

*Problem 2:* How many rectangles can be made from 7 squares with side 1 cm?

*Problem 3:* Ali, Vali and Soli planted fruit seedlings in the school garden. If Soli planted 5 seedlings more than Vali, how many seedlings did Soli and Vali plant?

*Problem 4:* Ali, Vali and Soli planted fruit trees in the school garden. If Soli planted 5 seedlings more than Vali and Ali planted 3 seedlings less than Vali, how many seedlings did the three pupils plant in total?

*Problem 5:* Ali, Vali and Soli planted fruit trees in the school garden. If Vali planted 8 seedlings and Soli planted 5 more seedlings, how many seedlings did Vali and Soli plant in total?

*Problem 6:* In the morning, Salim brought 6 bags of carrots, each weighing 50 kg, to the market. If he sold all the products in the evening, how much did he sell for?

*Problem 7:* An entrepreneur has 2,000 chickens. If chickens lay an average of 1,500 eggs a day, how much does an entrepreneur sell eggs for in a month (30 days)?

*Problem 8:* An entrepreneur has 2,000 chickens. One chicken eats an average of 100 g of grain per day. If all the hens lay 1,500 eggs a day, how much will the entrepreneur earn in 1 month (30 days)?

## CONCLUSION

To conclude briefly, as the problem solving is one of the important parts of the elementary math course at schools, pupils learn and develop the properties of arithmetic operations, different relationships between numbers, the essence of geometric concepts, different quantities, their units of measurement and the relationships between quantities through various mathematical problems.

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DOI: **10.5958/2249-7137.2020.00594.7**

## THE LEARNING HISTORY OF THE PROBLEM OF ANCIENT BACTRIAN CITIES AND THE ARCHAEOLOGICAL LOCALIZATION OF POLITICAL AREAS (4<sup>TH</sup> CENTURY. B.C)

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### ABSTRACT

*The article describes the archaeological localization of the names of the ancient Bactrian cities in the 9<sup>th</sup> century B.C. The findings of the archaeological researches of Alexandria, Branchidae, Aorn, Baqtra and the political regions of Gabaza, Paretakena and Bubakena in the ancient Greek and Roman sources were analysed by the basis of explorations. The city of Alexandria in the surroundings of Oxus is thought to be the Kampirtepa monument in the Surkhandarya region, and maybe the monument to the city of Tallkantepa is Branchidae. Aorn is reported to be a submarine of Afghanistan, while Bactria is as Balch. Territorial-political associations - Gabaza – is localised in a mountainous place between the Surkhandarya region and the Kashkadarya region (both are in the Republic of Uzbekistan), the north-western part of Paretakena-Surkhondarya region, and Bubakena - in the territory of Kafirnigon(Tajikistan), Vakhsh and in Kukcha-Kunduz-Talukan.*

**KEYWORDS:** Oxus, Alexandria-On-The-Oxus, Branchidae, Aorn, Bactra, Gabaza, Paretakena, Bubakena, Localization, Termez, Tarmida, Antakya, Talashkantepa, Erkurgan, Surkhandarya, Aykhanim, Altindiliortepa, Balkh, Afghanistan, Kampirtepa, Frurion, Pristan, Port Beacon, Harbors



## INTRODUCTION

Alexandria, the city of Branchidaes, Aorn, Bactran cities, Habaza, Paretakena and political areas of Bubakena around the Oxus, which was related to a 4<sup>th</sup> century B.C Bactria, were written by the works of ancient Greeks and Romans' authors<sup>1</sup>. The problem of their localization has been discussing among scholars till now (Table 1.2). However, many issues have been revealed as a result of archaeological explorations in the area of Northern Bactria in recent years.

Alexandria around Oxus is considered to be founded by the Alexander the Great. But there is not a single idea about localization of Alexandria city around Oxus among explorers (Table 1). V.Tarn and Sh.Pydaev thought that this city is the old Termez monument in Surkhandarya valley<sup>2</sup>. E.V.Rtveladze localized it with Kampirtepa monument in this valley<sup>3</sup>. French scholar P.Bernar concluded that Alexandria around Oxus might be the monument Aykhanim in Southern Bactria.

Aykhanim monument was regarded to be the only city, which was found in the memories of Amudarya areas, was launched by Greeks till the sixty's years of 20<sup>th</sup> century. That's why; explorers advanced the opinion of Alexandria around Oxus. But this idea has not found its confirmation during the recent.

Aykhanim was built the north-eastern part of Afghanistan, right bank of Amudarya and the confluence of Kukcha river to Amudarya<sup>4</sup>. According to the opinion of French archaeologist B.Leone, the time of foundation of the city has not been defined adequately till now<sup>5</sup>, because the deal of the exploration was stopped in the eighties of 20<sup>th</sup> century due to the Civil war in Afghanistan.

P.Bernard linked the period of the construction Aykhanim with Alexander the Great era whereas B. Leone connected it with Antiochus I (281-261 y, B.C) and some explorers did it with Seleucus I<sup>6</sup>. E.V.Rtveladze suggested that Aykhanim was constructed in the reign period of leader Euthydemus (235/230-200 y, B.C) or others that came after him by comparing the shapes of bricks which was used to build Kampirtepa and Aykhanim memorials<sup>7</sup>, because quadrangle bricks were used to the construction of citadels in Central Asia until the attack of Alexander the Great. The quadrangle bricks were used widely in the epoch of Hellenism. An initial construction step of Kampirtepa was built with quadrangle bricks, then square bricks were used in the next stages. As Aykhanim memorial, they used square ones. E.V.Rtveladze linked the usage of square bricks with Greek-Bactria eras. Furthermore, the researcher argued that Aykhanim was not *Alexandria around Oxus*, by showing the Ptolemy's map which demonstrated Alexandria was in the left-bank of Amudarya and north side of the Bactria, Aykhanim was located in the northern-east side of Bactria and on the right coast of Amudarya<sup>8</sup>.

Old Termez was situated 7 km. far from western side of Surkhandarya region Termez city in the Republic of Uzbekistan and the right coast of Amudarya. An archaeologist Sh.Pydaev pointed that Old Termez was founded in the middle of the first millennium B.C.<sup>9</sup> Furthermore, citadel firstly formed as a village and built on the natural hill. Coming to the II-I centuries B.C., fortress occupied 10 hectares area<sup>10</sup>.

V.Tarn mentioned that after being destroyed Alexandria around Oxus in 293-year B.C. by Saks, Antioch I who was the Empire of Seleucid restored it in 3<sup>rd</sup> century B.C. The scholar suggested that Old Termez was "Alexandria around Oxus", which was founded by Alexander the Great, on

the basis of showing Antioxia-Tarmida in the map “The table of Pevtingar” of an unknown Ravenna geographer relating to 7<sup>th</sup> century A.D. Initially, his mind was supported by many explorers. An archaeologist Sh. R. Pydayev proved this idea with the pieces of crockery relating to IV-III centuries B. C. which was found in Old Termez city as a result of explorations in the eighties of 20<sup>th</sup> century and he connected it with Alexander the Great period<sup>11</sup>. But there were no foundations belonging neither the trace of architectural constructions connected with Alexander the Great period nor crockery pieces related to that era during the researches that have done in recent years in Old Termez<sup>12</sup>. As a result, the point of being Termez was Alexandria around Oxus was under the doubt. After that, an archaeological scholar E. V. Rtveladze, who usually does explorations in Kampirtepa memorial, suggested at the beginning of 2000 years that Kampirtepa was the Alexandria around the Oxus<sup>13</sup>. This idea was proved after 2010 years during the procedure of the explorations in Kampirtepa memorial<sup>14</sup>.

Kampirtepa monument located in the right coast of Amudarya in the northern area of Bactria and was in west 0,6 km far from the village of Shurab in the district of Muzrab in the region of Surkhandarya in the Republic of Uzbekistan<sup>15</sup>. Memorial has been investigated since 1972 till now by an archaeological expedition with the command of E. V. Rtveladze. Nowadays, chronological chain of the monument is determined as in the late of 4<sup>th</sup> century B.C. and in the middle of 2<sup>nd</sup> century A.D.<sup>16</sup>. The improvement period of the monument was also defined on the basis of the result of radiocarbon analysis<sup>17</sup>. As a result of recent years explorations shows that monument was the frurion of Greeks, it means that it functionated as a defence point or harbour. The city occupied 5 hectares territory and its length was 400 metres from west to east side along the bank. It had strong defence system. While excavating Kampirtepa, there were (from frurion) streets, temples, the treasury of the city and workshops of handicraftsmen<sup>18</sup>. Explorers identified comfortable gulf for boats, pristan and the trace of harbour beacon in there. E. V. Rtveladze grounded that Kampirtepa was Alexandria around Oxus through comparing the results of written sources and archaeological deals during his exploration.

Arrian was the biggest city in Bactria and it called Bactra and Aorn<sup>19</sup>. The capital city of Bactria was Bactra and it existed from the middle of millennium B.C. till III-IV century A.D. It was situated on the territory of southern Bactria. Bactra city was called as Zariaspa in Pliny works.<sup>20</sup> Nowadays, Bactra is considered as an ancient fortress of Afghanistan's Balkh.

According to the archaeological data, Bactra was founded in the reign of Achaemenids in the fourth and fifth century B.C. In that period, it occupied 120 hectares area and it was on the place of top city “Bala-Hissar”. In the period of Greek-Bactria kingdom, new Balkh-bottom city was also founded. Its general land consisted of 400 hectares<sup>21</sup>. At that time, the whole territory of Bactra city was 550 hectares.

Even though there were many opinions about the localization of Aorn city, E. V. Rtveladze compared the information of written and archaeological sources and he came to the conclusion that Aorn city was Altindiliyartepa in the land of northern Afghanistan<sup>22</sup>. Altindiliyartepa was regarded as the second biggest city after Bactra (Balkh) according to its territory. And this was appropriate to the information of Arrian.

Branchidae's city and its eradication by Alexander the Great was mentioned in the works of Quintus Curtius Rufus and Strabon. There were not any definite solution about Branchidae's city though it was analyzed<sup>23</sup> many times by researches.

Priests, who were moved from temple located in Apollo at Didymus near Miletus, lived in Branchidae's city<sup>24</sup>. After being ruined the Apollo Didymus temple by the leader of Achaemenid Xerxes I (481-465 y, B.C.) priests gave the treasury of the temple to him. Greeks considered this deed of priests as a betrayal. Priests, who did not stay at Miletus, Xerxes moved to Bactria<sup>25</sup>.

ApolloDidymus temple stayed ruined till the period of Alexander the Great. After capturing these lands, Alexander the Great tried to restore the temple<sup>26</sup>. In its own period, Apollo Didymus temple and its priests had got higher status in the world of Greeks that is why their betrayal had not been forgotten for a long time. This was seen precisely from the attitude of Alexander the Great towards Branchidaes. According to the point of Quintus Curtius Rufus, Alexander the Great attacked to Branchidae's city crossing Amudarya river. He made carnage all population in the city and destroyed it wholly. He cut all trees around the city in order to make it desert<sup>27</sup>. In this way, the generation of Branchidaes were punished because of the guilt of their ancestors after 150 years<sup>28</sup>.

Nowadays, there are a lot of discussions about the localization problem of Branchidaes among scholars<sup>29</sup>. However, they cannot come to the single conclusion.

Academicians E. V. Rtveladze and A. S. Sagdullayev said that the city of Branchidaes was the Talashkantepa monument near the garbage village of Talashkan, a deserted village located 15 km southwest of the Sherabad district of Surkhandarya in thje Republic of Uzbekistan<sup>30</sup>. The memorial had a cirul shaped diameter 130 metres, it was 1,6 hectares<sup>31</sup>. The life in Talashkantepa continued only in the fifth and fourth centuries B.C.<sup>32</sup>. After being destroyed in 4<sup>th</sup> century B.C., it had not been occupied<sup>33</sup> again by population, because they consider this place was cursed. That is why, it might take the name of damned and cursed among local people.

However, E. V. Rtveladze mentioned in his work which was edited in 2002 "Alexander the Great in Bactria and Saghdiane" that this idea should be renounced and reviewed<sup>34</sup>. He demonstrated that there were not any findings relating to the culture of Hellenism as a main reason<sup>35</sup>. While analysing written and archaeological resources widely, he commented Branchidae's city might be Yerkorgan city in Kashkadarya valley<sup>36</sup>. The basis for this is the Grecian man of the Archaic era, found in the territory of the II-III century AD in Ergurgon, in the reverse part of the cache coin, as a lion or a bearded man with a sword and a sword in the back and a Greek inscription on the II-I centuries justified. In addition, Alexander the Great did not destruct all population of the city of Branchidaes, their offspring lived next periods<sup>37</sup>. If we analyse the information of written sources with scholar's mind, there will be seen inappropriate sides. Firstly, Quintus Curtius Rufus wrote that Branchidae's city was small. (Quintus Curtius Rufus VII.5.28). Yerkorgan was the biggest city in the southern Sughd at that time. Secondly, population who were moved had a particular independent control symbol not the capability of making coins. Thirdly, evidences had been given by scholar may be the heritage of Hellenism era. The culture of Hellenism reigned from 4<sup>th</sup> century B.C. till 4<sup>th</sup> century A.D. in the territory of Central Asia. We think that the localization of Branchidaes was near to Talashkantepa was more precise. First of all, there was a life only in 5<sup>th</sup>-4<sup>th</sup> centuries. Then, the life in the city was destroyed due to the horrible invasion. Thirdly, after 4<sup>th</sup> century B.C. this land was not acquired. Fourthly, Talashkantepa was constructed in the shape of temples as round. Fifthly, the city was in the left coast of Amudarya river and the crossing place of it was called with Greeks word as "Pardagvi(hotel)". According to the point of researches, Pardagvi was developed many years ago from Alexander the Great, and

it means that this crossing had got great impact in Greece nation<sup>38</sup>. In the period of Achaemenids, crossing place of the river of Amudarya was in the territory of Shurab. These analyses proved that Branchidae's city was Talashkantepa, but there were not any things belonging to Greek-Bactria's culture and it demands extra materials to the problem of localization. It is clear that the life disappeared in 10 monuments from learned 17 monuments in 1973 after the attack of Greek-Romans. E. V. Rtveladze connected it with the commander of Alexander the Great Krater and his attempt to subdue the insurrection in northern Bactria in 327-years B.C.<sup>39</sup>. But the constructive peculiarities of Talashkantepa such as, the differences of making crockery dishes, the means of names and attitudes of people to this place do not refuse this place will be a city of Branchidae's.

There are also some thoughts that Branchidae's city was in the territory of Turkmenistan, Kelif. However, the archaeological interpretation of this area does not correspond to this idea.

Recent year's archaeological research is likely to give more concrete evidence.

The ancient Greek and Roman resources also refer to lands where the Alexander the Great troops attacked - Gabaza, Paretakena and Bubacena. While doing the research, it was discovered that they were a specific regional-political association. In Sh. Shaydullayev's research shows that these territories are the "nom" state in Bactria. E.V.Rtveladze also recognizes them as an independent country. Currently, these independent countries are highly likely the agricultural oasis' that are being suggested by archaeological researches. During the analysis Gabaza, Paretakena and Bubacena were localized to the ancient Bactria region<sup>40</sup> (Table 2).

Gabaza- (Gabaza, Gobzon) is a part of the southwestern Xisor Mountains, from the Amu Darya to the TemirDarvoza (Iron Gate)<sup>41</sup>. It is a mountainous area between the Surkhandarya and the Kashkadarya region of the Republic of Uzbekistan.<sup>42</sup> It might be the lands of Sherabad agriculture. Its biggest city is considered Jondavlattepa. In the valley of agriculture there are Pshaktepa, Kuchuktepa, Talashkantepa I monuments. The activity of Jondavlattepa, Pshaktepa, Talashkantepa I was stopped in the 4<sup>th</sup> century B.C

Paretakena-Surkhandarya region unites mountainous regions, situated in the northwest-western part of the region. E.V.Rtveladzedemonstrates that the centre of the Paretakean can be the Qiziltepa monument<sup>43</sup>. Also, according to the archaeological study carried out here, 20 monuments of XI -IV centuries BC were discovered and are located in 6 oases along with the river network.

Archaeological evidence indicates that this region is a part of Boysun farming oasis. The central fortress of the oasis is the Qiziltepa monument. Moreover, Bandihon II, Qizilcha I -IX, Nomsiz tepa, Yalangtushtepa, Kultepa were discovered.

During the Bubacena localization process, researchers have developed various ideas. In his research, E.V.Rtveladze places Bubacena on the basis of archaeological sources in the subzone of Kafirnigon, Vakhsh, Kukcha-Kunduz-Talukan. He develops his ideas via French explorers' discovery of many monuments of the VI-IV centuries, including Baitudasht, Kalaimir, Tomashatepa.

As a result of recent studies, many memorials belonging to the Akhamonies' era have been discovered in this area. There are six monuments of Achaemenid's period in southern Tajikistan:

2 monuments from the upper Kofarnihon, 2 from the lower Kofarnihon, 1 from Vakhsh, 2 from Yavansu and 7 from Baitudash<sup>44</sup>.

Even though ancient Bactria did not find its archaeological interpretation problem relating to city and political territories in the 4<sup>th</sup> century B.C., but many ideas that are given by academicians E. V. Rteveladze have got its own basis. He proved by comparing written and archaeological resources Alexander around Oxus with Kampirtepa and Aorn with Altindiliyartepa monuments. However, there are problems that wait for their solution, such as Branchidaes.

**TABLE 1. ANCIENT BACTRIA CITIES AND THEIR INTERPRETATION**

	City names in written sources		Ideas about archaeological localization		Scientists who put the ideas forward
	Territory	Author	archaeological monument	Geographical location	
1	<i>Alexandria-on-the-Oxus</i>	Arrian, Quintus Curtius Rufus	Old Termez	Termez district of Surkhandarya region	W.Tarn, Sh.Pidayev, C.Rapin
			Ai-Khanoum	Afganistan, Toxar province	P.Bernard
			Kampirtepa	Muzrobdistrict of Surkhandarya region	E.V.Rtveladze
2	Branchidae	Quintus Curtius Rufus, Strabon, Plutarch	Talashkantepa	Sherabad district of Surkhandarya region	E.V.Rtveladze A.S.Sagdullaev
			Kelif	southern Afghanistan	F.Shurf
				between Bactria and Sogdiana	I.R.Pinchian
			Ergurgan	Karshi town of Kashkadarya region	E.V.Rtveladze (since 2002)
				Sogdiana	P.Bernard
3	Aorn	Arrian	Oltindillortepa	Northern Afghanistan Jurjon Province	E.V.Rtveladze
			Tashkurgan	The Khalum River	F. Schwartz, W.Tarn
			Eucratius	Oasis Kunduz	X. Humbax
4	Baktra	Arrian Strabon	Bolo-Xisor	Balh city of Afghanistan	P.Bernard



**TABLE 2. POLITICAL REGIONS OF NORTHERN BACTRIA AND THEIR INTERPRETATION**

Written sources of political landscape		Archaeological interpretation					
	Name of the zone	Author	Scientists	Geographical location	Political Territory	monuments	Scientists who researched the monuments
1	Gazaba (Gabaza) Gobzon	Quintus Curtius Rufus	E.V.Rtveladze	From the Amudarya to the Iron Gate	Sherobod farming oasis	Jondavlattepa Pshaktepa, Kuchuktepa, Tallantongepa	E.V.Rtveladze, A.Askarov , A.S.Sagdullaev Sh.X.Zapparov
			I.V.Pyuankov	Territory of Guzar			
			V.M.Minorskiy	The area between North and West Afghanistan and Kerki			
2	Paretakena	Arrian, Quintus Curtius Rufus	E.V.Rtveladze	Mountainous areas in the northwestern part of the Surkhandarya region	Baysun farming oasis	Qiziltepa Bandihon II, I-IX, Nomsiz Tepa, Yalangtushtepa, Kultepa, Pachstanpta, Bektepa (Bandihon II), Gozimullatepa, Kindiktepa	A.S.Sagdullaev Z.A. Khakimov, L.M. Sverchkov, U. Sin, N. Boroffka
			V.Tomashek	Badakhshan			
			V.Grigorev	Surkhandarya, Surkhab and Kofirnigan oasis			
			I. Markvart I.V.Pyuankov	Surkhandarya region and southern Tajikistan			
3	Bubacena	Quintus Curtius Rufus	E.V.Rtveladze	Kofarnihon, Vakhsh, Kukcha-Qunduz-Talukan downstream	Kofarnihon, Vaxsh farming oasis	Baytudasht, Qalai mir, Tomashatepa	P.Bernard, J.Gardin, I.M.Dyakonov , A.Abdullaev, T.I.Zeymal
			V.Grigorev	Badakhshan			
			B.A.Litvinskiy	Karategin or Kulyab territories			
			I.V.Pyuankov	Huttal			

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DOI: **10.5958/2249-7137.2020.00585.6**

## STREET VENDORS IN INDIA: AN OVERVIEW

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### ABSTRACT

*Street vendors form a very important segment of informal sector. Street vendors offer goods and services for sale without having a permanent built up structure to satisfy the demands of urban poor's and urban youth. They ensure the distribution of benefits in favour of the disadvantaged group. The objective of this paper is to identify the causes behind street vending, challenges faced by street vendors, highlight the importance of street vendors, what measures are taken by the Government to prevent the harassment of street vendors by police and other authorities, improvement in the working conditions, social protection and life skill development to improve the level of profitability.*

**KEYWORDS:** *Informal Sector, Street Vending, Town Vending Committee (TVC), Street Vendor Bill*

### INTRODUCTION

**A Street Vendor** is a person who offers goods or services for sale to the public without having a permanently built structure but with a temporary static structure or mobile stall (or head - load). Street vendors could be stationary and occupy space on the pavements or other public/private areas, or could be mobile, move from place to place carrying their wares on push carts or in cycles or baskets on their heads or could sell their wares in moving buses. The government of India has used the term "urban vendors" as inclusive of both traders and service providers, stationary as well as mobile and incorporates all other local/region specific term used to describe them, such as hawkers, pheriwala, rehri –patriwala, footpath dukandars, side walk traders and more. (National Policy on Urban Street Vendors ,2004.Department of Urban Employment and Poverty Alleviation , MUPA,GOI)

### **Role of Street Vendors in India**

Street vendors play very important role in India by generating employment and income opportunities. They sell different kinds of goods like clothes and hosiery, leather, moulded plastic goods and different kinds of goods necessary for household, which are manufactured in small scale or home based industries where large numbers of workers are employed (Bhowmika, 2001). The manufactures could have hardly marketed their products. Apart from non-agricultural product, street vendors also sell fruits and vegetables. Street vendors provide the market for home based manufacturing product as well as agricultural products. In this way, street vendors help generate employment in the home based and small scale industries and traditional sector. Therefore we can say that several manufacturers are linked with street vendors to sell their product. Urban youth prefers to purchase clothes and accessories from them because products sold by them are cheaper than those found in formal retail outlets. Street vendors provide benefits to Lower income group people who spend a higher portion of their income on purchase from street vendors because their goods are cheap and affordable.

Eleven major arguments in support of street vending:

1. Street vending contributes directly to overall level of economic activity and to the provisions of goods and services.
2. Citizens have constitutional right to choose their occupation and to engage in entrepreneurial activities.
3. Street vending is an actual or potential source of government tax revenues.
4. Street vending serves as a social safety-net.
5. Street vending is a laboratory for entrepreneurship, family business and social interactions.
6. Street vending provides entrepreneurial opportunities to people who cannot afford to buy or rent fixed premises.
7. Street vending greatly expand the range of places and times where goods and services can be provided, and sometimes they also offers goods and services which are not available in off-street locations.
8. Street vending brings life to dull street.
9. Because of its low capital requirements and its potential mobility, street vending is a very effective way to cater for seasonal, sporadic and special demands.
10. Street vending offers its workers considerable flexibility in working hours and levels of activity.

### **Objectives**

- (1) To identify the role of street vendors in the developing countries.
- (2) To identify the causes behind street vending.
- (3) To know about the challenges being faced by street vendors.
- (4) To know different policies and bills passed by the government to protect the rights and interest of street vendors.

(5) To know the ways to improve the conditions of street vendors.

### **Causes behind street vending**

1. Effect of an increasing population growth in the era of globalization was compounded by a rapidly accelerating migration from rural areas to urban areas. This accelerated pace of urbanization led to employment problems both a quantitative and qualitative nature. Insufficient capacity of the modern economic sector to provide employment for the rapidly expanding labour force, as a consequences of which a large number of person who are looking for work, are forced to find or create other income opportunities.
2. The fall in self-employment and stagnation or even relative decline indicate the great and growing significance or huge dependency in the informal sector employment.
3. In the most Indian cities the urban poor survive by working in the informal sector primarily due to poverty, but also due to a variety of factors such as lake of gainful employment in the rural areas, shrinkage of employment in the formal sector, and low levels of skills and education required for the better paid jobs in the formal sectors.
4. The formal sector offers higher salary than the traditional rural employment. The cities become magnets that attract rural labours. Unfortunately most of the agricultural workers do not possess the skills demanded by modern occupations. Hence they are not employable in the formal sector. To survive they have no resources except creating employment using their only assets, themselves.
5. Another cause of street vending is surplus labours in rural agriculture sector. Land does not expand, while population keeps on growing. Thus over time there is insufficient agricultural land to accommodate all of the rural labours. Also, progress in technology can manage the land efficiently and produce even more. So, more and more rural labour is crowded out of the agriculture sector. They have no place to go but to the cities, hoping to improve their lots. Cities become overcrowded, no employment opportunities are available for surplus labours, hence they start vending on sidewalks, roads and weekly markets, etc to earn minimum wage for their family.
6. Globalization is a cause of street vending. Facing tough import competition, domestic firms cut costs by any mean they can. The easiest way is by outsourcing, contracting some of the work to informal sector (ILO, 2005). The informal sector operates with cheaper labour due to non-existent labour protection in terms of no legal contract, no minimum wages, no health insurance, no unemployment insurance, no work safety standard etc.
7. One more reason for inflating number of street vendors in developing countries is unending economic and political crisis. These crisis causes increasing rate of unemployment, poverty etc.

### **Challenges faced by Street Vendors**

1. Street Vendors faces many problems as they are vulnerable population, who are neither protected by government, NGOs, labour union nor by any labour law. They are deprived by laws made by government in respect of labour union.
2. The street vendors always suffer competition with other street vendors because of fluctuation in market prices, insecure and irregular employment. Their incomes are often minimal and their

sales fluctuate. Another reason for decrease in income of street vendors is that they are forced to pay 15 to 20 percent of their daily income as bribes to local police.

3. Street vendors is usually associated with encroachment of public spaces, causes traffic congestion, inadequate hygiene, and poor waste disposal. Safety of food has been increasingly become a concern in regard to street vendors. No Government agency is authorized to verify the content of food as they are not regulated by any government agency.

4. The government does not recognize the contribution of street hawkers towards economic and social well-being of urban population. They survive without government support. But lately, government has passed “Street Vendors Bill 2013”, which protects the rights of street vendors.

5. Negative impact of online shopping on retailers and street vendors- Online shopping is a form of electronic commerce whereby consumers directly buy goods or services from a seller over the internet without an intermediary service. Online shopping has become the trend and the new mode of purchasing. There are around 1000s of online marketing enterprises selling cosmetics, clothes, shoes, accessories, vitamin supplements, etc. literally the entire range of consumer items. The trend is very clear, retail shop demand will fall and even shrunk. Online shopping is indeed having an adverse impact on the retail sector.

6. Uncertainty and insecurity: The basic problems of street vendors is insecurity and uncertainty as their profession is considered illegal, but according to government of India assessment done in 2004 shows around 2.5% of local poor urban population survive by working in this occupation. If government provide license to street vendors, they can be protected by harassment and eviction by local authorities and local police.

7. Walmart v/s street vending: Walmart is an American Multinational Retail Corporation that runs chains of large discount department stores and warehouse stores. The company is the world’s second largest public corporation, according to the fortune global 500 test in 2013, the biggest private employer in the world with two million employees and is the largest retailer in the world. Walmart ensures that they do work in the consumer and farmers interest. They eliminate middlemen and guarantee fair prices. It means walmart runs counter to the street vending and they may not have beneficial impacts on the street vendors.

8. Lack of financial resources: Access of capital is an important economic linkage that ties street trade to the economy which affects the vendor’s economic activities, profits and potential business growth .Capital is needed for initiating the business and later, for running and expanding the business through buying new merchandise. Seven sources of capital have been identified which are personal savings, family, money lenders, banks and co-operatives, organization, local retails and whole sellers etc. Street vendors have only above two sources for their business activities.

### **Upliftment of Street Vendors**

1. Commercial banks have been empirically proven to be unable to support the informal sector resulting in micro-financing. Grameen Bank is a Nobel Peace Prize-winning microfinance organization and community development bank founded in Bangladesh by Professor Muhammad Yunus. It makes small loans (known as microcredit or “grameen credit”) to the impoverished without requiring collateral. Micro-credit loans are based on the concept that the poor have skills that are under-utilized and with incentive, they can earn more money.



2. Management plays an important role in success of any activity. There should be proper management in street vending also. There are good examples of street vending management in several cities in Indonesia. In these cities, the street vendors provided standardized carts. The size of their lots was also standardized. These create uniformity and order. The carts were then wheeled in and out at certain time. Roads were closed and reopened at certain times. During off operating period carts were neatly stored somewhere unobtrusive, thus the cities stay clean and the roads uncongested. Proper management working environment provide income, health and safety benefits to street vendors.

3. Provide safety at work place: Street vendors are not trying only to earn a livelihood but also provide valuable service to urban population. Thus, it is the duty of the state government to protect the right of these segments of population to earn their livelihood since article 39(a) of constitution stated that “any citizen, men and women, have equal right to an adequate means of livelihood”.

4. Creation of member based unions: These unions are mainly association of active hawkers. Since the street vendors have no legal permission to survive, the main role of these committees (unions) is to negotiate with local authorities such as Municipal Corporation, local police stations for occupying public space to sustain their activities. These unions also help to set up welfare goals and labour commission for their social security and cooperatives for their access to credit for their economic activities. Union acts as intermediaries between individual street vendor and local authorities. Union also tries to provide license to legalize them. This helps to remove the problem of illegal trade.

### **Legal Aspects**

#### **1. National Policy on Urban Street Vendors, 2009**

##### **Highlights of the policy**

1. This policy recognizes the positive role of street vendors in providing essential commodities to people at affordable prices and at convenient places. It also recognizes the need for regulation of street vending by way of designated ‘Restriction-free Vending’, ‘Restricted Vending’ and ‘No Vending’ zones based on certain objective principles.

2. This Policy also aims to reflect the spirit of the Constitution of India on the right of citizens to equal protection before the law (subject to reasonable restriction) as well as their right to practice any profession, occupation, trade or business; and the duty of the State to strive to minimize the inequalities in income, and to adopt policies aimed at securing that the citizens have the right to adequate means of livelihood as enshrined in Article 14, 19(1)(g), 38(2), 39(a), 39(b) and 41 of the Constitution.

3. This Policy recognizes that to be able to practice any profession or to carry on any occupation, trade or business is a fundamental right of every citizen in our country. A person who wants to buy some items in wholesale and sell the same in retail by hawking is actually exercising such a right.

4. This Policy recognizes that street vendors constitute an integral and legitimate part of the urban retail trade and distribution system for daily necessities of the general public.

5. A centre piece of this Policy is the role of Town Vending Committee (TVC) to be constituted at City/Town level. A TVC shall be coordinated by a convener who should be nominated by the urban local body concerned. The Chairman of TVC will be the Commissioner/ Chief Executive Officer of the concerned urban local body. The TVC will adopt a participatory approach and supervise the entire process of planning, organization and regulation of street vending activities, thereby facilitating the implementation of this Policy.

6. This Policy adopts the considered opinion that there should not be any cutoff date or limit imposed on the number of vendors who should be permitted to vend in any city/town, subject to registration of such vendors and regulation through the TVC.

7. The objective of this policy is to provide for and promote a supportive environment for the vast mass of urban street vendors to carry out their vocation while at the same time ensuring that their vending activities do not lead to overcrowding and unsanitary conditions in public spaces and streets. There are some specific objectives of this policy which give legal status to street vendors, provide civic facilities and to promote access of street vendors to such services as credit skill development, housing, social security and capacity of building etc.

## **2. The street vendors (Protection of Livelihood and Regulation of street vending) Bill, 2012**

### **Highlights of the Bill**

1. The Bill aims to protect the livelihood rights of street vendors as well as regulate street vending through demarcation of vending zones, conditions for and restrictions on street vending.

2. Any person intending to undertake street vending needs to register with the Town Vending Committee (TVC). He may then apply for a vending certificate that will be issued based on various criteria.

3. The state government shall frame a scheme for street vendors. The local authority shall, in consultation with the planning authority, frame a street vending plan once every five years.

4. The TVC comprises of the municipal commissioner, representatives of street vendors, local authority, planning authority, local police, resident welfare association and other traders associations.

5. This Bill shall not apply to Railways land, premises and trains.

### **Key Issues and Analysis**

1. The Bill does not specify principles to be followed by governments in issuing vending certificates, allocating vending zones and the number of vendors per zone. Absence of such norms could defeat the purpose of enacting a law to ensure uniformity in the legal framework.

2. The Bill does not require the stakeholders to be consulted in the formulation of the street vending plan. This could lead to a lack of safeguards in ensuring that the plan is determined in a fair manner.

3. The central law will have an overriding effect on state laws that are inconsistent with the Bill. Current state laws differ with the Bill in terms of powers of the TVC, and mechanism for dispute resolution.

4. The Standing Committee suggests making the Bill applicable to the Railways, incorporating specific provisions of the scheme in the Bill, and consultation with the TVC on the vending plan.

### **3. Street Vendors Bill, 2013**

The Upper house of the Indian Parliament passed the street vendors (protection of livelihood and regulation of street vending) Bill, 2013. The bill aims at creating a conducive atmosphere where street vendors are able to carry out their business in a fair and transparent manner, without the fear of harassment and eviction. Some features of street vendor Bill 2013 are as follows:

1. The bill provides for constitution of a Town Vending Authority in each local authority, which is the fulcrum of the bill, for implementing the provision of the bill.
2. In order to ensure participatory decision making for aspects relating to street vending activities. It has been provided that 40% members of the Town Vending Committee will be from amongst street vendors to be selected through election, of which one-third shall be women.
3. It has been provided that no street vendor will be evicted until the survey has been completed and certificate of vending issued to the street vendors.
4. The mechanism is to provide universal coverage, by protecting the street vendors from harassments and promoting their livelihood.
5. Relocation of street vendors should be exercised as last resort. It means re-allocation should be avoided as far as possible unless there is clear and urgent need for land in question.
6. The bill also provides for promotional measures to be undertaken by the government towards availability of credit, insurance and other welfare schemes of social security, capacity building programs, research, education, training programs etc. for the street vendors.
7. The bill specially provides that the rules under the bill have to be notified within one year of its commencement, and schemes have to be notified within six months of its commencement to prevent delay in implementation.

### **Contribution of Street vendors**

Street vendors contribute to the well-being of urban population by providing inexpensive goods to the urban poor and generating employment for a large number of people especially, women. A World Bank Report 2002, based on data from all countries available, showed that informal traders mainly "street vendors" make up 73- 99% of employment in trade and 50-90% of trade gross domestic product. This shows a considerable contribution of street vending to the overall economy in strategic location that is convenient for customers. Street vendors have an important role in the informal economy by making a significant contribution. Globally over 25% of workers operate in the informal sector, and in India almost 80% of workforces are engaged in this informal sector. The increasing urban population with limited income to meet the needs of housing, food and clothing of themselves and their families generates a significant demand for a variety of products and services which can be supplied by informal sector vendors. The street and pavement vendors form a substantial proportion of the informal sector which earns their livelihood through vending. They have flexible vending hours ensuring the economic viability and dynamism of the city. It also creates employment thereby alleviating the hardships of employment. According to Ministry of Urban Development and Poverty Alleviation, there are

over one crore vendors in India contributing to over 50% of country's savings and 63% of the GDP come from vendors.

## CONCLUSION

Street vendors are very important part of the informal sector in the country. It is estimated that around 80 percent of the population are engaged in street vending profession. Women form a large segment of street vending in almost every city. Street vending is not only a source of self-employment to the poor in cities and towns but also a means to provide 'affordable' as well as 'convenient' services to a majority of the urban population. Street vendors are often those who are unable to get regular jobs in the remunerative formal sector on account of their low level of education and skills. They try to solve their livelihoods problems through their own meager financial resource. They are the main distribution channel for a large variety of products of daily consumption like fruits, vegetables, readymade garments, shoes, household gadgets, toys, stationery, newspapers, and magazines and so on. If they were to be eliminated from the urban markets, it would lead to a severe crisis for fruit and vegetable farmers, as well as small scale industries which cannot afford to retail their products through expensive distribution networks in the formal sector. The importance of this sector cannot be undermined, especially considering that the government does not have the capacity to provide jobs to the millions of unemployed and underemployed people in India. Even the corporate sector is able to absorb only a tiny proportion of our expanding work force. Overall employment in the formal sector is actually declining. This means most people in India have to fend for themselves. People in the informal sector ought to be encouraged to grow and prosper if the governments want to reduce unemployment and poverty in our country. They contribute significant role in local economic growth and development of the urban economies. Public authorities considered street vendors as a nuisance and as encroachers of sidewalks and pavements and do not appreciate the valuable services that street vendors provide to the general population of the world. Street vendors provide valuable services to the urban masses while making out a living through their own enterprise, limited resources and labour. Street vendors have been demanding protection from civic agencies and the state government so they can earn their livelihood without fear. Recently Delhi chief minister has assured vendors the government will write to municipal corporations not to evict vendors.

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DOI: **10.5958/2249-7137.2020.00522.4**

## THE ROLE OF MEMORIES OF TOURISTS AND AMBASSADORS IN TRADE AND ECONOMIC RELATIONS OF THE KOKAND KHANATE

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### ABSTRACT

*This article provides information on the fact that since the XVIII century the Kokand Khanate has become an intermediary state, which established trade relations with the peoples of Central Asia, as well as China and East Turkestan. It is also explained that Chinese goods entered the Bukhara and Khiva khanates through the Kokand khanate, and through them to the Eastern countries. Some information is given about the importance of the relations of the Kokand khanate with Russia, the entry of Russia into the Kokand khanate with the annexation of Tashkent to the khanate. The article also provides an overview of some of the details of the foreign economic relations of the Central Asian khanates.*

**KEYWORDS:** China, India, Bukhara, Central Asia, Russia, Khiva, Afghanistan, Dashti Kipchak, East Turkestan, Takhtapul, Sebzor, Labzak, Karasaray, Yangi-Kurgan, Julek, Din-Kurgan, Ak-Machit, Qamish-Kurgan, Avliyo-Ota, G. Kolmogorov, V.V.Vel'yaminov-Zernov, A.Teterevnikov.

### INTRODUCTION

With the independence of our country, radical changes have taken place in various spheres of our society, including in the field of history. A wide range of opportunities for the coverage of true history has been opened, all opportunities for researchers have been created by our state, and the main requirement and goal in this direction is only the objective coverage of history. This article



also pays great attention to the memories of ambassadors and tourists in trade, economic, cultural, social and diplomatic relations of the Russian Empire, Britain and other neighboring countries with Central Asia, including the three khanates. Central Asian states have long had economic, political and cultural ties with China, India, Iran, Afghanistan and other countries in the East, as well as with Russia. In particular, the roots of Uzbekistan's close and friendly relations with its neighbors go back to that long historical period.

### MAIN PART.

The Kokand Khanate established intensive trade relations with the Central Asian khanates, the steppes of neighboring China, India, and Kyrgyzstan. But the relations between the two neighboring states in the eighteenth and nineteenth centuries have not been sufficiently studied. However, important manuscript sources for studying the history of this period contain interesting information in the reports of Russian tourists and ambassadors. Zahiriddin Muhammad Babur's "Boburnoma", Mahmud ibn Wali's "Bahr ul-asror", Sang Muhammad Badakhshi's "History of Badakhshan", Mirza Olim Tashkendi's "Ansab us-salatin" about the relations between Central Asia and East Turkestan and China in the XVI-XVII centuries. and tavorix ul-havoqin", Niyaz Muhammad Hoqandi's "Tarihi Shohruhiy", Qurban Ali Ayoguzi's "Tavorihi khamsayi sharqi". Zahiriddin Muhammad Babur's information that there were a thousand people in the Andijan caravan coming from China testifies to the fact that economic relations between the two countries go back a long way.

The relative development of the Kokand khanate can be attributed to its favorable geographical area, the intersection of caravan routes and the ancient development of agriculture. According to Kokand, the center and capital of the khanate, it is more than 2,000 years old. In the first half of the XVIII-XIX centuries, the city of Kokand was not only one of the largest cities of the khanate, but also one of the largest cities in Central Asia. In the past, the city of Kokand has been looted and destroyed several times by the enemy. It is known that in the 13th century, when the Mongols invaded Central Asia, many cities were destroyed and razed to the ground. Among such cities was Kokand. After that, Kokand was rebuilt only in 1709 and in 1740 the city became the capital of the khanate. Kokand is surrounded by a sturdy defensive wall. Kokand became the political, economic and cultural center of the khanate.

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, India in the west and south, China in the east (via Kashgar), Dashti Kipchak migrants in the north, and especially Russia. Some sources mention that Japanese and English merchants also came to the khanate.

The khanate exported mainly silk and silk fabrics, cotton, leather, precious stones, gold, silver, jewelry and other products. Imported mainly tea, metal, porcelain, household goods, ready-made fabrics, clothes, shoes and others.

The khanate had such large cities as Kokand, Tashkent, Andijan, Namangan, where handicrafts were widely developed. For example: In Kokand there were the following types of handicrafts: coppersmith, jeweler, carver, gunsmith, potter, paperworker, weaver, doppi tailor, embroiderer, bridge maker, blacksmith, baker, cartwright, velvet weaver. bujgun, dyer, gilkor, dorikash, jibachi, walled, degrez, yormadoz, tanner, rifleman, najjar, spearman, grill maker, silkworm, skinner, takachi, tobrez, paranjidoz, tent, chevar, chitgar, carpet. Kokand had a market on

Wednesdays and Sundays. The development of a wide range of handicrafts in the Kokand khanate allowed it to establish trade relations with neighboring countries.

The development of jewelry may be due to the presence of gold deposits in the area belonging to Kokand. For example, gold was obtained from Kosonsoy, the Kokrev River north of Karatag, the Chirchik River, and the upper reaches of the Chatkol River.

In the XVIII-XIX centuries, when paper production in Samarkand was in decline, paper production began to be established in Kokand. The production of this product is associated with the relocation of Samarkand paper masters to Kokand. As a result, Kokand has become a monopoly on paper supplies from the Aral Sea to China. The Kokand paper was taken to Kashgar and even to northern Afghanistan. The paper workshop is located next to the mausoleum behind the Moi Mubarak Gate in Kokand. The paper shed consists of a simple palace, 25-30 square meters in size, with a shed on one side of the porch and a large facility for paper dough on the other side. The master made 300 sheets of paper a day with the help of his caliphs. Paper was produced in places other than Kokand. But Kokand paper was far superior to them in its quality and abundance. In the late Middle Ages, Central Asian scholars, historians, and poets wrote their works on Kokand paper. These papers were also widely used in the office. Local manuscripts and various diplomatic documents are written on Kokand paper. According to Maksimov, a Siberian Cossack who was in Tashkent in the early 19th century, ... paper is made in Kokand and Tashkent. ... leaves information [8:28 P].

The size of the paper was 58 cm long and 50 cm wide. Its 240 leaves are 1 garden, and on the eve and at the beginning of the First World War the first grade cost 6 rubles, the second grade 4 rubles, and the third grade 3 rubles. [9: 124 P]

Kokand also had high-quality paper made of silk. There was little need as silk paper was very expensive. Silk paper is made to order.

The Kokand Khanate was connected with the Central Asian khanates, China, India, Iran, Russia and other countries by caravan routes, with which the khanate entered into intensive trade relations. Russia's trade and political relations with the Kokand khanate developed a little slower than with other Central Asian khanates. This is due to the fact that the khanate is far from Russia and is distinguished by the principality of Tashkent. Political and trade relations between Russia and the Kokand Khanate began to be established in the second decade of the XIX century. The issue of trade and economic relations of the Kokand Khanate with foreign countries is reflected in the reports of Russian ambassadors and tourists, as well as in special works. In particular, in 1813, the translator of the Siberian Corps, Philip Nazarov, came to Kokand on a special mission to resolve the conflict in Petropavlovsk, which resulted in the assassination of the ambassador of the Kokand khan from St. Petersburg. As a result of F. Nazarov's trip to Kokand khanate in 1813-1814, in 1821 the book "Notes on some peoples and lands of Central Asia" was published. The work has a historical and ethnographic character. The book reports on the Kokand trade relations with Kashgar, China, Khiva, Bukhara and Eastern Iran. He attended the reception of the ambassadors of the Kokand Khan and saw the ambassadors of China, Khiva, Bukhara and other countries during the reception. F. Nazarov writes about the city of Uratapa, where the population lives in mud (cotton - A.B.) houses and weaves fluffy handkerchiefs in their homes. The play states that the people of Uratapa traded with Turkmens, Iranians, and nomadic Arabs in the territories belonging to Bukhara.

An article published in the Asian Herald in 1826 reported that the people of Kokand were engaged in the cultivation of cotton and silk, and that the Kokand people traded with China, Khiva, and Iran [6: 229-230].

One of Kokand's main trading partners was Tashkent (during the reign). Tashkent has always had a special place in the foreign economic relations of Central Asia with the eastern countries. Tashkent has a history of more than 2000 years, and the first data are mentioned in ancient Eastern sources from the II century BC. In Russian sources, the city of Tashkent was included in the "Book of Bolshoi Drawing" in the XVI century under the name Tashkura. In the second half of the 16th century, Tashkent was annexed to the Bukhara Khanate. In the Middle Ages, Tashkent was famous for its goods. Mahmud ibn Wali writes about the goods taken from Tashkent, about the captives of Kalmykia, about medicinal plants, including plants used to stop bleeding [5:57-p]. These drugs have also been exported to China. Mahmud ibn Wali in his work gives information about a perennial semi-shrub called darmana, which contains terpenoid santonin in its leaves and flower clusters, which has the property of killing worms. Darmana was transported from Tashkent to many European countries. According to the data, in the 30s of the XVIII century, traders transported the seeds of medicine grown in Tashkent to Iran and Turkey, and from Turkey to the German states [3: 96-97-p].

From the 17th to the 18th centuries, Tashkent's trade and economic relations with Russia began to develop. Tashkent merchants often visited Siberian cities. In 1739, the first Russian trade caravan arrived in Tashkent from Orenburg. By the second half of the 18th century, an independent Tashkent principality was formed. In the 19th century, Tashkent lost its independence and came under the rule of the Kokand Khanate. In the second half of the 18th century, as the Central Asian khanates developed trade relations with Russia and Kazakhstan, Tashkent became the center of trade relations. During this period, the city of Tashkent was divided into the following mahallas, depending on the area of handicrafts: knife-maker, coppersmith, dog-breeder, archer, miner, degrizon-pot maker. Residents of Takhtapul, Sebzor, Labzak, Karasaray mahallas were engaged in gardening, handicrafts and others. The inhabitants of Akhunguzar, Parchabof, Jangoh were engaged in handicrafts, weaving and trade. Tashkent weavers wove gray, bekasam, alacha, and velvet, and traders took these goods to neighboring countries for sale.

There were several caravanserais in Tashkent, where merchants from different countries stopped, including Sayidazim, Nurmuhammad Kushbegi, Namangan, and others [12: 307-p]. AP Khoroshkhin reminds that there are 29 caravanserais in Tashkent. He also noted the number of stalls selling goods in the city market [15:29-b].

It is known from history that Tashkent, like the cities of Central Asia, is located on the Great Silk Road, which connects East and West. The caravan route came from Kashgar to Tashkent via Osh. Tashkent is one of the most important cities in Central Asia, and Kokand has also acted as a mediator in trade relations with Russia. At the same time, the Russian government tried to trade with the Central Asian khanates through Tashkent and even through China.

The Russian state was interested in establishing trade and diplomatic relations with the Kokand Khanate through Tashkent. Because Russia could go to Kashgar via Tashkent and Kokand. Russia saw the role of Tashkent traders as a mediator in trade relations with East Turkestan. The Russians benefited greatly from Tashkent's supply of Kashgar goods to Russia via Kokand.

According to the data, in the late 18th century, Semipalatinsk customs documents contain information about the growing role of Tashkent traders in Russia's relations with East Turkestan.

As a confirmation of our opinion, at the end of the XVIII century, in November 1791, the following goods were delivered to Yamishev: 612 rubles 50 kopecks 19 pounds 30 pounds of Tashkent white paper, 814 rubles 70 kopecks 894 arshin floral and road Tashkent fabric, 9735 arshin Tashkent curtain, 799 pieces of Tashkent chaponi, chakmon, blue zenden. In October 1792, the following goods were brought to Yamishev: camel hair for 22 rubles 64 kopecks (unit of measurement not specified), 1301 sheep for 1,479 rubles for 20 kopecks, 340 head of cattle for 3902 rubles, 4 pieces of Tashkent white goat, 119 pieces of blue goat and others. In the same year, along with Tashkent goods, Chinese and East Turkestan goods, including 17 rubles 17.5 (weight unknown), 1 ruble 80 cups 18 pounds of black tea, 1 ruble 50 cups 10 pounds of wooden tea, 5 rubles 15 pounds of green tea and others [17: 140 p].

In Semipalatinsk there are courtyards of Tashkent residents, where Chinese, Kashgar and Tashkent goods are exchanged for Russian goods. The trade was done through barter and was also sold for cash.

According to sources, the active involvement of the Kokand Khanate in the political process and relations in Central Asia dates back to the time of Umarkhan. It is known that Umarkhan's envoys were sent to Khiva, China and Turkey.

According to the data of the middle of the XIX century, 16,000 camels came to Tashkent every year from Kokand and other cities of the khanate. Of these, 4,000 camels brought cotton, 200 camels spun yarn, 10,000 camels spun cotton, semi-silk and silk fabrics, coats, blankets, chador (stuffed with leather), etc., and the remaining 2,000 camels brought wet fruits. Annual import of goods is 4580 thousand rubles. reached [12: 313 p]. More Russian goods were brought to Kokand and other cities of the khanate from Tashkent. Because trade with Russia was carried out through Tashkent. The trade turnover between Kokand and Tashkent is about \$ 7 million a year. rubles. The proximity of the distance between Tashkent and Kokand has given Tashkent traders a great opportunity to trade actively. Given the annual turnover, the relations of Tashkent traders with Kokand were more important.

The Kokand khanate has long established traditional trade relations with the southern and southeastern regions of Kazakhstan. Kokand traders exchanged coats, blankets, and various fabrics for the livestock, leather, oil, wool, and fur of Kazakh nomads [7: 186-p].

In the 20s and 30s of the 19th century, the rulers of Kokand built a number of fortresses in South Kazakhstan, including Yangi-Kurgan, Julek, Din-Kurgan, Ak-Machit, Qamish-Kurgan, Avliya-Ota and others. In each of them he built military units, mosques, warehouses and blacksmith workshops, houses for merchants, shops and markets.

Most of the goods that Kokand traders brought to the Kazakh deserts were cotton yarn and dried fruits. Up to 15,000 camels are brought to the desert each year, and up to 3,000 camels are brought to the desert [12:40 p.]. G. According to Kolmogorov, every Kazakh family bought ready-made clothes from Bukhara, Kokand and China [4: 159-p]

Central Asian traders reportedly exchanged their goods for small and large cattle. For example, every year 200,000 sheep are driven to Tashkent, about 100,000 to Kokand and 100,000 to

Bukhara. In the exchange of goods, sheep was considered a means of circulation (instead of money). The price of a sheep ranged from 1 ruble 50 kopecks to 20 rubles silver.

In February-May 1852, a merchant from Rostov, S.Ya. Klyucharev, visited Tashkent and wrote in his diary the events he witnessed. VV Velyaminov-Zernov used the diary, enriched it with comments and additions, and wrote "Historical News of the Kokand Khanate, at Muhammad-Ali do Khudayar-Khana" [2: 363-p]. The evidence presented in the diary helps to shed more light on the political ties and trade relations between the khanates. In particular, on April 3 and 29, trade caravans arrived in Tashkent from Bukhara. Most of the goods in the caravan that arrived on April 3 were opium. The diary stated that "traders in Gulja, Chuguchak, Kashgar, and all the border towns of China immediately bought all the opium in cash because they knew that there would be a lot of profit from this commodity" [2: p. 364].

There were Kokand traders in Tashkent at that time. Kazakhs began to bring cattle to the desert from Tashkent, and 20,000 sheep were sold in one day. On April 8, a caravan left Tashkent for Troitsk and Gulja. The caravan that went to Gulja had nothing but gold (in the form of coins and money) and opium. On April 13, a caravan left Tashkent for Troitsk, Petropavlovsk, Bukhara, and on April 15 for Petropavlovsk and Semipalatinsk.

According to VV Velyaminov-Zernov, Tashkent was the central mediator between the Central Asian khanates, as well as between Russia and Kokand, and the Kokand khanate's trade relations with China. However, as a result of the unrest in Tashkent, caravans coming to Tashkent brought less goods and, conversely, more goods.

According to AP Teterevnikov, in the 60s of the XIX century, traders estimated that the total amount of trade in Tashkent could be 10,000,000 rubles [11-56-p].

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 juzes to Russia led to the cessation of civil wars between the ruling classes, which opened the way for trade relations with Central Asia, including the Kokand khanate with Siberia, the Urals, and the Volga region.

The Khanate also maintained 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 also reports that Indian merchants lived in the cities of the khanate and engaged in trade and even usury. 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 brought to the Emirate of Bukhara Russian iron, steel and cast iron, tobacco, handkerchiefs, rice and some Chinese or local silk fabrics, tea, porcelain, which were necessary for economic life. Indian tea, surp cloth, silk, dyes, opium (taryok), gold jewelry, yarn and cloth were brought to Kokand.

Russian Chiti 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 British fabrics from Mashhad, as well as a small number of Kabul tunics and turbans, and Indian attire.



The continuity and development of trade relations depended on the condition of transport and caravan routes. Trade relations between Kokand and Bukhara had a special place here. The caravan route between them was flat and carts were used to transport the goods. According to N.V. Khanikov, the first of the two main Kokand caravans arrived in Bukhara in early summer and the second in late autumn, and the smaller caravans traveled throughout the year. In addition to local handicrafts, the Kokand people brought to Bukhara not only local handicrafts, but also Chinese goods - tea, silver ingots, porcelain and necklaces, and other Russian goods [14: 175 p]. The main goods exported from Kokand to Bukhara are silk and silk fabrics, which are imported annually up to 8,000 pounds. The highest quality silk is called "chilla" and it is produced in Kokand.

Good trade relations have been established between Kokand and Bukhara. Kokand goods were sold not only in Bukhara markets, but also from Bukhara to Kabul. Kokand silk was superior to Bukhara silk in terms of quality. Therefore, its price was 16 gold coins per pound, and Khojand silk was 15 gold coins [10; 414 p].

Tea, porcelain, partly Chinese and Kokand silk fabrics, and many Russian iron, cast iron, and steel products were sold in Bukhara markets. The proximity of Tashkent to the Siberian border has allowed Tashkent traders to deliver goods to Bukhara markets in a short period of time. Most of these iron, cast iron and steel products were taken to Gissar, Badakhshan, Khulm, Maymand and other places and sold by traders from Tashkent and Khiva [14: 175 p].

Silk fabric called "chilla" was transported from Kokand to India and Afghanistan. It should be noted that, as in Bukhara, Kokand was inhabited by Indians and Afghans, who played an important role in Kokand-Bukhara relations. According to reports, they were about 70 in Bukhara.

Kokand traded with India through Bukhara. In particular, Anglo-Indian goods were brought from Peshawar to Kokand via Bukhara. Annually, 10-15,000 camels are brought to Central Asia from Peshawar via Kabul, Karshi, Samarkand and Kokand. The goods cited were mainly white goods, floral-embroidered shirts, sugar, indigo, thick surp, and chit. Of the 10-15,000 camel goods brought from Peshawar to Central Asia, 1,000 camels were bombey teas.

In India, the demand for Kokand silk was high. Every year, 1,000 camels of silk are shipped from Kokand, Bukhara and India.

In the 19th century, in order to gain trade in the Central Asian khanates, the British used the help of Indian Muslims living near Peshawar in northern India as one of the ways to distribute goods to the Bukhara and Kokand khanates [11:53 p]. British traders, known as parachutes, lent their goods to parachutes for a period of three years, which in turn sold parachute goods on credit in Bukhara and Kokand. Some of the parachutes were located in Bukhara and Kokand, and in this way tried to spread British goods more widely. British goods entered Central Asia via two routes, Kabul and Mashhad. It was brought to Tashkent by Indians who were in constant contact with it. The Indians brought local Indian goods along with British goods. The author says their main job was usury. A.N. Teterevnikov writes that he has recently noticed that British goods are rarely imported to Tashkent, and only the rest of the previously imported goods are sold.

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According to researcher A.Sh. Shomansurova, every year from Bukhara, Kokand, Tashkent via Kabul 10-15 thousand camels loaded with 160-200 thousand pounds of various goods were transported to India. In this trade he played an important role in the povin, who was mainly from the Lohani tribe of the Afghans. Povinda benefited greatly from this trade [16:12 p]

Kokand traders also reached Turkey and Arab countries with trade caravans. A.Vamberi writes that he saw that the pilgrims took with them "40 dujas (12 pieces) of silk, Bukhara handkerchiefs, about 2,000 knives, 30 pieces of Namangan silk cloth, many Kokand skullcaps" [1: 374 p].

Kokand-Russia trade relations also play a special role in Kokand's foreign relations. According to sources, the rapid development of Russian industry after 1861 and the growing demand for raw materials and foreign markets were one of the main reasons for Russia's active occupation of the Kokand market and its unlimited use. Iron, copper, steel, cast iron and iron products, chit and low-quality fabrics, small quantities of velvet, sugar, glass, leather, sheep and its skins, leather and leather products, felt from the Kazakh deserts, which were subject to Russia, were brought to Kokand from Russia. Cotton was mainly exported from the khanate to Russia.

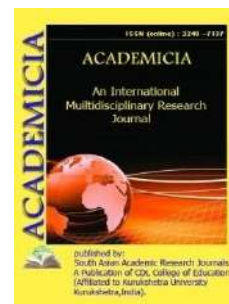
### CONCLUSION.

In conclusion, it should be noted that the Kokand Khanate established trade and economic relations with the Central Asian khanates, China, including East Turkestan, India, Iran, Turkey, Russia and other countries. The Kokand Khanate had close trade relations, especially with China, including Kashgar. In addition to direct trade with Kashgar, Kokand also acted as an intermediary in China's trade relations with the Central Asian khanates, India, Iran, and Russia. The Kokand caravanserais contain goods imported from India, Tibet, Kashgar, Bukhara, Afghanistan and Russia. It should be noted that Tashkent has a special place in these trade relations.

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DOI: **10.5958/2249-7137.2020.00523.6**

## THE ROLE OF NATIONAL-CULTURAL COMMUNICATIONS IN THE CULTURE OF NAMING

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### ABSTRACT

*The article explains the role of national Karakalpak cultural relations in the culture of naming, as well as the features that should be considered when choosing names. In addition, the meanings of the names have also been studied in detail, and the necessary conclusions have been drawn in this paper.*

**KEYWORDS:** *Karakalpak Folklore, Central Asia, Karakalpak Language, The Word "Jan" , "Gul" And Etc, New Karakalpak Alphabet*

### INTRODUCTION

The folklore of the Karakalpak people is the basis of the spiritual world of our people. The role of oral folklore in educating future generations as spiritually rich and perfect people deserves special attention. In particular, the personal names used in the 100-volume Karakalpak folklore provide valuable information about the centuries-old naming culture of our people. Oral folklore is one of the most important issues in Karakalpak linguistics, which requires a specific study of personal names.

In ancient times, when our ancestors named children, they believed that their happiness and fortune depend on the name given to them. Clearly, the name becomes a guardian of man, gives him or her strength, becomes a weapon that will be his or her lifelong companion.[1,591].In the lexical structure of Karakalpak folklore there are many words of both Arabic and Persian.Indeed, the words of the Persian language have been associated with the widespread assimilation of science, culture and religion in Central Asia and Kazakhstan since ancient times, as a result of the close interdependence of the Turkic and Iranian peoples. So that, it was said that in some places Turkic-speaking peoples spoke both Sogdian and Turkic languages [2, 24]. This situation

influences the introduction of some words, terms and human names from Persian into Karakalpak language and folklore along with some Turkic languages.

In particular, the Persian words **jan, dos, dana, pir, perde, taza, durys, gul, pakhta** and etc. come from the anthrop componential service in the formation of Karakalpak human names and are used in conjunction with Persian words to form human names.[3:163]. For instance:

Jaskelen loved,  
His only one friend,  
He called him **Jandos** (Jaskelen, volume 44, page 220).  
Gulbazar`s sister **Uljan**,  
No one would say good things about them  
(Bekimbetbaksy, 65-v,439-p).

The word "jan" in the works of O. Bekbawlov is an Arabic word meaning "human soul, living creature, living man." [4, 34], in Begmatov's [5, 137] and Dospanov's [6, 28] works, human names beginning with the word jan are derived from Persian.

The word "gul" in Persian means "beautiful as a flower, or its life as open as a flower" [5, 91].

In the land Jiydeli-Baysyn,  
The daughter of Erman bay, darling  
I was his beauty—**Gulbiybi** (4-t, Alp, 466-p).  
Utesh said to **Kurbangul**: apay, you  
Accept my advice to you (Utesh batyr, 62-v, 340-p)

Sayimbetov said that in the Karakalpak language it means pampering in the names of people connected with women and is used effectively, sometimes it can be the first component of human names connected with men [3, 48]. Such names are often found in folklore.

After some years, the son of the khan **Gulbulbul** was sixteen .(69-v, Btert, 244-p).

Turken`s great-grandfather **Gulmurat** koregen (83-v, Awyzgur, 380-p).

The word "pir" is called in Persian "an old man and a saint, the founder of a certain profession" [7, 219]. In another work, "teacher, head" [8, 178] and in the explanatory dictionary of the Karakalpak language, "a man who has lived a long life or religious leader, supporter, helper," [9, 111]. Human names beginning with this word are rarely used in folklore. For instance:

The man named **Pireke**, from the uruwmuyten and from tiyresamat, who was ready to answer heard about the girl and visited her home afternoon (94-v, Juwapaytys, 292-p).

In this case, the affix -ek in the name of Pireke is used in the Karakalpak language to abbreviate human names and mean to lessen and pamper.

The eldest son of **Pirlepes** - Yusup,  
There is no cure for quarrel (62-v, Uteshbatyr, 329-p).

The name Pirlepes means the miracle, the power of the “pir”. [6, 51]. The word "Dos" in Persian is "1. A person who has a close friendship with someone, who lives in peace, 2. A supporter of something or a person, his protector. Indir. A caring person, spiritual nourishment" [9, 82]. Begmatov's works mean "friend, adviser to his father or older brothers and sisters" [5, 121]. Currently, in the Karakalpak language, human names consisting of the only "dos" component do not occur. However, anthroponyms are used in folklore as follows.

At these times, brave guys called **Dos**, Kos moved around Tamdibulak from Kir and they also began to rule their surroundings. (82-v, Sheshenliksoz, 318-p)

**Dosan** listened Esen's words. (62-t, Ot b, 356-p)

One day, when khan Alewshe was sitting on the throne with his wallahs, Karakalpak **Dosimbiy**, Kazakh Erimbiy, Saraman, Mulkaman, Kalkaman, Hakim gazed at khan curiously. (28-v, Ersayim, 111-p)

Once upon a time, there was a rich man called Kawender. A poor boy called **Dosbergen** borrowed a thousand tilla from Kawender and made a trade to another land. (67-v, Qiyaert, 172-p).

Menglibay had a karatamir friend called **Dosekbay**. (83-v, Aw gu'r, 370-p).

Not sleeping at night, after walking seven days without rest, **Dosmambet** came to see his father, and told him some words. (1-v, Alpamis, 33-p).

The word “taza” is a Persian word which means “clean, pure. 2. Truth, reality, without adds”. [9, 257]. People's names which comes with the word “taza” are rarely found in folklore. For example,

After coming back, Let's invite Tazabaypadishah as a guest. (68-v, Siyqert, 184-p).

People's names which consist of words “dana, perde, duris, paxta” stated above are not encountered in folklore works.

O. Bekbawlov includes the words “**dar, tar, biy, nama, xan, xor, xosh, zar, dat, dara, darg'a, du'r, jipek, za'n'gi, miyir, dil**” and etc. in Persian words.

The word “dar” is “a pillar tightened to the rope which is used for people who were sentenced to death punishment. 2. It makes nouns which means profession when it used as a helping affix”. [4, 99].

It is used in people's names as following forms.

**Kaldar**'s son Hasen from Ispahan,

My dear king who took away him with forth. (30-v, Awezhan, 175-p).

I'll go to Bukhara khan **Muraydar**,

Taking a letter from Kokan khan MollaAliy. (46-v, Izzetqiz, 156-p).

My son died, world seemed narrower,

I missed him so much being passionate,

Played happily my son **Tilladar**



(43-v, Ja'ha'nsha, 50-p).

Professor E.Berdimuratov divides the words into two periods which came to Karakalpak language from other languages through Russian and other languages over Russian language when giving description to the historical relations coming from earlier times between Karakalpaks and Russian people: the period until 1917; 2.the period after 1917 [2,169]. If we show some examples from folklore works of those periods, a number of personal names which came from Russian are rarely found. For example:

Khan of Khiva had the head of Khiva garrison of the army of Russian king put into dungeon not relying on only the help of **Kolosovskiy**. (An'izlar, 79-v, 124-p)

In one thousand eight hundred,

And ninety-two,

At the time of tyrant **Nikolay**,

Ruled the khanate Madreyim,

Sitting on the gold throne (56-v, Yusipmergen, 56-v, 423-p).

They don't know a Russian boy **Sergey**,

(Shayirlaraytisi, 95-v, 370-p).

My daughter-in-law's mother's name is **Maria**, too

Made it known being fed up (Bekimbetbaqsinin' bayazi, 65-v, 440-p).

If we pay attention to the cultural language scene of nature surrounded us as depicting object, folklorist tries to portray folkloric meanings about the model with his own conceptions whereas linguist tries to depict semantics of word [10, 15]. Each nation expresses certain national customs and traditions which they have. That is to say, we are aware of national customs and traditions of each nation. Each person is dependent on certain culture, language, history or literature which expresses ethnic nationality on them. Specifically, language is rather related with culture as well as being social incident. Kept samples of language and culture like this are giving good result in our language. We can observe custom of giving name of Karakalpaks as an example of our national folklore. Stating specifically, custom of giving a surname in Karakalpak folklore has also certain peculiarities. Scientist O.Sayimbetov mentioned in his work that there were not any surnames until 40s, formalizing people's names were carried out together with people's fathers' names. We can be witness to this case in folklore works. Especially, naming the person with his father's name can be marked precisely in epic poems. We characterize this through the following examples.

#### **Tolibay's son –**

Tolibay's sons are Tinis, Saribay,

Saribay's son is Badekbay,

There was Bazargul. (Shejire, 80-v, 215-p)

#### **Shakhan's son Akshakhan –**

Shakhan's son Akshakhan,

In the land of Akshakhan,

In karakipshakuriw,

Sadirbay's son Kidirbay,

He's satisfied with his wealth. (Qoblan, 13-v, 377-p)

**Shonkara's son Aymirza** – Shonkara's son Aymirzabiy (Shej, 80-v, 216-p)

**Janibek's sons Haydar, Aliybek** – Janibek's sons Haydar, Aliybek. He had two sons (Shejire, 80-v, 215-p)

**Kassap's son Awez Khan** – Kassap's son Awez Khan, I would like him to be eater to you (Ba'zirgen, 16-v, 199-p)

New Karakalpak alphabet was accepted based on Russian graphics from 1940. From this year, particular changes appeared in the structure of Karakalpak anthroponomy. Firstly, this case was apparent on formalizing issues of people's names together with their fathers' names, that is to say, they became known with Russian samples of surnames. The form of -ov(ev) for men, and form of -ova(eva) for women in Russian language were took in Karakalpak language. This kind of sample can be found in karakalpak folklore, too. For instance,

**Asan Begimov** – While Asan Begimov was a representative in one region(unknown), he sent letter with poems in it to Dawletiyar Kasimov. (Shayirlaraytisi, 95-v, 367-p)

**Abdikerim Atajanov** – Agronomist of this town Abdikerim Atajanov also went to a party in Kegeyli, there was Palwaniyaz, too. (Awizekigu'rrin'ler, 83-v, 414-p)

**Bekbawli Turjanov** – The agronomist called Bekbawli Turjanov was a person who is always cheerful singing some lines of songs. (Awizekigu'rrin'ler, 83-v, 413-p)

**Jubatkan Bulakbaev** – Shepherd Jubatkan Bulakbaev took care of sheep for many years in Nazarbay. (An'izlar, 79-v, 163-p)

**Mateke Jumanazarov** – M. Jumanazarov was the head of the brigade of representatives. (Awizekigu'rrin'ler, 83-v, 405-p)

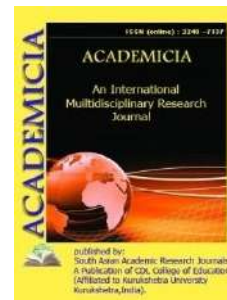
These surnames are formed by adding some elements of their fathers' names. In the basis of surname, there should be the name which means the personal background and the origin of people. In Korea among today's world nations, from mid-centuries, even earlier, the names of people served two duties; the name and surname. According to I.A.Soberevskiy, in Russian, the surname was visible in composition of people's names from XIV. T.Januzakov stated that the names of uriw were used as surnames in Kazakh nation in earlier times.

We represented samples of giving surnames in Karakalpak folklore and clarified them with samples based on our national culture during our work. By means of this, we make known that people's names which inform our history were used in Karakalpak folklore and they play an important role in our today's life. Studying the issues of other people's names related to our national culture in Karakalpak folklore will be our obligation in the future.

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DOI: **10.5958/2249-7137.2020.00524.8**

## THE EFFECTIVENESS OF FINANCING HIGHER EDUCATIONAL INSTITUTIONS IN A MARKET ECONOMY

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### ABSTRACT

*The article gives the basic principles and directions of increasing the effectiveness of financing state and non-state higher educational institutions, and according to the requirements of regulatory documents shows the calculation of the amount of budgetary funds for higher educational institutions using cost standards and correction factors.*

**KEYWORDS:** *State Higher Educational Institutions, Non-State Higher Educational Institutions, Financing, Efficiency, Educational Services, Market, Highly Qualified Personnel, Competitive Environment, Budget, Self-Financing.*

### INTRODUCTION

Any state at each stage of the educational development, which is located at the intersection of the demand curve and various intersection curves, sets its own nature of financing. However, to simplify this process, only one demand curve is given, although the curves also take on a different character.

It should be noted that in the market of educational services, prices are quite optimized, although in the case of excess demand for a certain cost of educational services (for example, the cost of one semester study at a university) as a result of competition between buyers, i.e. in the presence of competition, there should be an increase in value until this excess appears. However, this does not happen. In our opinion, this is explained by the fact that education refers to industries with a financed production cycle. Although, in contrast to other industries where production is set by changing the level of prices, in education, one of the factors that affects to decision-making on the cost of training for a new set is the number of students enrolled in the past year.

In accordance to the regulatory documents [1,3], a decision was made to gradually transition to a system of self-financing of higher education institutions since 2020, taking into account the high demand of certain areas of undergraduate (graduate specialties) and financial stability of HEU. These documents define the following tasks of universities that are transitioning to a self-financing system:

The provision of additional educational services, advanced training of specialists in various sectors of the economy and the introduction of other paid services;

The organization of scientific research aimed at solving urgent problems in the relevant field, the preparation of scientific and scientific-pedagogical personnel in this field;

Conducting fundamental, practical and innovative research aimed at solving the scientific problems of the industry in cooperation with research institutions;

Continuous improvement of the scientific and pedagogical potential of higher education institutions by regularly sending prospective young graduates to master and doctoral programs in domestic and foreign universities and research centers;

Introducing to the practice of concluding one-year contracts between higher education institutions and teaching staff in order to select highly qualified professors and teachers who can widely use modern teaching technologies and conduct research.

It is necessary to take into account that in the market of educational services in the field of higher education, due to their significant price differentiation, adequate to solvent demand, and subject to a limited number of services financed by the state, an excess of supply encourages the manufacturer to switch to goods - substitutes and adjust the marketing policy. In Uzbekistan, this situation can be traced to the strategy of technical, technological, economic and other professional universities.

A specific factor affecting to the formation of equilibrium prices is government financial policy. Whereas non-priority specialties are mainly not subject of budget financing. Obviously, in the current conditions of the development of new educational and information technologies, solvent demand will seek supply in countries that implement market or mixed education models. If the state provides the institution of higher education with the opportunity to provide educational services on a paid basis, the non-market model is manifested in the fact that the funds earned by the university are state revenue and must be transferred to the state budget.

Exactly this option that was reflected in the Law "On the Budget" of the Republic of Uzbekistan, which regulates relations in the sphere of execution of the state budget. At the same time, extra-budgetary funds received by educational institutions from carrying out independent activities in the market are budget revenues. Obviously, this provision characterizes the non-market model of education, since the centralized distribution means covering the budget deficit.

In market conditions, the choice of priority, in essence, means state budget support. This is due to the fact that in recent years, state policy in identifying priority projects and activities has become more open. The same applies to the requirements, the compliance with which gives educational institutions a formal right to apply for budget financing.

In higher education, according to opinions of some scholars, both foreign and domestic, based on the experience of reforming higher education in post-industrial countries, focused on the

widespread use of high technologies and creating optimal conditions for the development of personality and improving the quality of life, the following priorities are highlighted today:

1. Training of engineers, manufacturing technologists, specialists in information and communication technologies and the digital economy of high qualification, with innovative potential, able to organize the production of highly competitive products, ensure the permanent introduction of high technologies and the promotion of goods, especially high-tech products, to international markets.
2. Training of young scientists for the accelerated development of basic, applied and technological research in those industries and areas in which our country can take a leading position and identify competitors.
3. Retraining of highly qualified specialists, providing further high quality production and economy management.

Currently, in Uzbekistan there are more than 8620 thousand business entities. This means that for the effective functioning of the market, along with a large number of specialists in technical and technological areas, the training of economists, financiers, lawyers, managers and marketers is still relevant. In view of the foregoing, forecasting the training of highly qualified specialists should be aimed at increasing, rather than reducing, the training of necessary specialists for industries (fields) and the economy as a whole.

When the government continues to take the path of reducing its share of financing for the training of specialists, of course, the possibilities of training the necessary specialists for sectors of the economy will be reduced.

Neither need to be guided by the fact that a market economy will put everything in its place. Moreover, Uzbekistan is the only country in the world where 35 percent or more of the state budget is allocated to education.

At the same time, higher educational institutions should not take a hibernation position in this direction. They should be active in seeking additional financial resources to expand the training of highly qualified specialists. It is known that in a market economy there are many sources of financing and investment in industries and sectors of the economy. In this regard, the sphere of education is not excluded.

In the initial period of transition to the market, significant changes occurred in the financing of higher educational institutions. In order to develop forms and methods of teaching, the use of new pedagogical technologies were involved to the various international funds and grants. It is no coincidence that in 2012 year Uzbekistan was in the second place among the countries of the world in the ranking the innovative technologies using in the educational process.

In modern conditions, for example, Ishina I.V., Makarenkov E.V., Morgan E.V., Khalin V.G. [5-9] and other researchers are supporters of the development of extra budgetary resources in higher educational institutions. Perhaps this is when universities fully put their products on the intelligent market. However, if universities have not reached this level of development, then it will be necessary to provide funding for educational institutions through the state budget. Therefore, we are supporters of mixed financing, both budgetary and extra-budgetary funds.

In addition, it should be noted that one of the main requirements for increasing the effectiveness of higher educational institutions is government funding. At the same time, state funding of



universities can be expanded on the basis of many criteria. For example, used in practice in many developed countries, not only on the basis of the number of applicants to universities, but also those who received the highest scores on the results of testing (entrance exams), educational and research works conducted at higher educational institutions, the level of organization of state grants and the volume of contractual work, updating and restoration of fixed assets, efficient use of management costs and more. Moreover, the most important thing in educational institutions is the creation and development of a competitive environment. The fact is that the development of supply and demand determines the number of those enterprises and organizations for which solvency for contractors can be increased. This in turn prevents a decreasing of government funding.

In accordance with Resolutions [2,4], the Ministry of Finance and the Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan take measures and in accordance with this regulatory document, the calculation of the budget funds for a university using cost standards and correction factors is carried out according to the following formula:

$$BCB = (BH31 * K1 + BH32 * K2 + BH33) * N + (BHД1 * N_{dc} - N_{dce}) + BHД2 * N_{dce}$$

where: BCB - the amount of budget funds for the university; BH31 - the basic standard of current costs per university student, which includes labor costs, a single social payment and scholarships, hourly wages, as well as allowances from the funds of the special material incentive fund and other allowances and surcharges provided by law; BH32 - the basic standard of current costs per university student in 4 groups of expenses; BH33 - the basic cost standard for expenses on the development and improvement of the material and technical base of the university, which determines the amount of funds allocated for the acquisition of fixed assets and major repairs; N is the average annual number of students in all areas and courses of education (coefficient 0.1 is applied for correspondence students).

The average annual number of students is determined taking into account the planned changes in the student continent during the financial year for courses (admission, graduation, expulsion) and is calculated by the formula:

$$N = Y_H + Y_n / 3 - Y_B / 2 - Y_O * 0,6$$

where: N- is the average annual number of students;  $Y_H$  - student population at the beginning of the year;  $Y_n$  - the expected contingent of student enrollment;  $Y_B$  - the expected student population;  $Y_O$  - is the expected contingent of deductions; K1 - correction factor for increasing the university's expenses on wages, a single social payment and scholarships, based on the specifics of the educational process of the university; K2 — correction factor for increasing the university's expenses for the 4th group of expenses, applied based on the specifics of the university's educational process; BHД1 - the basic standard of expenses for providing one university student from among orphans and children left without parental care and who are fully supported by the state; BHД2- the basic standard of expenses for providing one university graduate from among orphans and children left without parental care and who are fully supported by the state;  $N_{dc}$  - the number of university students at the beginning of the year among orphans and children left without parental care and who are fully supported by the state;

Ндсв - the number of university graduates in the current financial year from among orphans and children left without parental care and fully supported by the state.

In Western countries, three financial and economic models of education are currently formed to finance the education system: 1) a model based on the free market; 2) a model that determines the role of the state in financing vocational education; 3) a model based on the principles of the state market. The first model is used in many countries of the world. Here, priority is given to public funding. However, other sources of financing are also used, such as foreign investment, sponsored and other private funds.

In addition, this model facilitates the transition of educational institutions to market entities, i.e. adjusted to the demand of institutions to the demand of the labor market. The essence of the third model is that higher educational institutions are more focused on the principle of self-financing, i.e. development of private universities. This model to some extent removes budgetary tension for the state. However, with this model, children of wealthy families can receive higher education. So this model is used in limited countries of the world. In the second model of the education system, the main place is given to state financing.

Education is formed only at the expense of the state budget. This model is common in selected Asian and Scandinavian countries. First of all, the state, regions and municipal structures all budget funds are allocated under the responsibility of higher educational institutions and the state constantly monitors the effectiveness of the allocated funds. At the same time, the state, allocating huge amounts of money, supports the policy of legal independence of HEU. In addition, the decrease in the financial responsibility of HEU is not able to provide education to all sectors of society.

Proponents of this model argue that improving equity in education should be based on the following factors: 1) the development of voucherization of education; 2) tuition fees on credit and in stages; 3) payment for the training of modern highly qualified personnel mainly at the request of organizations and enterprises; 4) payment for social training through the implementation of productive activities based on the achievements of modern "know-how".

Thus, considering the effectiveness of financing higher education institutions in a market environment, it should be noted that all financing measures are aimed at training highly qualified personnel to improve the quality and competitiveness of specialists with higher education.

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DOI: **10.5958/2249-7137.2020.00525.X**

## DEVELOPMENT OF ARTICLE IN CRITICISM OF UZBEK LITERARY

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### ABSTRACT

*The article analyses the development of the controversial article genre of the early twentieth century that has been little examined in literary criticism, literary process and attitude of the poet, prose writers. The problem is clarified in the example of creative works of Chulpan, Aybek, Fitrat.*

**KEYWORDS:** *Literary Criticism, Dispute, Discussion, Controversial Article, Literary Process, Critic.*

### INTRODUCTION

Genres of literary criticism are diverse and has a different character, and there is an equal struggle for the development of literature. Genres belonging to a certain group have a character of propaganda related to the writing and publication of a work of art: reviews, literary-critical articles, literary letter genres mainly perform such a function. Another group of genres has the character of generalizing the life and work of the writer: portrait-article, literary portrait, critical-biographical essay, essays serve such a purpose. Thus, all genres serve the same purpose, serve to promote literature as a unique tool of scientific and artistic thinking, have the ability to draw holistic conclusions about the creator and his work, creating a single scientific and artistic system.

Among the genres of literary criticism, the literary-critical article is the most common. The article is interpreted in the Glossary of Literary Terms as "a journalistic work written on issues of daily important socio-political, cultural and literary life for newspapers and magazines[1.78]". This means that the article is intended to provide information. Indeed, articles in the daily press are intended for the public, are written in an understandable language and in an interesting style, and are largely the product of journalistic research. The author of the article should use a variety

of terms in the field in order to make the essence of the chosen topic understandable to the public and provide explanations and dictionaries to make it understandable.

Depending on the topic, content and essence of the article, it has internal views such as political article, scientific article, journalistic article. "An article on research in the field of literature is an expression of literary and aesthetic views. In such articles, some kind of work, variety of literary problem is analyzed and the scientific and aesthetic conclusions arising in the process are described. Due to this feature, such articles are called literary-critical articles" [2,28].

A type of literary-critical article is a problematic article that plays an important role in literary criticism. It poses a clear problem and reveals its scientific and theoretical essence. In a problematic literary-critical article, deep issues of literature and literary criticism, current problems can be solved. Issues such as problematic articles, their types and development are rarely studied in Uzbek literature, and their study is one of the urgent tasks.

### **Main body**

A problematic article can be in the form of a scientific-theoretical discussion or research that focuses on the poetics of a work and illuminates the intended scientific event in a monograph, on the basis of the aesthetics of artistic creation. By this quality they are common in two forms:

- 1) Literary-critical article of a debating nature, it has become a tradition to summarize it and express it in the form of "debate-article". It is sometimes called a "conversation-article" because it is conducted in the form of a conversation. Debate research is more inactive in the press than scientific problem articles, and their proliferation further enhances the quality of scientific problem articles. The debate has evolved since the 1920s.
- 2) The research article is of a research character. For example, in the articles of the critic O. Sharafiddinov, it is clear that the vital and literary evidence is completely subordinated to the drawing of scientific and theoretical conclusions. A true scientist illuminates the essence of the evidence, refraining from counting it dry.
- 3) The difference between a discussion article and a research article is that more than one or several dozen literary scholars can comment on the issue raised in it. Some of them, of course, can stand in one position and defend one point of view, while others can defend a different point of view. "Will literature die?" By Sh.Kholmiraev. the article was of a controversial nature, to which many had expressed their opinion. This debate, rich in perspectives, lasted a long time. The very fact that the reader is somewhat thought-provoking shows that the article of a controversial nature has a certain significance.

Although the internal diversity of the article is evolving in Uzbek literary criticism, there is still no formal diversity in this area. This can be illustrated by looking at the literature of other nations. For example, the German poet Johann Hyote expressed his literary-critical views in his articles on Shakespeare's work, which were written in the form of an "emotional lyrical monologue." It can be seen in the same articles that Shakespeare Hyote has fascinated him throughout his life. That is why the literary critic O. Togaev was right when he said that Uzbek criticism was "still very poor in form" [3,132].

The controversy has been the subject of literary criticism since the 1920s. Many writers and critics have dealt with topical issues of Uzbek literature. Fitrat, A.Qodiriy, Cholpon, A.Sa'di,

Elbek, and from the youth H.Olimjon, G.Gulam, Mirtemir, Botu, Sh.Sulaymon, Sotti Hussein, A.Qahhor, Altai, O.Hashim, Yunus Latifs often appeared with their critical, scientific-educational works in the press. They discussed the most important issues in the formation of Uzbek literature.

The development of literature and literary criticism in the context of a sharp class struggle is an important feature of them since the late 1920s. An example of this is the fact that Cholpon's works have caused serious controversy in literary criticism.

The fact that Cholpon's work has caused serious controversy is a proof that the controversy intensified at that time. Discussions in the literary process were conducted in two directions. The first direction is an objective, accurate assessment of the poet's work. This includes articles by A. Qodiriy, A. Saadi, V. Mahmud, A. Alaviya, and in part by Z. Bashir and Oybek.

The second direction includes articles written by Ayn, Usmonkhan, Miyonbuzruk Salihov, and since the 1930s by A. Sa'di and Tuygunlar, which accelerated the tragedy of the poet's fate when evaluating Cholpon's work from a purely "Marxist-Leninist" aesthetic point of view [4].

Cholpon's collection "Renaissance" was published in 1922. In this regard, the newspaper Turkiston (1923) published a review by critic Zarif Bashir. In the review, he describes Cholpon as "not a folk poet, but an intellectual close to the people," describing Cholpon as "very rich in comrade imagination ... his imagination flies only in the realm of nature and the world of humanity".

V. Mahmud correctly analyzes and interprets the essence of Cholpon's poems in the review of the poet's collection "Springs".

Articles named "Uzbek young poets", "Cholpon" was published in two issues of the newspaper "Zarafshon" in 1924. Its author, A. Sa'di, examines Cholpon's work in great detail and describes the poet with a very "short description": "it burns and burns."

Similarly, in a very concise form, A. Qodiriy refutes the accusation that "Cholpon's tears are a poet"... in his preface to Cholpon's book "Secrets of the Dawn". Although there are many tears in the poet's poems, Cholpon reveals that "he wants to make flowers out of them".

On February 14, 1927 in the newspaper "Kizil O'zbekiston" under the signature of Ayn was published "Uzbek poets. Cholpon" will be published. In a statement at the end of the article, which was attached as an appendix, the editors announced that the article had begun a discussion about Cholpon's work and encouraged "all interested comrades" to take part in the discussion.

Ayn (O.Sharafiddinov) in the article "Uzbek poets. Cholpon" pays more attention to the ideological content. In connection with the publication of the poet's collection "Awakening" (1922), Z. Bashir wrote an erroneous opinion that Cholpon was "not a people's poet, but a poet of intellectuals close to the people." "Cholpon is a nationalist, patriotic, pessimistic intellectual poet," he said.

The same article tries to present itself as objectively as possible. He also dwells on the positive qualities of the poet. Recognizing that Cholpon was "the most prolific writer" and "the most influential poet in literature," he praised the poet's language. "Undoubtedly, today's Uzbek literary language is Cholpon. The whole literary youth recognizes his language as an example. He imitates her". Бироқ мунаққид синфийлик кўзойнагини тақиб олиши билан шоир



шеърларига хавфли айблар қўя бошлайди ва шоирга "Чўлпон йўқсул халқнинг шоири эмас, у миллатчи, ватанпараст, бадбин зиёлилар шоиридир". Унинг мафкураси шуларнинг мафкурасидир. У шу мафкура йўлида уринадир, талпинадир. Уни қайнатган, илҳом берган нарсалар шулардир" деб айб қўяди, шу билан бу фикр фожиали айбномага айланади.

Shortly afterwards, young Oybek came out with an article called "Cholpon. How to examine a poet?". Oybek's article, written in response to this controversy, was a counter-response, realizing that Ayn was "restricting creative freedom, immersing literature in a swamp of" ideology "and pushing it into a dead end, and gradually undermining the art of literature." Oybek urges to think about literature not on the basis of dominant ideological stereotypes, but on the basis of the laws of art. Oybek cites the example of how much Russians love Pushkin, and on this basis says, "We can't give up on Cholpon either". Because Cholpon's contribution to literature is great: "Cholpon created something new in new literature. Instead of Muvashshah literature, he created beautiful (artistic) poems according to the artistic taste of the day. Today's young generation loves his simple language, sweet style and technique. Oybek, who wrote at the time, was also falsely accused of writing the article.

Oybek deeply analyzes Cholpon's poetry as a poet and correctly emphasizes its necessity and importance for the people. Oybek's article on Cholpon's poetry is one of the most bold. Thus Cholpon's poetry and dramas caused serious controversy in literary criticism.

Usmonkhan, who wrote the controversial article named "The Critic of the Critic", unilaterally criticized Oybek, accusing him of misunderstanding the relationship between content and form in Cholpon's work. Oybek is included in the list of those who "look at the bourgeoisie" in literature because he wants to use Cholpon's artistic form. He said that Cholpon and his "salt", "Cholponism" is very harmful for young people, "Cholpon has no stability, no vision of the independent world", "He lands from one branch to another", "Cholpon does not understand his poetic mission". "Cholpon is not a progressive artist, he is a degenerate dreamer". At the time of writing, Cholpon had published three collections of poems, staged dozens of plays, published hundreds of articles, translated many works, and was recognized by the public as a talented artist. Is it possible to insult such a person as "does not understand", "does not have a worldview", "unstable", "betaine", "degenerate" without thinking, - writes O. Sharafiddinov. Yes, it was possible - Marxist literature and Soviet criticism became famous for this ignorance"[4,28]. (Unfortunately, despite being so modern, Osman Khan himself, like other talented intellectuals, was a victim of repression, no matter how much he defended that ideology).

It should also be noted that Oybek's response to Usmonkhan in the August 29, 1927 issue, entitled "The Critic of the Critic's Article," acknowledged that it was a "great mistake" to distinguish between the content and form of a work of art. remains faithful to his belief in the "analysis" of ideas from the language of art to the language of sociology, defending his views.

Certain positive conclusions can be drawn from these discussions. "In particular, Oybek's articles had such a place that they could be a good basis in the fight against fanaticism and vulgar sociology in literature, to protect artists from useless beatings, inappropriate oppression" - writes Ozod Sharafiddinov[4.29]. But the ideology defended Ayn and Usmonkhan, and thus the great Uzbek poet Cholpon was unjustly persecuted. Of course, the debates between Ayn, Usmonkhan, and A. Sa'di showed a certain influence on the development of Oybek's work and his critical

skills. This is a shining example of Oybek's deep understanding of the intellect and art of debate: he was seen in the debates as a cultured, calm, sharp critic who could scientifically substantiate his views.

Although Oybek compares Cholpon to Pushkin in his article, he agrees with the critic's views on the ideological flaws of Cholpon's work, but still seeks to evaluate Cholpon's work from the point of view of pure artistic criteria. Both Oybek and Z. Bashir were young and had not yet mastered the basics of criticism, so they were not able to fully demonstrate their professional skills, and therefore could not prove their point through the analysis of specific works. Therefore, they could not become a true defender of Cholpon's work. It was also difficult to win in such a confusing and complex environment.

Following in the footsteps of Ayn and Oybek, Usmonkhan (Eshonkhodjaev), who wrote the article "Munaqqidin munaqqidi", accused Oybek of one-sidedness and included him in the list of those who view literature as bourgeois. Oybek again wrote a reply to Usmonkhodja, admitting some of his mistakes, sometimes standing firm in his opinion. It must be acknowledged that the attitude of literary criticism in the early twentieth century to Cholpon's work continued in two directions. The discussion ends with this article. A. Ikramov will finish the debate.

"I am convinced that this debate will play an important role not only in the fate of Cholpon, but also in determining the further development of young Uzbek literature, as well as in tracing the trends in literary criticism and literary criticism" he said. Therefore, it would be useful to think in more detail about its content, what issues were discussed, what conclusions were reached, and what guidance was given to young artists entering the literature. Because the roots of many of the "qualities" of Uzbek literature as the literature of socialist realism go back to the same debate"[4.29].

Unfortunately, in the process of the birth and formation of Uzbek literature and criticism, more precisely, in the 20-30s of the XX century, such an approach to talent began to take shape. In particular, the first secretary of the Central Committee of the Communist Party of Uzbekistan, Akmal Ikramov, based on the ideology of the time and the wrong approach to Cholpon's work, exacerbated this process. Such one-sided views led to the unjust imprisonment and tragic execution of writers such as A. Kadyri, A. Cholpon, A. Fitrat.

We divided the participants of the debate on Cholpon's work into the above two groups. V.Mahmud, A.Sa'di (partially), A.Qodiriy, Oybek, who belonged to the first group, can be said to have given an objective assessment of the poet's work.

The views of Z. Bashir, Ayn, Usmonkhan, A. Ikramov, belonging to the second group, who gave a subjective assessment of Cholpon's work, were not supported by the environment of that time. The ideology of independence, on the other hand, has come to this day, showing how true the critics of the first group are.

The poet and critic Botu also commented on the debates in the literary criticism of the time. Academician B. Nazarov emphasizes that Botu has a special place not only in the history of Uzbek poetry, but also in the history of literary criticism "[5,55].

Боту биринчилардан бўлиб, ўзбек танқидчилиги ва адабиётшунослиги олдига муҳим талаблар қўйди, унинг келажакдаги вазифаларини белгилашга интилди. 1928 йилда “Нафис адабиёт соҳасида ўз-ўзини танқид” деб номланган баҳс-мақоласида айни шу

масалаларни кўтариб чиқди. Адабиёт бадиий томондан ҳам баркамол бўлиши керак деган фикрнинг айтилиши нафақат, ўзбек танқидчилиги, балки умумиттифоқ танқидчилигида бадиий асарлар асосан ғоявий-сиёсий жиҳатдан туриб баҳоланиши авж олган ва асарларга уларнинг бадиийлигини ҳам инобатга олган ҳолда киммат бериш бир қадар суст бўлган бу даврда назарий жиҳатдангина эмас, балки амалий жиҳатдан ҳам катта аҳамиятга эга эди.

Botu was one of the first to place important demands on Uzbek criticism and literary criticism, striving to define its future tasks. In 1928, he raised the same issues in a debate entitled "Self-Criticism in the Fine Arts." The idea that literature should be artistically perfect is not only theoretical, but also theoretical in this period, when Uzbek criticism, as well as all-Union critique, is based on the ideological and political evaluation of works of art and their value in terms of art. was also of great practical importance.

In the 20-30s of the XX century in Uzbek criticism there was a lot of controversy over the ideology of the work of art [5,136]. One of the debates on this subject began with an article by K. Trigulov "Fine literature on the way to the healing of our face" (1928); The discussion continued with Altai's article, "Fine Literature Needs Healthy Ideology and Healthy Criticism." Botir, in an article entitled "Discussion on Fine Literature", commented on the issues raised in the debate. However, the common denominator for these articles is that they focus on the study of all aspects of art in relation to the issue of ideology, and the connection of the idea of the work with the image, the protagonist, especially in matters of art and form. S. Hussein paid attention to these shortcomings. Critics say that an artist's work should be analyzed not only ideologically, but also in terms of form, and that it is critical of the way in which the form that represents it in terms of its ideological content is studied in relation to form.

In art, a true work of art is created only when ideology and art are combined to such an extent. Putting one of them above the other, explaining the essence of artistic creation in the light of the laws of social development, leads to vulgar sociology, the development of literary-artistic, scientific-aesthetic thinking.

Should Classical Heritage Be Used or Not? J. Boybulatov was one of those who chose the vulgarization method in the debate on and his nihilistic attitude to inheritance, even to the point of insulting him, is evident in his assessment of the Uzbek Literature Collection. He does not hesitate to insult both Fitrat, who wrote "Samples", and O. Hashim, who wrote the foreword to it. His article called "Uzbek Literature and Chigatoychilik" is a critique of the works of classical artists from beginning to end. In particular, he writes: "... in short, the exquisite literature of Chigatay is irrigated with mysticism in terms of content, in Arabic and Persian in terms of form [5.140].

It was impossible not to respond to such baseless allegations in J. Boybulatov's controversial articles. Although O. Hashim wrote two articles under the headline "Literary Heritage and Chigatay Adabiyati" and started an argument with him, the ideology of that period could not escape the pressure. He writes: "Jadid literature is the literature of the Uzbek bourgeoisie. Jadid literature reflects the thoughts and experiences of the Uzbek bourgeoisie, works for it, laughs and cries for it" [5,141]. In essence, this was an assessment based on the stereotypes of "Stalinist" policy. Father Hashim later tried to correct the mistakes he had made in evaluating classical literature, which was a characteristic of true critics. He emphasizes that there are several stages in the use of heritage, which need to be studied carefully. "Chigatay admits that literature has given

many examples of art, and that there are a number of artistic poets in this literature," he said. Lutfi, Navoi and other masters of words give examples from their poems and focus on the issues of artistic mastery. According to him, "the shortcoming of modern proletarian poets is the same," that is, the lack of skill. In order to better explain their ideas and learn how to master the art of artistic creation, V. Mayakovsky gives examples from his book named "How to write a poem?" .

The article can be seen in the work of A. Saadi, one of the most active critics of that period. In 1924, A. Saadi in his article "Young Uzbek poets" unjustifiably criticized the work of Fitrat. In response, Wadud Mahmud's article, A Look at Literary Criticism, came to the fore. He defends Fitrat with a sharper argument than Saadi. Fitrat also followed Wadud Mahmud's literary and theoretical speeches. Even in the "Folk Literature" section of the "Rules of Literature", he supports Wadud Mahmud's views on the differences, similarities and differences between written and folk literature, and the peculiarities of oral literature.

A. Saadi makes a factual mistake by saying that "Fitrat's work began with the February Revolution of 1917" without seriously examining Fitrat's work and without even determining when it was written. In any case, Fitrat has been known in Turkestan as a poet and writer since 1910. At that time, his poems were passed from hand to hand, even in writing, Wadud Mahmud told A. Saadi.

In the general spirit of Saadi's article, there is a strong tendency to criticize. He hardly considers Fitrat to be a poet, but he wants to know him as a philosopher and gives some weak evidence. Wadud Mahmud Fitrat defends his work from such unjustified criticisms: "First of all, it is not a literary criticism, because there is nothing in it in terms of the meaning of 'literary'. nor is it a scientific thing in terms of prestige," he wrote in A Look at Literary Criticism (1924).

Of course, from the point of view of modern literary criticism, both articles do not have controversial places. In the 1920s, A. Ismoilzoda and A. Saadi wrote about the press, Zhulkunboy and Nazir Turakulov about the press, Zhulkunboy and Ghazi Yunus about the magazine "Mushtum" and satire and humor, about Abdurauf Fitrat and Nemat Hakim, Elbek and Zeyniy Uzbek. were engaged in a debate. There were many such debates in the press of that period. The literary-scientific dispute between A. Saadi and Wadud Mahmud is a vivid and typical example of the genre of literary debate in literary criticism of the 1920s"[6,59].

A. Saadi and Wadud Mahmud's articles "Against Literary and Historical Illiteracy" and "A. Saadi's Literacy" are distinguished by the fact that they are based on such a debate.

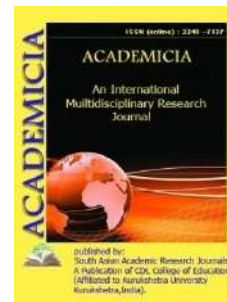
## CONCLUSION

It seems that since the beginning of the twentieth century, the genre has been in a period of rapid development, but with the advent of the Soviet era, subjectivism in literary criticism has led to changes in the dynamics and content of the genre.

The increase in the number of debates on various topics in recent years is a sign that the genre is gaining popularity and that scholars are seeking to uncover unexplored or controversial issues in the literature.

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DOI: **10.5958/2249-7137.2020.00526.1**

## EVAPORATION AND CRYSTALLIZATION AS A RESULT OF CHANGES IN THE AMOUNT OF BIOLOGICAL FLUID AND ITS CONTENT (NACL)

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### ABSTRACT

*The method of evaporation and crystallization of biological fluids for diagnostic purposes is now widely used, and much attention is paid to the study of the prospects of analysis. Increasing the use of biological fluid (saliva) in clinical analysis can help speed up the diagnosis. The main directions of research on the evaporation and crystallization of biological fluids (saliva) (the disappearance of the liquid system during the transition to the solid phase) depend on the substances present in the liquid and their amounts. to study the possibility of informing the process of intermolecular composition of biological fluids, which occurs during the dehydration process.*

**KEYWORDS:** *Biological Fluid, Evaporation, Form Element, Crystallization.*

### INTRODUCTION

**1. Relevance of the study.** Biological fluid is a complex tool that reflects the dynamic stability of the body's internal environment; however, oral fluid can have different, physicochemical and biological properties under the influence of various factors and is one of the indicators of the body's reactivity. An important argument for the use of fluid in diagnosing the functional state of the body is the simplicity of the process of obtaining biological fluid.



Numerous scientific findings have led us to conclude that human body fluids (saliva) are a unique substance with great potential for use in basic research and medical diagnostics.

The widespread use of physical changes in the evaporation of biological fluids and methods for estimating the solid phase in laboratory diagnostics, as well as the availability of information, is one of the current problems under study.

**2. The purpose of the study.** Currently, the method of evaporation and crystallization of biological fluids for diagnostic purposes is widely used, and a great deal of attention is paid to the study of the prospects of analysis. Increasing the use of biological fluids (saliva) in clinical analysis can help speed up the diagnosis.

Typically, when using this method, the physical processes that take place during the evaporation of a certain amount of biological fluid (saliva) under test, which takes the form of droplets, and the sediment in the form of a solid phase formed after evaporation (facies) morphology is studied. Biological fluid (saliva) can be a source for studying human DNA and clinical analysis in the body because the composition of certain molecules in saliva reflects their concentration in the blood. Using saliva for various laboratory tests, especially in children and the elderly, is much simpler, safer, and cheaper than using blood for testing.

The main directions of research on the evaporation and crystallization of biological fluids (saliva) (the disappearance of the liquid system during the transition to the solid phase) depend on the substances present in the liquid and their amounts. and to study the possibility of informing the process of intermolecular composition of biological fluids, which occurs during dehydration.

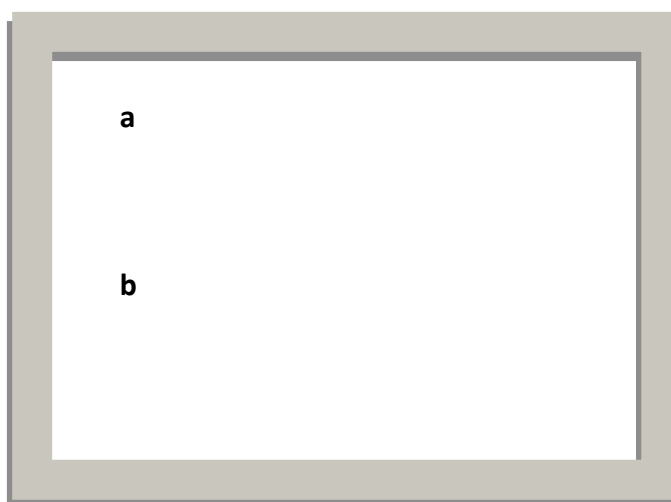
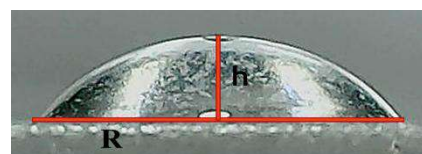
**3. Research method.** Every day, a person excretes 1-1.2 liters of body fluids (saliva). The main components of biological fluid (saliva) are water, mucus, proteins and inorganic substances. Human saliva contains 99.4% water and 0.6% various substances (dry matter). The dry residue contains about 0.2% inorganic and 0.4% organic matter. Inorganic substances in biological fluids (saliva) contain sodium, potassium, calcium, and other trace elements. Organic matter in biological fluids (saliva) consists mainly of proteins and salts. The following method has been developed to study the evaporation of biological fluids and the structure of the solid phase. Biological fluid with a volume of  $1\text{ mm}^3$ - $10\text{ mm}^3$  is dropped horizontally on a flat glass. The diameter of one drop is in the range of 2-5 mm, and the temperature is observed at a temperature of 22 °C and without changing the relative humidity. Methods for evaluating the evaporation process and solid phase of biological fluid (Figure 1 (a) - view from the horizontal position, Figure 1 (b) - view from the vertical position) are widely used in laboratory diagnostics [1.2] .

**1- picture**

The process was first studied by placing a biological liquid in a glass beaker in the form of a drop, and from the initial appearance, i.e., from the evaporation process to the solid phase. If a drop of liquid is placed on the surface of a clean glass window, its height decreases during evaporation, the diameter of the base does not change during drying. Takes the view state in Figure 2 (b).

To study this process, we used a modern biological microscope that can meet the requirements of the time, the main function of the microscope is not only to show the object in an enlarged view, but also to take pictures, transfer the captured object to the screen, Determining the parameters consists of creating a video image.

The size of a rainbow-shaped biological fluid (saliva) is determined by its height and the radius of its base.

**2- picture**

To calculate the volume of a rainbow-shaped biological fluid (saliva) rising into the air as a result of evaporation from the surface in a unit of time, we can include the following formula

$$v = V/t$$

$v$  –volumetric velocity formed by the evaporation of biological fluid (saliva),

$V$  –The volume that evaporates from a rainbow-shaped sample,

$t$  –the time required for a certain volume of biological fluid to evaporate.

From our observations, it can be seen that the sample dripped on the glass began to form shaped elements from the edge to the middle.

After mixing the biological fluid (saliva) and the substance contained in it (a mixture of 0.9% NaCl), the rate of formation of the form element in it was determined.

$$\vartheta = S/t$$

we can get by the formula

$S$  –the distance from the end point of the sample to the center

$t$  –the time taken for the droplet-shaped sample to form a droplet on the glass.

**4. Object of inspection.** The object of our study was a sample of a mixture of NaCl with a concentration of 0.9% in the amount of biological fluid (100% Biological fluid (saliva)) in the human body (50% of this biological fluid (saliva)), and pure 0.9%. Taking a sample of NaCl, a drop of it was dropped on a glass beaker using a pipidka, and the processes that take place in it, that is, the volume of liquid that evaporates from its surface over time and the formation of shaped elements, are connected to a computer. The following results were obtained by observing under a microscope (horizontal and vertical position).

#### 5. The result of the inspection.

Amounts of biological fluid and NaCl solution	The central height of the drop (mm)	The radius of the base (mm)	the time required for a certain volume of biological fluid to evaporate (minutes)
100% saliva, 0.9% concentration NaCl is not present.	0,899	2.112	36
50% saliva, 50% NaCl in 0.9% concentration	0,899	2.112	42
100% NaCl, 0.9% concentration, no saliva.	0,899	2.112	45

Using the data in the table, we determine the volume of the biological fluid and the volume rate formed by the evaporation of the biological fluid using the above formulas and the rate of formation of the form element.

Volumetric velocity of biological fluids			
Amounts of biological fluid and NaCl solution	drop size (mm <sup>3</sup> )	the time required for a certain volume of biological fluid to evaporate (minutes)	Volumetric velocity of biological fluids (mm <sup>3</sup> /minute)
100% saliva, 0.9% concentration NaCl is not present.	6,68	36	0,185
50% saliva, 50% NaCl in 0.9% concentration	6,68	42	0,163
100% NaCl, 0.9% concentration, no saliva	6,68	45	0,148

the rate at which a formal element is formed			
Amounts of biological fluid and NaCl solution	The radius of the base (mm)	the time required for a certain volume of biological fluid to	formation element rate (mm/min)

		evaporate (minutes)	
100% saliva, 0.9% concentration NaCl is not present.	2.112	36	0,0587
50% saliva, 50% NaCl in 0.9% concentration	2.112	42	0,0515
100% NaCl, 0.9% concentration, no saliva	2.112	45	0,0469

It can be seen that as a result of changes in the amount of a substance present in a biological fluid, its rate of dehydration and solidification, that is, the rate of formation of the element and the rate of volume of the liquid, decreases.

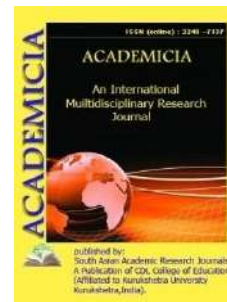
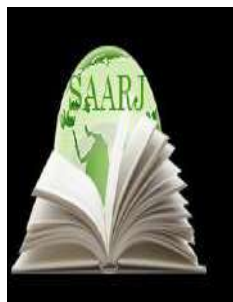
## 6. CONCLUSIONS:

In the study of the process of dehydration of biological fluid droplets, the study of changes in its volume and surface was carried out experimentally for the first time, and as a result the amount of substance (0.9% NaCl solution) in biological fluid (saliva) As a result of the change, the volume of fluid leaving the dehydration process decreased, and the time of the dehydration process increased, but the volume rate also decreased.

The transition of biological fluid (saliva) to the solid phase, ie the process of formation of the form element, the formation of the form element as a result of the addition of the substance contained in it (0.9% NaCl solution). It was observed that the process of formation takes less time and the rate of formation of the form element is higher.

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DOI: **10.5958/2249-7137.2020.00527.3**

## **EFFECTIVE USE OF ELECTRONIC AND DISTANCE LEARNING TO INCREASE THE NUMBER OF STUDENTS IN THE HIGHER EDUCATION SYSTEM BY CORRESPONDENCE COURSE**

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### **ABSTRACT**

*This article discusses the role of e-learning, distance learning, blended education, their types, methods and applications, effective results in the development of our economy to increase the number of students in higher education now and in the future in the continuing education system. In this state, we will increase the number of students in the current education system in the future through e-learning, DO, blended learning, methods and areas of use, such an impact on the development of our economy.*

**KEYWORDS:** *Distance Learning, Online System, Autonomous System, Computer, Network, Module, Platform, E-Learning, Internet, Credit System, Video Lesson, Audio Lesson, Presentation, Technical Means.*

### **INTRODUCTION**

Over the past three years, thanks to large-scale reforms carried out in our country under the leadership of President ShavkatMirziyoyev in order to bring the development of Uzbekistan to a new level, radical changes are taking place in all areas, the worldview and consciousness of our people is growing. It is important to create a modern system of continuing education through reforms in the formation of new values and traditions in our society. Improving the quality of education in the fourth priority area of the Action Strategy for the five priority areas of development of the Republic of Uzbekistan for 2017-2021, approved by Decree of the President of the Republic of Uzbekistan dated February 7, 2017 No. 4947. Much attention is paid to the development of continuing education in the education system using modern technologies. In his Message to the OliyMajlis on January 24, 2020, the President said that in 2019 there will be 4 presidential schools with a completely new content and form.

The creation of correspondence and distance learning in the field of continuing education as an integral part of the reforms is a step of the President of the Republic of Uzbekistan “On measures to improve the system of training engineers and technicians for industrial production in the Tashkent region”. Decision No. PQ-3153 of July 27, 2017 and Cabinet Decision No. 930 of November 21, 2017 were published. Appendix 1 to the resolution provides for the creation of a correspondence (special correspondence) department at the Nizami Tashkent State Pedagogical University in accordance with the Regulation on the organization of correspondence (special correspondence) education at higher educational institutions. On August 23, 2019, the Department of Distance Learning at the Tashkent State Pedagogical University named after Nizami began its work with teachers who gathered in 11 areas. [3, p.1-3]

## MAIN PART

At the department of distance education, each teacher must have a computer, a foreign language and a mature specialist in his subject. It is very important that every student studying for special part-time programs knows the computer and his specialty. Because a student who does not conduct an independent study of computers and specialties will not be able to answer intermediate exams and will be expelled from the university.

Currently, on the e-learning platform of the Tashkent State Pedagogical University, all students studying at all special correspondence and correspondence departments have their personal identification code and password, which they can use personally on the website [www.talaba.tdpu.uz](http://www.talaba.tdpu.uz). access to your online dashboards.

There, subjects taught for them in the spring and fall semesters, lecturers, seminarians, practitioners, laboratory teachers are included on the site [www.tdpu.uz](http://www.tdpu.uz) with all the information and posted on the site for students. You can use it at any time to see, read and use. It can be copied to your digital equipment and retrofitted at any time. There are also teachers who supervise coursework and answer questions as part of self-study, and students can easily get advice and guidance from the teacher on issues that they don't understand. [1, p. 91-93]

The learning process is such that the student does not recognize the teacher. Because when sending electronic tasks to a student, if there are 20 students in a group, professors prepare 20 tasks for each student, and the platform program on the computer rotates the parameters and displays one task for each subject in the student's personal account. If a student studies 7 subjects in each semester, the student can see the tasks for these 7 subjects in his personal account, download them to his computer and see when the deadline for sending an answer to the task comes.

Intermediate control grades can only be obtained if students send answers to assignments in electronic form to the platform. Each student sends answers to assignments in electronic form only from his personal account. Nothing written on paper is sent. Our students have a great opportunity to use it when writing answers to assignments. On the site itself, each student can download to his computer, phone and use at any time: electronic literature; lectures of our teachers on science; instruction for practical exercises; laboratory work; seminar classes;



educational literature; guidelines; teaching aids; articles; open lessons; video lessons are available on the website [www.majmua.tdpu.uz](http://www.majmua.tdpu.uz) so that students can download and use it on their technical device from anywhere in the world at any time.

In addition, each teacher will be able to share his experience with the teachers of the department and other teachers of the department who will be able to work in their classrooms, in open classes using innovative world-class methods. At the same time, in an open lesson, our teachers put their grades, teachers are evaluated, recommendations are given, skills are studied and taught. Each open lesson should be posted on the teacher's personal page.

At present, the department "Distance Learning" conducts testing for online systems in conjunction with the offline system, that is, in combination with e-learning, distance learning is organized at a certain distance.

This responsibility is assigned to us by the Law of the Republic of Uzbekistan "On Education", at present, significant changes are taking place in the education system, in particular, the DO method is one of them. This is a new form of DO. DO is independent, it develops a person's ability to think independently, assess the situation, draw conclusions and predict. Another advantage of pre-university education is that the student has the opportunity to study at a convenient time and this system is widely used in the modern world, and many large enterprises use this method to improve or change the qualifications of specialists, which saves millions of dollars a year.

At the same time, the role and importance of information and communication technologies in the global economy is growing, including computer and telecommunication technologies, software development and the provision of a wide range of interactive services based on them. Extended information today with the help of communication technologies, the DO system is developing and brings benefits worldwide due to its convenience. [2, p.76]

Distance learning (DL) is a process of interactive communication between students and teachers using the purpose, content, methods, teaching aids and Internet technologies of the educational process. Another advantage of this education is that the teacher in this subject is selected by the student, the student begins to study in accordance with the time set by the teacher, and the materials are mastered under the supervision of the teacher. Mastery is determined upon completion of assignments and tests after each lecture. The sooner a student has mastered this program, the sooner he or she will graduate and receive a diploma. If he does not get the required score after mastering the program, he will be given the opportunity to work independently and continue his studies. Taking into account the needs and capabilities of each student, continuing education programs in the country are external. Currently, the introduction of subsidiaries is in demand in our country. Distance learning was usually for those who work and study in order to get a specialty or improve their skills.

DL are particularly cost effective for developing countries. There are also organizational and economic advantages of pre-school education, such as the fact that students do not need classrooms to study or dorms to stay. Financial expenses are mainly spent on the preparation of training materials, special classrooms. Most of the costs are in the process of organizing this

process, of course, spent, then the costs will decrease. Therefore, as the number of students increases, the cost of training (contract) will also decrease. In distance education, the main attention should be paid to the preparation of training materials. Because the quality of teaching materials in distance learning is one of the most important quality factors. The more understandable and detailed the training materials, the more useful they will be for the student. That is, the material should be methodologically sound. [4, p. 88-90]

In addition to audio lessons, video lessons, animations, diagrams, presentations, color illustrations, instructions, guidelines, practical lectures, video lessons for students using various methods, tests, crosswords, educational and methodical complexes should be prepared using codes.

The analysis of university programs in the field of digital technologies allows us to note the following:

- For university teachers who have mastered office technology when working with science teachers, the approach to the implementation of the program aimed at primary computer literacy in network technology and Internet resources is typical;
- The program often does not provide enough or no space for fundamental training in the field of informatics, without which it is difficult to fully use the capabilities of digital technologies for educational purposes;
- In teaching students to use digital technologies, the main attention is paid to the development of standard software packages and devices, there is no clear focus on the use of their capabilities in pedagogical activities;
- Insufficient use of digital hardware, modern hardware and modern software to increase the efficiency of the educational process. In our opinion, today it is not enough for a modern educator to use the usual approaches to the formation of ACC. The organization of a modern pedagogical process in MTC, ensuring the adaptation of the individual to the conditions of self-expression and creative abilities involves the widespread use of modern tools and the optimal combination of traditional forms and methods of education with modern digital technologies.

This requires the development of unique educational technologies. The main principles of the educator's formation of ACC are distance orientation and complex information of the educational process. The principle of career orientation involves the integration of theoretical education and interdisciplinary links to prepare the teacher for the active use of digital technologies in remote activities in accordance with their personal interests and educational tasks.

The principle of complex information of the education system involves the identification of a set of digital technologies that allow the teacher to form the ACC at the required level. The introduction of digital technologies in the educational process in the context of person-centered education will help to improve the quality of education. The formation of the teacher's readiness to organize person-centered education using digital technologies leads to an increase in the effectiveness of the educational process.

Today, information and education systems are complexes that include computing and communication equipment, software and personnel, providing support for a dynamically

changing information model of the education system to meet the information needs of all participants in the educational process. We are talking about the application of the information system of education and the information-educational system of the whole education in the context of person-centered education. In recent years, research has focused on the use of computers, local area networks, as well as the psychological and pedagogical capabilities of the global Internet in the education system (at all its stages). It is possible to study the psychological and pedagogical potential of modern information technology (IT) in this context and develop effective options for their introduction into the educational process. In conclusion, during the current corona virus pandemic, distance learning video lessons were continued by specialist teachers, and distance learning departments were opened in universities. Students in this subject can have clear and fully covered knowledge. To do this, the lesson will need to be conducted by specialist teachers, not amateur, compulsory teachers, who will cover the lesson in full. Only then will we be able to achieve the goal set by our professors and teachers, based on the skills of experts and foreign standards, without mistakes and shortcomings.

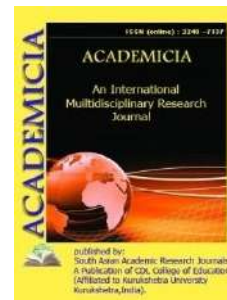
The more interesting the educational process of a teacher, the more students will be in the science class of this teacher. The number of students in the DO system is not limited, since the audience is not used. With the increase in the number of students there will be no noise, the quality of the lessons will not suffer, and the audience will not be crowded. As the number of students in the admission quota increases, the amount of the contract may decrease. This means that, as the president said, the number of people with higher education in continuing education will continue to grow. Personnel problems are reduced. Economically, our country is experiencing rapid development. Using distance education in the field of continuing education, we can achieve material and scientific development in our country.

## CONCLUSION

Currently, during the coronary virus pandemic in Uzbekistan, kindergarten students, schoolchildren, lyceums and colleges, university students, as well as kindergarten teachers, school teachers, college lyceum teachers and university professors also provide distance education and upbringing without interruption in their activities, using distance and e-learning. [5, p. 91-93]

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DOI: **10.5958/2249-7137.2020.00528.5**

## EDUCATIONAL ISSUES IN FOREIGN EXPERIENCE

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### ABSTRACT

*The article describes integration relevance and opportunities (differentiation), differentiation (stratification) and distance education in foreign educational practice. A computer is a simple and convenient way to access data. The person working with the data should be able to get it, no matter where the data is located, whether it's in the city or anywhere else in the world. These and other similar problems are now being solved with the help of computers. This new structure is created by synthesizing elements that were previously separate". Genetically integrated, interdisciplinary, interdependent, and ultimately complementary, expansive, and deepening, is a form and logically complete content level that synthesizes the subjects content at least at the educational standards level. It is not easy to cover the level of misbehavior among students in Japanese educational institutions. In Japan, the environment of educational discipline does not directly affect student achievement. After all, students who have experienced violence have lower test scores than those who have never experienced violence.*

**KEYWORDS:** *Integration, Differentiation, Distance Learning, Pedagogy, Didactics, Methodology.*

### INTRODUCTION

Human society development modern level is reflected in the radical changes taking place in all social life spheres in our independent republic. Such changes are undoubtedly closely related to well-rounded personality formation. This issue is reflected in "Education law " and "National Training Program".

Finding solutions to the socio-economic, ideological, political, educational problems facing human society, as well as the people of our independent republic today depends on the

interdependence and interaction of natural, social and technical sciences. Because all of them are structural in nature, content, nature, form and scale, they can be studied and solved using the right approach. This, in turn, implies systematic approach use in education.

Numerous sources, in particular the analysis of pedagogical practice areas, testify to problems existence that hinders the educational process development. This is mainly due to the fact that, in our opinion, some aspects and properties of the studied objects are formed in fragments form, which are not logically connected and systematized. An integrated approach plays an important role in overcoming such situations in practice. Although the concept of "integration" was used in science by G. Spencer as early as the eighteenth century, it was not given sufficient importance until recently, as required by the times.

From a scientific point of view, integration basis is the universe integrity and constituent elements interdependence. According to well-known Russian psychological scientist G.S. Kostyuk.

"Differentiation leads to an increase in mental processes and states (features), integration-regulation, subordination and the results placement in a certain sequence. Through integration, a new psychological process, a new structure of activity is formed. This new structure is created by synthesizing elements that were previously separate". Genetically integrated, interdisciplinary, interdependent, and ultimately complementary, expansive, and deepening, is a form and logically complete content level that synthesizes the subjects content at least at the educational standards level. Because of any interdisciplinary connection lower level is established between certain didactic units within the studied subjects framework, it involves the content coordination and timing of their study, in contrast, an educational subject organized on integrative connection or an object basis, event or process being studied in an integrated way requires interpretation in terms of relations and relationships comprehensive system, integrated system. This, in turn, allows you to form a qualified professional person who meets the requirements of the present and the future, who thinks independently and works creatively. Because it requires learners not only to perform operations of analysis and synthesis, but also high-level thinking operations such as abstraction, algorithmization, categorization, expression using conditional symbols, identification of causal relationships, analysis, synthesis, systematization, modeling. These operations are carried out by distinguishing (stratifying) all the important aspects and features of the object under study, understanding the essence and content and generalizing them. This means that integration always develops on the basis of differentiation, which is the other side of it, or vice versa.

Pedagogical scientists and practitioners recommend studying the issue of integration in the following areas:

- a) Content within the range of subjects and disciplines integrated learning;
- b) Persons studying various subjects integration of activities;
- c) Integration of forms of organization of educational work, etc.

### **Main part**

Each of these directions has a clear purpose and requires an appropriate form, method, means and conditions to achieve it. It should also be noted that in practice, the intended purpose can be achieved only if they are used properly.

In the field of pedagogy since the 80s of the twentieth century, scientific works have appeared that use such concepts as integration, "interdependence", "interaction", "synthesis", and the urgency of the problem of integration in educational work began to be felt. Until now, the idea of an integrated approach to the work of education has become a matter of universal importance, not limited within the framework of private sciences.

Integration (Lat. Integration-restoration, filling, merging. Integer-whole) is understood in the sense of synthesizing and uniting as a whole, making it a logical whole. Integration of the content of education means the synthesis of the content of interdependent, interdependent, expanding, deepening subjects, that is, logical integration into a single whole.

Integration (integration) and differentiation (stratification) do not exist in isolation from each other, nor do they arise from each other, but they always appear at the same time as two sides of the object under study. In scientific knowledge, one of them may also have a temporary definite advantage. Both sides of the problem can be shown as a result of the development of science and technology, the emergence of different professions in agricultural production, ie stratification, mechanization, automation and more joint professions or the dialectical development of highly qualified specialists.

The process of integration, in contrast to the interaction of modern scientific knowledge, can take place in the following areas:

- As an internal scientific development within a separate science;
- Within the framework of interdisciplinary interaction, within one or more areas;
- Within the framework of special integrated scientific knowledge.

The combination of the above directions can be thought of as an integrative approach. It may be the result of merging-integrating processes taking place in two or more relatively independent parts.

Integrative connections are also important in building an integrated system, and they are also called internal scientific connections. The main purpose of systematization is to create integrity through the regulation of internal scientific relations. The integrity created in this process will have new quality indicators. The essence of integration is to achieve a new level of learning outcomes as a means of theoretical synthesis.

The integrated study of specialty disciplines is aimed at solving the following issues:

- study the essence, content and conditions and means of integrated study of disciplines related to the specialty;

- To get acquainted with the scientific-theoretical and pedagogical-methodological bases of integration of the content of different disciplines;
- To prove the relevance of knowledge in the integrative increase of the level of educational activity, independence and knowledge of students;



-identification of requirements and opportunities for the synthesis of socio-economic, organizational, psychological and pedagogical, technical and technological knowledge.

In many cases, integrative, systematic and integrated approaches in educational work are interpreted as synonymous. The commonalities of these concepts are the various aspects, aspects, and properties of the objects being studied. But they also differ in essence.

The implementation of an integrative approach in the educational process can be carried out with knowledge of the internal and external relations of the system or the whole object of the existing form, the laws of its organization and management. An integrated approach to the training of junior specialists is used to ensure the integrity of the knowledge, methods of action and personal qualities and qualities of the specialty.[1. 13-18]

An integrative approach is used to integrate content-bound, interconnected, logically interdependent, and mutually reinforcing and expanding disciplines that incorporate holistic logic, perfect knowledge, action patterns, and personal qualities.

The effectiveness of the subject "Pedagogy" as an integrative science depends on how it solves the following problems:

1. The role of each integrative subject in ensuring the solution of any task;
2. Subordination of relatively narrow subjects to a common goal in the process of integration of didactic tasks;
3. Integrated development of methods, forms, techniques, tools and conditions for the study of an integrative subject.

In conclusion, there are commonalities between the structural, integrated, and integrative approaches, as well as specific differences. In general, an integrative approach can be seen as the result of a systematic and integrated approach.

The didactic study of the problem of integration requires its interpretation as a principle of education. From a methodological point of view, integration is the study of conditions and methods that improve the educational process and guarantee the desired result.

The integrative approach is carried out in conjunction and in harmony with didactic principles such as scientific, professional orientation, polytechnicism, membership, regularity, system aticity, demonstration, comprehensibility, stratification. The integrative approach, in turn, never gives the teacher a ready-made recipe like other didactic principles, but uses it to determine the solution of didactic and methodological problems.

The integration of the content of the study material as a didactic process is a multifaceted, multidimensional, system-shaped object of research. Its analysis (study) requires a systematic-structural approach. Because its function, composition, structure, and similar important properties are to be studied. The integration of special disciplines involves the synthesis of the most important and general ideas, problems, rather than the synthesis of all their characteristic features.

Integration is manifested as a means of theoretical synthesis, carried out within the boundaries of individual disciplines, and in the form of interdisciplinary synthesis, which involves the direct formation of general scientific knowledge. It is a high level of integration-synthesis. In the

process of cognition, analysis is manifested as the division into parts, and synthesis as their aggregation (generalization).

During the transition to the new curricula and programs implemented in our country, the issues of harmonization of relations between society and the environment, the establishment and formation of a serious attitude to the environment will play an important role.

Gegel presents style in philosophy as a form of content movement. In the learning process, through different systems, the teacher and with it the students express their knowledge, abilities and skills in the form of deduction, induction, synthesis, generalization, definition, comparison.

All logical processes form the inner side of the style that is inextricably linked with the content. The learning process in the primary grades is characterized by a variety of methods, techniques and forms used.

It is well known that the foundation of a serious relationship with the environment is taught in the primary grades. Therefore, the outcome of education depends on the 1st stage of school education. New psychological and pedagogical research allows us to review the previous understanding of the limited learning activities of young school students. This lays the foundation for changing and updating all components of primary education. A key issue for such an update is to identify a goal that meets the age characteristics of the primary school students and meets the course requirements.

A number of works are devoted to interdisciplinary and intra-subject relations in primary education. These challenges are an area of imminent development in the transition to the integration of academic disciplines. There is a lot of controversy among scholars about the importance of the integration links of primary school sciences.

Let's look at what integration is as an event in terms of terminology and methodology.

Integration is derived from the Latin word integration, restoration, replenishment, integer-whole. We have two concepts in this regard:

1. A system is a concept that expresses the state of interdependence of individual stratified parts and functions of an organism and the process that leads to that state.
2. The process of convergence of disciplines carried out in conjunction with stratification processes.

An integrative approach reflects the objective integrity of systemic relationships at different levels. (nature-society-man). It leads to an increase in the level of integrity and coherence of the system elements.

During integration, the volume of interdependence increases and is regulated, which regulates the performance of system components and the integrity of the learning object. Modern didactics and methodology emphasize that the success of teaching, development and upbringing of students depends on the formation of their understanding of world unity, the need to conduct their activities on the basis of general laws of nature, to solve interdisciplinary and interdisciplinary links in science. Integration in education is considered through a systematic approach to the design of the content of academic disciplines.

Different levels of integration are distinguished: primary is combining elementary knowledge about nature; intermediate is integration of divisions of disciplines; final is the integration of the final stage of education associated with the study of natural sciences. At the same time, the possibility of a fuller and wider integration of science education is not ruled out.

The simplest of the connections that form the simplest knowledge of nature or object is a local imagination bounded by a particular place or concept. This connection is separate from other knowledge and therefore provides the simplest mental activity. This is typical of a small school age. The cross-sections that belong to a system are the simplest structural cross-sections. They are formed on the basis of the study of a subject, object or event. Knowing an object, selection of new evidence and concepts is done by comparing them with one knowledge. The simplest generalization of knowledge occurs, but it would be just as useful if the knowledge gained was linked to knowledge that was all close to it. This results in students' analytical and generalization activities. Intuition within the system ensures that students know the whole system of sciences (physical, chemical, biological, knowledge system), there is a wide use of knowledge in the studied discipline. The cross-sections within the system reflect time, environment, and numerical relationships. Interdisciplinary perceptions are the highest stage of mental activity. They combine different systems of knowledge, allowing us to know the diversity of an event or process. Based on this knowledge, general concepts emerge. The formation of inter-systemic perceptions allows them to use knowledge, to subordinate them to each other, to limit the gaps in the boundaries of knowledge.

Using the stated psychological evidence, it is possible to identify the main features of the integration of primary, incomplete secondary and high school education. S.P.Baranov, L.R.Palatin, V.A.Slastenin's book "Pedagogy" shows a link to the science used in the lessons, but does not reflect the problems of integrated education.

From the views of scientists, it can be concluded that integration-differentiation processes together with the process of convergence and linking of sciences is a high form of interdisciplinary communication, which helps to create new, whole, integrated sections.

Integration between subjects does not negate the system of subjects, and such an approach, aimed at deepening the connections and connections between subjects, is based on understanding the relationship between differentiation and integration, as a way to improve the system of integration, to overcome shortcomings.

The purpose of pedagogy is to assist teachers in carrying out integration aimed at bringing together elements and parts of different disciplines with the same objective tasks. Many years of observations show that primary school students, and later graduates, find it difficult to study one subject or another, lacking the skills of independent thinking, similarity to acquired knowledge, or the ability to move to new situations.

All this is happening due to the mismatch of lessons in different subjects during the lesson. In this case, integration is not the transfer of knowledge from one subject to another and the exchange of activities, but the process of creating new didactic equivalents that reflect the direction of integration of modern sciences. While some scholars focus on the importance of integrating school education, some see integration as a means of effectively organizing the lesson, a form of taking subject relationships to new heights.

Hence, integration is a source of finding new evidence that confirms or deepens a student's observations and conclusions in a variety of disciplines. They prevent students from getting tired and nervous by alternating different forms of activity.

### **Differential education**

The creation of public secondary schools in developed countries has exacerbated the problem of educational differentiation. This situation has led to the need for a different system of quality levels of general education diversification. Enhancing and complicating differential training according to students abilities, interests, and mastery has become a global trend of the modern school.

The main forms of differentiation are the division of educational institutions into different types, streams and profiles within a school, and groups into classes. The problem of differential education is not the same solution and has contradictions. Social differentiation becomes a method of social choice. The system of paid education and examinations is a means of selection. Usually stratification (differentiation) begins after graduating from primary school. It is carried out in different types of educational institutions. For example: grammar and modern schools in England, real school, gymnasium and basic schools in Germany, technological, vocational and general education lyceums in France, ordinary high school, lyceum, college, gymnasium in Russia, etc. The main hallmark of differentiation in these educational institutions is the programs. Differentiation is widespread within an educational institution. For example, large high schools in the U.S. and Japan have 2 types of general education and special programs. They explore different groups of students in different perspectives. In Germany, the gymnasium offers 6 profiles of education, while the primary school carries out the differentiation on the basis of the PEBP system. According to him, education is organized according to the following options of the program: professional course (K), extended course (K), basic course (A), personalized course (M). Incomplete high school is a means of differentiation. In the 1930s in the United States, in the 1950s in Japan, in the 1970s and 1980s in Western Europe, and in the 1990s in Russia, educational institutions began to appear with differential education. We are talking about a small high school in the US and Japan, a joint school in the UK, a single college in Germany, a 6-year high school in Russia. In such educational institutions, students aged 11-12 to 15-16 are taught. The pedagogical complications of stratification in these educational institutions are positive. With a natural goal-oriented nature, the capabilities of different groups of students are taken into account. The general program is designed to increase the level of preparation of students. For example, the percentage of good graduates in the first single colleges in France was higher than the number of good graduates in parallel educational institutions of the same age. Incomplete secondary education is provided in small secondary schools in the United States and Japan. This program has a number of advantages. Elective subjects include continuing education or starting a career.

In the late 1950s, a group of educators led by D.J. Konant proposed a comprehensive school model. According to this model, all children, regardless of social status, abilities, interests, study in a general education institution, but a variety of educational programs are implemented. Conant's recommendations were used to introduce differential education in small secondary schools in the United States. In the UK, integrated schools include small grammar classes and modern schools. In the first 3 years, students are engaged in a modern school program, then

either continue this program, or study in a grammar school program. In joint schools, 90% of teenagers are engaged by age.

In Germany, 5% of students are educated in general schools by age. Cooperative and integral types of general school have emerged. Cooperative schools combined basic, real schools and gymnasiums. After 9th grade, students receive a diploma just like in elementary school, and after 10th grade, the diploma is equivalent to the middle school of a real school and gymnasium. Classes in cooperative schools are a combination of compulsory and elective programs.

In France, group education is organized on a regular basis in single colleges. Different types of groups are formed: homogeneous groups - the same level of readiness, semi-homogeneous groups - close, the level of heterogeneous - different. Divided into groups on the recommendation of teachers, psychologists, counselors in the field. The groups master the school program options. There are strong and weak stage groups in the two graduating classes. The next types of education are recommended to college students who graduate from these two different groups.

Group education has a good position in Japanese schools, it is organized in the form of competitions. The groups in the class compete in memorizing many English words, hieroglyphs, and poems. Ratings are given to the whole group. Japanese educators look at group education from different perspectives. Group education is considered to be pedagogically correct, but there is a risk of narrowing the worldview of children and adolescents engaged in groups. For example, when a group is divided into a strong and a weak group, 2 situations occur: either the strong or the weak are focused, which is detrimental to both groups.

### **Educational Discipline in Chile (Florence Torch, Alexandro Mizala)**

The Chilean education system has a unique organizational structure. The Chilean education system underwent organizational changes in 1981, meaning that the education system, which was centrally controlled by the government, was transferred to a universal voucher system controlled by local authorities. Today, educational institutions are divided into socio-economic strata. These include public schools for the poor, public schools with vouchers for the middle class, and private schools for the rich. The high rate of violence among students in Chile may be the result of widespread bullying in Chilean schools. While Chilean schools are characterized by sharp stratification, the order in schools where the rich study is not much different from that in lower schools. In turn, the rate of disorder in the countryside is much lower than in the city [2. 74-80]

### **Educational Discipline and Achievements in Israel (Yossi Shavit, Carmel Blank)**

There is a strong and significant link between the disciplinary climate in Israeli education and student achievement. The test results show a negative correlation between supervisors' reports on student engagement and teachers' class discipline reports. Violence among students and against teachers by students has been widely covered by the media in recent years. Israeli students receive mixed information about obedience and respect. In schools, Israeli students are assessed in the same report for both discipline and science. In turn, students can be expelled if the grade for the discipline is below a satisfactory level. On the other hand, Israelis attach great importance to the culture of patient youth who value independence and courage [2. 104-107]



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**Presence, discipline and activities of immigrants in Italian educational institutions (Paolo Barbieri, Stephanie Sherer)**

Violence among Italian students is a major obstacle to academic performance. The negative impact of high levels of violence is an acute issue in the activities of immigrant students. They face more violence than Native Italians and their academic performance is also relatively low. Immigrants in Italy come from all eras of the world. Most of them came from Morocco, China, Romania, Ukraine, Moldova, India and the Philippines. The difference between northern and southern Italy is also dramatic. The South lags far behind the North in having fewer financial resources than the North, and this backwardness can also be seen in education.

In the south, students, teachers, and leaders report higher levels of disorder than those in the north. [2. 138-143]

**Educational Discipline and Academic Achievements in Japan (Hiroshi Ishida, Satoshi Miva)**

It has been shown that the incidence of disorder and crime in Japanese educational institutions is very low. The high level of education in Japanese schools is due to the high demands on parents and school staff, as well as the hierarchical ordering in secondary and post-secondary education. It is not easy to cover the level of misbehavior among students in Japanese educational institutions. In Japan, the environment of educational discipline does not directly affect student achievement. After all, students who have experienced violence have lower test scores than those who have never experienced violence. [2. 163-170]

**Educational Discipline Environment in Holland, Educational Challenges, and Academic Achievements (German G. Van de Verfborst, McBteld Bergstra, Rene Veenstra)**

The fact that the educational disciplinary environment in Holland has only a small impact on student performance shows the independence of its influence on the composition of the student group, and the unique structure of Holland education system shows that student activity is limited. The education system in Holland is highly standardized; however, there is more room for school-level autonomy. There is a dramatic difference in education. A high level of educational security is provided in educational institutions that offer only academic orientation compared to both academic and vocational-oriented educational institutions. In general, the Holland is characterized by a very high level of cultural tolerance [2. 180]

**Distance learning**

The world is evolving so fast now that today's innovation is becoming obsolete tomorrow. Therefore, in order to obtain information in a timely manner, mankind has created information technology. A computer is a simple and convenient way to access data. The person working with the data should be able to get it, no matter where the data is located, whether it's in the city or anywhere else in the world. These and other similar problems are now being solved with the help of computers. Computers are rapidly penetrating all aspects of human life and their number and scope of application in the world is expanding exponentially. This allows computers to evolve day by day. All this has an impact on the education system as well. Nowadays, it is necessary to change the information technology in order to have a thorough knowledge, because the education system must always meet the requirements of the times. The modern requirement is a new learning environment, that is, the acquisition of knowledge in any place with the help of new

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information technologies, communication with voluntary educational institutions and obtaining information from anywhere in the world. The Internet can help us with this. Through the Internet, it can be observed that schools, colleges and educational institutions where the education system has been established are now being merged into the evolving 'virtual schools'. This reduces the distance between educational institutions and ensures maximum data exchange.

The introduction of new technologies in education leads to the emergence of new educational technologies and forms of teaching based on electronic means of information transmission and processing.

Distance learning uses technical tools and technologies such as trainers, testers and communication tools. Teaching aids include annotated dictionaries, search tools, e-learning manuals, video courses of lectures, and more. Test tools include test questions, self-test tools. The means of communication are forums, mail, audio and videocassettes.

In distance learning, the teacher performs the function of teaching and testing tools (fully automated, complete software products), as well as performs video and electronically published methodological material that forms an automated learning environment.

The possibilities of the e-textbook can be expanded with the use of modern means of animation and video. These can be video lectures on the training course, demonstrations of production processes, speeches of famous scientists, and more.

Didactic programs for modern computers (electronic textbooks, computer assignments, multimedia electronic textbooks, etc.) are among the multimedia teaching aids. Multimedia provides a highly comfortable and visual presentation of didactic material, which in turn increases students' interest in learning.

Until recently, concepts such as distance learning, distance learning, open learning, etc. were almost inseparable. But so far, distance education has proven its importance and necessity. But so far, the question of whether it is a form of education or a technology remains relevant. Because the concept of this question depends on the strategy of distance learning, implementation tactics and the readiness of teachers to work in distance learning.

At present, it is described by researchers and practitioners of distance education as follows:

Distance education is a synthetic, integrated, social form of education in the widespread use of traditional and new information technologies and their technical means, used in the delivery of educational materials, independent learning, communication between teacher and student. Distance learning is built with the same goals as in the context of full-time education (if it is built on a curriculum that is appropriate for learning), but the form of material delivery, the form of interaction between teacher and students, as well as students will be different. The basic didactic principles of distance education are the same as other types of education, but the organizational principles of distance education are different, they are specific to distance learning, because they are characterized by form features, Internet media capabilities, its services (chats, forums, email, videoconferencing). Specific features of distance education include modularity, mastering the role of a teacher, distance separation of subjects of the learning process, virtual cooperation of education, establishing their own control over the control exercised by the teacher, the use of modern special education technologies and tools.

The main areas of use of distance learning include:

- Professional development of teachers in certain areas;
- Preparation of schoolchildren for certain subjects in the expert examination;
- Preparation of schoolchildren for admission to educational institutions of a certain direction;
- Organization of school education for students;
- Additional training on interests;
- retraining;
- Professional training.

Comparing the forms of distance and distance learning with distance learning, it can be concluded that distance learning, learning based on the use of personal computers, video and audio technology, space and fiber optic technology can be seen as a new stage in the development of distance learning.

Distance learning differs from the form of distance learning in that a significant part of the material is not independently mastered, but is carried out in constant communication with the teacher (telephone and Internet, online consultations in lectures and seminars). Also, the main differences between distance learning and distance learning are constant communication with the teacher using telecommunications, the ability to communicate with him promptly on any questions that arise.

There are new types of educational institutions in developed countries. Such educational institutions became known as "open", "remote" universities, "electronic", "virtual" colleges. They have a unique organizational structure and use appropriate pedagogical methods and economic mechanisms.

## CONCLUSION

In the world educational experience, the issues of differential and integrated education, in particular, the main directions of development of world education, the essence of the content of differential and integrated education as a pedagogical problem were studied and the following conclusions were drawn:

1. Integration (Lat. Integration-restoration, filling, merging. Integer-integral) is understood in the sense of synthesizing and uniting as a whole, making it a logical whole. Integration of the content of education means the synthesis of the content of interdependent, interdependent, expanding, deepening subjects, that is, logical integration into a single whole.
2. Genetically integrated, interdisciplinary, interdependent, and finally complementary, expansive, and deepening is the form and level of logically complete content that synthesizes the content of subjects at least at the level of educational standards. A learning subject organized on the basis of integrative connection or an object, event or process being studied in an integrated way requires interpretation in the form of a holistic system in terms of comprehensive connection and relationship. This, in turn, allows you to form a highly qualified professional who is an independent thinker and creative person who meets the requirements of the present and the future.

3. Integrative education requires learners not only to require analysis and synthesis operations, but also high-level thinking operations such as abstraction, algorithmization, categorization, conditional expression, causal relationship identification, analysis, synthesis, systematization, modeling. These operations are carried out by distinguishing (stratifying) all the important aspects and features of the object under study, understanding the essence and content and generalizing them. This means that integration always develops on the basis of differentiation, which is the other side of it, or vice versa.

4. Integration and differentiation do not exist in isolation from one another, nor do they arise from one another, but they always appear at the same time as two sides of the object under study.

5. The authors of the integrated curriculum try to integrate all the adjacent curricula around the core subject and idea, which helps students to think creatively.

6. Developed countries recommend in-depth courses in specific subjects as well as the inclusion of integrated courses in the curriculum. For example, in Western European countries, 15 percent of students study physics in depth.

7. The main purpose of the use of step-by-step differentiation technology is to teach each student at the level of their capabilities and abilities, as a result of which each learner will have the opportunity to acquire knowledge and realize (apply) their personal potential.

### **Recommendations**

1. Foreign experience shows that haste in the process of restructuring the content of education is unacceptable. We believe that a more effective way in this area is to create curricula based on integration and specialization.

2. In the pedagogical process, an individual and differential approach to students is an important factor in the development of personality, because such an approach implies the ability to see the talents and abilities in children, to create conditions for personal development.

3. Differentiated learning differentiation should be widely used at different stages of the learning process: learning new material, differentiated homework, measurement of knowledge in the classroom, current verification of the subject, independent and control work, work on mistakes, reinforcement lessons.

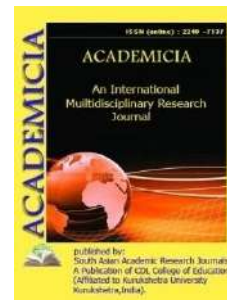
4. Often, when homework is requested in the classroom, gaps in students' knowledge are sought. In fact, achievement, knowledge, skills need to be determined, because when homework is requested, the main task is to teach, help and support. At this point, it is necessary to use differential teaching methods when asking students for homework.

5. Differential education should be carried out in order to know the individual characteristics of students, if necessary, to achieve a corrective effect, which requires teachers to study the individual abilities and learning opportunities (level of development of attention, thinking, memory, etc.), knowledge, skills, competencies .

6. Differentiated education is the organization of the learning process taking into account the leading characteristics of the group of students, while individual education is provided depending on the abilities and talents of each student. Therefore, in order to effectively organize differential education, it is necessary to create new versions of the program, textbooks, didactic materials.

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DOI: **10.5958/2249-7137.2020.00712.0**

## **DETERMINANTS EFFECTING COMPANIES' LEVERAGE: A STUDY OF PANEL DATA IN SRI LANKA.**

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### **ABSTRACT**

*The purpose of the study was to carry out empirical testing, to find the factors that influence financial leverage of Sri Lankan companies. The sample covered 72 companies listed on Colombo Stock Exchange (CSE) and the analysis was based on the year end observations of five consecutive years running from 2006-2010. In this study, panel data methodology was used and six variables profitability, tangibility, risk, non-debt tax shield, size and age of companies were analyzed as the firm specific determinants of the companies' financial leverage. This paper was studied determinants of total debt ratio (leverage) as well as determinants of short term and long term debt ratio. Fixed effect regression analysis was applied for explanatory variables to measure their effect on leverage ratio. Three of variables were significantly related to leverage ratio whereas the remaining three variables were not statistically significant in having relationship with the leverage ratio. Analysis illustrated that variables of non-debt tax shield revealed a positive association with the leverage ratio, however, profitability, and tangibility revealed inverse relation with debt level. Risk, size and age of companies were not statistically significant to determine the leverage of companies. There was significant differences in the determinants of long and short term form of debts.*

**KEYWORDS:** *Financial Leverage, Determinants, Listed Companies*

### **1. INTRODUCTION**

Theories of capital structure give explanations in questions like how much companies should borrow, what is the relationship between capital structure and company value, how companies choose their capital structure and so on. Even there is no exact formula available for the

establishing optional target debt and capital ratio, empirical studies indicate all influencing factors should consider when formulating capital structure policy.

The purpose of this study was to find the factors that influence financial leverage of Sri Lankan listed companies. It was attempted to find whether companies' features are important concerning financial borrowing. Financial leverage, in the context of this study was defined as the degree to which a firm utilizes borrowed money as leverage has been measured by Gill and Mathur in their study in 2011. Reasons for listed companies have taken into the consideration to this study is listed companies are contributing much for the Sri Lankan economic growth. In 2010, the Sri Lankan economy recorded an impressive growth of 8.0 per cent, the highest annual rate of growth reported in the last three years. It shows burgeoning growth after ended 30 years lasting civil war in May 2009 and moves to a higher sustainable growth path. All key sectors of the economy demonstrated a commendable performance in 2010, underpinned by the peaceful domestic environment, improved investor confidence, favorable macroeconomic conditions and gradual recovery of the global economy from one of the deepest recessions in history( Central Bank of Sri Lanka annual report – 2010). The Colombo Stock Exchange (CSE) is only one Sri Lankan stock exchanges financial market which has 241 companies representing 20 business sectors as at 31st December 2010. CSE has a responsibility to the nation at large to serve as a dependable platform for capital market activity whilst evolving towards a more robust and sustainable future. The improved performance of CSE's all key factors contributed towards the economic growth in 2010. The CSE rose to activity at the historically high levels in 2010, and the CSE became one of the best performing stock exchanges in the world with all indicators recording high performance. Such a superior corporate performance need to develop for the country's economic growth. To organize the enhanced corporate performance effectual investment decision making is fundamental to corporate survival and long term success. In this situation capital structure policies are decisive to boost corporate performances.

## 2. Previous studies

“Capital structure basically refers to the combination of funds, in the form of debt and equity, a firm uses to finance its assets investments” (Muzir, 2011 pp.87). Further, Muzir argued that that capital structure choice that provides the greatest appeal to investors and shareholders results in the lowest cost of capital and maximized firm value in presence of efficient investment strategies and is called optimal capital structure. In another way, capital structure refers to a mixture of a variety of long term sources of funds and equity shares including reserves and surpluses of an enterprise (Brealey and Myers, 1992, Gitman, 1997). From this point, the researchers found that it is important to study the financial decisions of the managers in determining the ratio of debt, the impact on the cost of funds and therefore the market value of the business and the indicators of the companies when they are choosing the company's financial structure.

Research on the theory of capital structure was pioneered by the seminal work of Modigliani and Miller (1958). Significant empirical and theoretical extensions followed and the broad consensus paradigm, at least until recently, has been that firms choose an appropriate (optimal) level of debt, based on a trade-off between benefits and costs of debt. The main benefit associated with debt was the tax advantage of interest deductibility. More recently, it has been argued that the monitoring engaged in by lenders was another significant benefit associated with debt, as this may reduce the agency costs of manager-stockholder conflicts (Jensen, 1986). The costs of debt



include bankruptcy and agency costs. According to this view, the leverage decision is fundamentally an exercise in balancing the costs and benefits at different levels of debt. Gill and Mathur (2011) indicated in their study, capital structure choices are the tough choices because higher leverage can lead to risk of bankruptcy. They explained further this does not mean that financial leverage is always bad. Financial leverage can increase shareholders return on investment and often there are tax advantages associated with borrowing. Therefore, financial leverage decision is important and a firm can use a specific mix of debt and equity to finance its operation (Abot, 2005 cited in Gill and Mathur (2011)).

### **Determinants of Capital structure/ financial leverage**

#### **Profitability**

The pecking order theory, based on works by Myers and Majluf (1984) suggests that firms have a pecking-order in the choice of financing their activities. This theory states that firms prefer internal funds rather than external funds. If external finance is required, the first choice is to issue debt, then possibly with hybrid securities such as convertible bonds, then eventually equity as a last resort (Brealey and Myers, 1991). This behavior may be due to the costs of issuing new equity, as a result of asymmetric information or transaction costs. There are conflicting theoretical predictions on the effects of profitability on leverage (Rajan and Zingales, 1995), while Myers and Majluf (1984) predict a negative relationship according to the pecking order theory, Jensen (1986) predicts a positive relationship if the market for corporate control is effective. However, if it is ineffective, Jensen (1986) predicts a negative relationship between profitability and leverage.

#### **Asset structure/ tangibility**

The asset structure of a firm plays a significant role in determining its capital structure. The degree to which the firm's assets are tangible should result in the firm having greater liquidation value (Titman and Wessels, 1988, Harris and Raviv, 1991). (Bradley et al., 1984) assert that firms that invest heavily in tangible assets also have higher financial leverage since they borrow at lower interest rates if their debt is secured with such assets.

#### **Non-debt tax shield**

According to Modigliani and Miller (1958), interest tax shields create strong incentives for firms to increase leverage. But also the size of non-debt related corporate tax shields like tax deductions for depreciation and investment tax credits may affect leverage. Titman and Wessels (1988) use the ratio of tax credits over total assets and the ratio of depreciation over total assets as measures of non-debt tax shield.

#### **Firm risk**

The level of risk is said to be one of the primary determinants of a firm's capital structure (Kale et al., 1991). The tax shelter-bankruptcy cost theory of capital structure determines a firm's optimal leverage as a function of business risk (Castanias, 1983). Given agency and bankruptcy costs, there are incentives for the firm not to fully utilize the tax benefits.

**Size**

Size has been viewed as a determinant of a firm's capital structure. Larger firms are more diversified and hence have lower variance of earnings, making them able to tolerate high debt ratios (Titman and Wessels, 1988; Wald, 1999). Smaller firms, the relationship between firm size and leverage is also unclear. If the relationship is a proxy for probability of bankruptcy, then size may be an inverse proxy for the probability of bankruptcy, since larger firms are more likely to be more diversified and fail less often.

**Age of Firm**

Age of the firm is a standard measure of reputation in capital structure models. As a firm continues longer in business, it establishes itself as an ongoing business and therefore increases its capacity to take on more debt; hence age is positively related to debt. If the investment is profitable, shareholders will collect a significant share of the earnings, but if the project fails, then the creditors have to bear the consequences (Myers, 2001). To overcome problems associated with the evaluation of creditworthiness, (Diamond, 1989) suggests the use of firm reputation. (Petersen and Rajan 1994) show that leverage decreases with age of the firm, although they cite agency issues as a potential explanation, age of the firm may also proxy for lower information asymmetries. As firms grow older more information regarding their future viability becomes available. Lower information asymmetries imply higher leverage. Bondholders would be more likely to lend to firms they know more about than lending to firms they know less about.

This paper investigates the capital structure of companies listed in the Colombo Stock Exchange. The main objective is to examine the factors correlated with leverage in the cross section. There is limited published work on the determinants of leverage in Sri Lankan companies. Followings are some previous studies related to leverage on the Sri Lankan stock market which has been published in Journals.

**2.1 Related Literature in Sri Lanka**

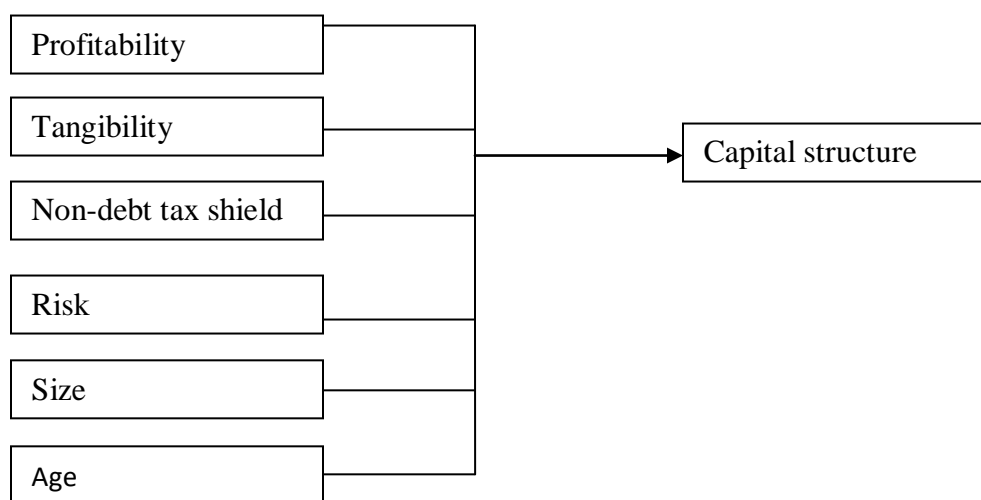
Samarakoon (1997) investigated the ability to market beta, book to market equity, leverage and earnings price ratio to explain the cross sectional variation in expected returns in Sri Lanka. This study is similar to Fama and French (1992). Senaratne (1998) tested the applicability of the pecking order theory of financing in Sri Lanka. The empirical results suggested that Sri Lankan companies follow the pecking order partially. Although companies prefer internal finance to external finance and straight debt to convertible debt, equity is preferred to debt in raising external finance. The study also revealed that Sri Lankan firms consider that ability to pay interest financial flexibility, interest tax savings, restrictions by bondholders, cost of issue as some of the more important factors in the choice of the financing method.

Samarakoon (1999) investigated the capital structure of Sri Lankan companies. He considered profitability, tangibility, firm size, growth opportunities as explanatory variables to determine the capital structure of the companies. His result indicated that the use of long-term debt is relatively low in Sri Lankan listed companies. The tangibility and growth opportunities are not related to leverage. Firm size is reliably positively related to leverage indicating a tendency for large firms to use more leverage. Profitability is reliably negatively correlated to leverage suggesting that more profitable firms tend to use less leverage.

## 2.2 Conceptual frame work

This study examines the factors that influence financial leverage of Sri Lankan firms, a variety of variables that are potentially responsible for determining leverage decision in companies can be found in the literature. In this study, the selection of exploratory variables is based on the current empirical studies on capital structure. The choice is sometimes limited, however, because of lack or relevant data.

Figure 1: Factors which are influencing the capital structure.



This study has tested the following null hypotheses on relations between defined variables and capital structure of companies.

H01: There is no significant relation between the profitability of the firms and financial leverage in the Sri Lankan companies

H02: There is no significant relation between the assets structure (tangibility) of the firms and financial leverage in the Sri Lankan companies

H03: There is no significant relation between the non debt tax shield of the firms and financial leverage in the Sri Lankan companies

H04: There is no significant relation between the risk of the firms and financial leverage in the Sri Lankan companies

H05: There is no significant relation between the size of the firms and financial leverage in the Sri Lankan companies

H06: There is no significant relation between the age of the firms and financial leverage in the Sri Lankan companies

## 3. Methods

Population of the study was listed companies in Sri Lanka. From the listed companies 72 companies were selected in order to carry out the research for the period of 2006-2010. Stratified random sampling method was used to select the sample to show the proportional representation

from different sectors of Colombo Stock Exchange Market. The selection was determined by the availability of data for five years.

Annual data extracted from the financial statements of these companies over five year's period has been used for analysis. The entire set of variables used in this study is based on book values. Myers (1984) advocated that the book values are proxies for the values in place. Panel data analysis allows studying the dynamic nature of the capital structure decisions at the firm level of listed companies.

Secondary data for the study was drawn from audited accounts (i.e., income statement and balance sheet) of the concerned companies as fairly accurate and reliable. Therefore, these data might be considered reliable for the study. Necessary checking and cross checking were done while scanning information and data from the secondary sources. Sample of this study extracted from listed companies in Sri Lanka. Also Sri Lankan Colombo Stock Exchange is functioning under the government rules and regulations and adopting the international and Sri Lankan Accounting Standards. All these efforts were made in order to generate validity data for the present study. Hence, researchers satisfied content validity.

It has estimated equation by the panel data method to obtain the estimates of the parameters of the fixed effect model. The fixed effect model assumes a common slope but each cross-section unit has its own intercept, which implies that the intercepts vary over cross-section units.

Paradigm of this study emanated from positivism as objectives of this study were empirically borne out and observe how the concepts operate. It is clear that this research stands on positivistic epistemological position of the principle of deductivism. On the basis of a positivistic approach to the investigation of knowledge and methodology used, and this paper is mostly appropriate to quantitative study. That is, the knowledge is objective and quantifiable. This study applied co-relational and non-experimental research design. As indicated above the process of measurement is central quantitative research because it provides the fundamental connections between empirical observation and mathematical expression of quantitative relationships.

### 3.1 Mode of Analysis

This study applied panel data regression analysis. As indicated in the study of Song (2005) it has become more and more popular to estimate panel data regression model in economic research, and so also in empirical research on corporate finance. One reason for this is an increased availability of panel data but also an increased awareness of the advantage of panel data over cross section or time series data (Baltagi, 2002 cited in Song 2005).

It is separately considered short term and long term debts. It is cited with the study of Song (2005). He mentioned in his study, Bavan and Danbold (2000), Barclay and Smith (1999), Huchinson et al (1999), Chittenden et al (1996), and Vander Wijst and Thurik (1993) they all argued that analysis of the determinants of leverage based on total debt may mask important differences between long-term and short term of debt. Also, since the cost / benefits of short term debt and long term debt differed to a great extent. Therefore, separate analysis could better explain the relationship.

The following regression equations were used in the analysis.

$$1. LEV_{it} = \beta_0 + \beta PROF_{it} + \beta TANG_{it} + \beta NDTs_{it} + \beta RISK_{it} + \beta SIZE_{it} + \beta AGE_{it} + e$$

$$2. \text{STD\_TA}_{it} = \beta_0 + \beta \text{PROF}_{it} + \beta \text{TANG}_{it} + \beta \text{NDTS}_{it} + \beta \text{RISK}_{it} + \beta \text{SIZE}_{it} + \beta \text{AGE}_{it} + e$$

$$3. \text{LTD\_TA}_{it} = \beta_0 + \beta \text{PROF}_{it} + \beta \text{TANG}_{it} + \beta \text{NDTS}_{it} + \beta \text{RISK}_{it} + \beta \text{SIZE}_{it} + \beta \text{AGE}_{it} + e$$

Where:

1.  $\text{LEV}_{it}$  is total debt divided by the total assets of firm  $i$  in time  $t$ . Total debt pertains to sum of total fixed liabilities and current liabilities except shareholder's equity. Assets included all assets at their book value.

2.  $\text{STD\_TA}_{it}$  is short-term debt divided by the total assets of firm  $i$  in time  $t$ . Short term debt included all liabilities, which are required to be discharge within one year, alternatively, these cover those obligations whose liquidation is expected to be made out of current assets. They are usually incurred in the normal course of business and are required to be paid at fairly definite dates.

3.  $\text{LTD\_TA}_{it}$  is long-term debt divided by the total assets of firm  $i$  in time  $t$ ; Long term debt included all liabilities other than the short term debt and Shareholders' equity.

4.  $\text{PROF}_{it}$  (Profitability) is Earning Before Interest and Tax divided by total assets of firm  $i$  in time  $t$ . Profitability was measured by commonly used ratio by many researchers i.e. Return on Assets (ROA).

5.  $\text{TANG}_{it}$  (Tangibility) is Fixed Assets divided by total assets of firm  $i$  in time  $t$ . It explains the assets structure of the company.

6.  $\text{NDTS}_{it}$  (Non\_Debt Tax Shield) is depreciation divided by total assets of firm  $i$  in time  $t$ ;

7.  $\text{RISK}_{it}$  is Sales divided by operating income of firm  $i$  in time  $t$ ;

8.  $\text{SIZE}_{it}$  is the log of sales for firm  $i$  in time  $t$ . Natural logarithm of sales has been taken as proxy for firm size (SIZE). This measure was the most common proxy for size (Titman and Wessels, 1988).

9.  $\text{AGE}_{it}$  is log of number of years since the date of incorporation of firm  $i$  in time  $t$ . The age of a firm may also have an impact on firm's performance, Stinchcombe (1965) argued that older firms can achieve experience- based economies and can avoid the liabilities of newness. Natural logarithm of number of years since the date of incorporation of the company has been considered as age of companies.

10.  $e$  is the error term.

#### 4. RESULT AND DISCUSSION

**TABLE 1: SUMMARY STATISTICS OF THE DETERMINANTS AND LEVERAGES**

Determinants	Mean	Maximum	Minimum	Std. Dev.
Profitability	0.0985	0.6718	-0.2886	0.1136
Tangibility	0.3321	5.5824	0.0014	0.3845
Non debt tax shield	0.0242	0.4361	0.0001	0.0299
Risk	4.4848	28.3265	0.1220	4.3761
Size	7.7242	10.1812	4.6513	1.4367
Age of companies	1.3069	2.0607	0.3010	0.2891
<b>Leverages</b>				

Leverage (Total debt_ Total Assets	0.4627	1.9967	0.0103	0.2759
Short Term Debt _Total Assets	0.2937	1.9449	0.0058	0.2410
Long Term Debt_ Total Assets	0.1690	0.8802	0.0001	0.16643

Source: Survey data

Average value of profitability over five year period was 9.8 % (it was nearly 10% ) that demonstrate a not remarkable performance of the companies in the period under study because minimum profitability was -28.86%. Mean value of tangibility was 33% which indicated 33% of fixed assets were in the total assets. Only 2% was depreciation on the total assets. Average of short term debt to total assets was 29 % that depicts a noteworthy portion of assets was financed with the short term debt. This suggested that short-term debt tends to be easily available therefore companies used short term debt as their major source of financing. Long term debt to total assets as compared to the short term debt to assets was low i.e. 16%. The under developed nature of the long term debt market might be one of the possible reasons. Overall 46% assets were financed with the debt that depicts listed companies was moderately leveraged.

#### 4.1. Regression Statistics

Results of the regression equations used in the analysis were exhibited in this section. The results were discussed separately that enable us to make comparison of the different debt financing options. The separation of results also permitted us to observe inherited almost opposite characteristics of short term debt and the long term debt

**TABLE 2: ESTIMATION RESULTS OF FIXED EFFECTS PANEL DATA REGRESSION**

Explanatory variables	Total debt ratio	Short-term debt ratio	Long-term debt ratio
C	0.27637 (0.60402)[0.54630]	0.34499 (0.82790)[0.40840]	-0.06348 (-0.31670)[0.75170]
Profitability	-0.33852 (-2.45664) [0.01460]	-0.21403 (-1.70551) [0.08920]	-0.12487 (-2.06847) [0.03950]
Tangibility	-0.15370 (-2.07038) [0.03930]	-0.13627 (-2.01547) [0.04480]	-0.01617 (-0.49714) [0.61950]
Non Debt Tax Shield	1.91721 (2.17721) [0.03030]	1.29626 (1.61639) [0.10710]	0.60867 (1.57780) [0.11570]
Risk	0.00789 (1.87261) [0.06220]	0.00859 (2.23995) [0.02590]	-0.00226 (-1.14064) [0.2548]
Size	0.04245 (1.31536) [0.18950]	0.03013 (1.02506) [0.30620]	0.01205 (0.85195) [0.39500]
Age of Companies	-0.10625 (-0.37680) [0.70660]	-0.21997 (-0.85658) [0.39240]	0.11146 (0.90229) [0.36770]
R-squared	0.746168	0.724105	0.865924
Adjusted R-squared	0.672209	0.643718	0.826858
S.E. of regression	0.157975	0.143868	0.069207
F-statistic	10.08902	9.007774	22.16599
Prob(F-statistic)	0.0000	0.0000	0.0000



Notes: Base year is 2006. (*t*-statistics) [*p*-value].

#### 4.2 Hypotheses testing

In order to test the hypotheses, considering the probability of *t* test of profitability was less than 5%. Hypothesis ( $H_{01}$ ) states that there is no significant relation between profitability and capital structure. Since *t* test of *p*-value was  $.0146 < .05$ , which illustrated that there was a significant negative relationship between profitability and capital structure as a result  $H_{01}$  was rejected that there was a significant negative relationship of profitability and capital structure ( $\beta = -0.3385$ ,  $p = 0.0146$ ,  $t = -2.4566$ ). This means lower profitable use high debt. This finding is in line with the results of Hammes (1998), Gleason et al (2000), Samarakoon (1999), Majumdar and Chibber (1999) and Biger et al (2008). Findings of this study are inconsistent with the finding of Long and Maltiz (1985) in which they indicated the positive relationship between leverage and the profitability.

Further, result depicted that empirically significant negative relationship existed between the long term debt and profitability ( $\beta = -0.1248$ ,  $p = 0.0395$ ,  $t = -2.0684$ ). It indicated that higher level of long term debt in the capital structure lower the profitability. But there was no significant relationship between short term debt and profitability ( $\beta = -0.2140$ ,  $p = 0.0892$ ,  $t = -1.7055$ ).

Probability of *t* test of tangibility was also less than 5%. Hypothesis ( $H_{02}$ ) states that there is no significant relation between tangibility and capital structure. Since *p*-value of  $.0393 < .05$ , illustrated that there was significant negative relation between tangibility and capital structure as there was clear evidence of the significant negative relationship of tangibility with capital structure  $H_{02}$  was rejected that there was significant negative relation between tangibility and capital structure ( $\beta = -0.1537$ ,  $p = 0.0393$ ,  $t = -2.0703$ ). That means, tangibility is the determinant of capital structure in the Sri Lankan companies. This finding is in the line with the result of Cassar and Holmes (2003). He reported in his study a negative relationship between assets tangibility and debt financing. Findings of this study are inconsistent with the finding of Samarakoon (1999) in which they indicated there was no relationship between leverage and the tangibility.

Further, result illustrated that there was no significant relationship between the long term debt and tangibility ( $\beta = -0.0161$ ,  $p = 0.6195$ ,  $t = -0.4971$ ). But there was a significant negative relationship between short term debt and tangibility ( $\beta = -0.13627$ ,  $P = 0.0448$ ,  $t = -2.01547$ ). It is concluded that tangibility was a significant negative relationship with leverage ratio and short term debt ratio. Even long term debt ratio was negative relationship with tangibility but it is not statistically significant.

According to the result, non debt tax shield significantly positively related with total debt ratio ( $\beta = 1.9172$ ,  $p = 0.0303$ ,  $t = 2.177$ ). Hypothesis ( $H_{03}$ ) states that there is no significant relation between non – debt tax shield and capital structure. Since *P*- value of  $0.0303 < 0.05$ ,  $H_{03}$  was rejected that there was significant positive relation between non-debt tax shield and capital structure. This finding is in the line with the finding of Harris and Raviv (1991). Even though there was no significant relationship between non debt tax shield with long term debt ( $\beta = 0.6086$ ,  $p = 0.1157$ ,  $t = 1.5778$ ) and short term debt ( $\beta = 1.2962$ ,  $p = 0.1071$ ,  $t = 1.6163$ ).

As per the result there was no significant relationship of risk with total debt ratio ( $\beta = 0.0078$ ,  $p = 0.0622$ ,  $t = 1.8726$ ) and long term debt ( $\beta = -0.0022$ ,  $p = 0.2548$ ,  $t = -1.1406$ ). But there was a

significant positive relationship of risk with short term debt ( $\beta = 0.0085$ ,  $p = 0.0259$ ,  $t = 2.2399$ ). Hypothesis ( $H_{04}$ ) states that there is no significant relation between risk and capital structure. Since p-value of .0622 > .05, illustrated that there was no significant relation between risk and capital structure as there was no clear evidence of the significant relationship of risk with capital structure therefore hypothesis ( $H_{04}$ ) was accepted. Finding of the study is in the line with the result of Cassar and Holmes (2003).

As result illustrated in table 2, in this study, there was no significant relationship of size and age with all three debt measures. Therefore hypotheses  $H_{05}$  and  $H_{06}$  were accepted that there is no significant relationship of size as well as age with leverage ratio as there was no clear evidence with the illustrated result. That means, firm size and age of company are not the determinant of capital structure in Sri Lankan companies. This result is consistent with the result of Cassar and Holmes (2003).

Model 1:  $LEV_{it} = \beta_0 + \beta PROF_{it} + \beta TANG_{it} + \beta NDTS_{it} + \beta RISK_{it} + \beta SIZE_{it} + \beta AGE_{it} + e$

For the model 1, value of the coefficient of determination of factors which was; ( $R^2$ ) is 0.7461, whilst this result implied that 75 % percent of the total variance in leverage, could be explained by the selected factors. As the model revealed the remaining 25% of the variability was not explained. An Analysis of Variance (ANOVA), indicated that;  $F = 10.08902$ ,  $p < 0.05$ , that the model was significant. It means that the regression results were acceptable for this analysis.

Model 2:  $STD\_TA_{it} = \beta_0 + \beta PROF_{it} + \beta TANG_{it} + \beta NDTS_{it} + \beta RISK_{it} + \beta SIZE_{it} + \beta AGE_{it} + e$

For the model 2, value of the coefficient of determination of factors which was; ( $R^2$ ) is 0.7240, whilst this result implied that 72 % percent of the total variance in short term debt to total assets ratio, could be explained by the selected factors. As the model revealed the remaining 28% of the variability was not explained. An Analysis of Variance (ANOVA), indicated that;  $F = 9.0077$ ,  $p < 0.05$ , that the model was significant.

Model 3:  $LTD\_TA_{it} = \beta_0 + \beta PROF_{it} + \beta TANG_{it} + \beta NDTS_{it} + \beta RISK_{it} + \beta SIZE_{it} + \beta AGE_{it} + e$

For the model 3, value of the coefficient of determination of factors which was; ( $R^2$ ) is 0.8659, whilst this result implied that 87 % percent of the total variance in long term debt to total assets ratio, could be explained by the selected factors. As the model revealed the remaining 13% of the variability was not explained. An Analysis of Variance (ANOVA), indicated that;  $F = 22.1659$ ,  $p < 0.05$ , that the model was significant.

## 5. CONCLUSION

This paper examined the factors influencing companies leverage using 72 listed companies in Sri Lanka between 2006 and 2010. Three different leverage measures based on the book value have been applied: total debt ratio (leverage ratio), long term debt ratio and short term debt ratio. The empirical evidences provided that there existed significant differences in the determinants of these three leverage measures. The paper searched to fill the gap in the literature as a result of limited studies that had been conducted so far in this area using Sri Lankan data.

On the basis of findings, it was documented that profitability and tangibility are negatively related with leverage while non debt tax shield is positively related to leverage. At the same time risk, size and age of the company did not have significant relations with leverage of the Sri Lankan companies. Also, there was a negative relationship between tangibility and short term

debt to total assets ratio while there was a positive relationship between risk and short term debt to total assets ratio. There was no relationship of profitability, non debt tax shield, risk and age with short term debt to total assets ratio. But profitability only had a significant negative relation with long term debt to total assets ratio. Tangibility, non debt tax shield, risk size and age did not have significant relations with long term debt to total assets ratio. The most interesting finding in the study is thought that there exist significant differences between short term debt and long term debt.

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DOI: **10.5958/2249-7137.2020.00597.2**

## ARCHAEOLOGICAL STUDY OF THE MONUMENTAL STRUCTURES OF YERKURGAN

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### ABSTRACT

*In given article are analysed results of the study in settlement Yerkurgan, which is a large monument Kashkadarya oasis. Of particular interest is a fragment of one of the largest sculptures - a life-size brightly painted female face. On the surface of the western column, a number of symbolic signs were found, drawn in black lines on a red background, as well as two silhouette figures of donor-bearers facing the altar. The results of excavation work 3 showed that it was urban Zoroastrian dakhma, which was a monolithic, rectangular, tower-like structure in the upper part 34x23 m in size, built of mud brick and clay. The only factor that shaped the building structure was the street, or rather the road that ran from the inner wall gate to the southeast gate of the outer wall. Only in the VIII century AD some parts of the city settle in again. At the site of the bastion, a round fortified structure with office premises is being built, which is until the X century.*

**KEYWORDS:** Museum-Local History Department, Uzkomstaris, Urban Planning, History, Culture, Ancient Population, Trade And Money Relations, Ruins Of Medieval Cities, Historical And Archaeological Past, Senmurv - Mythological Dog-Bird, Ceramic Finds, Medieval Sources.

### INTRODUCTION

Systematic studies of archaeological sites in the Kashkadarya valley were begun only in 1946, with the inclusion of the topic "Historical topography and archaeological sites of the r. Kashkadarya". In the archaeological work of the Institute, this topic occupied a small place: the main task was to identify and initially study the monuments of the region, almost not affected by archaeological research [1].



Work on mapping and fixing all the settlements and cities of the Karshi oasis made it possible to systematically approach the establishment of the role of the central city of Nakhshab in the socio-settlement structures of ancient Sogdian society as a whole.

The largest city of ancient Nakhshab, the vast area of which made it possible to create developed urban development, was the capital Yerkurgan, which represented a sufficient variety of types of monumental architecture. Its structure was determined by monumental high-rise public buildings. Forming the silhouette of the city, they were the main spatial landmarks of social life, functionally being the centers of administrative, economic, ideological and military life, both of the city and the oasis as a whole. These central nodes, which determined the aesthetic imagery and the individual look of the city, were connected by the main street highways, which cut through the ordinary urban development, going out onto the square in front of the main facades of these structures.

The citywide palace and temple complexes of Yerkurgan are unique in their individuality, but the general composition scheme, structural elements and details of their decoration find the closest analogies in the wide region of the Middle East and Central Asia, starting from antiquity.

Most of the Yerkurgan settlement is a system of hills of the remains of urban architecture of public, residential and industrial purposes [2]. In different years, the hill fort was repeatedly examined, which was reflected in monographs, reports and articles.

An important object of study of the Kashkadarya expedition of the Institute of Archeology of the Academy of Sciences of the Republic of Uzbekistan was - "eastern hill", which, as represented by the ruins of the city temple. The excavation laid here showed that on the top of the hill there was a cella of a large city temple, erected in about the 3rd century AD and finally launched in the VI century AD. A significant part of the central sanctuary of the temple was opened. The walls are marked with large and small niches covered by circular arches, and in the center of the south wall a wide entrance was opened.

During the excavation, a complex of cult tools was discovered: ceramic vessels for ritual incineration and incense, vase-shaped incense burners on the leg, lamps in the form of a round stucco bowl with a large loop-shaped roaster handle, bronze mirrors, and individual jewelry. Researchers concluded that the temple was dedicated to a female deity. During each perestroika, the painted clay figure of the deity was broken and their fragments were walled up in the masonry of walls, sufs and floors.

In the stratigraphic pit laid on the temple complex, it was revealed that under this building of the upper construction horizon lay the leveled remains of earlier buildings of a temple character.

In the stratigraphic pit laid on the temple complex, it was revealed that under this building of the upper construction horizon lay the leveled remains of earlier buildings of a temple character.

Continuation of excavations of the city temple of Yerkurgan revealed 5 building periods of the building. Samples of the plot polychrome wall painting were obtained, fragments of ganch gilded and painted clay sculpture were discovered. Of particular interest is a fragment of one of the largest sculptures - a life-size brightly painted female face. On the surface of the western column, a number of symbolic signs were found, drawn in black lines on a red background, as well as two silhouette figures of donor-bearers facing the altar.



In the northwestern part of the city, between its inner and outer ramparts, excavations of a hill 70 m long and 7 m high were started. The results of excavation work 3 showed that it was urban Zoroastrian dakhma, which was a monolithic, rectangular, tower-like structure in the upper part 34x23 m in size, built of mud brick and clay. The southern and eastern facades of the tower, facing the city, were decorated with frequent pilasters. By definition, R.Kh. Suleymanov, dakhma functioned in the II century BC, for a short while and was soon thoroughly walled up, thanks to which it was perfectly preserved in the lower part[3].

In the northeastern part of the settlement, the quarter of ceramists was investigated for the first time examined by S.K. Kabanov in 1947-1948 Excavation No. 5, located in the center of the quarter, revealed the corridor, kilns, a lot of ceramics and coins of the Nakhshab coin from the 5th-6th centuries along the upper level of the building.

In 1974, six excavations were laid at various sites in Yerkurgan, and defense walls were studied at seven sites. In all sections of the internal defensive wall, the original masonry of coarse raw material was revealed, a format that was considered characteristic of the middle of the 1st millennium BC.

Much work on the study of the fortifications of Yerkurgan since 1975 was carried out by M. Turebekov. In the southern part of the settlement, they discovered the remains of the outer wall of the 1st century BC, with rhythmically repeating towers with a radius of more than 5 m from a very durable well-mixed groin [4]. In the southeastern corner of the inner wall of the walls, a citadel of the settlement was excavated, the upper layers of which consisted of early medieval deposits.

At E-5, in the quarter of ceramists (M.Kh. Isamiddinov), in the dump of the ceramic workshop, an extensive series of samples of dishes of the 1st century was obtained. AD: glasses, bowls, goblets, dishes. To obtain comprehensive data on the ceramic complexes of the settlement, the fixation of the material was carried out on micro-layers [5]. In the quarter of the ceramists, another excavation site was laid (E-13), in the lower part of which fragments of molded painted ceramics were found, known from such monuments of the early Iron Age as Yaztepa and Kuchuktepa and dating from the 9th-7th centuries BC. Together with finds from E-5, his materials made it possible to trace the stages of the development of ceramic forms and complexes of Yerkurgan from the late Bronze Age to the early Middle Ages. These findings already indicated the venerable age of Yerkurgan numbering at least 2700 years. M.Kh. Isamiddinov was the first for the western part of South Sogd to develop fractional periodization of the development of ceramic complexes [6]. A detailed comparison of the ceramics of Bactria and Sogd made it possible to trace the development of ethno-cultural ties between the regions.

During the excavations at R-5, a print of the seal on a cone-shaped fragment from semi-burnt clay was found. In the center there was an image, a profile of a person, and along the perimeter there was an inscription in Sogdian writing. It was read by M. Iskhakov as part of the name of the owner of the press and is transmitted in transliteration - "Anush" - the root from which many ancient proper names such as Anushirvan, Anushancha, Anushbam and others come from. "Anush" also occurs in the common sense - "immortal, happy. According to paleography, the inscription dates back to the 5th-6th centuries AD, which corresponds to the last stage of the life of the ancient city[7].

Archaeological work of 1974-1975 on the settlement Yerkurgan allowed to clarify the periodization and the life time of the city. It was found that this earliest metropolitan center of the Karshi oasis appears in the 9th-7th centuries BC, reaches its maximum prosperity in the era of chionites and ephthalites in the IV-VI centuries AD and in the VI century. the conflagration dies in the fire, after which life on it freezes. Only in the VIII century AD some parts of the city settle in again. At the site of the bastion, a round fortified structure with office premises is being built, which is until the X century. served as an observation tower of medieval Nasaf, as it was, for example, in the system of Bukhara Kampirduval and medieval Khorezm.

As the author finds out, the compositional and planning structure of these two main monumental buildings of Yerkurgan belongs to the widespread type of complexes of ancient and early medieval Central Asia, consisting of a hall built on one axis, introducing its lobby or aivan and, further, the courtyard. This basic scheme in the form of a hall with a lobby or a portico in specific cases varies greatly, then, forming the center of the overall composition of architectural complexes, it is sometimes found as an integral element in large complex complexes.

The unique memorial structures discovered as a result of work on Yerkurgan give an idea of the funerary customs of the urban population of Sogd, from the time of antiquity. The first of them in time is the dahma of Yerkurgan. Typologically, it differs from the circle of the above architectural complexes, and chronologically precedes them. DahmaErkurgan II century BC, built and finished in compliance with the basic elements of ancient oriental architecture. As R. Suleymanov notes, it functioned for a very short time - no more than several decades, within the 2nd century BC.

During archaeological work in the quarters of potters and blacksmiths, differences in their structures were noted, which allowed R.Kh. Suleymanov assumed that the quarter of the potters was privately owned and belonged to the producers themselves, as a result of which the structure of its development took shape spontaneously for a long time. The quarter of potters of Yerkurgan has a structure since ancient times characteristic of urban and proto-urban development, dating back to the tradition of the proto-urban stage, when the living and industrial premises of artisans formed an indissoluble whole.

The addition of the smith's quarter in the outer city went a different way. The only factor that shaped the building structure was the street, or rather the road that ran from the inner wall gate to the southeast gate of the outer wall. All artisan farms are built here along the street, on which facades one or two rooms of each of the farms go, the rest go deep [8]. R.Kh. Suleymanov gives summary typological complexes of Yerkurgan ceramics, combining the most saturated and chronologically seasoned collections of layers, giving material of a given time at different excavations of the ancient settlement.

Thus, the observations of R.Kh. Suleymanov's on a systematic analysis of synchronous ceramic complexes of products by masters of different quarters of Yerkurgan, different in origin and function of the utensil complexes of the oasis settlements, within a single time interval, led the author to conclude that the so-called stratigraphic columns of ceramic types used methodically in practice in no way can claim to provide the full amount of information and reflect the whole richness and diversity of the typology of ceramic dishes of a particular era in a particular region.

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DOI: **10.5958/2249-7137.2020.00598.4**

## IMPROVEMENT OF TRANSFORMER PROTECTION ELEMENTS

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### ABSTRACT

*According to the task performed, transformers are divided into the following types: 1) Power Transformers 2) Special Transformers. Power transformers in turn: it is divided into general-purpose and sectoral types. Electricity intended for transmission, reception and use of energy change of electrical energy in the network and equipment (voltage increase or decrease) function transformer power it is called a transformer. In this article highlights of improvement of transformer protection elements.*

**KEYWORDS:** *Transformer, Energy, Protection Elements.*

### INTRODUCTION

Transformer (lot. transformo) - in technique-any important property of energy or objects (eg. the device is designed to change the voltage (current, voltage, etc.). Electric transformer, gidro Transform at or, photo transformation, engraving (extremely high frequency) transformer and other types are included. The electric transformer is designed to change (increase or decrease) the alternating current voltage. His work is based on the phenomenon of electromagnetic induction. It consists of a single primary cell, single or multiple secondary cell and basically a type ferromagnetic core (magnetic conductor). All freckles are wrapped in a ferromagnetic core and are inductively connected to each other. Primary wrap ends (transformer input) are connected to the alternating current voltage source, secondary wrap (or wraps) ends (transformer output) consumers. For the first time an electric transformer N.Y.Yablochkov 1876 used in the electric lighting network. M. A. Dolivo Dobrovolsky 1890 created a three-phase electric transformer. Other scientists and inventors later discovered that the transformer could be improved, improved,

and f.i.k.ni they have been doing a great deal of work to increase, improve insulation, compact and so on.

The most common type of electric transformer are power transformers. They are installed on power transmission lines (PTL). Such transformers provide the voltage of the current produced by the generators of electric motors from 10-15 kV to 220-750 kV. The moldings of transformers are made of copper, electro technical steel, from which magnetic conductors are cold rolled. There are dry and oil types of electric transformer. The dry transformer is cooled in the air without oil. The magnetic conductor and conductor of the oil transformer are placed in a bag filled with mineral oil. The oil serves as insulation and cooling.

In addition to power transformers, there are also Transformers such as measurement transformer, voltage transformer, current transformer, impulse transformer, factor transformer.

It is also called small transformer (substation), which is designed to increase or decrease the voltage in the alternating current network as well as dividing power consumers. It will include a power transformer, devices, automatic control and protection device, additional facilities. Strong in some reduction transformer substations with high power, at home compact autotransformers are used.

What are the types of Transformers?

The transformer is mainly the use of electromagnetic induction principles, changing the AC voltage of electrical equipment, the main component is yellow, the two yellow and the core. Its main functions are: voltage mining, current conversion, impedance conversion, insulation, regulation, etc.

Sorting by cooling medium

It is divided into dry type transformers, oil-conducting transformers and air-exchanging Transformers. Dry type transformers usually rely on air convection cooling, which is used for local lighting, electronic constructions and other small-volume Transformers. Oil conductor Transformers rely on oil as a cooling medium.

Accordingly, the pressure regulator points it is divided into a device for changing the non-moving voltage transformer and load cranes.

According to the basic form

- 1) Core transformer: for high voltage power transformers.
- 2) Shell transformer: for large flow Transformers, such as electric furnace Transformers, welding Transformers.

Classified by purpose

- (1) Power transformers.

Mainly in energy systems, for example, improved Transformers, downstream transformer distribution transformers, contacttransformators and plant Transformers.

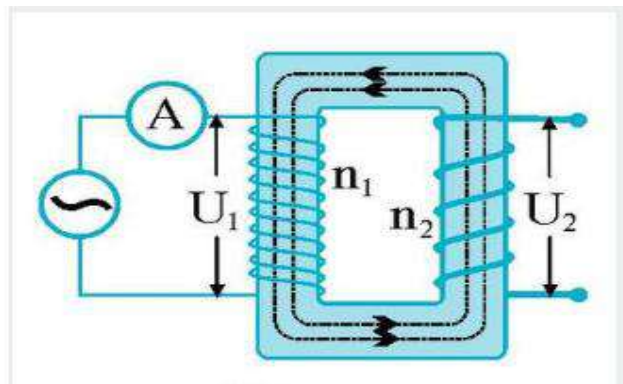
- (2) Special Transformers.

It refers to the use of other Transformers from electrical systems such as voltage regulators, instrument transformers (voltage transformers and current transformers), mining Transformers, test Transformers, Rectifiers Transformers, electric furnace transformers and rotary Transformers.



Structure and operation of the transformer Devices that change the voltage from one value to the second value without changing the frequency of the alternating current are called Transformers.

In Transformers, two coils are put on a common core (figure 199). This is called the first reel ores – the primary ores, and the second reel ores – the secondary ores.



Connecting the primary switch to the  $U_1$  voltage alternating current. The alternating current forms an alternating magnetic field in the chunks. The magnetic force lines of this wrap go to the secondary wrap on the core.

As a result, a  $U_2$  voltage alternating induction current is formed in the secondary coil. The frequency of this current is the same as the frequency of the current in the primary cell.

The amount of  $U_2$  voltage in the secondary coil depends on the number of dies of the wires in the primary and secondary coil. Experience shows that the number of times the number of ores in the secondary wrap is less than in the primary wrap, the voltage of the current formed in the second wrap is so many times less. And vice versa, how many times the number of ores in the secondary wrap is more than in the primary wrap, the voltage in the second wrap is so many times greater.

The number of dies in the primary cholera is  $n_1$ , the voltage given to it is  $U_1$ , the number of dies in the second cholera is  $n_2$ , the voltage generated in it is  $U_2$ . In that case, the following expression will be appropriate:



$$\frac{n_1}{n_2} = \frac{U_1}{U_2} \quad \text{yoki} \quad U_2 = U_1 \frac{n_2}{n_1}$$

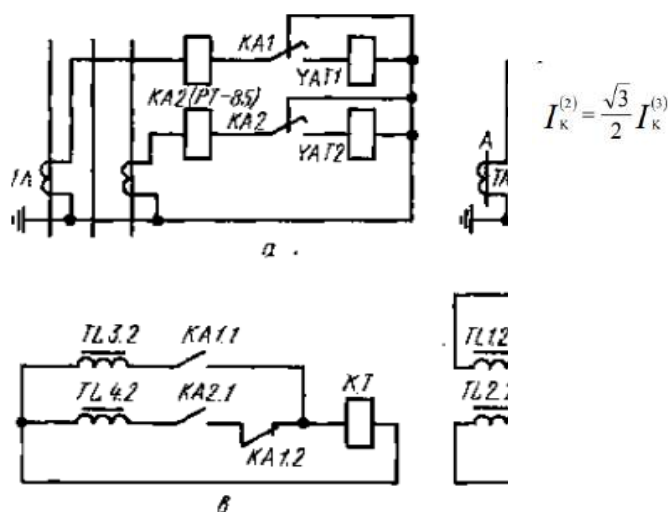
This means that it is possible to change the voltage of the alternating current. This is an important feature of the alternating current.

Basic conditions of maximum current protection account for networks 35, 10 kV non-starter on voltage for reducer transformers maximum buckle protection can also be applied for selection. The protective device current is also detected so, only the reliability improvement coefficient is slightly more acceptable, since the KHC transformer has a voltage regulator.

The determination of the sensitivity K coefficient is determined from expressions on secondary tokens.

In the case of accounting damage, the 2-phase short-circuit mode after the transformer is obtained.

Maximum current in 2-phase short circuit without taking into account the load the relays in the protection schemes are listed in the expressions of the identification of the account currents. The maximum amount of current that can pass through a 2-phase short circuit from the relay steppes is accepted as the calculated current. In order to simplify practical calculations, the table is represented by a 3-phase short circuit current. In the electric network, two-phase clamping can be expressed through a short circuit current of 3 phases:



Schemes for the implementation of maximum buckle protection. a) full Star, b) full star with 3-wire additional relays. c) triangle with 3 relays g) triangle, with 2 relays.

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DOI: **10.5958/2249-7137.2020.00599.6**

## PEDAGOGICAL TECHNOLOGIES AND PRINCIPLES OF INFORMATIZATION IN EDUCATIONAL PROCESSES

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### ABSTRACT

*The article describes the principles and technologies of informatization of educational process in higher education institutions in accordance with modern requirements. The last three years also highlight some of the reforms and advances and shortcomings in education. In the meantime, the quality of information transmission, storage, processing and imaging has increased significantly, while computer literacy has become an important sign of culture. The sustainable growth of the economy is associated with the development of Science and its capacity building. But today, there is no single consensus on increasing scientific technical activity in our country, providing and providing support. Principles of informatization the study of science serves to look for easy, accessible ways to solve the existing problems in it.*

**KEYWORDS:** Education, Training, Development, Information, National Spirit, Modern Methods.

### INTRODUCTION

The growth rates of economic development of our country are highly recognized by the world community. At the same time, it is the result of large-scale reforms aimed at the development of Science, the reform of the educational sphere, the comprehensive support of scientific and innovative activities.

Decree of the president of the Republic of Uzbekistan "on measures to further expand the participation of economic sectors and sectors in the quality of training of specialists with higher education" PE-3151 dated July 27, 2017, as well as attracting doctoral students and junior students conducting scientific research at higher education institutions of the Ministry of Higher and secondary special education of the, priority tasks such as implementation of the order "on improvement of conditions for experimental testing work in research and project institutes" are defined.

Radical improvement of the system of Higher Education, radical revision of the content of Personnel Training due to the priority tasks of socio-economic development of the country, creation of the necessary conditions for the training of specialists with higher education in the country, having an independent, stable life position corresponding to the level of international standards, is a topical issue of today.

If initially it was spent 50-100 years on the introduction of inventions and discoveries into practice, then today there was an opportunity to use them in 10-20 and even in 2-3 year. At this level, the existing circle of knowledge kengay that has emerged the process of “acceleration” of the flow of information. This process is expressed in the phrase “informed society”. [1] While it offers a wide range of opportunities in all spheres of social life, at the same time, it is still necessary to protect today's person from “information attack”. Today's era requires high potential from young people. After all, our President Sh.M. Mirziyoyev noted “innovation means the future. If we are going to start restoring our great future from Steam, we should start it on the basis of innovative ideas, innovative approach.” [2] The changes, reforms and updates that are taking place in various spheres of the social sphere of our modern society are primarily aimed at accelerating social progress.

Currently, with the development of information technology, the existence of only one computer for teaching using technical and software has become sufficient. Previously, the computer successfully assumed the functions performed by television, video recorder, film projector, diaproector and others. In the meantime, the quality of information transmission, storage, processing and imaging has increased significantly, while computer literacy has become an important sign of culture.

Computer literacy is necessary for every person in the future to become a fundamental tool in the way of life and in the process of work. So, computer work, it is no doubt that teaching to use a computer will become a common activity in the nearest time. Among the tools of modern information technologies are: computer, scanner, video camera, interactive electronic whiteboard, fax modem, telephone, email, multimedia tools, Internet and intranet networks, mobile communication systems, database management systems, artificial intelligence systems. Modern information technology tools are mastered in the conscious and planned implementation of certain actions.

Education process the use of pedagogical software serves to improve the quality of education and to increase the interactivity of education based on innovative technologies.

As a result of the implementation of the tasks set before us, in 2019, very large reforms in the sphere of education have been carried out in a completely new content and form. In particular, four presidential schools, three schools of creativity began to work. Last year 19 new higher educational institutions, including 9 prestigious foreign universities, were opened for the development of higher education, in cooperation with leading foreign universities, training on 141 joint educational programs was launched. A total of 146 thousand 500 students or 2 times more students were admitted to higher education institutions than in 2016[3].

The sustainable growth of the economy is associated with the development of Science and its capacity building. But today, there is no single consensus on increasing scientific technical activity in our country, providing and providing support. Also, the single system, which includes features such as the gradual development of scientific potential in the future, the implementation

of research of significant scientific and practical significance on a global scale, the wide application of their results, the uniqueness of scientific work, has not been restored. To do this, it is necessary to create a new system of management, which includes modern methods, an organizational system of introducing innovations into practice, a production system that includes the use of resources, new methods of increasing efficiency, a technical system aimed at reconstructing production and raising its technical level, and, in short, a unified concept that includes the socio-economic, financial, this policy ensures a constant connection with the production of science and innovation processes, extensive use of results and the creation of the necessary regulatory and legal framework in this area.

Emerging in the development of modern education “innovative approach”, “innovation activity”, “innovation pedagogy” style concepts are based on needs, and their ultimate goal is to introduce changes, updates that guarantee the result of the educational process in the field of education.

The system of education is an important factor in the development of every country. In the global environment, the socio-economic development of countries requires a higher quality of Education, a wider use of innovative educational technologies. This makes continuous attention to the continuous education system an object of necessity. The First President of the Republic Of Uzbekistan I.Karimov pointed out,“... to bring our children to adulthood as independent and broad-minded, conscious living perfect people-should be the main goal and function of the educational sphere”[4].

Effective use of information technologies in the educational process is one of the main tasks. In general, in pedagogical practice, the main goal of information technology represents the complete achievement of a high result in education. Definitions are given on the basis of various scientific approaches to the concept of pedagogical technology, which have been used since the last century. A complete and only definition has not yet been adopted to this concept. Within these definitions, the definition given by UNESCO is expressed as follows:

Pedagogical technology is a systematic method of creating, applying and identifying all processes of mastering training and knowledge, which set the task of optimizing forms of education, taking into account technical resources, people and their interaction.”[5]

Although different definitions are given to the concept of pedagogical technology, its main purpose is the thorough assimilation of the knowledge given in education by the educators. Although the participants of the educational process cover such parties as the educator and the educator, it is distinguished by its complexity and relevance. In it, the presence of a constant goal and the fact that it can be achieved through various methods, expresses the complexity of this process, while in the conditions of transition to an innovative economy, its relevance increases. As a result of each process, the result of which is considered a structural element of this process, means the degree to which the goal is achieved. The main essence of pedagogical technology in general is the achievement of full self-education and knowledge of interested educators in education. In a holistic case, it expresses the activity of forming a harmonious person. The thorough mastering of the knowledge given in education by the majority of students is the main goal of the introduction of pedagogical technology. In the application of pedagogical technology, the method of teaching, forms of education, educational tools are widely used, one of the important components.

The method of teaching is a way of organizing the interaction of educators and educators in order to achieve the stated purpose of teaching, it can be classified as follows: lecture, story, narrative, demonstration, demonstration, video, exercise, laboratory method, practical method of work, work with a book, conversation, discussion, smart attack, pinboard, method of training projects, case-Study, etc. The introduction of information tools into these methods will not only improve the educational performance but also save time.

And the forms of education are grouped as follows: mass work, collective work, group work, individual.

This means that pedagogical technology, which is considered an integral element of the pedagogical system, is important in ensuring the result of this process-that is, the purpose of the training. The effective introduction of pedagogical technologies in the process of training leads to the independent functioning of educators in the educational process.

**In conclusion**, it can be noted that it is necessary to organize all the sections of education in such a way that it will provide deep and thorough knowledge to the educators, as well as teach them a wide range of coverage thinking, timely and productive use of the achievements of modern culture and scientific activity. Because the formation of the need for independent knowledge in the student in the process of education is a requirement of the present day. This means that the main issue of pedagogical technology is to ensure the achievement of the educational goal by developing the knowledge of the educators.

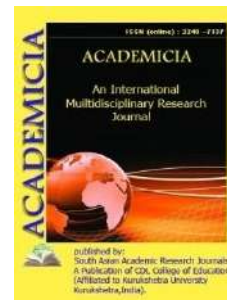
Our President Sh.M.Mirziyoev noted in his appeal to the Oliy Majlis on January 24 this year "...The broad introduction of digital technologies, both in the public and public administration, in the social sphere, can improve the efficiency, in a word, dramatically improve the living of people" [6].

Principles of informatization the study of science serves to look for easy, accessible ways to solve the existing problems in it. Applying the principles of informatization to the educational process creates an opportunity for active participation, high interest of students in the educational process, their acquisition of independent knowledge, narrowing of the resource quickly in the conditions of "informed society" and comfortable working with it, ultimately ensuring high efficiency of education and expected results.

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DOI: **10.5958/2249-7137.2020.00631.X**

## THEORETICAL WAYS OF ACHIEVING SUCCESS IN TEACHING ENGLISH TO DEAF CHILDREN

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### ABSTRACT

*This following article about how to achieve success in teaching English to children who are deaf. And also author mentions that General stage of teaching English for deaf children. It is given essential information on teaching English for deaf students. A pre-school and a boarding school for children with hearing impairments have the necessary facilities. Children with moderate hearing loss can hear a spoken word in a loud whisper from a distance of 1 to 3 m. As mentioned above, in deaf pedagogy, hearing-impaired children include children who were born deaf and later became hearing-impaired. A wide range of conditions is being created for students to be able to do it in practice without fear or shame. Pupils' pronunciation is clear and their range of hearing is chosen from light to complex.*

**KEYWORDS:** Deaf, In Native Deafness, Non-In Native Deafness, Psychological Condition, Speech, Signal System.

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### INTRODUCTION

It is natural that disabled children will have more difficulty learning a foreign language than healthy children. However, using these child-friendly methods and creating psychological conditions in teaching foreign languages can eliminate any problems that may arise. For this purpose children with disabilities, who are deaf, are separated into special groups[1].

- Low hearing ability;
- lost hearing ability;
- In native deafness;
- No - In native deafness.

There are special groups for children with hearing impairments in pre-schools and vocational colleges in Uzbekistan. Children with mild hearing impairments can be educated in public preschools and Scholl's along with their healthy peers. Education in these institutions is based on the state requirements and programs of 11-year general education.

### **Theoretical Basis**

Deaf educators are making great strides in working with children with hearing impairments. Boarding school for this category of children have a pre-school education department. This category of anomalous children successfully graduates from higher education after studying in special evening schools and works equally with everyone in various enterprises of the country. The main task of educators and teachers is to separate healthy children from hearing-impaired children and to ensure that they receive education in special institutions or are involved in integrated education if they need a special approach. Hence the elimination of hearing loss can compensate for the fibres. A student who feels he or she is unable to express himself or herself orally in a private institution should be able to express himself or herself in writing. To this end, students are taught to express themselves orally and in writing on the basis of practical speaking skills and competencies. In deaf and hard of hearing students, teachers and student activities are organized on the basis of exercises in a certain system of lessons and classes on the formation of spoken and written speech. In order to ensure the practical acquisition of speech materials, situations that require special written problem-solving and written explanations are planned in advance. It is required to be able to adapt all types of didactic tools to the speech process. In this case, the speech materials are predetermined in the planning of the curriculum of the correctional pedagogical process is carried out on the basis of a certain system. Speech materials for each lesson are prepared in strict accordance with the principles of the correctional utility system. A wide range of conditions is being created for students to be able to do it in practice without fear or shame. Pupils' pronunciation is clear and their range of hearing is chosen from light to complex. Their extensive communication and warm relationship with a deaf child develops the child's ability to receive and transmit speech information to the neat deaf and hard of hearing children. Nurturing the need for conversational speech begins in the family. The speaking skills and competencies acquired in the new school should be strengthened in the natural environment of the family. In addition, the development of deaf and hard of hearing children requires the use of loudspeakers in special institutions. These conditions are created with the participation of family members. Deaf and hard of hearing children acquire their mother tongue on the basis of corrective communicative principles adapted to the mental and speech abilities of the child, arising from the features of the laws of this language.

Classroom are specially equipped, the formation of boarding school in accordance with the direction of the material and technical base increases the effectiveness of educational content. Because, now, he has the skills on how to receive information. It is also possible to learn a foreign language in the same way after mastering one's mother tongue. They should be able to motivate children when needed. Deaf and dumb children need to be in constant contact with their parents and teachers to prevent them from developing depression when they reach adulthood. This means that the mental state of children is a priority in order to achieve positive results in learning foreign languages. Learning a foreign language seems a little easier for a child than learning his or her mother tongue. Teachers and educators have a great responsibility. If the child is approached with the right intention and strategy, he will develop positive qualities and will be

able to learn foreign languages fluently. Because at that time, he has the skills on how to receive information. Speech is a complex mental action. It effects to growing to children with mental and generally mature. Speech is based on hearing organ and it becomes developing a way of comparison. A hearing analyser, the moving speech analyser which effects of speech. The moving speech analyser works with hearing analyser as a companion. Developing of the hearing analyser depends on pronunciation. Developing speech of children belongs to speech sounds, physiological and phonetical progressing. Most importantly, it is also characterized by the ability to distinguish the structure of words in one's own speech and the speech of others, the structure of sound. Both signals systems, as well as the interaction of speech with cognition, form the basis of mental development. According to dermatologists (T.A. Vlasova, R.M. Boskis, D.V. Neumann, etc.), The level of development of a child with hearing impairment depends on the stage of the child's life and the severity of the defect. In deaf pedagogy, children with hearing impairments are studied as a group of children who become deaf, hard of hearing, and later deaf. Absolute deafness in both ears during congenital infancy leads to deafness. Children with speech impairment as a result of partial hearing impairment are included in the group of hearing-impaired children. Children who become deaf after speech development are later included in the group of those who become deaf. Even if the defect occurs after the speech has been composed, there may still be hearing loss due to a defect in the ear. Deafness can be congenital or acquired due to the causes of permanent hearing loss 25-30% of deaf and dumb children have congenital hearing loss. This due to various disease of the mother during pregnancy, such as influenza. Acquired defects in hearing may be due to defects in the structure of the ear or hearing analyser. This is caused by changes in the upper nerve centre, conduction pathways, or the ear itself. Children with hearing impairments are included in the category of anomalous children. Because this defect has a negative impact on the children overall development and mastery of the application materials. Causes a number of specific difficulties in mastering kindergarten and school programs. After hearing development in young children, for example, after the age of two, the child does not hear the speech of others as a result of deafness. He even slowly forgets what he knows. The deafness in the child gradually merges with the deafness and he becomes deaf and dumb. Teachers and educators in special instructions should help such children to receive an appropriate education. If the child is not given special care in time, he will also show signs of mental retardation.

## Results

However, a positive result is achieved if the necessary measures are taken to compensate for the defect. Children with mild hearing impairment hear a spoken speech at a distance of 6 to 8 m from the ear scores 3 to 6 m. Hearing-impaired children, in turn, are divided into children with mild to moderate hearing loss, depending on the degree of hearing impairment. A pre-school and a boarding school for children with hearing impairments have the necessary facilities. Children with moderate hearing loss can hear a spoken word in a loud whisper from a distance of 1 to 3 m. As mentioned above, in deaf pedagogy, hearing-impaired children include children who were born deaf and later became hearing-impaired. Hearing impairment results in several deficiencies in the child's speech Poor spelling Poor grammatical component Words in a sentence Misuse of words inability to connect them inconsistent word-formative modifiers inability to use suffixes. In the severe hearing loss, the child hears a moderately spoken speech from a distance of 0.5 m. Misleading similar-sounding consonants, and so on. Some educators and teachers mistakenly

treat the child as a lazy, irresponsible bully, as a result of which the child's whimsical cries become slurred, which leads to secondary mental changes.

## DISCUSSION

The conclusion is that every teacher working with children with disabilities should have sufficient psychological qualifications in addition to being a teacher.

It is clear that minor actions can have a negative impact on the character of the child in the future. In addition to the profound knowledge of the English language, the use of effective, well-rounded techniques is the key to achieving good results. Every student with disabilities can learn a foreign language, If we create the right atmosphere for them, if teacher use right, efficient methods and strategies if parents support their children.

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DOI: **10.5958/2249-7137.2020.00632.1**

## ABOUT A TYPE OF ADVERTISING TEXT

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### ABSTRACT

*This article also describes the specific conditions for the use of creolitic text in the preparation of advertising products. The position of verbal means in conveying serious understanding, convenience, and news to the consumer must take precedence over that of visual units. At this point, nonverbal units serve to persuade and engage.*

**KEYWORDS:** *Creoleization, Multimodality, Verbal, Nonverbal, Polycode Text*

### INTRODUCTION

Taking into account the fact that in some respects, depending on the age, gender and worldview of the consumer some features may be attractive to him or her, verbal and nonverbal elements are used in the texts of advertising products. Such texts are called creolized or creolitic text. The concept of creolitic text was introduced in 1990 by Yu.A. Sorokin and E.F. Tarasov. Children of mixed marriages of locals with Spanish and Portuguese immigrants were called Creoles (French Creole, Krillo, Crioulo, port Crioulo, Latin). Creoles were born and live in Latin America. [1] In linguistics, the term refers to the formation of a mixed language as a result of the interaction of two or more languages. When the same principle is applied to text, creolization represents the concept of text combined in linguistic and paralinguistic methods. [2] Creole texts are “semiotically enriched” texts.

As the American sociologist James Sidbury describes, “Creolization is the process of assimilating other cultural values.” [3] In the twentieth century, a new “visualized era” emerged in the development of society as a whole. Due to the abundance of information, the problem of time for the process of receiving it in the human mind began to dominate. The widespread use of visual elements in solving this problem began. Visual elements surpass verbal information in their versatility, charm, and inclusion of a lot of information.

As V.M. Berezin noted, "...picture is becoming more and more an element of text formation. As a result of the integration of all graphic tools, as well as other symbolic forms, it will become a single text field for print and electronic publications." [4]

Today, the world of mass media is constantly evolving. Creole text helps at a point where the verbal world is failing to convey information to humanity within its means. Looking back, we are convinced that Creole texts are used to attract attention with their role in conveying information to the recipient, which is also its advantage. The desired result is achieved when the knowledge and experience of representatives of the fine arts are used in the development of Creole texts. Historian and fine arts scholar Yu.A. Gerchuk, in his book *The World of Fiction*, wrote: "Initially, the artist drew a picture with contrasting lines and local colors, in the modern sense it was an art speech, not a picture." [5]

The synthesis of word and image in the process of communication became the basis for the emergence of a number of new genres and visual arts. By creolizing verbal texts, the presence of graphic content, as well as content or components that include all the designs that affect the textual content, was identified. Among them, the font, color, text background (colored or illustrated), language units, pictorial prints (pictograms, ideograms, etc.), the graphic appearance of the oral text (in the form of pictures, etc.) should have a special place.

**Creole text** consists of two parts, verbal and nonverbal. Such texts are used in advertising products, cartoons, movie posters and placards. In Creolithic texts, the verbal and visual components are inextricably linked. When one of the components is deleted, the remaining component stops transmitting data: it is not fully executed or can be interpreted as bad. The earliest examples of the Creolithic text are found in A. de Exupéry's novel *The Little Prince*, where the verbal text and the author's lines form a single whole. [6]

According to the Finnish linguist L. Quikka and the English linguist Carey Jevit, "A mixture of verbal and pictorial text is called creolized (multimodal) text. Multimodality combines one or two organizational parts to create meaning, such as an ad-creole text, made up of visual and verbal pieces." [7]

The interaction of semiotic elements is an important topic in the multimodality front. These include the interrelationships between the components, such as the relationship between picture and written speech.

A. Nazaykin defines it as follows: the word "creolization" in the metaphorical sense means a non-identical semiotic text consisting of different characters by nature and consists of verbal (natural language) and nonverbal (picture, music, formula) components. [8]

Multimodal text is text that is presented in several ways of perceiving a communicative situation, i.e., through viewing and hearing. [14] Multimodal text analysis is based on verbal and visual theory as well as Cress and van Leeuwen's image theory. This combination explains to us the visual "grammar" that identifies the main motives of verbal and visual elements and takes into account the relationship between verbal and nonverbal text.



In linguistics, the term “creolization” refers to the interaction of two or more languages to produce a new language with a mixed vocabulary and grammar.”[9]

During the Creoleization process, a simplified language gradually emerged as a result of interaction with other languages. [10]

The involvement of nonverbal components in creolitic texts varies depending on the type of advertising and is divided into different hierarchical systems accordingly. Creole text units consist of a picture, text, music, color, font size, sound, which provide impression and appeal, showcasing cultural innovations. When different character system elements are used in text construction, ambiguous or creolized text emerges.

Well-known Russian linguist E.E Anisimova evaluated the degree of integration of verbal and non-verbal (nonverbal) components in the text. These are divided into verbal, partially Creolite, and fully Creolic texts. [11]

E.E. Anisimova describes the creolized text as follows: "Creoleized texts use descriptive means along with spoken words, as well as other semiotic codes (color, font, etc.)." [11] In the views of the linguist E.E. Anisimova covers all the main possibilities of interaction between verbal and nonverbal components in the Creole text.

Not all of them can be described at once. An appropriate definition should be included for the general characteristics of all paralinguistic active texts. A.A. Bernatskaya suggests using the term "polycode text" in this case. [12] This term clearly describes the presence of several components in the advertising text, so it can be used for the purposes we have indicated.

There are many forms of Creole text in society, and these texts do not only serve for advertising products. They have specific types and functions.

According to the Russian linguist A.A Musakhranova, it is expedient to group Creole texts for the following reasons:

1. According to the degree of creolization.
2. According to the socio-cultural direction.
3. According to the type of connection.
4. According to the number of components.
5. According to the complexity of the hypertext.
6. According to the level of coverage of the listener groups.
7. According to the level of compositional complexity. [13]

Advertising texts are created to make an impact on the listener and to control his or her thoughts or actions. More specifically, an advertising product not only conveys information about a new product in the sales area, but also serves to motivate the consumer to purchase that product. In this case, the consumer is not a person who buys the product on display or offered, but a person who thinks positively (buy the product) or negatively (not buy the product) to the idea (advertising).

Nowadays, it is impossible to imagine a society without advertising. Because advertising is a reality that illuminates the availability of activities, services and products that consumers need, their convenience and preferences.

The advertiser uses different ways to achieve the goal. But the advertising of the product on display goes beyond specific unwritten laws. As a result of increasing competition, the creation of an effective advertising product has become a complex process, and there is a need for more research and the discovery of modern mature professionals.

There are also specific barriers depending on the areas of distribution of the advertising product. Advertisers have to reckon with the leading values, experiences in a particular area to find a solution to the problem. Because the scope of an advertising product is related to culture, values, religious concepts, and consumption.

Commenting on the advertisement, Sarpavaara said that "it is not a mirror of a society that clearly reflects culture, values and ideals". It is more appropriate to look at advertising as a means of developing and absorbing new values in a particular culture: once it emerges, it can change existing cultural ideas, patterns, and skills. [15]

As the availability of modern media products and information expands, new opportunities are emerging in the world of advertising. Because in today's world, the exchange of information is growing, and in the minds of consumers there is a problem of the ability to receive different information and the regulation of time as a social unit.

In the advertising text, each component (title, main part and slogan) has its own function. In particular, the text should not only attract the attention of the consumer, but also have the ability to motivate and persuade to buy the product.



Figure 1.

The banner of the State Service Agency and the phrase "Documents move, not citizens" are written in capital letters on the banner to attract consumers. But the task of convincing the consumer is assigned to the sentences "My job is done", "30 minutes". The "under the Ministry of Justice" phrase indicates that the owner of the advertising product is a high-ranking organization. It means that the advertised product is more reliable with the legitimacy of being open and more displayed to the consumer.

The use of visual units in advertising is also a unique modern trend, and the performance of the assigned task can be an effective tool for the formation of reality in the minds of consumers in different forms. The combination of visual and verbal units results in a complex whole, involving people with disabilities as well, leading to an expansion of the consumer ranks. The ad text consists not of a simple sequence of verbal units, but of their interrelationships and the integrity of the content categories. The main task of the advertising text is to ensure that the components of the text adhere to the linguistic categories and adequately reveal the content. The basis of the advertising text is a holistic complex semiotic element that is designed to bring the advertised product to market, combining an independently structured character unit. [16]

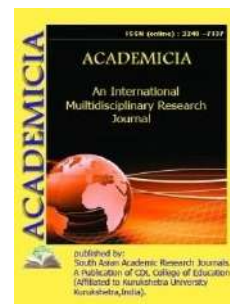
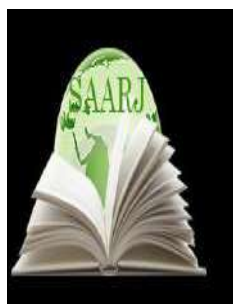
The ad text has a hierarchy that takes into account the size of the letters, i.e. the text consists of a title in uppercase letters and a descriptive main part in the secondary uppercase letter, lexical units representing address information in lowercase letters. There is a culture of finding and using appropriate words in advertising text. The correct or incorrect use of words will determine the future of the advertised product in the sales area.

In short, the Creole text is the object of study of linguistics, psychology, fine arts, computer science, music, sociology, linguoculturology. As consumer consciousness and worldviews grow in a developed society, there is a need to pay more attention to the unity of form and content in the creation of an advertising product. In order to absorb advertising into the consumer, it is advisable to raise its morale, create a positive environment and gradually demonstrate the main content. More complex forms of information communication are being discovered, and it is likely that other texts will be created due to the constant updates in the field of advertising.

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DOI: **10.5958/2249-7137.2020.00633.3**

## DEVELOPMENT OF PROFESSIONAL SPEECH CULTURE OF MEDICAL STUDENTS

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### ABSTRACT

*The article is devoted to the study of the problem of improving the foreign language vocational culture, in other words, amelinguistic competence, in the conditions of a medical higher educational institution. Currently, much attention is paid to improving the technology of preparing future specialists for amelinguistic competence. Issues related to the cultural and speech aspect of the formation of the personality of a future medical professional remain little studied.*

**KEYWORDS:** *Amelinguistics, Competence, Speech Culture, Pedagogical Acmeology, Communication, Professional Education, Technology, Linguistics, Science.*

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### INTRODUCTION

The reforms carried out in the Republic and changes in the state's foreign policy contributed to the expansion of international contacts, as a result of which the need for cadres with linguistic competence increased. Such changes are aimed at improving the technology of preparing future specialists for amelinguistic competence in our study of medical education students. Unfortunately, an analysis of the practice performed by us indicates that the state of professional speech culture (PSC) of medical education students is considered satisfactory in terms of speech etiquette. As a result, it was determined that medical education students not only do not speak foreign languages, but also have a very low level of vocabulary, inability to communicate at a professional level. While the ability to communicate is an attribute of the integral communicative activity of a future specialist, the development of a foreign-language professional-speech culture is an important link in the preparation of students of higher medical education.

In this regard, there is a need to study the problem of the formation of a foreign-language professional speech culture of medical education students in the process of their professional training. However, the problem of improving foreign-language professional-speech culture, in

other words, acmelinguistic competence, is insufficiently reflected in the conditions of a medical higher educational institution, although studies of this kind represent an actual direction in the theory and methodology of professional education. A number of issues related to the cultural and speech aspect of the formation of the personality of the future medical worker remain poorly developed. In particular, the problem of the formation of acmelinguistic competence of students of a medical higher educational institution has not been sufficiently studied. Issues requiring development remain questions regarding pedagogical methods, technologies, conditions and mechanisms for improving the acmelinguistic competence of medical students in the process of training. The fundamentals of the acmelinguistic competence of a doctor are laid in the process of training, therefore, the subject of scientific interest is the acmelinguistic competence of medical students. As part of this study, it is necessary to study the content, structure and features of this concept. In this connection, we turn to the analysis of the definitions of the concept of "acme", "linguistics", "pedagogical acmeology", "competence". In this study, we settled on the study of a new direction in linguistic science - acmelinguistics. Acmelinguistics, from our point of view, should be studied as a section of pedagogical acmeology, as a necessary component of professional speech activity of a specialist. Pedagogical acmeology - the science of ways to achieve professionalism and competence in the work of a specialist. [1]

One of the constituent components of pedagogical acmeology should be the acmeological concept of specialist skill, which is a way of being a specialist and the feasibility of the potential of his personality, as well as a condition for climbing to achieve "acme". Based on the foregoing, from our point of view, the essence of pedagogical acmeology consists in determining the ways for a specialist to achieve professionalism, which has a clearly expressed humanistic orientation towards the development of the personality of another person. From the above it follows that the acmeological approach in the modern system of vocational education is to provide increased professional motivation, stimulation of the realization of creative potential, identification and fruitful use of personal resources to achieve success in the professional activity of a teacher. We can talk about the acmeologization of the personality of a professional and the acmeologization of the process of his preparation, which is possible only if there is an acmeologically educated specialist and an acmeologically oriented system of his training and retraining. There is no such system today. The foregoing determines the following: the need for a scientific study of the fundamental foundations of creating such a system; a high degree of urgency of the problem of creating an acmeologically oriented specialist training system. Recently, the relatively recently appeared term acmelinguistics is actively used in pedagogical literature. [3]

The name comes from the Greek "acme" - "peak" and the Latin "linguistics" - "linguistics". Historically, acmelinguistics has arisen from acmeology, a science formed at the intersection of natural, social and humanitarian disciplines that study the laws and mechanisms of human development when they reach the highest level. The latest achievements in psychology, pedagogy, sociology, psycholinguistics, linguodidactics have allowed to form a new science, designed to solve current problems of language learning. Acmelinguistics is a field of not only scientific, but also practical activity of a specialist, which examines and uses the laws, factors and mechanisms of development and self-development of an adult student in order to achieve the highest results in language learning, that is, language acts as a means of achieving personal "acme". [2]



The following main features of this concept should be noted: acmelinguistics “studies the patterns of achievement by a person of an acme level, the productive manifestation in life of all the essential forces of an individual, focused on solving value-significant problems - through language acquisition” [4]; acmelinguistics “not only used the general methodological principles of modern knowledge, but also itself“ sets ”an acmecentric vector orientation capable of determining its interaction with other sciences” acmelinguistics “carries a certain continuity of psychological categories of reflection in the student’s personality and activity, synthesizing psychology and pedagogy, however, in contrast to them, acmelinguistics takes a “subject-centric” position in which the learner from the object becomes the subject of training with the establishment of integrative relationships with all participants and components of the educational process ”Thus, the main features of acmelinguistics are recognized: the patterns of achievement by a person of acme level through language and speech activity.

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DOI: **10.5958/2249-7137.2020.00634.5**

## ABOUT THE PERSIAN TRANSLATION OF "TARIKH AR-RUSUL VAL MULUK"

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### ABSTRACT

*The article includes the work of the medieval historian Ibn Jarir al-Tabari, Tarikh ar-rusul val-muluk, and al-Balami (d. 974), the minister of the Samanid Abu Salih Mansur ibn Nuh (961-976), a well-known patron of science. y.) is called "Tavarikhi Tabariyi Persian" ("Stories of Tabari in Persian"). The ancient copies of "Tarikh Bal'ami" preserved in Persian and the style of writing of the book are very simple and unfamiliar.*

**KEYWORDS:** *Ibn Jarir At-Tabari, Balami, Tarikh Ar-Rusul Val-Muluk, History, Historian, Caliph, Narration, Faqih, Source, Summary, Detailed, Existence, Caliph-Rashidin, Prophet, Author, Classification, Hijri, Scholar, Sharia, Ahkom, Tawil, Mu'tabar, Patron, Manuscript.*

### INTRODUCTION

The work "Tarikh ar-rusul val muluk" written by the scholar Ja'far Muhammad ibn Jarir at-Tabari, who made a great contribution to the development of the science of history and tafsir, became famous as "Tarihi Tabari". This work contains information about the most ancient history, as well as the history of the kings of Iran, Roman and Byzantine emperors, the lands of the caliphate, in particular, Khorasan and Movarounnahr until 915.

A significant part of this great work is dedicated to the socio-political events that took place in Movarounnahr, in the words of the ancient Turanian authors of that period, from the 7th century to the beginning of the 10th century. The author provides important information about the history of Bukhara, Samarkand, Khorezm, Sughd, Nasaf, Termez, Kesh, Ustrushana, Shosh, Fergana regions and cities, their condition, lifestyle, military strengths and shortcomings of the people through the historical events of those times. It contains many ancient place names, some of which have survived to the present day. Historical events such as the famous Qutayba ibn

Muslim invasion, the political movement of Abu Muslim, the revolt of Hashim ibn Hakim, known as Muqanna, and the popular uprising led by Rofe ibn Lays are interesting stories. They help the person of today's society to clearly imagine the social events that took place in our country one and a half thousand years ago. The contribution of this work to the study of the glorious past of the nation, the illumination of its vast ambiguities, the discovery of identity is great and invaluable.

"History of ar-rusul wa-l-muluk" is one of the main and most authoritative sources on the history of Muslim countries, as well as Movarounnahr VIII-IX centuries, which had a great influence on the further development of historical science. There is also a Persian edition of Tabari's work, written in 963 by al-Balami (d. 974), a minister of the Samanid Abu Salih Mansur ibn Nuh (961-976), a well-known patron of science. This work is called "Tavarikh Tabari Persian" ("Tabari's stories in Persian").

During the Camoni period we can find many sources in various fields of scientific work. As W. W. Barthold noted, "The information we have collected about the Samanid period of Turkestan will be perfect not only for today, but also for future periods."

Abul Fazl Muhammad ibn Ubaydullah al-Balami was the minister of Ismail ibn Ahmad, the Emir of Khorasan. Abul Fazl al-Balami was a wise, prudent, learned man and a great statesman of his time. Abu Ali Muhammad Balami also left a significant mark on the development of science and the cultural development of the country during his tenure as Minister of the Samanid State for about 20 years (second half of the 10th century). It is noteworthy that he reworked many chapters of this valuable book. This work of his also brought him fame. Indeed, Tarihi Tabari became a favorite book of many kings in the following centuries. The reason we are writing about this for our readers who are interested in history is that the book "Tarihi Tabariy" provides detailed and reliable information about important historical events that took place in the East and in some parts of the West from ancient times to the author's time (X century). this work was very popular in all the countries of the East, was considered an example in historiography, and was widespread in manuscripts.

His translation into Persian by the Minister of State was the most widely used book for the kings of Movarounnahr. The great Sahibkiran Amir Temur also loved to read and teach. It can be said that Alisher Navoi received almost all historical information from the book "Tarihi Tabariy". It is also preserved in the tombs of later Timurids, including Umar Sheikh Mirza, Babur Mirza and other princes. Even the amirs of Bukhara, Khiva and Kokand khans used it.

This work deals with the history of horns and dynasties, pre-Islamic Muhammad s.a.v. The period before the prophecy, as well as information about the early history of Islam, contains valuable information about the Sassanid Persians and the legendary history of Iran, which began with the traditional method of writing historical works, namely, praise and glorification of Allah, the Prophet.

In the introductory part of the work, the author says, "In this play we rewrite everything that has been said about the history of the world, about astronomers, and about Zoroastrians, Christians, and Jews."

While translating the work, Minister Balami mentions some chapters, saying, "Tabari did not say this, but we did quote it." The appendices of the translation are more devoted to the history of Movarounnahr.

Balami's editing is not just a simple translation, but a reworking of the work and in some cases enriched with new facts. It contains, first of all, information which is not found in the abridged edition, which Balami took from the full copy of the work of Tabari. Second, the Balami edition was supplemented with new information based on other sources.

Tarikh Balami is one of the oldest surviving books of prose in Persian, and its writing style is very simple and does not contain unfamiliar or poetic words. The sentences were also short, and the author tried to write in as simple a style as possible. In the introductory part of the work, Balami gives the information that Tabari in Arabic, in contrast to the original text, did not follow the chronological sequence.

Balami pays great attention to the principle of sorting Arabic poetry. Tabari often cites examples from Arabic poets, and in the Balami translation process he uses poetic examples of peoples who are directly and indirectly related to Persian-speaking peoples. Balami added about 60 bytes and poetic fragments in his work. A number of other additions have been made by Balami and have been recognized by experts in the field.

He tries to give a concise account of the prophets and kings peculiar to Tabari, as well as to bring down the chain of stigma in the description of historical data.

Balami removed some specimens of the Sassanid chronicle (224-615) from the Khwadai salt, and in some cases the information given by Tabari was summarized in detail in some passages from the Khwadai salt. Tabari also briefly details the appointment of Bahrom Chubin as commander of the Iranian army set aside for Chubin's military struggle against the Turks, limited to information about Bahrom's career and the number of his troops. Bal'ami, in addition to him, gives a number of details about the military council from which the commander was elected.

The socio-political and cultural intellectual conditions of the translation of the work, as well as the uniqueness, independence of the translator, have a special place in terms of historical and literary significance of the work. The study of these issues will help to better understand the essence of pre-Islamic traditions, the formation and development of the Persian language in the literature. Tarihi Bal'ami is one of the first works to use the Dari language in scientific literature.

Various manuscripts of this book are preserved in the funds of the world today, in particular, the oldest manuscript of the work is a copy of the XIV century. There are about a dozen copies in the Bodleian Library of the British Museum, the Leningrad Manuscripts Fund of the Institute of Oriental Studies, and the State Public Library named after M.E. Saltykova-Shedrina.

## CONCLUSION

Ibn Jarir al-Tari's Tarih ar-rusul val muluk, a Persian translation, and Tavarikhi Tabariyi Farsi, are historically and geographically related to tenth-century Arab and Iranian history, particularly the geographical classification of the ancient Near East and historical events. is an ancient work in the Persian language that illuminates its peculiarities. The translation of Tarikh ar-rusul val muluk in other languages is not as famous as the Persian translation of Tarihi Bal'ami.

The work "Tarihi Bal'ami" provides valuable information in the study of historical processes. The relationship of Iranian ethnic groups with other peoples provides valuable information on the historical processes of classifying the history of ethnic groups. This historical work is a description of the origins of the Iranian people, the borders of these peoples, their languages, the customs and cultural traditions of Iranian cities and villages, and a number of other issues.

Balami Tabari is a historian who has involved all the materials and information in the work "History ar-rusul val muluk" for scientific analysis and research. Based on Balami's "Tarikh ar-rusul val muluk" and other historical works, he created a new interpretation of the work "Tarikh ar-rusul val muluk" in Persian. We can see from his work that he resigned from the broader data.

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DOI: **10.5958/2249-7137.2020.00586.8**

## THE IMPACT OF SENSORY BRANDING (FIVE SENSES) ON CONSUMER: A CASE STUDY ON KFC (KENTUCKY FRIED CHICKEN)

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### ABSTRACT

*Sensory branding is based on the idea that consumers are most likely to form, retain and revisit memory when their all five senses are engaged during the process of buying products or services. By going beyond the traditional marketing media of only sight and sound, brands are now taking advantage of all other senses to establish a stronger and longer-lasting emotional connection with consumers. This marketing strategy appeals to multiple senses and the efforts are multiplied, creating powerful brands with lasting consumer connections. This study reveals the impact of sensory branding on consumers of Kentucky Fried Chicken (KFC). This study analyses all five senses applied to KFC to identify the impact of each sense on consumer. The study was conducted using survey method and respondents were the people who have eaten KFC at least once in one of the thirteen outlets in the city of Hyderabad, India. A sample of 116 respondents was taken for analysis. The study concluded with the impact of sensory branding strategy by KFC and brings out the results, which can be adopted by marketers for the other products of same genre.*

**KEYWORDS:** *Sensory Branding, Sensorial Marketing, Branding, And KFC Branding*

### I. INTRODUCTION:

For many marketers (and consumers), the affectivity, perception and pleasure are more important than the price, since many products are now technically similar: they have to be differentiated in another way. Sensory branding is based on the idea that human beings most likely to form, retain and revisit memory when all five senses (taste, smell, sight, sound and touch) are engaged. Sense, as per Oxford English Dictionary, is any of the faculties, as sight, hearing, smell, taste, or touch, by which humans and animals perceive stimuli originating from outside or inside the body. Keeping marketing in perspective, marketers started using these human instincts as a



strategy to sell their goods or services by creating such environment that appeals to senses at the point of sale. Kotler (1973) defined the atmosphere of point of sale as “the creation of a consumption environment that produces specific emotional effects on the person, like pleasure or excitement that can increase his possibility of buying”. He considered the creation of this atmosphere as the most important strategic way of differentiation for retailers.

As the cost of reaching consumers rises in the traditional media, competition for securing their attention increases likewise. Brands are struggling to compete in today’s crowded marketplace, strategic use of sensory information can provide a critical advantage. Sensory marketing strategy appeal to multiple senses, efforts are multiplied, creating powerful brands with lasting consumer connections. According to Lindstrom by using all the five senses “a total sensory experience would at least double, if not triple, the consumer’s ability to memorize the brand.” (Lindstrom 2005, p 23). Motive of sensory branding is to find ways to engage all consumer senses to strengthen the brand experience.

## **II. ABOUT KENTUCKY FRIED CHICKEN (KFC):**

KFC (the name was originally an initialism for (Kentucky Fried Chicken) is a fast food restaurant chain that specializes in fried chicken and is headquartered in Louisville, Kentucky, United States (US). It is the world's second largest restaurant chain (as measured by sales) after McDonald's, with 18,875 outlets in 118 countries and territories as of December 2013. The company is a subsidiary of Yum! Brands, a restaurant company that also owns the Pizza Hut and Taco Bell chains.

Harland Sanders, an entrepreneur who began selling fried chicken from his roadside restaurant in Corbin, Kentucky, during the Great Depression, founded KFC. Sanders identified the potential of the restaurant franchising concept, and the first "Kentucky Fried Chicken" franchise opened in Utah in 1952. KFC popularized chicken in the fast food industry, diversifying the market by challenging the established dominance of the hamburger. By branding himself as "Colonel Sanders," Harland became a prominent figure of American cultural history, and his image remains widely used in KFC advertising.

In December 2013, there were 299 KFC outlets in India. As well as the standard KFC offerings, the chain sells a chickpea burger and hot wings with chilly lemon sprinkles. A major franchise holder is QSR Brands (M) Holdings, which operated 26 outlets as of 2012. The first Indian KFC was a two-storied outlet on the fashionable Brigade Road in Bangalore in June 1995. KFC began to expand outside of Bangalore in 2004, with a localized menu that was the most extensive meat-free menu across the chain's worldwide operations. It introduced a vegetarian menu that included rice meals, wraps and side dishes and, like McDonald's, served eggless mayonnaise and sauces. Unnat Varma, marketing director of KFC India, states "The vegetarian offerings have made the brand more relevant to a larger section of consumers and that is necessary for KFC's growth." KFC also began using Indian spices and cooking techniques to localize its chicken dishes. By 2008–09, KFC operated 34 outlets in India.

## **III. IMPACT OF SENSES ON CONSUMER:**

Sensory branding, the idea that brands should engage consumers on a variety of touch points and it is hardly new to the market. Obviously senses play a very important role in our experience, choices of brand/products. Brand can’t impart an aroma via a television set or newspaper hence it

must come from the product itself. As matter of fact, the unique aroma, texture and sound has very little to do with the quality and the performance of the product. However, these components play a great role in building relationship of consumer with the product. The sensory stimulation not only attracts consumer choice but also helps distinguish a product from others. These get attached in our sensory memory and finally become a part of decision-making process and bring a way towards future brand building for a product.

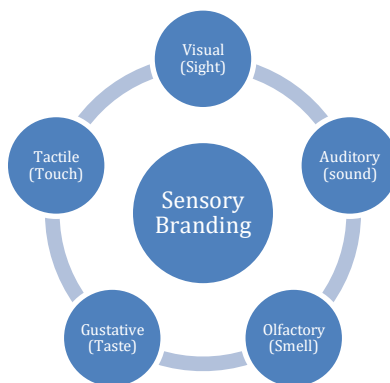


Fig.1: Sensory Branding Diagram

**(i) Sight (Visual):** Ever since advertising was born, it was oriented on our sight, mainly because that sense is most responsive to the environment. 92.6% of the population puts most importance on visual factors such as color and shape when buying products. We make our first impressions within 90 seconds of the initial viewing, and between 62%-92% of that impression is based on color alone. When talking about on-shelf visibility, 80% color can increase brand recognition. According to research, 42% ads in color are read more than the same ads in black and white. White is the basic colour, as it brings out everything else. White Sign of purity, cleanness and coolness. In a restaurant, white is used everywhere the customer expects for cleanness (plates, kitchen...). On a packaging, black is symbol of quality and sobriety. As it is the darkest colour, black is exclusively used to create a very specific environment. Market researchers have also determined that color affects shopping habits. With our sight we notice and recognize shapes and colors really fast, but we can't experience a brand only by looking at it, at least not at its full potential.

**(ii) Sound (Auditory):** Human-beings are naturally sensitive to sounds and their meanings. The first sound we could hear was our mother's heartbeat. What is so great about sound is that it doesn't need our full attention to be noticed. And also it has been proven that sound evokes certain memories and experiences. Then, music has been introduced, in commercials (with the apparition of TV spots) as in the point of sales. Today, there is no point of sales without music in the background, and 99% of advertising is focused on what we see and hear. Experiments conducted in restaurants show that when music slower than rhythm of a heartbeat is played, we can eat more. Audio branding is a new branch that relates only to sensory branding through sounds. Sound designers are developing audio identities for brand and that involves: audio logo, brand theme, soundscape, brand voice. Sound of a steady heartbeat, a piano, a breath were chosen as most convenient sounds for an Audi audio branding. Mercedes Benz formed a team to get the most appealing sound for a closing car door.

**(iii) Smell (Olfactory):** Scientific studies have shown that 75 % of our emotions are generated by the smell. Humans are able to distinguish over 10,000 that are being transmitted to our olfactory system in the brain where it is closely tied to memory, mood, stress and concentration. Our sense of smell has been proven as most impressionable and responsive of our five senses, while it invokes memories and appeals directly to feelings without being filtered and analysed by the brain (as our other senses work). Smell was used a lot in real estate business, somehow houses sold better if they smelled like vanilla, fresh baked cookies or popcorn (evoking memories of early childhood. Mahogany wood, motor oil and the smell of leather were used and combined to recreate the unique smell of the 1965 Silver Cloud Rolls Royce interior. Now every Rolls Royce leaving the factory is equipped with a diffuser in the underside of the car's seat to convey this unique luxurious identity of the brand. Starbucks is one of the companies that is well aware of the power of sensory branding. Through their characteristic cozy interiors, nice Barristas and of course the smell and taste of fresh grinded coffee they occupy all of our senses. They even stopped serving breakfasts because the smell of the eggs interfered with the smell of the fresh grinded coffee.

**(iv) Taste (Gustative):** People can sense 5 basic tastes bitter, sour, umami (savory, or meaty), salty and sweet. For all other flavor tastes we must thank to our sense of smell, for that is the one that gives flavor to our food. We can say that taste is the sense that fuses all different senses together to create a holistic brand experience, but is also linked to emotional states, so it can alter mood and brand perception. Most famous campaign that included taste was the one made for the launch of Škoda Fabia in 2007 in London. It cost more than a real car (\$800,000). Idea was to advertise it as tasty, so they decided to bake a life-sized cake that looked like Škoda. They hired the best chocolatiers, bakers and bricklayers to construct and bake the car, and filmed the whole process. According to Škoda, in the first week of the campaign, the visits to car dealerships went up by 160 percent.

**(v) Touch (Tactile):** Our skin has more than 4,000,000 sensory receptors that can be easily manipulated through materials, weight, softness and comfort of the product. Haptics refers to the sense of touch (comes from the Greek word haptikos that means "I fasten onto, I touch"). Today haptics is mostly considered as a tactile feedback technology which takes advantage of the sense of touch by applying forces, vibrations, or motions to the user (we can see examples in user-interface design and product design) Haptics also plays a great role when it comes to packaging design, or even in some advertising campaigns. Packaging - and by that I mean form, material, size, weight - can give a huge impact on our brand awareness. It is a perfect way for getting close to consumer's unconsciousness, their perceptions, feelings and tastes. Some great examples can be found is the work of conceptual designers, architects and enthusiasts.

#### IV. THE STUDY:

Study on 116 respondents from different age groups is done. Each responded to following statements -

- a) "KFC" brand is differentiable or identifiable through its taste.
- b) "KFC" brand is differentiable or identifiable from its Smell.
- c) "KFC" brand is differentiable or identifiable through seeing the logo.
- d) "KFC" brand is differentiable or identifiable through touching the fried chicken piece.

e) “KFC” brand is differentiable or identifiable through listening the jingle/advertisement.

## V. OBJECTIVE OF THE STUDY:

The objective of the study is to find or investigate the impact of sensory aspects of (five senses) “KFC” on consumer.

## VI. SIGNIFICANCE OF THE STUDY:

As brands struggle to compete in today’s competition, strategic use of sensory information can provide a critical advantage. Before using the strategy of sensory branding it’s helpful for marketers if they have an idea about the impact of sensory aspects of brand on customer. So, my purpose of the study is to provide a view to marketers as they decide to incorporate sensory marketing strategy in their products and services.

## VII. METHODOLOGY:

There were 116 respondents selected for the study. These respondents took the survey through an online survey form. These respondents were residents of Hyderabad, India. All respondents had eaten at least once in one of the 13 KFC branches in the city. While analyzing, data was divided into five elements of senses namely Sight, Smell, Taste, Sound and Touch.

## IX. ANALYSIS AND MAJOR FINDING:

This part provides the empirical findings that I have gathered data for my study through questionnaires. In empirical part, I used diagrams to make the connection between the text and study conducted clearer KFC is a global brand and has entered into Indian market recently. People giving survey might have very low brand awareness. Sample size is 116, which is very small KFC being a global brand, and limited to city of Hyderabad, India. I asked several questions to the respondents. The findings from the questionnaires are given below

Q1. “KFC” brand is differentiable or identifiable through its taste.

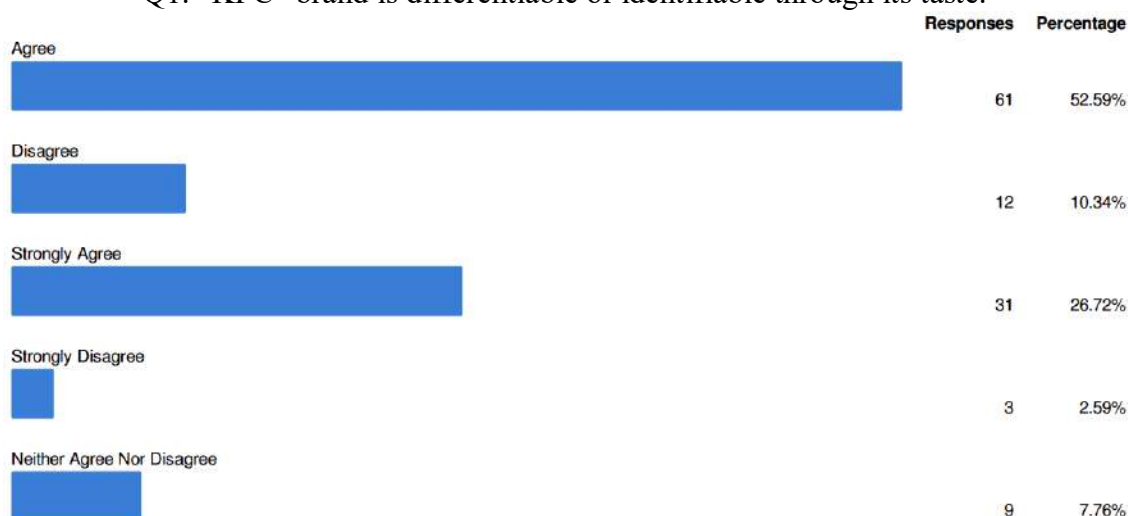


Fig. 2: Identifiable through taste.

The diagram shows (Figure-2) represents the result of question asked to the respondents about the brand identity of KFC based on taste. The respondents replied, 52.59% with agree, 26.72%

with strongly agree, 7.76% with neither agree nor disagree, 10.34% with disagree and 2.59% are strongly disagree with that statement.

Q2. “KFC” brand is differentiable or identifiable from its Smell.



Fig. 3 : Identifiable through Smell.

The diagram (Figure- 3) represents the result of question asked to the respondents about brand identity of KFC based on smell. The respondents who agreed are 57.76%, 13.79% strongly agree, 10.34% neither agree nor disagree, 16.38% disagree and 1.72% strongly disagree with that statement.

Q3. “KFC” brand is differentiable or identifiable through seeing the logo.

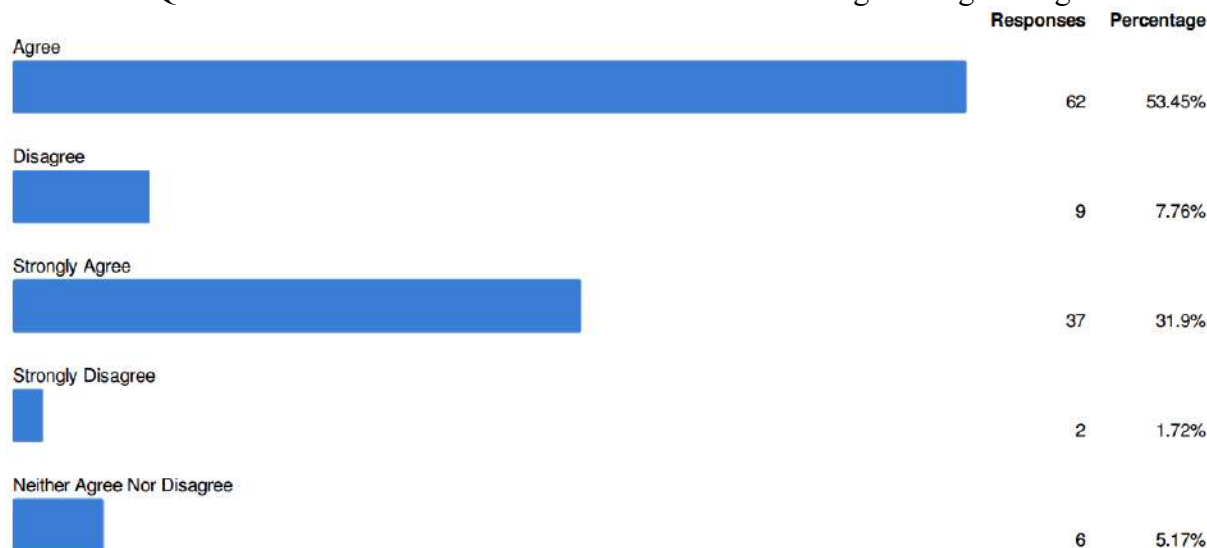


Fig. 4: KFC is identifiable through logo

The diagram shown (Figure-4) represents the result of question asked to the respondents about brand identity of KFC based on the logo. The respondents replied, 53.45% agree, 31.9% strongly agree, 5.17% neither agree nor disagree, 7.76% disagree and 1.72% are strongly disagree with that statement.

that statement.

Q4. "KFC" brand is differentiable or identifiable through touching a piece of chicken.

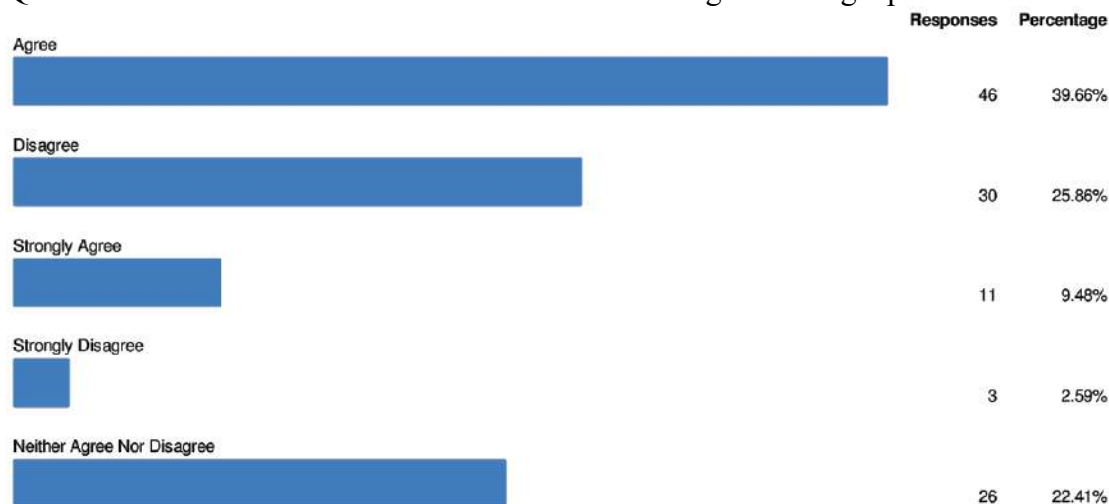


Fig. 5: KFC is identifiable through touch.

The diagram shown (Figure-5) represents the result of question asked to the respondents about brand identity of KFC based on the touch. The respondents are replied with agree which is 39.66%, 22.41% replied with neither agree nor disagree, 25.86% are replied with disagree and 2.59% replied with strongly disagree and 9.48% replied with strongly agree.

Q5. "KFC" brand is differentiable or identifiable through listening the jingle/advertisement.

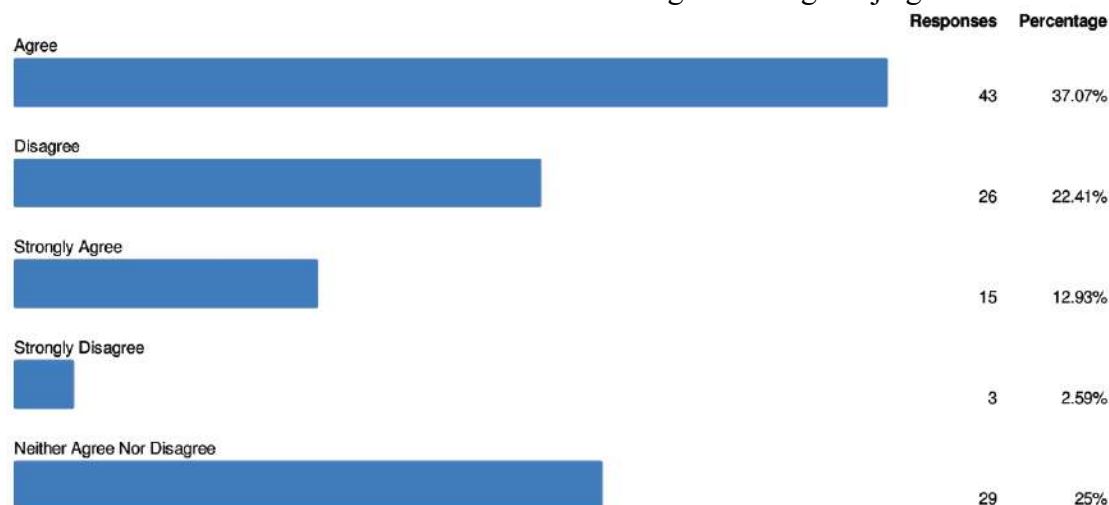


Fig. 6: KFC is identifiable through sound.

The diagram shown (Figure-6) represents the result of question asked to the respondents about brand identity of KFC based on the jingle. The respondents are replied with neither agree nor disagree which is 25%. On the other hand, 37.07% replied with agree, 12.93% replied with strongly agree and 22.41% replied with disagree, 2.59% replied with strongly disagree.

To summarize, following data is determined from my research according to the questionnaire



answered by KFC consumers:

Senses	Number of respondents who Identified or recognized KFC	Percentage
Taste	61out of 116	52.59%
Smell	67out of 116	57.76%
Sight	62 out of 116	53.45%
Sound	43 out of 116	37.07
Touch	46 out of 116	39.66%

Fig. 7: Number of respondents who identified or recognized KFC

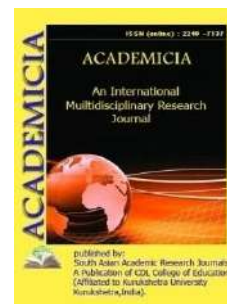
## X. CONCLUSION:

Sensory branding is based on the idea that consumers are most likely to form, retain and revisit memory when their all five senses are engaged during the process of buying products or services. The research was conducted to get the impact of sensory branding strategy of KFC on consumer for building brand identity and brand awareness. The study found that of all five senses olfactory has highest impact on KFC consumers followed by visual and gustative aspects of it. On the other hand, tactile and auditory impacts on the sensory aspects (five senses) of KFC consumers are lesser respectively. Nevertheless, KFC brand equity is highest though there have been many competitors selling similar products along with many street vendors.

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DOI: **10.5958/2249-7137.2020.00650.3**

## **CULTURE-BOUND WORDS IN LINGUOCULTURAL ANALYSIS OF LITERARY TRANSLATION (BY THE EXAMPLE OF THE TRANSLATION VERSIONS OF THE NOVEL “BYGONE DAYS” BY ABDULLAH QADIRI)**

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### **ABSTRACT**

*Nowadays, due to the phenomenon of interlinguistic and intercultural incompatibility, which arises as a result of communication between languages and cultures, the problem of understanding and interpreting the concepts of another language and culture by the owner of one language and culture is becoming more actual. Concepts specific to a particular language and culture, in most cases, create complex situations in the translation process. Such words are called culture-bound words in the language of translation. In the translations of the novel "Bygone Days" by the talented Uzbek writer Abdullah Qodiri, such words are often found, and they are relevant in terms of the fact that they are still involved in linguocultural analysis and do not draw the appropriate scientific conclusions. The article discusses specific words that represent measurements and currencies and their translation options based on a linguocultural approach. In the linguocultural approach to translation, the author sought to determine the degree of conformity of the translation to the originality, based on a complete component analysis. In fact, the analyzed sema units are identified, the main sema is separated according to the function of application in the context, and the semantic function of the lexeme in the context is indicated. The degree of adequacy of the translation to the original is determined by the fact that the content of the sema is restored in the translation, and at the same time, the purpose allocated in the context to the unit of the original is realized in the translation as well.*

**KEYWORDS:** *Specific Words, Linguocultural Analysis, The Recipient Of The Translation, Adequate Translation, Anachronism, Functional Analogue, Transcription.*

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## INTRODUCTION

Translation as a form of activity involves, on the one hand, the establishment of linguistic communication in order to adequately convey the content of the work expressed by means of one language, and, on the other hand, the differences in cultures manifested in these languages. This means that translation is not only a comparison of different language systems, but also a connection of different cultures. The Slovak scholar A. Popovich, in his book "The Problems of Literary Translation" [3], describes the clash of cultures in translation as follows: "In the so-called "ours" field, the boundaries of other cultures disappear completely, and the sense of "translated" in the translated text disappears. Emphasis on the cultural pole of authenticity, on the other hand, leads to a situation in translation in which the recipient, i.e., the recipient of the translation, falls into another cultural environment without any warning or condition. In the third case, there is a "creolization", ie the merging of two cultures in translation. In this case, the fields of originality and the language of translation have an approximate similarity.

It is important to take into account the pragmatic component of the expression in the translation process. In this case, the adaptation of the text between the students of the original and the translation, taking into account the socio-cultural differences, plays a key role. The principle of taking into account the culture of the student in linguocultural studies can be an alternative to this consideration in translation studies. One of the main problems in the delivery of specific words is the pragmatic aspects of translation. In this case, it is important to take into account the functional role of culture-bound words in the text of this or that message.

The problem of finding equivalents of another language in translation, in turn, is divided into such areas as ecological, socio-cultural and material-cultural. For example, the image of the sun creates unique associations for each nation according to its geographical location. "Blue eyes," a standard of beauty for Europeans or Russians, do not evoke similar feelings in Uzbeks. The associations associated with the swallow, which is the herald of the spring, are strange to the American, who accepts the swallow as a species that belongs only to a group of birds, and so on. The undeniable factor is that a change in an extralinguistic being certainly leads to a linguistic change in turn. This means that in translation, the process of adaptation to the new reader of the text is established, and this leads to changes in the information in the original.

Depending on the pragmatic function of the characteristic word, it can be omitted in translation, conveyed in a generalized way without national coloring, or translated as adequately as possible with special attention as the main characteristic of the image. The "exotic images" in the translated text, while seemingly unnatural to the representative of another language, can give a vivid impression that complicates the process of understanding the text and does not justify itself. Therefore, the interpreter works on the basis of a separate approach for each situation, primarily taking into account the functional dominance of the image.

Specific words denoting weight, length, area, volume, and fluid dimensions are one of the groups that require special attention in translation. Different situations are observed in works of art in relation to units of measurement, and differences in translations also require a serious approach to this issue. We will analyze some of them using examples.

The units of measurement associated with words denoting numbers and other quantities are data carriers that represent a certain distance, weight, or volume in a text of any genre. In order to be able to adequately receive this information, the reader of the translation must be aware of the real

or approximate dimensions of these units, and of course this issue must be resolved by means of certain methods in translation. As in the "Bygone days" by Abdulla Kadiri, the fact that historical information about the measurement system is well understood by the translator saves him from cases of anachronism. We will analyze some of examples and their translation versions below.

Example:

*Darbozaning ikki biqinini o'rab olg'an loyig'a gullar, naqshlar tushirilib ishlangan sakkiz **gazlar** yuksaklikda o'rda qo'rg'oni [6,66].*

1. Two clay walls, eight **arshin**\* high, decorated with colourful, carved patterns... (\*arshin – may refer to an old Turkic measurement, equivalent to a yard or to an obsolete Russian measurement equivalent to one cubit) [2,70].

2. The flowers covered the walls of the gate on both sides, inlaid patterns of decorations on the wall of eight **gaz**\* high (\*the measure of length) [4,71].

3. the defensive walls, whose battlements displayed an intricately carved floral design, reached a height of eight **meters**... [1,134].

In all three translations of this example, we can see that three different options were used for the original unit. Before analyzing which of them is an alternative translation to the original, let us consider the interpretation of the archaic units of measurement, "gas" and "arshin." 1918 - Before the introduction of the metric system in the world, certain units of measurement were used in Central Asia, and now they are obsolete, which can be found only in encyclopedias or dictionaries. In particular, "gas" is the distance from the middle of the chest to the fingertips, a unit of measurement that has been used at different lengths in each city or village in Uzbekistan. 1 Gas is a unit of length equal to 0.71 meters. The word "arshin" is derived from the Persian words "arash", "oron", which means elbow. The word passed from Turkic languages to Russian in the 16th century. Arshin is also found in various forms in Ukrainian, Belarusian, Polish, Czech, Slovak, Bulgarian, Serbo-Croatian. 1 Arshin taken as - one step, and 1 step (in Central Asia) - 63–71 cm.[7]. The size of the gas and the arshin coincide, and the use of the "meter" in Qadiri's work leads to anachronism. In this case, the transcription of "arshin" and "gas" as an alternative to the unit of measurement of "gas" justifies itself in this case. Only in this case would it be expedient if the interpreter gave a more detailed underline explanation of the gas unit of measurement. Let's look at another example:

Example:

*... paxsaning enidan bir **gaz** chamasi joy ochilg'an![6,240].*

1. We have already dug about an **arshin** into the clay-covered layer of the duval. [2,228].

2. I have already dug two **feet deep**! [4,243].

3. We removed approximately one **meter**. [1,385].

Besides the "meter" (anachronism) in the third version of the translation, both of the above translations reflect the unit of measurement intended by the author.



When entering the language of images, specific words denoting units of measurement should serve not only to convey precise information, but also to significantly embody in the reader's imagination a particular portrayed piece of reality. For example, the author may draw the reader's attention to a detail of his choice by using the phrase "ten meters high" to indicate the height of a hill, or the phrase "thousands of miles" over a very long distance. The given examples allow to define some bases in application of such formation of artistic images. Digital indicators, as expected, do not play a decisive role, as is the case in the scientific and technical text, but in this case, predictability comes first. In addition, it is possible to determine the approximate meaning of the units of measurement in a narrow context, for example, the "only" distance in "only fifty meters" clearly shows that the distance is not very large.

Example:

A) *Ko'zi uyqusizliqdan bir **qarich** ichiga tushib ketibdir.* [6,230].

1. *He looked dreadful after his sleepless night.* [2,217].

2. *His eyes were deepened so much because of sleeplessness.* [4,231].

3. *His eyes were sunken; he looked exhausted after a sleepless night.* [1,367].

B) *Zaynabning bir yarim **qarich** osilib ketkan qovoq-dudog'ig'a istehzolanib tomosha qilar edi* [6,350].

1. *...all the while throwing mocking glances at Zainab, enjoying the sight of her furrowed brow and pouting lips.* [2,319].

2. *... and she watched Zaynab getting frustrated and upset with an irony.* [4,352].

3. *... the same with Zainab, from whom she also walked one step removed, observing her gloomy countenance with suspicion.* [1,537].

As noted, in both of the above examples, the unit of measurement is used to emphasize the mental and physical state of the protagonists, not to express a precise numerical dimension, and the translators used the correct translation method to describe the state of the image.

Each nation has its own standard-images on different concepts within its worldview. In the author's work, in most cases, the native language makes extensive use of such popular terms of dimensions, and the need to preserve the national and historical color of these lexical units requires that they be translated in the same style in translation. This can be achieved either by using a literal translation or a functional analog (a unit with such coloring in the language of translation). For example, the following example shows the active use of the number "seven" in units of measurement, which is of great importance in the Uzbek mentality:

Example:

*Toshkandning yetti yosharidan yetmish yosharig'acha bilganlikdan...* [6,86].

1. *Here in Tashkent, young and old alike knew and revered him.* [2,89].

2. *He was the respectful person for the people in the city, to everybody from seven to seventy.* [4,91].

3. *They were from all walks of life, both young and old...* [1,162].



The fact that the second translator followed the literal translation was able to retain the pragmatics of the text more than the other two neutralized translations (from the age of seven to seventy - there are signs of exaggeration). Or let's analyze the translations of examples involving another vernacular unit of measurement - the word "qarich".

Example:

A) **Qarich**g'a keladigan uzun soqollar [6,80].

1. *Those long beards* [2,82].

2. *Long beards* [4,84].

3. *beards of a **pious hand`s length** ...* [1,152].

B) Olti **qarich** kenglikda uzundan-uzoq tor ko'cha, tor ko'cha boshida kichkinagina bir eshikcha edi. [6,245].

1. *The narrow, interminably long ginnel, no wider than five **hand-spans**, led to a small wicket gate.* [2,227].

2. – *A narrow, perhaps **half a foot** in width but infinitely long side street ended at a small gate.* [1,383].

*In all three translations of the following example, the communicative purpose of the translation is achieved:*

Example:

*Chunki tepaning boshqa tomonlari yuqorida aytilgandek bir necha **terak bo'yi** jarlik bo'lg'anliqdan...* [6,85].

1. *...since as we have already mentioned, the other sides presented a sheer drop **the height of several poplar trees**.* [2,87].

2. *Because the other side of the hillock above mentioned was a deep ravine with the **height of several poplar trees** ...* [4,89].

3. *Because the other side of the hill **measured the height of several poplar trees** ...* [1,158].

Sometimes it is contrary to the principles of realistic translation that the reader of the translation should receive information about the specific word from the context only in general lines. The reader is imaginary, however, in an attempt to compare a specific word in a foreign language to the units of measurement in his own language, and as a result a state of image clarity is distorted. Therefore, when he encounters a familiar word in his work, the created image is embodied in the precision required in his imagination. In general, if the painting of a work does not depend on a given unit of measurement, or in other words, does not impair the painting, then it is better not to confuse the reader with a foreign word? Of course, it is necessary to be vigilant in cases of analogy and anachronism.

Example:

*Suv bir do'konning ostidan chiqib, bu havlida uch-to'rt **quloch** chamasi ochiq havoda oqar va ko'prik-tom ostig'a ketar edi.* [6,31].

1. The water flowed from beneath a shop, gushed through a few *sagenes*\*(*sagene* – equivalent to about seven feet or one fathom) of open space, then disappeared once more under a little bridge. [2,34].

2. Water gushed out from under a bench, ran three-or four *fathoms* of open space, and again hid under the bridge. [4,32].

3. The stream flowed under a workshop, with part of it twisting three or four *steps* through the yard into the open air before again disappearing under the bridge house... [1,82].

In the first translation of the above example, when the translator uses the archaic unit of measurement - the "sajen", we can see that he allowed analogue, given that it was known only throughout the territory of old Russia. This is, of course, a deviation from the requirements of realistic translation. The fact that the word fathom, used in the second translation, means not only the English naval unit of measurement, but also "embrace", also helped to ensure the adequacy of the translation. The unit used by the third translator can also be called an equivalent translation. Hence, when using analogues in the language of translation, it is also important to consider to which audience they are intended.

Example:

*O'rda darbozasining sahni botmonlab hisoblang'an mevazor bo'lib, bunda olma, o'rik, nok va tut yog'ochlari xilig'ina bor edilar.* [6,66].

1. A large orchard spread out before the gates, spanning several *acres*, with apple trees, sweet uryuchina apricots, and pear and mulberry trees. [2,70].

2. The Orda's gate is with its wide area, surrounded with fruit trees like apple, apricot, pear and mulberry trees. [4,71].

3. An Urda used to stand near the city walls in the district of Yormazar but now *acres* of orchards with apple, apricot, pear and mulberry trees have been cultivated in that area. [1,134].

Given the fact that the example in the example means "in large quantities", all three translators were able to give an alternative. Depending on the context, the neutral substitution in the second version serves a communicative purpose, while the English "acre" in the other two translations did not lead to the nationalization of the original (as we have discussed in the dissertation on the concept of "nationalization").

A complete neutral substitution can be successfully used due to the reduction of the national dye load in specific words denoting individual units of measurement (depending on the function within the context, of course).

Example:

*...siz mana shu pulga guzardan chiqib bir chorak\* et keltirib, sho'rba qilib bersangiz. (\*bir chorak – uch yarim-to'rt qadoq chamasi toshdir)* [6,180].

1. ... go to the little bazaar at the crossroads, buy *some* meat and cook us up some shurpa\* [2,169].

2. ... you go to the bazaar, buy *some* meat and cook soup for us, please. [4,177].

3. ... *could you go to the bazaar on the corner, purchase **some** meat, and make us a soup?* [1,296].

In this example, the author's interpretation of "quarter" as another specific word "packaging" does not necessarily mean that the same should be done in translation. It seems that all three translators did the right thing by translating with the neutral word "some", given that "quarter" means "a little" in the context and it does not have a historical or national color load.

And, of course, in the context in which the exact numbers are required, the translator has no choice but to refer to the transcript. It also depends on the skill of the translator: no matter what type of transcript the subtitle uses, whether it is an in-text explanation or not, he must be able to do so in such a way that the translator does not stumble when he encounters an unfamiliar word in the text. In this case, it is useful for the translator to have knowledge of the units of measurement that are common in many nations.

Example:

*Ammo imorat qismi darboza bilan bir qatorida bo'lib, so'l biqinida devonxona, uning qatorida bo'yiga qirq, eniga yigirma **olchin** joy olg'an o'n besh darichalik kattakon chorzari uy...* [6,66].

1. *To the left of the house was the ruler's chancery, then a sizable structure with fifteen windows, forty **arshin** wide and twenty **arshin** long.* [2,70].

2. *On the left side there was a reception area and in the same line was a house with forty **olchin** height and twenty containing windows width.* [4,72].

3. *On the north face, a substantial keep stood behind the inner gate, measuring forty **meters** by twenty **meters**.* [1,136].

Given that "olchin" is equal to the values of "gas" and "arshin", we can see that the first translation was done correctly. The fact that in the second version of the translation "olchin" is not given any subtitle commentary leads to the misunderstanding of the reader of the translation. We have mentioned above that the "meter" in the third translation does not correspond to the translation of this work in terms of time.

Example:

*Maydon ikki **tanob** kenglikda bo'lib, janubi qutidor va qo'shnisining imoratlari orqasidan va boshqa uch jihati ham shunga o'xshash binolardan iborat edi.* [6,246].

1. *The yard covered about **half a hectare** of ground and backed onto the rear wall of Kutidor's house and that of his neighbour.* [2,227].

2. *The yard was **rather large** and there were the qutidor and his neighbour's houses with their back walls facing the yard....* [4,242].

3. *The width of the square yard was about two **tanob\***. The southern section consisted of Qutidor's property... (tanob/tanap\* – a unit of measurement often for agriculture.... explanation)* [1,384].

In this context, a detailed description of the place requires an indication of the exact unit of measurement, and this was successfully reflected in the third translation.

In our opinion, the frequent occurrence of analogy and anachronism in the translation of specific words denoting a unit of measurement with a bright historical or national color undermines the national-cultural and historical value of the work in translation, so a translator looking for an alternative functional analogue in the target language should not overlook these aspects. Next, let's think about another measurement word - currency translation.

It is expedient to study the lexicon denoting currencies in the context of specific words in two types: 1. national currencies (ruble, soum, pence, kopeck, pound sterling, etc.); 2. Currencies (tillo, grosh, centim, etc.) that have lost their exact value for a number of reasons (usually historical reasons) as well as bright national coloring. The lexicon of the first group is recognized as proper words; and those in the second group are only specific words in a diachronic order, i.e., historically specific words. Also, as mentioned earlier, when used in a figurative sense, the original word loses some of its connotative meaning, and this also applies to currencies: when it comes to the figurative sense, they lose their accuracy and material value and fall into the second group of specific words (shuncha xarakat bir pul bo'ldi, dunyoniki miri kam ikki, etc.).

The functional analog method seems to be the most optimal way to naturally translate specific words denoting currencies into the translated text. In this case, it is justified to refer to the specific words belonging to the second group in the language of translation. Another method is to replace the concepts of the same type, for example, with the words "money", "funds" or, if necessary, to omit the currency, which is difficult to translate.

Before proceeding to the analysis of some examples, let us give information about the ratio of mutual values in the lexicon, which represents the currencies used in the play. So, in the novel "Bygone Days" we come across the following typical words:

Tilla (oltin) - a gold coin worth ten soums.

Tanga (white coin) is a silver coin worth 15 tiyn in Bukhara khanate and 20 tiyn in Kokand khanate.

Pul (chaqa) - a unit of money equal to half a penny in some places, and a penny in some places, and a small coin of the same value. It is mainly made of copper or brass.

Miri - Five cents.

In general, in cases where quantitative accuracy is required, the above currencies can be translated into single equivalents and used throughout the work. In these cases, we would recommend giving gold in the form of gold coin, tanga in the form of coin or small coin, and miri in the form of miri. Then the confusion of monetary value will disappear in the eyes of the reader of the translation, and the national coloring will also be preserved to a certain extent. In the following examples, let's look at the translators' approach to this:

Example:

... Otabekning bobosi o'n besh **tillo** barobariga sotib olgan edi... [6,9].

1. ... Atabek's grandfather had bought him for fifteen **gold tilla**\*... (**tilla – a gold coin**) [2,13].

2. Actually, his grandfather had bought Hasanali from a Turkmen guy for fifteen **gold coins**... [4,8].

3. *Otabek's grandfather had bought him for fifteen **pieces of gold**... [1,49].*

In this example, the use of the word “tilla” in the transcription by the first translator in conjunction with “gold” results in a situation of excessive transcription when the equivalent is present. The fact that the other two translators resorted to the “gold coin” option in terms of their affiliation with the second group is a sign that they were right.

In the following example, we can see that another mistake was made:

*...uch yuz **oltin pul**, mundan keyin olib berish va'dasi bilan Marg'ilondan o'rdadek bir havli... [6,58].*

1. *Three hundred **gold tilla**; the groom would pledge to buy a spacious house in Margilan after the wedding...[2,60-61].*

2. *... three thousand **gold coins**, after marriage to be bought a great big house from Margilon... [4,62].*

3. *Three hundred **gold coins**, a house with a large walled yard... [1,122].*

Let's analyze a number of more examples. In the following examples, the difference in value of tilla-tanga-pul (chaka) relative to each other is also understood in context.

Example:

A) *Menga qolsa bu kunlarda o'ttuz ikki **tanga** emas, o'ttuz ikki **qora pul** solish ham og'iridir. [6,105].*

1. *It would seem to me that even thirty-two **pul**\*(pul – a Kokand coin of a low value) could only be raised with difficulty, let alone thirty-two **tanga**. [2,105].*

2. *Let them rectify their condition in ten days, and then... [4,108].*

3. *In my opinion, it is hard to collect thirty-two copper pieces, not to mention thirty-two tengas, even for me\* (**tenga – a description of the currency**) [1,188].*

B) *O'zingiz ip yigirib, kun ko'rib turgan bo'lsangiz, sizga uch **tanga** emas, uch **pul** berish ham og'ir ekan...[6,195].*

1. *If you live solely from spinning yarn, it will be arduous for you to pay **three pul**, let alone **three tanga**! [2,182].*

2. *If you live hardly due to spinning threads, it will be difficult to you to pay not those **three coins**, but even three **old small coins** as well. (tinges\* coins) [4,192].*

3. *... it will be hard for you to save three **tengas** for payment... [1,317].*

In the above two examples, by contrasting the tanga and the chaqa, the differences between them and the financial condition of the images are exaggerated. In order not to obscure this artistic purpose, it is also necessary to provide accurate information about the currencies without confusing the reader of the translation. The use of "copper pieces" in the third translation of the first example is close to the author's goal (it is known that almost all nationalities make the lowest value of copper). In the second example, the skill of the second translator can be assessed - the interpreter was able to achieve the goal in the context by comparing small old coins to coins.

Let's look at another example:

*Men javob o'rniga **chaqalarni** sanab chiqdim, bitta oltmish **pullik tangasidan** boshqasi bir pullik, besh **pullik** zang bosqan **chaqalar** bo'lib... [6,194].*

*1. Instead of replying, I counted out her **money**: apart from one **sixty-pul-coin**, they were all **coppers** covered in green... [2,181].*

*2. I counted her **money**: except **one coin in sixty pennies**, all were **rusty coins-old small coins, three-kopecks**, pieces...[4,191].*

*3. instead of quoting a price, I counted the **coins**. With the exception of a **sixty-tengas piece**, the rest were **small copper coins**... [1,315].*

We can take the third as the most adequate translation option of this example; while the first translation contains an incorrect transcription of “pul”, the second translation uses the foreign words “penny” and “kopecks” as functional analogs, which does not justify in this case, as currency is not used figuratively in this context. As for the expression of currencies used in the figurative sense, the translator has a wide choice of options, and it can be considered that the introduction of such foreign words into the translation for a specific communicative purpose does not contradict the principle of translation. Let's analyze one of the following situations:

Example:

*...ular Otabekka **uch pullik** ham ro'zg'or qildirmaydirlar. [6,162].*

*1. ... they have not taken even **one penny** from Atabek to spend on running the household. [2,153].*

*2. ... I know well that they have not allowed Otabek to spend **any penny** for the household. [4,160].*

*3. ... they will not allow Otabek to spend **three coins** on household goods. [1,270].*

Thus, the use of the penny as the smallest currency in the first and second versions of this example in translation as required by the context (mainly for the purpose of exaggeration) does not detract from the national color.

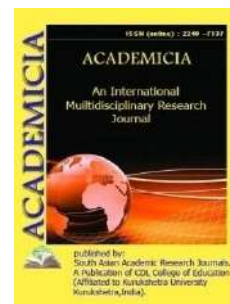
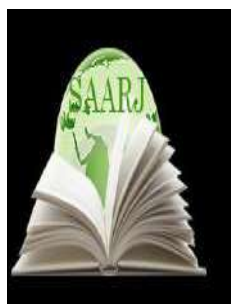
The translation is made for "his" reader; if the transcribed original words in the text remain outside the limits of its comprehension, then the communicative purpose of the translation has not been realized. If the original words are conveyed in a special way and the dyeing is lost, the same result is achieved "[5, 102]. Therefore, when giving specific words in translation, it is also necessary to take into account how familiar they are to the reader of the target language; if they are unfamiliar, whether they can be understood through context, otherwise what to do - these questions must be answered.

As the reader reads the translated work, he, too, must approach this level as much as possible, even if he cannot get the exact impressions of the original reader, and this complex task must fall entirely on the shoulders of the translator. The interpreter is the person who maintains the balance between the two languages - he must restore the deviations from the desired norm by all available means.



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DOI: **10.5958/2249-7137.2020.00651.5**

## EVALUATION OF MEDICAL AND DIAGNOSTIC ACTIONS CARRIED OUT BY NEUROLOGICAL PATIENTS IN THE PRIMARY HEALTHCARE

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### ABSTRACT

*About the majority of patients with neurological diseases with such diagnoses as migraine, dyscirculatory encephalopathy, radiculitis, vascular brain syndromes in cerebrovascular diseases, the disease was independently diagnosed by primary health care doctors. Doctors of General practice correctly performed a full volume treatment of patients with these pathologies. A more in-depth analysis of the state of this issue revealed a lack of knowledge among DGP in assessing the volume and quality of medical care provided by DGP for neurological pathology. Most often, DGP provided independent medical assistance for facial nerve neuritis, various pain syndromes in the lumbar region and lower extremities, and migraines. They prescribed adequate treatment for the treatment of these diseases. The same pattern was observed when analysis the compliance of the prescribed treatment with approved standards.*

**KEYWORDS:** *Primary Health Care (PHC), In The Doctor General Practitioners (DGP), The Quality Of Medical Care.*

### INTRODUCTION

The quality of medical care is a set of characteristics that confirming the compliance of the provided medical care with the existing needs of the patient (population), their expectations, and the current level of medical science and technology. In many foreign countries use the who definition, which invests in this concept is the following: "Each patient shall receive such medical care, which would lead to optimal health outcomes in accordance with the level of

medical science, the patient's age, diagnosis, response to treatment; when it should be brought the minimum funds risk of additional injury or disability should be minimal, but the result and satisfaction from the process of care maximum" [4]. The quality of medical care is assessed according to the who standard (1997), which includes:

- Quality of patient information collection (complaints, anamnesis, objective status);
- carrying out the necessary diagnostic measures;
- the correct formulation and justification of diagnosis;
- Quality of treatment measures implementation;
- High-quality maintenance of medical documentation;

providing regular medical records of the patient's condition and the observed dynamics of the disease, interpretation of the obtained laboratory and instrumental research methods, justification of the need for surgical and other medical interventions, the presence of records of consultations and consultations and their decisions, stage, transfer and discharge epicrisis.

During the examination of the quality of medical care are evaluated:

- Sufficiency and timeliness of prescribing and conducting diagnostic measures;
- Correct and timely diagnosis;
- The adequacy of treatment measures to the diagnosis made or the patient's existing symptoms;
- Compliance of medical documentation with approved standards and regulations;
- correct implementation of instructions on the procedure for issuing a disability certificate in cases of temporary disability.

The volume and quality of medical and diagnostic care provided by General practitioners to neurological patients was assessed in the group of patients observed in the Hospital with a total number of 5738 people.

We assessed, in particular, the amount of assistance provided by the GP independently, in addition, we studied in which cases the GP resorted to the advice of a neurologist of the CRH, to specialists from the regional center. In addition, we assessed the degree of compliance of medical care provided to patients with neurological diseases by DGP with official standards of management of such patients. Most often, as it turned out, DGP provide independent diagnostic assistance for diseases such as migraines and sciatica of different localization. [2]. In more complex cases requiring urgent care, more subtle, including topical diagnostics, such as hemorrhagic stroke, epileptic status, subarachnoid hemorrhages, etc., as a rule, specialists were consulted.

Table 1 shows that the main part of patients with such diagnoses as migraine, dyscirculatory encephalopathy, radiculitis, vascular brain syndromes in cerebrovascular diseases, the disease was self-diagnosed by doctors of the Medical center of the Russian Federation .General practitioners performed fairly correct treatment of patients with these pathologies (table 2).

A more in-depth analysis of the state of this issue revealed a lack of knowledge among DGP on the management of these diseases. The same pattern was observed when assessing the volume and quality of medical care provided by DGP for neurological pathology. Most often, DGP provided independent medical assistance for facial nerve neuritis, various pain syndromes in the lumbar region and lower extremities, and migraines. They prescribed adequate treatment for the treatment of these diseases. The same pattern was observed when analyzing the compliance of the prescribed treatment with approved standards. This indicates that DGP have sufficient knowledge to treat these diseases.

Repeat referrals and referrals of patients to specialists: abased on the number of cases of referrals The DGP neurological patients to other specialists is of particular importance. GP refers to the category of cost-effective specialties, and its main feature is both to ensure preventive activities among the population, and to meet the needs of patients as much as possible during initial treatment for diseases. [1]. This makes clear the importance of analyzing the frequency and reasons for each GP to refer their patients to other specialist doctors.

#### The volume of diagnostic care provided to neurological patients in the PHC( n=540)

Group of	diseases total	independent diagnostic assistance		referral to the RMO		referral to a neurologist in the region		referral to the regional hospital of	
		abs.	%	of abs.	%	of abs.	%	of abs.	%
1.Convulsive syndrome in children	53	14	26,4±6,1	23	43,4±6,8	5	9,4±4,0*	11	20,8±5,6
2.Migraine, tension headache	50	29	58,0±7,0	17	34,0±6,7*	2	4,0±2,8***	2	4,0±2,8***
3.Dyscirculatory encephalopathy	46	27	58,7±7,3	9	19,6±5,9***	3	6,5±3,6***	7	15,2±5,3***
4.Neuritis and neuralgia	38	9	23,7±6,9	5	13,2±5,5	8	21,1±6,6	16	42,0±8,0
5.Sciatica	51	32	62,8±6,8	9	17,6±5,3***	6	11,8±4,5***	4	7,8±3,8***
6.Transient disorders of cerebral	circulation 34	8	23,5±7,3	14	41,2±8,4	4	11,8±5,5	8	23,5±7,3
7.Acute violation of cerebral circulation (stroke)	45	11	24,4±6,4	7	15,6±5,4	23	51,1±7,5*	4	8,9±4,2*
8.States after the transferred	onmc 37	12	32,4±7,7	18	48,7±8,2	5	13,5±5,6*	2	5,4±3,7**
9.Parkinson's	Disease 29	9	31,0±8,6	12	41,4±9,1	4	13,8±6,4	4	13,8±6,4
10.Vascular brain	38	23	60,5±	6	15,8±5	6	15,8±5	3	7,9±4,

syndromes in cerebrovascular diseases			7,9		,9***		,9***		4***
11.Generalized epilepsy and epileptic syndromes	29	8	27,6±8,3	3	10,3±5,6	7	24,2±8,0	11	37,9±9,0
12.Compression of nerve roots and plexuses in the pathology of	interv ertebr aldisc s 35	9	25,7±7,4	7	20,0±6,8	9	25,7±7,4	10	28,6±7,6
13.Perinatal lesions of the nervous system (traumatic, hypoxic and asphyxiating, infectious)	37	9	24,3±7,1	4	10,8±5,1	5	13,5±5,6	19	51,4±8,2*
14.Spinal cord injury paralysis Erba	18	5	27,8±10,6	3	16,7±8,8	3	16,7±8,8	7	38,8±11,5

Note: it is reliable in comparison with self-rendered assistance (\*-P<0.05; \*\* -P<0.01)

#### Assessment of the adequacy of the quality of care for neurological patients in PHC

A group of diseases	all	Self-rendered assistance				The correctness and validity of prescriptions				Treatment according to the standards			
		Enough		Is not enough		That's enough		Does not match enough		does		Not match the	
		ab s.	%	of ab s.	%	of ab s.	%	of ab s.	%	ab s.	%	ab s.	%
1.Convulsiv esyndromes in children	53	8	15,1±4,9	6	11,3±4,3	13	24,5±5,9	5	9,4±4,0*	10	18,9±5,4	11	20,8±5,6
2.. Migraine, tension headache	50	20	40,0±6,9	9	18,0±5,4*	17	34,0±6,7	2	4,0±2,8**	2	4,0±2,8	0	0
3.Dyscirculatory encephalopathy	46	17	37,0±7,1	10	21,7±6,1	9	19,6±5,9	3	6,5±3,6*	5	10,9±4,6	2	4,3±3,0
4.Neuritis and neuralgia	38	6	15,7±5,9	3	7,9±4,4	5	13,2±5,5	8	21,1±6,6	10	26,3±7,1	6	15,8±5,9
5.Sciatica	51	21	41,2±6,9	11	21,6±5,8*	9	17,6±5,3	6	11,8±4,5	3	5,9±3,3	1	1,9±1,9

6. Transient disorders of cerebral circulation	34	8	23,5 ±7,3	6	17,7 ±6,5	8	23,5 ±7,3	4	11,8 ±5,5	5	14,7 ±6,1	3	8,8± 4,9
7. CVA (stroke)	45	8	17,8 ±5,7	3	6,7± 3,7	7	15,6 ±5,4	23	51,1 ±7,5 **	1	2,2± 2,2	3	6,6± 3,7
8. States after the transferred	37	4	10,8 ±5,1	8	21,6 ±6,8	18	48,7 ±8,2	3	8,1± 4,5**	2	5,4± 3,7	2	5,4± 3,7
9. Parkinson's	29	9	31,0 ±8,6	4	13,8 ±6,4	8	27,6 ±8,3	4	13,8 ±6,4	1	3,5± 3,4	3	10,3 ±5,6
10. Vascular brain disorders with cerebrovascular disease.	38	11	28,9 ±7,4	12	31,6 ±7,5	6	15,8 ±5,9	6	15,8 ±5,9	1	2,6± 2,6	2	5,3± 3,6
11. Other types of generalized epilepsy. and epileptic syndromes	29	5	17,3 ±7,0	3	10,3 ±5,6	3	10,3 ±5,6	7	24,2 8,0	8	27,6 ±8,3	3	10,3 ±5,6
12. Compression of the nerve roots and plexus in the pathology between. declaims	35	5	14,3 ±5,9	4	11,4 ±5,4	7	20,0 ±6,8	9	25,7 ±7,4	5	14,3 ±5,9	5	14,3 ±5,9
13. Perinatal lesions of the nervous system	37	6	16,2 ±6,1	3	8,1± 4,5	4	10,8 ±5,1	5	13,6 ±5,6	9	24,3 ±7,1	10	27,0 ±7,3
14. Spinal cord injury paralysis Erba	18	4	22,2 ±9,8	1	5,6± 5,4	3	16,7 ±8,8	3	16,7 ±8,8	2	11,0 ±7,4	5	27,8 ±10, 6

Note: it is reliable in comparison with the standard help (\*- P<0.05; \*\* -P<0.01; \*\*\* -P<0,001).



It is possible to identify the features of the work of DGP working in primary care and doctors specialists of the Central district clinics and hospitals, and in hospitals at the oblast level.

The list of registration of referrals to other specialists reflects all the main information about the direction: date, reason, specialist, referral number. The diagnosis is not indicated in this list. [3]. It is indicated both in the diary of the medical card, and in the blank form of the referral itself.

The introduction of this sheet into the developed form of the medical card allows the GP to control the patient's referral to other specialists and, accordingly, facilitates monitoring of the results of these referrals by the GP (table 1).

*The incidence according to referral data includes:*

1. General and primary morbidity, which is studied according to the following documents: "Individual card of an outpatient patient", which has a "list of updated diagnoses", which allows you to record the incidence according to the data of referrals to a medical institution, to identify groups of frequently and long-term ill patients who require special attention of the GP. When registering the final diagnosis by filling in the "Statistical coupon for registration of updated diagnoses" (F -025-2u), the doctor must necessarily enter the registered disease. In the "list of updated diagnoses" of the individual outpatient card (F.-025u), this will ensure the completeness of accounting for diseases.

2. "Statistical card for recording the final diagnoses" (F. 025-2u) is filled for each case identified by the physician of acute illness with the sign (+), in each case first identified by a physician of a chronic disease with a plus sign (+), and if the first request in the current calendar year to the previously identified chronic diseases with the sign (-). When studying the overall incidence of treatment data, all statistical coupons filled in during the year are taken into account to record the final diagnoses (both with a "+" sign and with a "-" sign). When studying the primary morbidity of the population, according to the data of referrals, filled out statistical coupons are taken into account to record final diagnoses only for diseases first detected in the course and year (with a "+" sign). When analyzing the incidence based on referral data, it is necessary to take into account factors that allow you to get complete information about it: the availability of medical care, availability of doctors, the ability and desire of the population to seek medical care at their place of residence, and in specialized institutions, the medical activity of the population and the level of its sanitary culture, etc.

Currently, DGP work mainly in state-run outpatient medical institutions (family and district polyclinics, urban and rural medical centers); a relatively small part of them work in non-governmental institutions and as private practitioners. In a generalized form, we can talk about the following forms of GP work: individual patient reception and group practice (departments or teams). Usually, the team consists of (except GP), dentist, surgeon, obstetrician-gynecologist, less often pediatrician. [1].

Primary care practitioners or pediatricians who have passed special training at the faculties of advanced training of physicians or graduates of medical universities with a diploma of primary care work as DGP. Primary training of DGP is currently being carried out in all medical universities in Uzbekistan. The Ministry of health of the country has developed and approved a training program for DGP and General practice nurses. DGP not only perform the functions of district internists and pediatricians, but also conduct the reception of patients with neurological,

ophthalmological, surgical and ENT diseases. Based on the results of the study, the composition of patients who turned to specialist doctors was analyzed.

The lowest rate of such requests is observed to the surgeon and traumatology's. These indicators are very low because in most cases patients go to the doctor 1 time and during this visit receive all the necessary medical and preventive assistance and recommendations.

Referrals to an obstetrician-gynecologist are usually aimed at questions of contraception or pregnancy. Contraception is one of the forms of preventive work aimed at preserving the reproductive health of the population, which is recognized in our country as a priority area of public health, and therefore appropriate forms of state reporting have been established.

The primary and repeated visits of patients to RMC specialists (internist, pediatrician, obstetrician – gynecologist, surgeon, and traumatology's) are shown in table 3.

**TABLE 3 PATIENTS ' ACCESS TO THE GP OF A RURAL MEDICAL CENTER**

#	RMC specialists	Primary Up take		Repeated Negotiability	
		Availability of abs.	%	Of abs.	%
1	Therapist	7434	35,0±0,33	4898	31,5±0,37*
2	Pediatrician	8053	37.9±0.33	5987	38.4±0.39
3	Obstetrician-and gynecologist	3390	15,9±0,25	3001	19,3±0,32*
4	Surgeon-traumatologist	2387	11.2±0.22	1679	10.8±0.25
	Total	21264	100	15565	100

Note: \* - significantly compared to the initial uptake ( $P < 0,001$ ).

These data show that the greatest number of referrals is to therapists and pediatricians.

The state of a woman's health during pregnancy has a significant impact on the course of pregnancy itself, its outcome, the course of childbirth and the postpartum period, and largely determines the health of the born child. Currently, the situation with the health status of women of fertile age, and especially during pregnancy, cannot be considered a good one.

Thus, the state of health of pregnant women is an important medical-c and social problem. [6]. To solve this problem, it is necessary to develop comprehensive medical and social programs aimed at the formation of reproductive health, starting from childhood and contributing to improving the quality of health of the female population, taking into account, first of all, its childbearing function (table 1).4).

**TABLE 4 COMPARISON OF PRIMARY AND SECONDARY REFERRALS  
TONEUROLOGICAL SERVICES PATHOLOGY**

RMC specialists	Primary turnover in General		Primary neurological turn ability		Repeat conversion rate		Repeated neurological	
	reversibility of abs.	%	of abs.	%	Abs.	%	of abs.	%
Therapist	7434	48,0±0,40	2077	27,7±0,52*, Ah	4898	45,0±0,48	702	14,0±0,50*, Ah

Pediatrician n	8053	52,0±0,4 0	2105	26,0±0,49 <sup>*</sup> Ah	5987	55,0±0,48	855	14,0±0,45 <sup>*</sup> Ah
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Note: \* - significantly compared with the overall primary and primary neurological referral rate(P); a-significantly compared with all primary treatment and repeat treatment of patients(P<0,001).

Patients' access to a pediatrician for neurological problems is higher than that of a therapist. This is due to the large volume of preventive work that pediatricians carry out.

In particular, the pediatrician's preventive work includes patronage of children up to 1 year old at home, vaccination, work with schoolchildren up to 12 years old, etc.

Table 5 shows that the largest share of visits therapeutic or Advisory purpose, and the purpose of follow-up, what was the total number of applications for neurological diseases 2016 year to 27.6% (1581); 2017 year – 32,9% (1893), and in 2018-year – 39,5% (2264) (table.6). Visits for diagnostic purposes and documentation processing had the lowest share.

**TABLE 5 STRUCTURE OF THE POPULATION'S ATTENDANCE OF PMCDISTRICT DOCTORS FOR DISEASES OF THE NERVOUS SYSTEM, DEPENDING ON THE PURPOSE OF SERVICE**

Purpose of the	abs visit . %	2016y. o. (n=1581)	2017y. o. (n=1893)	2018y. o. (n=2264)
Therapeutic	abs.	617	679	885
	%	39±1,5	35,7±1,3 <sup>*</sup>	39,1±1,2
Advisory	abs.	374	506	678
	%	23,7±1,3	26,7±1,2	29,9±1,1 <sup>*,^</sup>
Dispensary observation of	abs.	169	218	257
	%	10,7±0,82	11,5±0,78	11,4±0,70
Prof. about the show	The abs system.	158	164	180
	%	and 10.0±0,78	8,7±0,63	8,0±0.55 is
Diagnostic	Of abs.	123	140	171
	%	5,4±0,39	8,9±0,69	9,0±0,66 <sup>*,^^</sup>
Registration of	Abs documentation.	123	141	158
	%	7,8±0,60	6,2±0,45	8,3±0,62 <sup>^</sup>

Note: \* - reliably compared with the indicators of 20-16 16y. o. (\*- P); ^ - reliably compared with the indicators 2018of 20-18 y. o. (^-P<0.05; ^^ -P<0,001).

General practitioners in cases of neurological patients in most cases try to provide assistance on their own. Specialists are usually sent to the dispensary patients or in cases of complicated course of the disease.

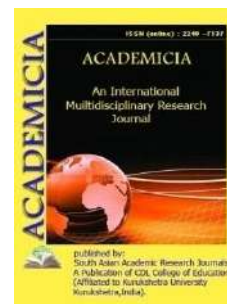
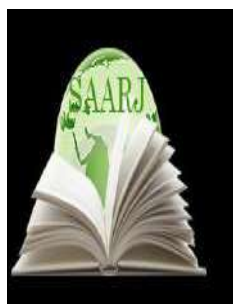
## CONCLUSIONS

Thus, in the main part of patients with neurological diseases with such diagnoses as migraine, dyscirculatoryencephalopathy, radiculitis, vascular brain syndromes in cerebrovascular diseases, the disease was independently diagnosed by doctors Of the hospital. General practitioners

performed fairly correct full-volume treatment of patients with these pathologies. A more in-depth analysis of the state of this issue revealed a lack of knowledge among DGP on the assessment of the volume and quality of medical care provided by DGP for neurological pathology. Most often, DGP provided independent medical assistance for facial nerve neuritis, various pain syndromes in the lumbar region and lower extremities, and migraines. They prescribed adequate treatment for the treatment of these diseases. The same pattern was observed when analyzing the compliance of the prescribed treatment with approved standards. Analysis of primary and repeated referrals of patients to specialists PMC (therapist, pediatrician, obstetrician –gynecologist, surgeon and traumatology) showed that the greatest frequency of visits is observed to therapists and pediatricians, while the greatest proportion falls on visits to the PMC for medical or consulting purposes, as well as for the purpose of dispensary observation. Visits for diagnostic purposes and documentation processing had the lowest share. According to the data obtained, the following conclusion can be drawn: DGP in cases of neurological patients in most cases try to provide assistance on their own. Specialists are usually sent to the dispensary patients or in cases of complicated course of the disease.

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DOI: **10.5958/2249-7137.2020.00652.7**

## **SOCIOLINGUISTIC ASPECT IN TEACHING A NON-RICH (RUSSIAN) LANGUAGE IN A GENERAL EDUCATIONAL SCHOOL WITH A UZBEK LANGUAGE OF TEACHING**

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### **ABSTRACT**

*The article presents the results of studies on the effectiveness of using sociolinguistic theory in teaching the Russian language in a comprehensive school (with the Uzbek language of instruction); The importance of integrated vocabulary suggesting the intralinguistic and extra linguistic characteristics of the word is shown. The article shows that the use of the Russian language is oriented, on the one hand, to its preservation in the country, and on the other, to active study and everyday use as a means of communication and internationalization of culture.*

**KEYWORDS:** *Sociolinguistics, Competence, National-Cultural Component Of The Word Meaning, Integrated Approach To The Presentation Of Vocabulary, Historical And Literary Text.*

### **INTRODUCTION**

The new socio-economic and political situation requires the implementation in society of a language policy in the field of foreign language education, aimed at satisfying both social and personal needs in relation to foreign languages. In the current conditions of the development of the Republic of Uzbekistan, the use of the Russian language is oriented, on the one hand, to its preservation in the country, and on the other, to active study and everyday use as a means of communication and internationalization of culture.

Teaching the Russian language in a comprehensive school (with the Uzbek language of instruction) requires a linguistic description that is most consistent with the goals of

communicatively-oriented learning. A communicative-activity approach is defined as the theoretical basis for teaching the state (Uzbek) language, which has received sufficient theoretical justification in the methodology of teaching the non-native (Russian) language.

**Main part.** The development of international relations in politics, economics, culture and other fields requires the modern methodology of teaching the non-native (Russian) language to be guided by the real conditions of communication. Communicative competence as the end result of training involves not only the possession of appropriate foreign-language technology, but also the assimilation of the vast extra-linguistic information necessary for adequate training and mutual understanding.

The main problem in learning a foreign language is that the student is faced with difficulties related not only to the field of vocabulary, grammar, phonetics or stylistics, but also to the areas of regional geography of social, everyday or historical features of culture expressed in the language being studied. The correct use or understanding of certain words or phrases often requires knowledge of their origin, situations in which they can be used, or basic information from the history, literature, political reality of the country of the language being studied. But teaching does not always rationally combine the methods of co-learning a language and culture. The specific features of teaching the Russian language to Uzbek students have not yet been fully studied, as evidenced by the known difficulties of graduates of Uzbek schools when studying in higher educational institutions with the Russian language of instruction. All this determines the relevance of the topic of the article.

The issues of the connection of language and culture, which underlies sociolinguistics, have long been the focus of attention of linguists, linguodidacts and methodologists (F.I. Buslaev, A.A. Shakhmatov, N.V. Krushevsky, Ya.A. Komensky, K. D. Ushinsky, V.V. Vinogradov, V.L. Zhirmunsky, L.V. Sherba, E.D. Polivanov, R.A. Budagov, V.A. Andriyanova, etc.). Special branches of linguistics have developed - social linguistics, as well as psycholinguistics, ethnopsycholinguistics, ethnolinguistics, dealing with issues of the connection between language and culture.

One of the most relevant concepts of modern linguodidactics is communicative competence, the sphere of manifestation of which becomes an activity process, and speech activity acts as a necessary link.

Starting from the 70s of the last century, the concept of communicative competence became effective, as the structural elements of which linguistic, sociolinguistic, discursive, socio cultural, strategic and social sub competencies began to be distinguished.

In Russian linguodidactics, the term communicative competence was introduced by M.V. Vyatyunev. He suggested understanding communicative competence "as a choice and implementation of speech behavior programs depending on a person's ability to navigate in a particular communication environment; the ability to classify situations depending on the topic, tasks, communicative attitudes that students have before the conversation, as well as during the conversation in the process of mutual adaptation "[2].

V.I. Andriyanova emphasizes that the communicative principle is the basis for teaching the Russian language as non-native. The scientist considers it necessary "to create such a training system that would ensure mastery of the language in its main functions - as a means of



communication, communication, cognition, planning and organization of activities (especially collective), emotional, aesthetic and moral influence and upbringing - with the priority of the communicative function" [1].

Mastering a foreign language as a means of international communication is impossible without knowledge of the socio cultural and sociolinguistic features of the country of the language being studied.

Like communicative competence, sociolinguistic competence is associated with the selection and implementation of speech behavior programs depending on the communication environment. Sociolinguistic competence reflects the socio cultural conditions for using the language (orientation on social norms of communication between different generations, genders, classes and social groups, decoration of rituals). The area of sociolinguistic competence includes, inter alia, the ability to organize pedagogical communication and take into account a specific pedagogical situation, consists of the ability to use realities, special turns of speech, specific rules of verbal communication characteristic of the country of the language being studied, that is, a peculiarity in the language that indicates the influence of customs, culture. In connection with the orientation toward social norms (rules of good form, norms of communication between representatives of different generations, genders, social groups, linguistic consolidation of certain rituals adopted in this society), the sociolinguistic component has a great influence on the linguistic design of communication between representatives of different cultures. Thus, sociolinguistic competence is an integral component of communicative competence. Since the requirements for the level of sociolinguistic competence are somewhat vague, it is necessary to identify individual components, the requirements for which can be described more accurately, and accordingly, can be measured and controlled. This is especially true for schools with the Uzbek language of instruction, since the sociolinguistic component has a great influence on the speech interaction between representatives of different cultures, since it focuses not only on the language (the Uzbek and Russian languages are typologically and genetically completely different), but also on social norms.

When studying a non-native (Russian) language, information on the cultural and historical experience of the people, reflected in the semantics of the language, must be assimilated to a certain extent. From a linguistic and didactic point of view, this means that the obligatory installation in ensuring the lexical aspect should be such a presentation of the semantics of Russian words, which takes into account the meaning of the word as a reflection of a certain phenomenon of reality from the point of view of its occurrence, place and functioning in society, i.e. a description of the cultural-historical aspect of semantics. The object of reality, called the word, should be considered as an object of culture, understood in this case as the unity and totality of the material and spiritual values of the people.

In teaching the non-native (Russian) language, appropriate cultural and linguistic differences should be identified in comparison with the native (Uzbek) language, "special efforts are required for the results of cognitive activities and information exchange to be systematized, included in the general knowledge system and made available for later use "[6]. The word of the Russian language, when it is presented in a foreign language audience, should not be torn off from the cultural-linguistic situation that develops with its natural functioning in the Russian language environment. During its semantization, all relations of the subject denoted by it, with

other objects accompanying it, related to it, and the constructive-subjective attitude of native speakers to these subjects, as well as the cultural and linguistic situation in which they operate, should be disclosed. The analysis of the word in this aspect should be based on specific facts from the history and culture of society and the history of language. Such an analysis of words with national-cultural specificity does not exclude the lexicological approach, but rather complements it.

Sociolinguistics as an element of linguodidactics is the most acceptable interpretation of the theoretical foundations of linguistic science for the presentation of the problem of the national-cultural specificity of the language. A special role is given to vocabulary, in which the cumulative function of the language is most pronounced, due to the direct appeal of the words to the phenomena of objective reality, the close connection of vocabulary with the history and culture of the people.

The words of two languages - studied (Russian) and native (Uzbek) - are conceptually equivalent, can have completely different associations between the student and the native speaker of the studied language. The function of the concept is to classify a specific subject indicated by a word as a specific set of homogeneous objects. But there are additional elements of the meaning of the word that are not related to its conceptual basis.

In the methodology of teaching the Russian language as non-native, its solution was proposed by E.M. Vereshchagin and V.G. Kostomarov of the linguistic and regional theory of the word, the central for which was the concept of the lexical background of the word, new to semasiology and linguodidactics. In classical linguistics, academician V.V. Vinogradov answered these questions fully and convincingly: "To the extent that the word contains an indication of an object, it is necessary to understand the language of objects indicated by words, it is necessary to know the whole circle of the corresponding material culture. The same names in different eras mean different objects and different concepts. On the other hand, each social environment is characterized by the peculiarities of its designations. The same objects are interpreted differently by people of different backgrounds, different worldviews, and different professional skills. Therefore, the same Russian word as an indication of an object includes different contents in the speech of different social or cultural groups "[3].

## RESULTS AND DISCUSSIONS

Based on the point of view of academician V.V. Vinogradov and on the fact that the meaning of words lying at the junction of internal and external linguistics can be limited by significance, which refers to internal linguistics, or expanded to the concept, image, cultural and historical fact that implemented in speech activity and relates to external linguistics, we consider effective in the course of the official language a comprehensive approach to the analysis of vocabulary, which includes an "intra-linguistic" characteristic, i.e. traditional lexicological systematic approach and "external linguistic" characterization, i.e. cultural and historical aspect of the consideration of the word content.

The effectiveness of using the techniques and methods of the sociolinguistic approach in presenting the vocabulary of external linguistics, from the point of view of the cultural and historical content of words, is due to the fact that sociolinguistics was initially oriented toward teaching the language as a "linguodidactic analogue." Sociolinguistics studies the extra linguistic plan for purely cognitive purposes. Sociolinguistics deals with the extra linguistic plan of the

language in terms of the educational process, i.e. with applied goals [5]. And it is most acceptable for teaching Russian non-Russian.

## CONCLUSION

Thus, the problems of the connection of language and culture, the national-cultural specifics of the language, vocabulary in its practical interpretation quite successfully constitute both the subject of study and the subject of teaching within the framework of sociolinguistics, which serves as the basis for the ability to use its main provisions, methods, means, techniques in the practice of teaching the Russian language in a foreign audience.

The sociolinguistic aspect is quite successfully “introduced” into the teaching of the Russian language by non-Russians both at school and at the university. It should be noted that the content and value orientation of the studied concept is changing: the subject of co-study becomes, as in the courses of the Russian language as a second language, Russian culture, which is not for students a culture of a completely foreign country.

Being a foreign-language and foreign-language culture for them, it is at the same time (in the conditions of becoming unified in spirit, in content and in the language of interethnic communication of culture) partly familiar and to some extent “own”. This is one of the sections of the field of knowledge that relates in this case to the culture of the people who have, with the people to which the students belong, a common history, traditions.

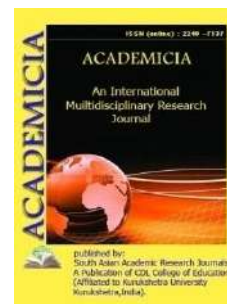
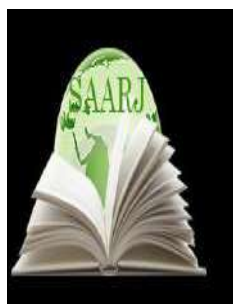
Thus, the sociolinguistic side is based on the following theoretical premises, linguodidactic principles and methodological techniques:

- recognition of the reflection in the language, in particular in vocabulary, of the cultural and historical experience of the people;
- the need to teach the Russian language as a non-native co-study of the language and culture with the aim of adequate perception by students of the studied language in its various manifestations and forms;
- development of vocabulary principles and criteria for a specific recipient;
- selection, classification of sociolinguistically valuable vocabulary depending on the specific addressee and the goals of its presentation;
- selection of historical and literary texts, where this vocabulary is presented most fully and which contain the most valuable cultural and historical information;
- the use of common methods and techniques for the presentation of cultural and historical information, concluded, broadly, in the content of historical and literary texts and, in a narrow sense, in the semantic structure of the word.

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DOI: **10.5958/2249-7137.2020.00653.9**

## ON THE VOCABULARY OF POLITICAL SPEECH IN CHINESE (BASED ON XI JINPING'S SPEECH AT THE STRONG TWENTIETH SPECIAL SUMMIT)

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### ABSTRACT

*It is well known that the lexicon of formal and journalistic styles in Chinese is one of the styles that retain relatively many elements of classical Chinese Wenian. In the framework of this article, on the basis of the speech of the Chinese leader, the peculiarities of the lexicon of the text of political speech in modern Chinese, the role of Wenian elements in the lexicon of the language of this direction today were identified. The analysis was based on Xi Jinping's speech at a special summit of the G20 leaders. Relevant conclusions were also stated statistically.*

**KEYWORDS:** *Xi Jinping, Coronavirus, Lexicon, Venyan, Independent Words, Auxiliary Words, Phraseological Units, Stable Compound, Lexical Content, Modern Chinese, Political Speech.*

### INTRODUCTION

Political speech is not only an integral part of political activity, but also a means of connecting the speaker, often the state, with the people. Therefore, it is very important to have an error-free structure of speech in the state language, the correct choice of lexical units, the appropriate use of stylistic tools, on the other hand, speech requires serious attention, as it quickly reaches the consciousness and consciousness of the people, as well as reflects the intellect and wisdom of the speaker.

This article analyzes the speech of the President of the People's Republic of China Xi Jinping at the G20 Special Summit of the G20. The text of the speech was taken from the website of the Chinese Xinhua Agency (26.03.2020).

This speech is aimed at the coronavirus pandemic 《携手抗疫 共克时艰》*Xiéshǒu kàng yì gòng kè shí jiān* It is called “Let's fight the epidemic hand in hand, let's overcome the hardships of the time in unity.”

When attention is paid to the vocabulary of the speech title, the words are chosen with great care, but far from the modern Chinese spoken language. The words in the title are simple in structure, with only the first component 携手 *xiéshǒu* in the form of a compound, 携 *xié* usually requires an object after itself, in this place 手 *shǒu* The word “hand” is the object of the verb. The following explanation of this compound is given in Chinese annotated dictionaries: 1) 手拉着手 *shǒu lā zhuóshǒu* “Holding hands”, 2) metaphor: means to do something together [1, 1507]. In the second source, only its first meaning is given “holding hands” [2, 737].

抗 *kàng* 1) return; to resist; 2) to refuse; 3) comparison, equalization [1, 764] [2, 369]. The meaning of this word is explained in the dictionaries using the following examples: 1) 抗灾 *kàngzāi* “disaster relief” | 抗旱 *kànghàn* “киргоқчиликка қарши туриш” | 皮大衣旧点儿没关系, 只要挡风抗冻就行。 *Pí dàyī jiù diǎn er méiguānxì, zhǐyào dǎng fēng kàng dòng jiùxíng.* Even if the outerwear is old, the main thing is that it protects from the cold (returns the cold). 3) 抗衡 *kànghéng* such as equalization.

疫 *yì* epidemic This word is interpreted as a synonym in both dictionaries [1. 1616] [2. 796].

共 *gòng* 1) general : 共性 *gòngxìng* | 共通 *gòngtōng*. 2) together, unanimously : 同甘苦, 共患难 *tóng gānkǔ, gòng huànnàn*. 3) together, together : 和平共处 *héping gòngchǔ* | 共进晚餐 *gòng jìn wǎncān*. 4) in total : 这两个集子共收小说十二篇 *Zhè liǎng gè jí zi gòng shōu xiǎoshuō shí'èr piān*. 5) Applies to the Chinese Communist Party [1. 478] [2. 227].

克 *kè* There are four dictionary articles in the Modern Chinese Dictionary, which have the following meanings.: 1) be able to: 不可分身 *bùkěfēn shēn* inability to be in two places at the same time. 2) to overcome; to take control : 克己 *kè jǐ* self-management | 以柔克刚 *yǐróukègāng* overcome with gentleness (softness). 3) to strike; to surrender : 克服 *kèfú* to conquer, to conquer | 克敌 *kè dī* to surrender the enemy. 4) digest: 克食 *kè shí* digestion | 克化 *kè huà* digestion, absorption [1.773]. In the second lexicographic source, dictionary articles are combined [2, 372].

时 *shí* 1) applies to a slightly longer period of time (in the sense of time, period): 古时 *gǔ shí* in antiquity, in ancient times | 宋时 *Sòng shí* Sun period. 2) known, specified time: 按时 *ànshí* in time | 准时 *zhǔnshí* a total of twelve meanings are given as at the specified time [1. 1234] [2. 609].

艰 *jiān* hardship [1. 662][2. 318]. This lexeme is used in only one sense in both sources.



So, this speech of the President of the People's Republic of China can be translated as “Let's fight the epidemic hand in hand and overcome the hardships of the times together.” Apparently, the subject of the speech is in the context of a call and an invitation.

As can be seen from the title of the speech, modern Chinese words are almost never used, most of which have Wenyang features.

尊敬的萨勒曼国王,

各位同事 :

*Zūnjìng de Sàlěimàn guówáng,*

*gèwèi tóngshì:*

The speech began with the traditional address words, namely: Dear King Salmon, dear colleagues! It should be noted that the choice of words and punctuation in the sentence is specific to the Chinese language. Since the names of foreigners are much longer than Chinese names, the choice of the main part of the name in the Chinese variant is not considered disrespectful, but is a normative case due to the nature of the language. Although the word “respectable” is not reused before the next word “colleagues,” this lexeme, which appears at the beginning of the introductory sentence, also applies to the second part of it. It is expedient to translate this introductory sentence as “King Salman ibn Abdul Aziz al Saud, esteemed colleagues, ...” (this translation belongs to Ikhtiyor Niyazmuradov).

After the application part, the following greetings are given:

大家好！首先，我谨对萨勒曼国王和沙特方面为这次会议所做的大量沟通协调工作，表示衷心的感谢！

*Dàjiā hǎo! Shǒuxiān, wǒ jīn duì Sà lěi mǎn guówáng hé shā tè fāngmiàn wèi zhè cì huìyì suǒ zuò de dàliàng gōutōng xiétiao gōngzuò, biǎoshì zhōngxīn de gǎnxiè!*

Peace be upon you. First of all, I would like to express my sincere gratitude to King Salmon and Saudi Arabia for the large-scale work done on communication and organizational issues for the organization of this summit (translated by Samida Mustafaeva).

The two lexemes in the sentence require special attention: 谨 *jǐn* 1) carefully. 2) with respect [1. 711] [2. 342]. It is in the second sense that the word is used to express respect, mainly when expressing gratitude [2, 342]. 衷心 *zhōngxīn* sincerely, wholeheartedly [1. 1768] [2. 866]. This word is also often used when expressing gratitude. The two lexemes mentioned above in this sentence are of special importance, although 谨 *jǐn* is not an independent word. That is, it is these lexemes that express the humility of the speaker (the speaker) and his deep respect for the interlocutor (the party to whom the speech is directed).

面对突如其来的新冠肺炎疫情，中国政府、中国人民不畏艰险，始终把人民生命安全和身体健康摆在第一位，按照坚定信心、同舟共济、科学防治、精准施策的总要求，坚持全民动员、联防联控、公开透明，打响了一场抗击疫情的人民战争。经过艰苦努力，付出巨大牺牲，目前中国国内疫情防控形势持续向好，生产生活秩序加快恢复，但我们仍然丝毫不能放松警惕。

*Miàn duì tūrúqílái de xīnguān fèiyán yìqíng, zhōngguó zhèngfǔ, zhōngguó rénmin bù wèi jiānxiǎn, shǐzhōng bǎ rénmin shēngmìng ānquán hé shēntǐ jiànkāng bǎi zài dì yī wèi, ànzhào jiāndìng xīnxīn, tóngzhōugòngjì, kēxué fángzhì, jīngzhǔn shīcè de zǒng yāoqiú, jiānchí quánmín dòngyuán, liánfáng lián kòng, gōngkāi tòumíng, dǎxiǎngle yī chǎng kàngjǐ yìqíng de rénmin zhànzhēng. Jīngguò jiānkǔ nǚlì, fùchū jùdà xīshēng, mùqián zhōngguó guónèi yìqíng fáng kòng xíngshì chíxù xiàng hǎo, shēngchǎn shēnghuó zhìxù jiākuài huīfù, dàn wǒmen réngrán sīhào bùnéng fàngsōng jǐngtì.*

Suddenly facing a new coronavirus pneumonia epidemic, the Chinese government, without fear of hardship and danger, put the safety and health of human life first, firmly in the body, scientifically prevent and treat the disease, respond to the demands of government policy developed at a level that would allow, with tolerance at the level of the national movement, to be controlled in an organized manner, and with openness the whole people's struggle against the disease began. With tremendous effort, with great sacrifices, the epidemic control situation in China is changing for the better. Production and social life are rapidly returning to their place, but we must still not lose vigilance, even in the slightest (translation S.M.).

In this part of the speech, a number of lexical units are of particular interest. 突如其来 *tūrúqílái* It is hard to say that the word meaning “to happen suddenly, to happen suddenly” is widely used in modern Chinese speech. The first part of the compound, 突如 *tūrú* is synonymous with the quality of 突然 *tūrán* keng, which is widely used in modern Chinese literary language, the second component, 其来 *qílái* consists of two components, where 其 *qí* 1) the third person singular pronoun singular (he) and plural forms (they); 2) show diamond (that, he, like him); 3) in the function of the show pronoun (in this case it is an auxiliary word and does not mean an independent meaning). Ravish is used as a word in the category of rhetorical content and in the formation of sentences with the content of the command or request. There are also cases when this morpheme comes as an affix [1. 1069]. In the above combination, the third meaning of this unit given in the dictionary article is observed, that is, the meaning of the pronoun “he, that” is understood, but it is not reflected in a separate translation as an independent word.

Just as 忘其所以 *wàng qí suǒyǐ* is used in the phrase “to be arrogant and forget everything”.

In both places it does not manifest itself as a completely independent word, although the meaning of showing, pointing to it (they) is understood in its content. 来 *lái* and in the sense of “coming.”. 其来 *qílái* together they are considered neutral vocabulary today 发生 *fāshēng* Means “to happen”.

不畏艰险 *bù wèi jiānxiǎn* the first components in this compound 不畏 *bù wèi*, бунда 不 *bù* is considered a morpheme meaning denial, 畏 *wèi* “To be afraid, to be confused” [2. 697] not used alone in modern Chinese. The second part of the compound 艰 *jiān* “difficulty, hardship” [2. 318] and 险 *xiǎn* “danger, danger, frustration” [2. 724] these words are also not used alone in modern Chinese together “困难和危险” *kùnnán hé wéixiǎn* Used as a short form of the phrase “hardship and danger”. In this respect, too, the phrase with this equal relation reflects the ancient Chinese Wenian character. Similar verb conjugations can be observed again in this part of speech: 防治 *fángzhì* accumulation 预防 *yùfáng* “prevention; protection” and 治疗 *zhìliáo*

“treatment”, 联防 *liánfáng* “sympathetic (joint, organized) protection” and 联控 *lián kòng* “joint control, management”, 抗击 *kàngjī* *цъи* 抵抗 *díkàng* “resistance; resist” and 反击 *fǎnjī* formed from the combination of the words “counter-attack.”, 防控 the word in turn 预防 *yùfáng* “prevention” and 控制 *kòngzhì* “management” reflects the basic components of control lexemes.

在中方最困难的时候，国际社会许多成员给予中方真诚帮助和支持，我们会始终铭记并珍视这份友谊。

In difficult times for China, many members of the international community have spared no effort and support. We will always keep this in mind and cherish this friendship immensely.

Although the above 铭记 *míngjì* sentence means "to remember, to remember," the first component of the word "carving on stone (or metal)" means that the Chinese leader in his speech praised the international community's support for China. It is understandable that it expresses a relatively high recognition and that it will forever remain in the memory of the Chinese people.

In this sentence 珍视 *zhēnshì* the combination of verbs in a complex structure is noteworthy in the context, it 珍惜 *zhēnxī* “appreciation” and 重视 *zhòngshì* “pay close attention” verbs denoting meanings are formed from a combination of basic morphemes. However, in most cases, especially in colloquial speech, the phrase “cherish this friendship” is given in Chinese as 珍惜这份友谊, however, the Chinese leader used the word 重视 *zhòngshì* as a morpheme meaning “to pay serious attention” to enrich the content of the above sentence, as well as China's attitude to the support of the international community.

Such peculiar lexical units can also be found many times in the following sentences of Xi Jinping's speech.

In the next paragraph of the speech, a number of strict syntactic units (fixed compounds) were also used, 坚定信心 *jiāndìng xìnxīn* “with firm confidence”, 齐心协力 *qíxīn xiélì* “to work together”, 团结应对 *tuánjié yìngduì* “in unison” such as compounds that have meanings.

The phrase 携手 *xiéshǒu* “holding hands” in this paragraph is also a written alternative to the phrase 手拉着手 *shǒu lāzhuó shǒu*, which is often used in oral speech.

In the following sections, the speaker makes a number of points about the situation. In this case, the word 此 *cǐ*, which belongs to the ancient Chinese language, is used in place of the modern Chinese 这 *zhè* “this, this” pronoun. 愿 *yuàn* “to want”, 以下 *yǐxià* “following” such words also actually manifest themselves as elements of ancient Chinese.

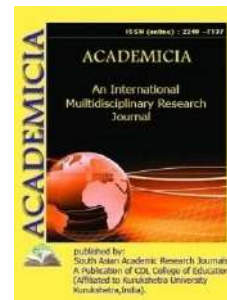
## CONCLUSION

In the lexicon of Chinese political discourse, the elements of ancient Chinese venyen occupy a more prominent place than the other stylistic lexicons of the language. We can see that Xi Jinping's weight in the lexicon of speech has increased even more. A total of 536 independent words (the total number of characters in the text is 1412) were used in the speech of the Chinese leader on the surface of the coronavirus pandemic, of which 35 (excluding repetitions in the text), ie about 7% fully reflect the characteristics of Venus. Most of these words are verbs, a

certain part belongs to the category of diamonds. Also, about 80% of the auxiliary words used in the text of the speech are venyan-specific auxiliary words. This, in turn, demonstrates the effective use of classical language elements in the lexicon of political speech in modern Chinese (especially Xi Jinping's speech). Phraseological units were also used in the text of the speech, which shows the closeness of the speech to the people and the appreciation of national traditions. Although speech is related to the coronavirus pandemic, complex terminological units in speech are extremely rare, accounting for about 0.5% of speech vocabulary.

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DOI: **10.5958/2249-7137.2020.00654.0**

## INDUSTRIAL IMPACT OF INDUSTRY IN SAMARKAND REGION

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### ABSTRACT

*The article is based on historical sources on the implementation of industrialization policy in Samarkand region in the 40-80s of the XX century, the dense and very close location of industrial enterprises in a particular city, the rapid fulfillment of obligations of industrial enterprises, the interests of industrial enterprises in the former Soviet Union. described. There are reports of the damage caused to the environment by waste due to the neglect of the material and technical base of industrial enterprises due to the rapid implementation of production.*

**KEYWORDS:** *Industrial Enterprises, Environment, People, Manufacturing, Water, Soil, Health, Atmospheric Air, Disease.*

### INTRODUCTION

Speaking at the 72nd session of the UN General Assembly at the 72nd session of the UN General Assembly, President of the Republic of Uzbekistan Shavkat Mirziyoyev spoke about security and stability in Central Asia as one of the most important issues of international importance. The current state and sustainable solution of complex and global issues related to the use of [1].

A number of mistakes in the policy of cotton monopoly and industrialization pursued by the Center in relation to Uzbekistan in the former USSR, years later, caused socio-economic difficulties and environmental problems in the country. Mexmonov, H. Oblamurodov, A. Razzoqov, D. Bobojonova, H. Yunusova described in her monography [2]. Including, d. In her monograph, Bobojonova notes that "the economy of Uzbekistan has become an integral part of a single centrally managed national economy" [3].

In addition, X. Yunusova said: "The local population is mainly engaged in cotton growing, and it is one of the last countries in the world after the former Soviet republics in terms of food production and even consumption of these products. The delivery of agricultural products grown

in the republic itself was a manifestation of socialist homelessness. This situation in the whole country has disturbed the balance of nature and aggravated the ecological situation.”[4]

### **Main part**

In 1957, the industrial management authorities, the leaders of the party leadership decided on the Samarkand economic central region. In 1957, compared to 1913, the industrial sector in Samarkand increased 83 times. In the Samarkand economic region were built mineral fertilizers for agriculture, silicate bricks, building materials [6], spare parts for tractors and cars, a high level of leather, wine, grapes, factories and garments, silk, food factories.

The Samarkand Tea Factory [7], the only supplier of high-quality tea among the former Soviet republics, has also been recognized. The uninterrupted operation of factories and mills could be seen in the second half of 1957, when production increased by 11 per cent compared with the first quarter of 1957, when the annual plan was immediately fulfilled by 100 per cent as of December 20 [8]. In order for such production to reach a high level, of course, the support system for industrial enterprises must also be high.

Therefore, before the opening of the Angren coal mine, valuable Karaganda and Kuzbass coal was imported to provide Samarkand industrial enterprises with sufficient capacity. Expensive coal was used only in the power supply of heavy industrial enterprises. By the 1960s, with the construction of the Jarkok-Bukhara-Samarkand-Tashkent main pipeline, natural Bukhara gas had served to increase the capacity of all industrial enterprises in the Samarkand region. In addition, the Dargam canal hydroelectric power station has been a great help in supplying power to industrial enterprises. Samarkand economic region is divided into 3 important industrial enterprises: central, eastern and north-western. In Samarkand, KrasnyDvigatel, Kinap electromechanical plant, refrigeration plant, superphosphate, ammophos, tire repair, porcelain, leather factories, tea packaging plant, cotton ginning plant are among the largest industrial enterprises of the city. The total area of Samarkand region was 16.4 km<sup>2</sup>, districts - 16, cities - 11, urban districts - 3, towns - 12, villages - 125 [10]. During the former Soviet Union, the relocation of industrial enterprises to densely populated areas in Samarkand also led to a change in the ecological balance. The spread of chemical waste during the operation of industrial enterprises for the production of chemical and organic fertilizers, which are especially important in agriculture, has exacerbated social problems in the environment. In 1954, a superphosphate plant was built in Samarkand, which produces mineral fertilizers, which play a key role in agriculture. By 1958, the superphosphate plant began to produce seric acid using karatauskihphosphorites imported from the Kazakh SSR [12]. Other additional raw materials were brought from the former (city of Khibinogorsk) from the Kols Peninsula. The Serno acid plant is a source of accelerating basic operating activities for technical equipment in the fields of radio engineering, electrical engineering and telemechanics. According to the decision of the Central Committee of the CPSU, the Samarkand Chemical Plant took the lead among the world's chemical industries in the implementation of the plan in May.



In 1967, the location of Samarkand industrial enterprises [13]

Region Name	Production Quantity	Gross Products Remaining	Manufacturing Products
Central	37.3	31.2	20.3
West	27.9	19.0	11.9
Northeast	21.3	41.3	15.0
Near the city	13.5	7.8	52.8

The Chashma canal passed through the center of Samarkand and was very close to the central nuclear zone of industrial enterprises. During the operation of industrial enterprises, ChashmaArigi played an important role, the main users were metal processing, machinery and other food, light industry enterprises. The Central Spring Fountain was important not only in the supply of water, but also in the washing of various technical equipment in production.

So we know that industrial enterprises have been dumping more of their wastewater into nearby canals. In this regard, on the map of Samarkand region, we observed the flow directions of the Chashma stream. The spring flows through the border areas of Samarkand with the former Gagarin, M. Gorky, Titova and Agalik streets. In turn, the population has been using Chashmaaryg for farming, livestock and melons.

Territorial division of industrial enterprises in Samarkand in 1966 [14]

Territories of industrial enterprises	Mechanical engineering and metal processing	Chemical industry g food	Wood processing	Building materials	Light industry	food	Other production
Central	47,2	-	47,0	26,5	51,5	16,4	20,1
West	16,3	-	-	0,3	27,8	16,7	-
Northeast	29,9	-	38,1	14,3	20,7	66,9	79,0
Near the city	6,6	100,0	14,9	58,8	-	-	0,9

In 1965-1970, the growth of new industries in Samarkand region increased. In particular, a porcelain factory, refrigerators factory, home refrigerators, elevator construction plant, textile factories have been built and put into operation in the city center.

In order to ensure the implementation of the Resolution No. 169 of April 16, 1976 "On the impact of industrial enterprises on environmental pollution in the organized society" Uzplodrovinprom in 1976-1980 ", the situation of industrial enterprises in Samarkand region was studied. During the inspection, Samarkand winery named after Khovrenko, Samarkand cast iron

plant "KrasnyDvigatel", Samarkand stone processing, porcelain, tannery, cannery "Serp imolot", Samarkand distillery, Gazalkent cannery dumped their wastewater into the central canal of the city. identified [15].

The discharge of wastewater into the surrounding canals by industrial enterprises has had an impact on the drinking water of the population.

In 1978, the harmful effects of meat processing plants in the Samarkand region on the environment were identified [16].

№	Harmful substances	The amount of untreated wastewater	The amount of waste released into the atmosphere
1	Solids and gaseous substances	36,9	36,9
2.	Carbon monoxide	31.6	31.5
3.	Nitric acid	5.2	5.2

## RESULTS AND DISCUSSIONS

In the practical control work of the state "On the results of the implementation of the plan for environmental protection in 1979 and the results of work in the field of nature protection" as of 1979, only 60% of environmental measures at Parkent-1 And at the Samarkand Serp i Molot cannery, 40% of the demand was found [17].

During the inspection of the areas, it was reported that the technical equipment for environmental protection at the plant did not meet the requirements, as well as the wastewater from the plant was discharged into nearby ditches without proper treatment. It was clear that the effluents of the enterprises and the toxic dust emitted into the atmosphere had been polluting the environment by passing through the facilities that did not meet the demand.

In the 1980s, 26.7% of the population in Aqdarya district, 34.8% in Ishtikhon district and 37.1% in Kattakurgan district of Samarkand region were provided with tap water [18]. The rest of the population has been consuming drinking water from open water reservoirs. The protection measures of the reservoirs were not monitored. In Samarkand, the work on protection of the environment and water resources was not carried out at the required level. The Samarkand winery named after Khovrenko dumped untreated wastewater into open ditches [19].

Supervisors noted that the directors of industrial enterprises were negligent in protecting the environment, and imposed fines on them by the heads of industrial enterprises in Samarkand, Bukhara and Kokand for their damage to the environment. Although these fines were collected, the material and technical base for the company's facilities was not updated. The techniques that have been damaging the environment have not been updated over the years, and the damage to nature has only been solved by changing leaders and paying them fines.

Unfortunately, the situation was similar at the chemical plants in Samarkand. Looking more directly at the issue of water, why it is so important today, its vital role in the sustainability of human life, human society and the natural environment is the focus of not only experts and scientists, but also the leaders of countries it can be felt that the level has become a rising problem [20].

In 1983, due to the technical failure of the Samarkand SFZ (Super Phosphate Plant), Kattakurgan Oil and Gas Combine Wastewater Treatment Plant, 10,000 tons of cubic meters of wastewater were dumped into nearby ditches. Due to the fact that the fluorine in the wastewater of superphosphate production plants was discharged into the water basins of the population, the water became unsuitable even for irrigation of agricultural crops. The discharge of industrial wastewater into canals has led to an increase in the amount of fluoride in drinking water and a deterioration in water quality. An increase in fluoride in water has led to an increase in fluorosis diseases among children [21]. The Samarkand Super Phosphate Plant has been dumping its wastewater into the Dargam Canal for years.

In the 1970s, 300 m<sup>3</sup> of wastewater was chlorinated for one day at the Samarkand Silk Factory, and then discharged into the Obirahmat Reservoir. Such water contained microbes such as cocoon worms, seripin, streptococcus-bombicus. There was a layer of curtain on the surface of such dirty water, which made it very difficult to clean the water. At the same time, water is the lifeblood of nature, and this factor, which has changed the ecological situation in the watershed, has also begun to cause disease in living things in the watershed. The internal affairs of the enterprise are also poorly organized in terms of life safety. The human life factor is not taken into account at all. Workers and employees of the Samarkand Chemical Plant do not pay any attention to safety in the preparation of various chemical fertilizers used in agriculture. However, the workers have been working in the open with various chemicals. Atmospheric air pollution is also the most painful point in ecological change. Because all living things and plants in nature, especially fresh air in human life, are important. One of the enterprises that has caused damage to the environment of Samarkand region is the Samarkand foundry, which emits 7 times more wastewater and 948 tons of metal dust into the atmosphere. Such harmful emissions and dusts that have been discarded over the years have, of course, led to drastic changes in the environment and the spread of disease among humans. If we look at the comparison of Samarkand region with other regions, it has the following indicator.

Amount of harmful emissions into the atmosphere in Uzbekistan [22].

№	Regions	1980	1985	1986	1987
1.	Tashkent	61.3	47.6	51.7	68.3
2.	Samarkand	65.3	71.2	72	72.8
3.	Angren	51.9	75.5	74.9	68.0
4.	Chirchiq	31.9	83.0	84.5	84.1

These statistics show that these cities also have chemical plants, such as Samarkand region. However, the deplorable situation in Samarkand region indicates that the enterprises in the region are concentrated. If the toxic dust emitted into the atmosphere at the enterprises of Samarkand region were caught by technical equipment, the ecology of its atmosphere would not have changed and would be clean. During the study of the operation of filters and cleaning equipment installed at the enterprises during these years, it was reported that they did not meet the technical requirements. The indicator showed that over the years, emissions of harmful dust into the atmosphere have increased. The amount of dust released into the atmosphere in Samarkand region can be seen.

Use of equipment to trap harmful wastes, gases, dust [23].

Years	Amount of hazardous waste (thousand tons)	Amount of recycled hazardous waste (thousand tons)
1980 й	2037.0	76.4
1985 й	1824.3	63.6
1986 й	1952.4	64.4
1987 й	2495.7	68.7

Sources of soil contamination with heavy metals consist mainly of wastes from the metallurgical industry. Therefore, any waste dumped in the environment has a negative impact on the soil. This is because in the biological system, water, atmospheric air and soil move in the same system. The fact that industrial wastes damage such environmental factors has led to qualitative and biological changes in them.

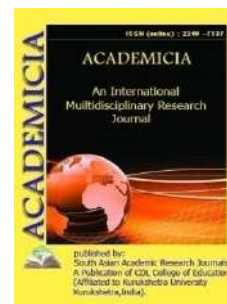
## CONCLUSION

In short, industrial enterprises set up during the former Soviet era produced only agricultural-oriented cotton-growing and development-oriented products. It was not the interests of the Uzbek people, but the interests of the former Soviet Union. In addition to the country's natural resources, its biodiversity, environmental degradation, and environmental degradation have shown that the interests of the union take precedence over the lives of the people. The consequences of this have led to the emergence of various diseases in the health of the population, the pollution of water in the environment, the increase in soil quality.

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DOI: **10.5958/2249-7137.2020.00655.2**

## THE USE OF PHRASEOLOGICAL METAPHORS IN T.MURAD'S STORY "STARS BURN FOREVER" (YULDUZLAR MANGU YONADI)

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### ABSTRACT

*This article discusses the role of phraseological metaphors in the Uzbek language and views on its enrichment. Derivative meanings of metaphor. Based on examples from T. Murad's story "Stars Burn Forever" (Yulduzlar mangu yonadi), it is analyzed from a linguocultural point of view.*

**KEYWORDS:** *Metaphor, Language Of Fiction, Linguocultural Units, Phraseological Metaphor, Symbol, Lexeme, Phrase And Precedent Units, Speech Phraseological Metaphor*

### INTRODUCTION

The language of a work of art is diverse in terms of its lexical structure, which shows that the ability of a word to perform various stylistic functions in works of art is as wide as the use of lexical means. The talent of each writer as a word artist, the ways of using words, as well as the writer's worldview are reflected in the language of the work of art in the process of effective use of linguocultural units, including metaphors. A well-known representative of cognitive linguistics, J. Lakoff and the famous philosopher M. Johnson explains metaphors as follows: "Metaphors penetrate not only our daily lives, not only language, but also our thinking and activities. Our everyday conceptual system is also metaphorical in nature" [1,387-416].

T. Murad is one of the masterful creators who used the colorful layers of language, in particular, phraseological metaphors in his works. Here are our observations on the author's story "Stars burn forever".

### THE MAIN FINDINGS AND RESULTS

Commenting on the writing of this story, the writer said, "I grew up fighting in circles since I was a child. Wrestling is in my ancestor, wrestling is in my blood. I was moved by that wrestling



blood (*qonim qo'zg'alldi*) . I was prepared to suffer from my enemies. I hit a big piece (*qo'l urdim*) to show who I am. Finally ... in a very few days I created the first story, "Stars Burn Forever"(Yulduzlar mangu yonadi) [2, 265]. In this passage, which is related to the work, my blood is stirred (*qonim qo'zg'alldi*) (blood boils - to become bitter, hot) [3,290], I clap my hands (*qo'l urdim*) (1. Touch; 2. to start a work) [3,304] are phraseological metaphors.

It is no coincidence that T.Murad called his first great work "Stars Burn Forever"(Yulduzlar mangu yonadi). Candidate of Philological Sciences Umida Rasulova writes about the title of the work: "Through the title, the writer conveys to the reader the subject, the thoughts, the views expressed in the play, thus creating a closeness between the reader and the reader. If we pay attention to the title of the work, "The stars will burn forever." At first glance, the beauty of the sky, though tiny, seems to be described as a celestial body that is striking with its brilliance. However, if we pay attention to the understanding of the essence in the title, mainly through the symbol, a special interpretation emerges"[4,11].

Metaphor is an active participant in the interpretation of the worldview. If we consider the metaphor as a translator of the inner world of man (N.Aryutunova) and a conceptual phenomenon that carries information to the cognitive apparatus, the symbol is one of the organizers of the metaphor. [5,165] From this point of view, we have reason to say that the writer also used a metaphorical method in naming the work. The protagonist of the story is a wolf wrestler. The author also explained the title of the work in his language: "Every slave has his own star (*ko'kda o'z yulduzi*) in the sky, my friend. The burning of this star (*yulduzning yongani*) is the burning of this slave. The extinction of this star (*yulduzning so'ngani*) is the extinction of this slave"[6,64]. It is obvious that in the passage from the work itself, "the burning of the star" (*yulduzning yongani*) and "the extinction of the star"(*yulduzning so'ngani*) are expressed in a peculiar way.

The story of "Stars burn forever" begins with a picture of a wedding at the wrestler Zulfiqor: "Lying on the roof, the elder Nabi watched (*ko'z- quloq bo'ldi*) the events of the wedding (watching, hearing; lurking [8,412]) and gave appropriate instructions (*yo'l- yo'riqlar berdi*) (advice, guidance [8,353]). In particular, it did not ignore future guests (*e'tibordan chetda qoldirmadi*)(look, pay attention [3,366]). As soon as guests turn black at the beginning of the street (*qora berishi bilanoq*)(as soon as they appear - U.X.), Nabi elder (*ovoz berdi*) (to vote - to call out aloud or to respond to a call [8,518]): — Come on, guests, come on!..."[6,6] .In this passage, fixed metaphors such as ignoring, blacking out, voting, (*e'tibordan chetda qoldirmoq, qora bermoq, ovoz bermoq*) give the work a special charm.

Here is an excerpt from a play on children's play: "The children chased around ... Five or six children gathered. Inside a house, he drew a circle around the ground. He called the circle gir... Whoever squints into his eyes (*ko'zini shamg'alat qilib*)(without noticing, left [8,396]) and deftly enters the ring is the winner .. the boy ran towards the entrance and was caught (*qo'lga tushmoq*) "(arrest - to be found guilty [8,635]). The above text from the story "Stars Burn Forever" uses phraseological metaphors such as blinking and catching (*ko'zini shamg'alat qilmoq, qo'lga tushmoq*).

Phraseologisms and metaphors that exist in language, and the cultural connotations attached to them constitute knowledge, i.e., cognitive assimilation, so phraseologies and figuratively motivated words, i.e. metaphors, are indicators of cultural characteristics [9]. In the story "Stars

burn forever", T. Murad used linguocultural units to depict the struggle of the Uzbek people as a national symbol. We observe this by analyzing the events of the work: ... "What do you think if we entrust this person to lead the circle". — Well, the wrestler's grandfather's bones were frozen in a circle! (*Suyaklari davrada qotgan*) (hardening of the bones - hard work [10,602]) ... don't hurry, a cut of seven scales (*etti o'lchab, bir kes*) (Proverbs. See carefully [3,86]). Notice the right and left of the shurchiliks. Again, just look at the shurchiliks (stare - watch; don't overlook [3,133]) .. — Save our Tilovberdini to the end of the round with a couple of braves. It is useful for our day when the thick is stretched and cut thin (*Yo'g'on cho'zilib, ingichka uzilganda*) (Proverb. In a difficult, difficult situation - U.X.) (it is useful when necessary, it hardens - U.X.). Who else is there? - This is Bakirboy's son Janibek, who is studying in Samarkand. Although there is a good take. When he came last year, he made Sariosia a *mom* (the winner of the round) [6,12]. The lexemes, phrases, and precedent units whose meanings are explained above emerged as a product of popular thinking and imagination. The explanation of some of the phrases is given again in our sources. An example of this is the expression "staring" in the form of "to review". This indicates the richness of our language, the role of phraseological metaphors in the expression of units in the language.

In T. Murad's story "Stars burn forever", the metaphorical twisted product effectively used sememas in accordance with its aesthetic purpose. In the words of Professor B. Mengliev, who makes a worthy contribution to the development of Uzbek linguistics, "Metaphor is one of the most important means of artistic style, speech, as a common way of creating sememas" [7,156]. In general, figuratively motivated words, phrases and metaphors play an important role in ensuring the beauty and attractiveness of the language of the work. We will continue our analysis with examples:

"At that moment, the Shurchi elder stood up and said in a thick voice (*so'zni qalin-qalin qilib*): Brethren, we are not jealous of the main dish ... Khojasoat residents brought our rain to the ground (*yag'rinimizni yerga tekkizib*) last week in Shurchi! .. So we tied our waists in five places (*belimizni besh joyidan boylab*) [6,53].

"Abay wrestler Tilovberdi did not take his eyes off the wrestler (*ko'zlaridan ko'z olmadi. Ko'z ayirmadi*). He did not take his eyes off. Tilovberdi kicked the wrestler until his foot hit the ground. Xap-a-a-a! He shouted. Before the end of the shout, Tilovberdi fell on his shoulders! (*ikki yag'rini bilan gupillab tushdi!*)" [6,58]

In the above two passages from the story "Stars Burn Forever." The phraseological metaphor of "speaking the word in bold" (*so'zni qalin-qalin qilib aytmoq*) is given, as well as metaphorical phrases: *qoqib yubormoq*, *ikki yag'rini bilan gupillab tushmoq* units such as verbally defined dynamic semantics (action), *yag'rinini yerga tekkizmoq*, *belini besh joyidan boylamoq*, *ko'zlaridan ko'z olmoq*, *ko'z ayirmoq* such phrases serve to express the dynamics of the nonverbal character.

Our observations show that the similarity of action and state in the metaphor used in "The Stars Burn Forever" (Yulduzlar mangu yonadi) is the basis for the formation of many expressions in language. In linguistics, there are attempts to distinguish a phrase from a metaphor, [11] which is a scientific error, in our opinion, to ignore the phenomenon of metaphor, the primary factor that creates a phraseological fund of language, which is a valuable source of information of folk culture and mentality. Because phraseological units as a whole are built on the basis of the

portable meaning of one of its components. This suggests that phraseological units in language occur mainly on the basis of metaphor. We explain our opinion through the following piece analysis:

"Come on, buddy, I'm leaving. When the light came out of the girls (*yorug'lik chiqib*) (the light came out - to benefit someone [12,48]), now it comes out. I call them human and carry rocks ... Don't tell anyone, beast, there's a girl over there, and she was my heart. My dear friend dusted my heart (*ko'nglinga chang soldi*) (dusting - grabbing with a fork; aggression [13,454])! Uh, let's see! I trusted my friend, beast. He trampled on my trust (*ishonchimni oyoqosti qildi*) (to trample, to crush [10,89]) ... Think for yourself, beast, Nasim was looking at Momoqiz knowingly (*ko'z olaytirdi*) (to look (at) is a bad intention, to look at it with a bad eye [10,105]) - yes! .., that's it, I'm not going to see Nasim anymore (*yuz ko'rishmayman*) (face to face - to see each other, to be face to face [12,468])".

The protagonist of the author's story "Stars Burn Forever" describes the experiences of the wolf wrestler in the above passage *yorug'lik chiqmoq, ko'ngliga chang solmoq, ishonchini oyoqosti qilmoq, ko'z olaytirmoq, yuz ko'rishmoq*. He used appropriate phraseological metaphors to describe the mood of the protagonist, the anguish of the heart. It is known in the literature that when mutual trust between man and man is lost, man sometimes expects encouragement from other creatures, animals in nature. We can observe the same situation in this play. After the betrayal of his true friend, the wolf wrestler tells his words about the pains of the heart to the animal, i.e. the bull. This reception further enhanced the impact of the context.

In "Stars Burn Forever", the creative and heroic thoughts and psyches are harmoniously depicted under the torture of mental torture. The author's individual methodological skills and the extent to which he was able to use the capabilities of the language system in writing a work of art are reflected in the vivid depiction of the spiritual world of images. According to the Russian literary critic and folklorist AA Potebnya, "the environment is regulated by the human mind, artistic creation is a product of the creative state of mind, while the creative process enriches and deepens the human spiritual world" [15,262]. We base our opinion on the text analysis of the story:

"... Karim's heart is black (*ko'ngli kir*) (annoying, malicious [3,159]). The wolf wrestler did not have a quarrel with the chairman (*osh-qatiq bo'lmadi*) (to have a quarrel - to come and go with someone, to have a close relationship [10,175]). The wolf wrestler picked up the Otan wrestler and knocked him down. He raised the glory of Surkhandarya (*surhandaryoning shon sharafigi ko'tardi*) (defended the honor - U. X.)! The adults' mouths touched their ears (*og'zi qulog'iga yeti*) (to put one's mouth to one's ears - to rejoice, to be glad [3,203]). Bakovul touched the hearts of the wrestlers (*ko'ngliga qo'l soldi*) (to touch the heart - to try to know the most secret thought [3,159]), made an emergency error... The wolf scratched the inside of the wrestler (*ichini it tirnamoq*) (scratching the inside of a dog - secretly annoying, anxious [3,116])" [6,22].

## CONCLUSION

For many phrases (expressions) in language, expressive-emotional coloring is an integral feature, however, the main part of the expressions is methodologically neutral. Because the expression expresses not only the name of this or that object, event, but also the expressive attitude of the speaker to that object or event, person [14,7]. In the same passage above, such phrases as filth, filthiness, glorification, touching the mouth, touching the heart, scratching the inside of the dog, (

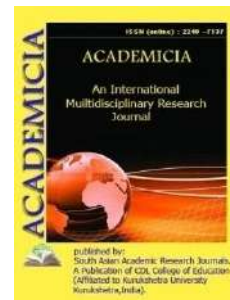
*ko'ngli kir, osh-qatiq bo'lmoq, shon-sharafini ko'tarmoq, og'zi qulog'iga yetmoq, ko'ngliga qo'l solmoq, ichini it tirnamoq*) a total of six metaphorical phrases were used. These are the character's characters (*ko'ngli kir*), relationship with people (*osh-qatiq bo'lmoq, ko'ngliga qo'l solmoq*), situation (*og'zi qulog'iga yetmoq, ichini it tirnamoq*), purpose (*shon-sharafini ko'tarmoq*) expressed and reflected as memorable details that shape the national, linguistic landscape.

In short, In "Stars Burn Forever", T.Murod effectively used figuratively motivated words, metaphorical phrases, which have a verbal and nonverbal character, and thus contributed to the enrichment of the Uzbek lexicon and the discovery of new aspects of metaphors.

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DOI: **10.5958/2249-7137.2020.00706.5**

## METHOD OF APPLICATION OF GAME RECEPTIONS IN THE FORMATION OF ELEMENTARY MATHEMATICAL REPRESENTATIONS IN PRESCHOOLERS

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### ABSTRACT

*The article considers the development of mathematical representations of preschoolers. A special place is given to the use of didactic games for the development of perception, mental operations (comparison, abstraction, symbolization), attention, memory, and contributes to the development of logical thinking and cognitive abilities of preschool children. Mathematics provides ample opportunities for the development of perception, mental operations (comparison, abstraction, symbolization), attention, memory, contributes to the development of logical thinking and cognitive abilities of preschoolers. The educational process for preschoolers should be entertaining, because only in this case children do not lose interest in educational activities and are actively involved in it, as well as in the formation of elementary mathematical representations, the use of game methods and techniques makes the learning process more effective.*

**KEYWORDS:** *Preschool, Education, Mathematical Representations, Multitude, Relation, Number, Magnitude, Feeling, Pupils, Integration Of Subjects, Relevance, Modern Pedagogy*

### INTRODUCTION

In his resolution approving the concept of development of the preschool education system of the Republic of Uzbekistan until 2030, President of the Republic of Uzbekistan Sh. Mirziyayev said: "Over the past period, the country has brought up a healthy and comprehensively mature generation. Extensive work has been done to establish an effective system of preschool education, aimed at the introduction of effective forms and methods of education and upbringing



in the educational process. The favorable conditions created for the development of public-private partnership in the field of preschool education have laid a solid foundation for further increasing the number of non-governmental preschool institutions and expanding the range of services they provide. At the same time, the analysis shows the need to address the issues of estimating the coverage of children with preschool education, filling preschool education institutions with modern teaching materials and literature, attracting qualified teachers and management staff to the field. "It's showing." (Tashkent, May 8, 2019, No. PQ-4312). In this regard, it is planned to retrain preschool teachers and educators on the basis of modern technologies and methods and to create "appropriate conditions for the upbringing of children." [1]

Preschool age is short in duration in a person's life, however, it is extremely important and eventful, including from the point of view of cognition and acquisition of knowledge about the world. The source of knowledge for a preschooler is sensual and intellectual experience. The issues of familiarization and training of preschool children in mathematics are the subject of the discipline "the formation of elementary mathematical representations in preschoolers." Full-fledged mathematical development is ensured by an organized, purposeful activity, during which the teacher consistently poses cognitive tasks for children, helps to find adequate ways and solutions. Mathematical representations in children are formed gradually, in the process of cognition of the surrounding world. One of the most important and urgent tasks of preparing children for school is the development of logical thinking and cognitive abilities of preschoolers, the formation of elementary mathematical representations, abilities and skills in them.

Several classes are devoted to the solution of each problem, and then, in order to consolidate it, they are repeatedly returned throughout the year. Among the main tasks of mathematical preparation of children in kindergarten, according to the program of upbringing and education, the following are distinguished:

1. Formation of a system of elementary mathematical representations in preschoolers. The assimilation of the concepts of "multitude", "attitude", "number", "magnitude".
2. Formation of mathematical ideas and abilities (teaching children to count, developing ideas about the number and number within the first ten, dividing objects into equal parts).
3. The formation of the prerequisites for mathematical thinking and individual logical structures (classification, generalization, ordering).
4. To form the ability to make simple generalizations, comparisons, conclusions, to prove the correctness of certain judgments,
5. To form the ability to use grammatically correct turns of speech. Expanding children's vocabulary and improving coherent speech. [2]

The tasks are not solved separately, but comprehensively, in close connection with each other. Despite the fact that they are mainly aimed at the mathematical development of children, they are combined with the fulfillment of the tasks of moral, labor, physical and aesthetic education, develop organization, discipline, that is, contribute to the comprehensive development of the personality of preschool children. In addition, the child mastering mathematical representations in the classroom, is in a peer team, this expands the scope and experience of collective relationships between children.

The most effective mastery of knowledge in mathematics is facilitated by the following conditions:

1. accounting for individual, age-related psychological characteristics of children;
2. creating a favorable psychological and emotional atmosphere;
3. The developing nature of the tasks.
4. change and alternation of activities in connection with the rapid fatigability and distraction of children;
5. integration of mathematical activity into other types: game, musical, motor, visual.

When explaining the new material, it is necessary to rely on the knowledge and ideas available to preschoolers, to support the interest of children throughout the lesson.

### **Main part.**

When solving any mathematical problems, in order to keep the educational process entertaining, it is necessary to apply game methods, game elements and a variety of didactic material, to increase attention in the classroom, bring them to independent conclusions, learn to argue their reasoning, and encourage various answers to children.

Achieving the goals and objectives in mathematics helps the implementation of the following principles:

1. The principle of consciousness and activity;
2. The principle of accessibility and individualization;
3. The principle of science;
4. The principle of systematicity and consistency;
5. The principle of developmental learning;
6. The principle of visibility.

The gradual complication of the material allows children to feel the successes in their work, their growth, which in turn contributes to the development of their growing interest in mathematics.

The role and importance of game techniques in the formation of elementary mathematical representations in preschoolers.

With the help of the game you can develop attention, memory, thinking, imagination of the baby. Playing, the child acquires new knowledge, skills.

The most important properties of the game include the fact that in the game children achieve a very high level of activity, and always voluntarily, even unconsciously for the child.[5]

The following features of the game for preschoolers are distinguished:

1. The game is the main and most accessible type of activity of preschool children.
2. The game is an effective means of forming the personality of a preschooler, his moral-volitional qualities.

3. The game is an important means of mental education of the child, where mental activity is associated with the work of all mental processes. The game contributes to the formation of all aspects of the personality of the child. In the process of teaching mathematics to preschool children, the use of didactic games is necessary, as they contribute to the participation of the child in the cognitive process, help the perception of the material.

The following types of classes are distinguished:

1. classes in the form of didactic games;
2. classes in the form of didactic exercises;
3. classes in the form of didactic exercises and games.[4]

Their selection is conditional and depends on what is leading in the lesson: didactic game, didactic material and activities with it, or a combination of both. With any type of activity, the teacher actively leads the process of learning children knowledge and skills.

The didactic game, depending on the age of the children, the purpose and content of the lesson, can be used as a training task, an exercise aimed at performing a specific task of forming ideas.[4]

Classes in the form of didactic games are widely used in younger groups. In this case, the training is playful. Classes in the form of didactic exercises are used in all age groups. Training on them becomes practical. Performing exercises with demonstrational and distributing didactic material leads to the assimilation by children of certain methods of action and the corresponding mathematical representations.

Classes in the formation of elementary mathematical representations in the form of didactic games and exercises are most common in kindergarten.

This option combines the previous ones. Didactic game and various exercises form independent parts of the lesson, combining with each other in all possible combinations, the sequence is determined by the program content

Didactic games are divided into games with objects, desktop-printed games and word games.

However, the main goal of all types of games is to develop the ability to establish the simplest patterns: the order of alternating figures in color, shape, size.

Also, when using math games, you must vary game actions and questions, individualize the requirements for children, repeat games, complicate with time.

The widespread use of special educational games is important for awakening interest in mathematical knowledge among preschoolers, improving cognitive activity, and general mental development.

So, there are various methods and techniques that help to formulate elementary mathematical representations in children. The leading role among them is given to classes in the form of didactic games and exercises.

Didactic games that contribute to the formation of elementary mathematical representations.

The main purpose of didactic games is to provide children with knowledge in distinguishing, highlighting, naming many objects, numbers, geometric shapes, directions.

## RESULTS AND DISCUSSIONS

The following tasks are solved in the article:

1. Analyzed the psychological and pedagogical literature on this issue.
2. A general description of the content of the concept of “the formation of elementary mathematical representations is given
3. The effectiveness of the use of gaming techniques in the formation of elementary mathematical representations in preschoolers was investigated

Didactic games for the formation of mathematical representations are conditionally divided into the following groups:

1. Games with numbers and numbers.
2. Games - time travel.
3. Orienteering games in space.
4. Games with geometric shapes.
5. Games for logical thinking.

Tricky tasks vary in degree of difficulty, the nature of the transformation. They always require vigorous mental activity, the creation of a new method of solution, they cannot be solved simply in a previously learned way.

Conventionally, for children 5-7 years old, the tasks of ingenuity can be combined into 3 groups:

1. Tasks for drawing a given figure from a certain number of sticks: make 2 equal squares of 7 sticks, 2 equal triangles of 5 sticks.
2. Tasks for changing figures, for the solution of which it is necessary to remove the specified number of sticks.
3. Tricky tasks, the solution of which is to shift the sticks to transform the given figure.

In the course of training, methods for solving the problem of ingenuity are given in the indicated sequence, starting with simpler ones in which children apply skills acquired by children and gradually complicating actions.

<b>Games with numbers and numbers.</b>	<b>Games - Time Travel</b>	<b>Space Orienteering Games</b>	<b>Games with geometric shapes</b>	<b>Logical thinking games</b>
Teaching children to count in the direct and reverse order.	Introducing children to the days of the week.	To develop the ability to determine in word the position of an object in relation to another.	Develop knowledge about the shape of geometric shapes. To teach children to recognize in the surrounding objects the shape of a circle, triangle, square.	Formation of elements of logical thinking.
The formation of numbers within 10 (20) by comparing equal and unequal groups of objects.		Teach children to use words to indicate the position of objects.		The formation of the ability to reason, to make their own conclusions.
he composition of the number.			Acquaintance with the ways of joining, building one form from another. Familiarization of children with the method of constructing figures by dividing a geometric figure into several (a quadrangle or square into two triangles, into two squares).	

## CONCLUSION

Currently, the problem of the formation of elementary mathematical representations is one of the most important and urgent tasks in the framework of preparing children for school. Mathematics provides ample opportunities for the development of perception, mental operations (comparison, abstraction, symbolization), attention, memory, contributes to the development of logical thinking and cognitive abilities of preschoolers.

Preschool age plays an important role in the formation of a person's personality, and one of the tasks of a preschool institution during this period of life is to interest a child, arouse his interest

in new things, knowledge, arouse a desire to learn, and help a child believe in himself and his abilities.

The educational process for preschoolers should be entertaining, because only in this case children do not lose interest in educational activities and are actively involved in it, as well as in the formation of elementary mathematical representations, the use of game methods and techniques makes the learning process more effective.

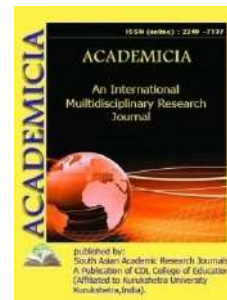
The study of theoretical premises, justifications, usefulness and practical examples of the use of gaming techniques in the formation of elementary mathematical representations in preschoolers in order to increase their own level of knowledge and application in further practical work.

In their work, educators strengthen and develop the cognitive interests of preschoolers. The regular use of game tasks and exercises, didactic games in math classes allows educators to make the learning process more diverse, exciting and productive, and contributes to the development of cognitive opportunities for children and their mathematical development.

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DOI: **10.5958/2249-7137.2020.00713.2**

## **CHILDREN'S BEHAVIOR OVER TELEVISION ADVERTISEMENTS: A STUDY OF PARENTS' EXPERIENCE IN THE POST-WAR PERIOD IN SRI LANKA.**

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### **ABSTRACT**

*This paper examines how television advertisement is linked with children's behavior in Jaffna district in the post-war market situation. Researchers examine whether these children paying attention on television advertisements are influenced by the characteristics of the child's early home environment and parental behaviors. In Sri Lanka, Parent – Children conflict is one of the most vital issues. Especially, in the post-war Jaffna market situation, the Parent-Children conflict' created by television advertisement is most considerable problems for Jaffna district parents and marketers. Therefore, there is a need for accomplish various researches concerning the outcomes of parent-children conflict derived by television advertisement. This research explored methodological implications by using qualitative approach; data were collected via purposive sampling method as of 10 parents from Jaffna district by using preset questions based on a primary interview questions as open-ended question format. Researchers found that the children's behaviors of purchasing request to buy particular advertised product from their parents. Until the end of time, emotions in the television advertisements attract the children very much. This paper is a key resource for marketing practitioners wanting to focus on future quandary regarding unconstructive children's behaviors shaped by television advertisement and*

*outcomes of parent-children conflicts created by television advertisement. The researchers have found that numerous negative outcomes are there in Jaffna district regarding parent-children conflicts derived by television advertisements. Especially there are negative outcomes of conflict over a request to buy particular advertised product among Jaffna children.*

**KEYWORDS:** *Television Advertisement, Children, Behaviors, Attention & Colorfulness & Outcomes.*

## INTRODUCTION

Children behavior is an important measurement of children's mental health and has consequences for outcomes in later life (Carol Propper, 2007). In the war situation Jaffna people didn't consider about anything other than their needs. Whatever there was availed for their living purpose, they purchased. There was no any consideration about commercials. But, now it has been changed. In this situation, we need to find out the actual impact of television advertisement on parent-children conflict in Jaffna peninsula which means in post-war Jaffna market situation how extend television advertisement influences on parent-children conflict. This study is to explore how parents can solve problems and resolve conflicts caused by television advertisements.

Now-a-days marketing strategies that involve mass production, mass targeting, mass media and mass developments in the market place-specially by changing consumer needs and wants through variety of promotional mix tools like advertising, sales promotion, personal selling, direct selling, public relation & so on (Garland Wood, 1958).

Strengths of television advertisement are high reach, ability to demonstrate, high-impact medium & prestigious. Therefore, television advertisement attracts its viewers with images, graphics, accounts & stories of live. If we take in to the consideration the children, they are more interested in advertisements & their music and they identify the advertising when the music starts to play. Television advertisement is the most influential media even there is no acting of purchase the product still remains in our consciousness (CheeHuat, 2008).

Television advertisement impacts on attitude, values, customs, norms, ethnicity, culture, religion and some other behaviors. Sometimes advertisement may change our life style; especially child's attitude. It can shape our way of life also (Belk and Pollay, 1985; Kumaran, 1987). Television advertising exposure is positively related to children's purchase requests which leads to increased number of product denials from parents, then causes conflict between parents and child (MoniekBuijzen and Patti Valkenburg, 2003).

In the advertising promotional mix tool, there are lot of different mediums. Such as; television, radio, newspapers, magazines, direct mail, bill boards etc. Even though, appealing of television advertisement to reach the greatest number of targeting consumers, because there are no homes without television. It plays major role everywhere in the homes and act as an agent of consumer socialization competing with some traditional agents such as school, working place & even parents (Guinn and Shrum, 1997). The characteristics of the specialized media and their audiences are essential for the advertiser who makes them a part of the media mix (Anderson, Simon and Gabszewicz, Jean, 2005).

Some consumer commodities are popular among people not only because of the special quality of the product, but also the creativity of the advertisement. Therefore, advertising has become key factor for both consumers and producers in the market economy (Samaraweera and Samanthi, 2012). Because, television advertising act as a source of new product information, providing children with some knowledge of the range of goods & services available and the attributes & criteria that they can employ in evaluating various purchase alternatives (Rhonda Jolly, 2011).

Commonly children do not like traditional concepts & life styles. Children like fun & happiness information rather than to provide any factual product related information. Advertising by using television considers this strategy to attract child consumers (Barcus, 1980; Doolittle & Pepper, 1975; Kunkle & Gantz, 1992).

### **RESEARCH GAP**

A variety of researches related to children & advertising and children & television have been done by academic researchers and they focused on following topics; Children's television advertising viewing behaviors (Ward Levinson & Wackman, 1972), Children's exposure to TV advertisement & social development (Atkin, 1975), Children's responses to commercials (Breen & Powell, 1973), Children's awareness, interest, desire & product preferences (Frideres, 1973) and How children learn through TV commercials (Siegel, 1974), The effects of television food advertisement on children's food purchasing (YasareAktasArnas, 2005), How children learn through TV commercials (Siegel, 1974) and Some past researches investigated the effect of television advertising on parent – child conflict (Goldberg & Gorn, 1978). Even though, in a deep manner researchers have neglected some topics like; the specific ways in which kind advertising can often lead to children's product request, children force parents to buy unnecessary items after seeing advertisements, Children's attention level on viewing television advertisements, the level of parent – children conflict & its consequences or outcomes & etc.

There is wider range of markets & choices of products in the Jaffna post-war marketing situation. There are no barriers for marketers & customers. Television advertisements also make longer impacts on marketing activities as well. In this particular situation there is a gap for researchers to find out the children's behaviors regarding television ads & its consequences.

### **RESEARCH PROBLEM**

One of the main promotional tools is advertising. Especially television advertising effects, such as; advertised product desires are not only deer mind by cognitive responses to a message, but also by effective responses (Brown & Stayman, 1992; Narin & Fine, 2008). Through the children's emotions like; fantasy fun & peer popularity that commercials aimed at young children & influencing their strategy for taking product purchasing decisions (Roberts & Pettigrew, 2007). According to the present business environment of post – war Jaffna market it is a need to explore the influences of television advertisement on children's behaviors. Hence, this study is most important to advertising policies makers & publics in the post-war marketing context, for the reason that parent-children conflict is one of the off-putting issues of television advertisements. Number of Television channels and Television advertisements are proliferated in the Jaffna market, and it is a need to design an appropriate strategy for this special context.

## LITERATURE REVIEW

Considerable research has examined advertising's cumulative effect on children's eating habits. Several studies have found strong associations between increases in advertising for innutritious food and rates of childhood obesity and also, exposure to television food advertising is parent-child conflicts that may arise regarding food choices. These conflicts can have a negative impact not only on children but also on relationships within the family (Buijzen and Valkenburg, 2003).

In Sri Lanka there are nine television channels fighting for airwaves, the competition is tough. The list of Sri Lanka TV channels are; VasanthamTV, NethraTV /Channel eye, Dan Tamil Oli, ShakthiTV, SirasaTV, National television, ITN &Swarnawahini and the India TV channels are; Sun TV, KalaingarTV, Zee tamil, Jeya TV, Raj TV, Polimer, Vijay TV, Comedy channels like; Adithiya TV, Kids channels like; ChuttiTV, ChithiramTV, Cartoon network & Pogo TV. Major channels like; Rupavahini, Sirasa, ITN &Swarnawahini compete with each other from about 7.30 pm in the evening (Samaraweera & Samanthi, 2012).

People in the Jaffna district are more aware of Indian television advertisements, because they always watch drama serials, which are telecasted by the Indian channels. The Indian advertisements which are telecasted in between the breaks are likable, match with consumer culture & perfectly designed (Shivany, 2013)

If we take in to the consideration of Jaffna children's favorite channels and programs, we can observe children's Chutti TV Channel viewing amount and Sun TV channel's KuttiChutties program viewing interest levels. Because, ChuttiTV is a 24hrs Tamil language television channel owned by sun network. This channel is dedicated to children aged between 3 & 12. It was launched in 2007, marketing it sun network's first ever television channel dedicated to kids (Pilot study).

Advertisement creators are using child actors in their advertising strategy. Therefore, children reacted very positively. Child can easily identify the advertising character that appeared to be the similar in age & life style (Kinsey, 1987).

The advertising market has been rapidly promoting in Jaffna for recent years. Fast foods are highly focused in advertisements (Sumaraweera & Samanthi, 2012). Consumers who are returned to the normal life prefer enjoyable, cultural match & fun associated advertisement rather than the long message content advertisements & also they like the celebrities who match their social patterns & ethnicity. Therefore, the celebrities used to promote the advertisements in TV commercials are very friendlier to the audience in the past conflict environment. Celebrities in the local TV commercials & their dress code also match with the people.

Marketers who try to penetrate the Past - conflict market might need to develop TV commercials in an enjoyable manner, background music should be enjoyable. The experienced gained in the conflict environment, consumers have become more knowledgeable, less naïve & less easily influenced, at the time of war consumers were more conscious on the product accessibility & didn't consider the other promotional aspects in the purchase, but in the post- conflict marketing environment they search for information & compare quality aspects in each marketing activities (Shivany, 2011).

Several authors argue that advertising may cause unhappiness in children. Most of these authors have investigated a direct relation between exposure to commercials & unhappiness (Richins,

1991). Even though, several others hold a contrary view, they maintain that children are generally unable to understand an advertisement's persuasive agenda and thus tend to become easy targets for commercial persuasion (Wilcox, 2004). Past reviews have clearly shown that advertising aimed at children can have certain undesirable consequences for the family, such as; increased parent – child conflict & materialistic & disappointed children (Buijzen&Valkenburg, 2003). Growing up in a world of advertising with the emergence of a new media landscape implies consumer socialization with the various ways and different agencies that operate to instill consumer learning in children. As children have limited disposable personal income they have to negotiate within the family for goods & services. This can have negative consequences often called “Pester Power” or the “Nag Factor”. By definition, the “nag factor” is the tendency of children, in response to marketing, to never stopping request advertised items. Packaging, characters and commercials were the three main factors that motivated children to nag. Parents deal with the nagging through some strategies, such as; ignoring, distracting, staying calm & so on, because successful nagging of children will lead to more nagging (Brian Young, 2003).

Approximately 80% of all advertising targeted to children falls within four product categories, such as; toys, cereals, candies and fast food, not only these categories but also sweets drinks, music, films & clothing to children which are aimed at children currently on television advertisements (Lionel Wijesiri, 2012). Children are a key target for advertisers as brand preferences often remain unchanged throughout life. Children's segment is now being target by many consumers' Product companies, because children are important potential customers as they not only decide about their own buying as they can influence the buying decisions of their parents also (Muhammad, Shabana & Hafiz, 2008). Consumers in the post conflict environment are more aware of Indian Television advertisements, because they always watch drama serials, which are telecasted by the Indian channels (Shivany, 2013). Most popular Indian channels among Jaffna people are; Sun TV, KalaigarTV, Zee tamil, Polimer, Vijay TV, and So on.

Television advertisement the stimuli in the form of marketing messages are competing with each other on the consumer's attention, both in the form of other commercials as well as the program itself (Mc clung, park & saur, 1985).

Attractive advertisement makes a deep influence on children's attitudes & behavior, which especially leads to purchase behavior as well as purchase request. Children can be categorized into positive & negative attitudes, while children who have positive attitudes toward advertisement, their behavior remain consistent with their attitudes and they tend to make purchasing of that particular product whose advertisement they have seen. On the other hand, children who have negative attitude toward advertisement they don't take any step to purchase that particular advertised product (Erra, 1990).

Atkin (1981) found that respondents who reported heavier exposure to children's television (& its advertising) also reported making more requests for advertised toys, cereals, & fast foods. Kraak & pelletier (1998) stated that the television advertisements & prime – time programs have been identified as important influences on the types of food that children ask their parents to buy for them and food they buy for themselves. Research has also shown that by the age of nine, children start to lose interest in toys & develop a preference for products with a social function, such as music and sports equipment (Buijzen&Valkenburg, 2000). Past researches have indicated, if television advertising based on the experiences which are strictly influence to the



minds of children by using the most appropriate & best strategies, this directly influences on the food pattern of the children (Livingstone & Helsper, 2004).

Previous studies have shown that children's attitudes & behaviors and television advertisements are co relational. So, it is difficult to determine whether advertisement influence children's attitudes & behavior or whether attitudes & behaviors determine what television programming or advertising will be viewed (Ann Sanson, 2000). Marketers, who try to penetrate the post- conflict market should need to develop television advertisements in an enjoyable manner, background music should be enjoyable. Because, children can be easily memorized by those ear – catching jingles & endorsement by animated characters commercials & they often imitate what the animated characters endorse such as; jingles or lines (Neeley & Schumann, 2004). Post conflict marketing environment is unique and exclusive; there is vast opportunities for marketers to sell their product & services to the potential customers who returned to their normal life (Shivany, 2013).

The evidence indicates under the other undesirable consequences of advertising by Atkin (1978) that, the first parents reject approximately one- third to one – half of child requests for products. This leads to parent – child conflict in about half of all families; such arguments are generally mild & infrequent. The evidence shows that children who see the most advertising have considerably more conflict. About one- third to one – half of the children become unhappy, angry or disappointed after denials of food & toy requests; again, the rate is considerably higher among those seeing the most advertising. In addition, some children may become dissatisfied when actual products fall short of the advertised image. Advertising interruptions of program enjoyment produce irritation in many viewers.

## METHODOLOGY

### Introduction: Qualitative Research

A qualitative exploratory research has been adopted for this study. Because, in Jaffna peninsula, there are few researches on the topic of television advertisement & parent-children conflict via qualitative research method like; “*Age variances of children and conflict with their Parents instigated by television advertisements*” (Dilogini and Shivany, 2014). Therefore, a research design was employed for this study.

First, the strength of qualitative research is its ability to provide complex textual descriptions of how people experience a given research issue, it provides information about the “human” side of an issue- that is, the often contradictory behaviors, beliefs, opinions, emotions & relationships of individuals, although findings from qualitative data can often be extended to people with characteristics similar to those in the study population (Natasha Mack, 2005).

The second one is the goals of exploratory research are intended to produce the following possible insights, such as; familiarity with basic details, settings & concerns, well-grounded picture of the situation being developed, determination about whether a study is feasible in current situation and direction for future research & techniques get developed.

Harry Wolcott (1999) maintains that one of the main problems in qualitative work is having too much of data rather than not enough, because the research is meant to provide details where a small amount of information exists. Normally, qualitative research means; investigation in to a problem or situation which provides insights to the researcher.



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### **Population of the Study**

The population for the present study consisted of parents in Jaffna district between 25 to 45 years of age with at least one child between the ages of four & twelve. In 2012, Samaraweera & Samanthi have done a case study from Galle district about “television advertising and food demand of children in Sri Lanka. This is an accountable past study in Sri Lanka.

### **Sampling Technique**

One of the most common sampling strategies is purposive sampling. According to preselected criteria relevant to a particular research question sample size, which may or may not be fixed prior to data collection depend on the resource & time available. Purposive sampling is therefore most successful when data review & analysis are done in conjunction with data collection (Natasha Mack, 2005).

In qualitative research sample selection has a profound effect on the ultimate quality of the research (Kitson, 1982). Miles and Huberman (1994) suggest that sampling strategies can be evaluated in terms of six different attributes, according that the sample should be likely to generate rich information on the type of phenomena which need to be studied & the sample should enhance the ‘generalizability’ of the findings. Because of these attributes, Purposive Sampling technique is applicable to this study.

The purposive sampling technique is called as judgment sampling. It is a nonrandom technique that does not need underlying theories or a set number of informants. Simply put, the researcher decides what needs to be known and sets out to find people who can and are willing to provide the information by virtue of knowledge or experience (Bernard 2002, Lewis & Sheppard 2006). This research was consisted a purposive sample. Sample was restricted to 10 parents for the diversity of the sample, so the researcher recruited some of the parents from the different division from Jaffna district.

### **Instruments/ Materials**

This qualitative approach using in depth interviews with the parents were conducted. In depth interviews is an appropriate method for capturing & understanding informants’ experiences & words (Taylor, 1994).

A great deal of qualitative material come from talking with people whether it be through formal interviews or casual conversations the researcher must listen carefully to what participants say, engage with according to their individual personalities & styles and use “probes” to encourage them to elaborate on their answer.

This study fully concentrated on in depth interviews by using preset question based on primary interview question as open- ended question format.

### **Data Analysis Methods**

Data analysis method begins almost immediately with primary analysis. Later on, after more data collection in interaction with primary analysis, a second stage occurs with category & concept formation (Peter Woods, 2006).

Commonly there are four steps in qualitative analysis, such as; interim analysis memoing, data entry & storage and coding & developing category system. At the same time there are some

forms do qualitative data take. Such as; field notes, audio recordings & transcripts. In this manner, researcher conducted in depth interviews and those interviews were digitally recorded, translated & transcribed (Bryman & Bell, 2011).

In the first stage of the analysis, the researcher wrote all the themes which researchers found. Next, researchers chose major common themes with which most participants were concerned. Then, the researchers discussed some common themes that emerged from the first interview to last interview, so that the significant issues were discussed and analyzed more thoroughly. Because, the researcher read through the transcripts of all ten interviews and looked for themes or categories. As the method of analysis, this study used analytic induction which tries to find common patterns in the data. Coding is defined as marking the segments of data with symbols, descriptive words or category names. In this research, inductive codes were developed by the researcher by directly examining the data.

### **Questions for In-Depth Interviews**

Questions was asked about whether their child pay attention to TV commercial when watching TV, What does he/she typically do when a commercial comes on and whether they believe their child's product requests are influenced by televised advertisements; If so, how is she/ he influenced, the usual outcomes of conflict over a request to buy a particular product and parents were answered very generously.

### **Coding and Findings/Concepts**

In qualitative research, the goal of coding is not to count things, but to "fracture" the data and rearrange them into categories that facilitate comparison between things in the same category and that aid in the development of theoretical concepts (Maxwell & Joseph, 2005).

Therefore, the researcher was done 1<sup>st</sup> coding through line-by-line analysis and identified important concepts from transcribed interviews, and then the researcher done axial coding as a 2<sup>nd</sup> coding, finally the researcher was found the concepts that emerged from data. Those coding steps and concepts are presented here below in the annexure.

### **Reliability and Validity of Analysis**

A good qualitative study can help us "understand a situation that would otherwise be confusing" (Eisner, 1991). The validity and reliability are two factors which any qualitative researcher should be concerned about while designing a study, analyzing results and judging the quality of the study (Patton, 2002).

'Reliability means dependability of consistency' & that qualitative researchers 'use variety of techniques (interviews, participation, documents) to record their observations consistently' and 'Validity means truthful' it's referring to the bridge between construct and the data. It can be seen that validity means the correct correlation between data and conclusion (Lawrence Neuman, 2003).

Moreover, there are some criteria for reliability and validity of qualitative research, such as;

- Credibility; (in place of internal validity), that is, the extent that the constructions adequately represent the participant's reality.

- Transferability; (in place of external validity), that is, an adequately and thickly described account so that those who wish to transfer the implications to another context can do so with an adequate data base.
- Dependability; (in place of reliability), that is, the data is internally coherent.
- Confirm ability; (in place of objectivity), that is, the extent to which the theoretical implications are grounded in the data (Guba and Lincoln, 1981).

One of the most important strategies for establishing dependability is “The outside researcher experienced” (Lincoln and Guba, 1985). Here, dependability could be achieved by using an outside auditor to examine the research process and to determine if the findings and interpretations are supported by the data. Therefore, in this study; the researcher submits an account of her findings for checking (Alan E. Bryman, 2008).

On the other hand, one of the most important strategies for establishing credibility is “Respondent validation”. Respondent validation occurs during the period of data collection when feedback is obtained from the participants about the accuracy of the data they have given, and also the researcher's interpretation of that data. (Such as a short report or interview transcript) (Lincoln and Guba, 1985). In addition, feedback after the completion of the research project on the interpretation of all the data that has been obtained and interpreted can provide another type of validation.

To achieve validity in qualitative research is to reduce the gap between reality and representation and the more data and conclusions are correspondent the more a piece of qualitative research is valid (Bryman, 2008). Since in this study, all the interviews were translated, transcribed and findings sent back to the respondents in order to determine the accuracy of the interview findings.

Therefore, the researcher was done open coding through line-by-line analysis and identified important concepts from transcribed parent's interview answers, then the researcher done axial coding and assembled them into second-order themes, finally the researcher was presented the strategies that emerged from data were presented & how the coding were done and the final analysis are clearly shown in this chapter.

## DATA ANALYSIS

This study aimed to explore children's attention level on TV commercial when watching TV & subsequently their behaviors. The researchers have obtained the findings to this objective through interview questions. All respondents' answers were coded by the researchers. Through the final concepts, the researchers have conducted the data analysis.

***“They won't even move when they watch ads on the TV. They just watch those more attention ally”***

***(Sivanya, Teacher)***

Jaffna children in the post – war market are more attention to Indian kid's advertisements, because of the attractiveness & colour fullness of the advertisements.

***“But it depends on the advertisement.***

***If there is kid dish music, dance come on they watch those.”***

***(Sasikaran, Tailor)***

Children in Jaffna don't watch TV & ads all the time, but when commercial comes on the TV, they watch that without blinking an eye & immediately request some products and also remind the parents at the purchase places. Moreover, they follow them in the ads something related to children.

***“They'll be more concentrating on them and specially is it's something related to them they will watch that without blinking. As I said earlier, it influences more than 90 %. I think those are rally colorful.”***

***(Raveeswaran, Lecturer)***

This study tried to find the influence of televised advertisement on Jaffna children's product requests. In Jaffna district parents believe their child's product request are influenced by televised ads, through impressionable way of techniques like colour, shape, size because of that children believe, remind & adamant on it.

***“Yes, it does, it does. There some chocolate ads, which comes up. She takes the chocolates whenever we go to food city she takes it because she watches the ads about it. Kids watch that they wouldn't ask without watching 'He eat chocolates and he is grown up. Drink Boost, eats chocolate... There are so many like this.”***

***(Balaputhiran, Lecturer)***

***“Yes there is a link between them. That's an attraction isn't it? They eat noodles by spoon as shown on the ads.”***

***(Pirabhakar, Housewife)***

And also, this study tried to find the usual outcomes of conflict over a request to buy a particular product. The researcher has obtained the findings to this objective through interview question regarding the usual outcomes of conflict over a request to buy a particular product.

***“She will say that she wouldn't eat anything. When the elder kids argue and disobey the younger ones follows them.”***  
***“They get told off by me”***

***(Shahila, Bank staff)***

***“They got angry with us.”***

***(Anandasayanan, Lecturer)***

There are so many negative outcomes of conflict over a request to buy particular product among Jaffna parents and children like children disobey the parents, they would cry, get angry with parent, they will be depressed & show the sadness on child's studies, eat, sleep as well as, this usual outcomes will lead affections on the overall child's behaviors.

***“She forgets as she is a kid. But she will say “I won't come the next” as soon as we get back home.”***

***(Krishnakumar, Teacher)***

***“He wouldn’t, but he’ll show his anger on his studies.***

***It we switch off the TV, He wouldn’t eat. He won’t be happy. So we need to prefund that we are on his side just to keep the things on the right track so he ask mom to boils the milk, ad that on it and eat that. He does the same things as shown on the TV”.***

***(Balaputhiran, Lecturer)***

Crying at home /avoiding food/crying at the shops/comparing with other parents who always buy products for their children are negative outcomes of parent-children conflicts derived by television advertisements. Go against with their parents and argue with their parents are very unlikable outcomes of conflicts with their parent, other than these affects, the main affection on children’s studies. Jaffna parents mainly concentrate on their children’s studies. So, it’s a major negative outcome of these kinds of conflicts.

***“They will be angry. They Show the sad face. They won’t even sleep without eating.***

***It’s a bit worrying. There are some situations when we can’t afford.”***

***(Ajantha, Housewife)***

***“They’ll be depressed... Destructive behavior....When we tell her that we can’t, she’ll be..... “I wouldn’t study if you don’t buy that now”. But we misguide her when getting the things she asked. They might think that even though Amma has money she is not buying that for me. It’ll accept it if they have positive attitude otherwise they will get confused.”***

***(Raveeswaran, Lecturer)***

Not only the children’s behaviors, but also these outcomes can affect on the happiness of the whole family. The issue of depression in children is very serious one, because thinking negatively greatly affected the likelihood of developing a depression and maintaining it during stressful events in a person's life. It’s not that much easier to develop positive attitude in children’s mind.

## **CONCLUSION**

The outcome of this study shows some limitations. The first limitation of this study is that this research relied only on the perception of parents. Therefore, the knowledge from this study might be a little bit biased by the parents’ particular viewpoints toward the issues in this study. Even though the parents’ perspectives were considered the most important for this study, it is possible that there may be gaps in information that can be filled in by asking questions from the perspectives of other family members, including the children themselves, because the answers by the children might be different. Therefore, one possible future study would include the children, or other family members as participants.

Another limitation is that this research consider only children segment in Jaffna Peninsula in the post – war market situation. The research result states that the potential researchers should consider the other segment in Jaffna Peninsula while evaluating the impact of TV advertisement on conflict for other segments, like; grown-ups children (12-18ages) or adults (18-25).

The other limitation is that the sample is geographically limited. The research has been done only in Jaffna district. It can be done in other parts of the country, like; Mannar, Kilinochchi, Vavuniya as well or for the whole country.

A qualitative exploratory research method has been taken into consideration for this study. Therefore in the future, the researchers should be taking into account of the other methods, like; quantitative research method or mixed method as well.

Based on this research finding, there is a conflict exist between Parent and children in the post-war Jaffna context. Because of the adamant behaviors & nagging behaviors parents in the post-war marketing context are persuading to conflicts between their children & themselves. In the peaceful marketing situation, mass media developed environment, children are requesting advertised products to never stopping is called as “Pester Power”. Behaviors of continuously asking particular advertised product are creating parent-children conflicts often.

Present study found that because of heavy advertisement and proliferated Tv channels children are confused, and nag their parents to purchase unwanted products. Parents are struggle to solve these conflicts because of the heavy inspirations of the motives and colours in the advertisements. Marketers should follow the correct advertising strategies when they create children’s related products advertisements. It also will reduce these types of conflicts and diminish those types of negative outcomes as well.

In the post-war Jaffna market unethical and business behaviors are encouraged by this unwanted purchase intentions. According to the past studies (Livingstone & Helsper, 2004) advertisement strategies should be in a good manner, and marketers should consider the appropriate Television commercials otherwise, these will affect the society.

This study has the implication that organization should design proper Tv advertisement, which will not affect the Parent-Children relationships, it is an ethical responsibility of the organization, which operates in the Post-War context.

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## ANNEXURE

### Examples of Coding: Four Tables.

(Source: Author constructed)

#### IQ1: Does your child pay attention to TV commercial when watching TV?

1st coding/open coding	2nd coding/axial coding	Findings/concepts
1. They give more attention to ads. 2. Ads are very colorful. 3. watch ads on chutty TV 4. It depends on the Ads. 5. There is a kid dish music, dance. 6. They love to watch. 7. We got 45 channels now. 8. Change the channel. 9. Indian Ads. 10. Girl on the lux ads also pretty 11. They are more interested in kid’s ads. 12. Very much interested. 13. Songs, music are very much attractive.	1. More attention. 2. Colour full & attractive. 3. They are more interested in kid’s advertisements, 4. It depends on the advertisements. 5. Watched Indian advertisements.	1. Attention toward attractiveness 2. Attention toward colour images

#### IQ2: What does he/she typically do when a commercial comes on?

1st coding/open coding	2nd coding/axial coding	Findings/concepts
------------------------	-------------------------	-------------------

1. They wonder why it takes such a long time. 2. They don't watch all the time. 3. They got more interested on it 4. They tell the place where that item is available. 5. Elder one goes away. 6. Younger ones have interest on the ads. 7. Depend on the ads. 8. They will sing. 9. Observes it so attention ally. 10. They play good music in the background. 11. They watch chutty TV. 12. They have no idea about ads 13. They won't even move. 14. Just watch more attention ally. 15. She has the option. Change the channels. 16. Follow them. 17. More concentrating. 18. Watch that without blinking. 19. Something related to them. 20. Repeat the once on it. 21. Immediately request. 22. Remind us at the super market. 23. Something related to them.	1. Don't watch all the time. 2. Watch that without blinking an eye. 3. Remind us at the purchase places. 4. Something related to them. 5. Immediately request.	1. Very interesting
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**IQ3: Do you believe your child's product requests are influenced by televised advertisements? If so, how is she/ he influenced?**

1st coding/open coding	2nd coding/axial coding	Findings/concepts
------------------------	-------------------------	-------------------

<ol style="list-style-type: none"> <li>1. Yes, there is a link between them.</li> <li>2. That's an attraction.</li> <li>3. As shown on the ads.</li> <li>4. It has the influence.</li> <li>5. Kids want everything they see.</li> <li>6. "We need this" when they watch the ads.</li> <li>7. This is the place we saw on the TV.</li> <li>8. Some time they ask following ads.</li> <li>9. She asks for kinder Joy.</li> <li>10. So adamant on it.</li> <li>11. There are some chocolate ads, which come up.</li> <li>12. Whenever we go to food city.</li> <li>13. Because she watches the ads about it.</li> <li>14. Those are rally colorful.</li> <li>15. Noodles were colorful.</li> <li>16. Different ads are more impressive.</li> <li>17. The technique.</li> <li>18. Shape looks different.</li> <li>19. Colour, shape, size are all has influences</li> <li>20. Ask after watching the TV ads.</li> <li>21. Drink boost.</li> <li>22. Boost them or grew them or have energy.</li> </ol>	<ol style="list-style-type: none"> <li>1. There is a link between child's product request &amp; TV ads.</li> <li>2. Different ads are more impressive.</li> <li>3. So adamant on it.</li> <li>4. Change children's thoughts like grew, energy &amp; so on.</li> <li>5. Remind the parent at the purchase place.</li> </ol>	<ol style="list-style-type: none"> <li>1. Unwanted things are purchased</li> <li>2. Impressionable way</li> </ol>
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**IQ4: What are the usual outcomes of conflict over a request to buy a particular product?**

1st coding/open coding	2nd coding/axial coding	Findings/concepts
<ol style="list-style-type: none"> <li>1. She wouldn't eat anything.</li> <li>2. Kids argue.</li> <li>3. Disobey.</li> <li>4. Younger ones follow them.</li> <li>5. They get told off.</li> <li>6. They angry with us.</li> <li>7. As soon as we get back home.</li> <li>8. They get angry.</li> <li>9. They go.</li> <li>10. Their mother straight away.</li> </ol>	<ol style="list-style-type: none"> <li>1. It affects' on child's studies, eat, and sleep as well.</li> <li>2. Child gets angry with parents.</li> <li>3. Disobey the parents.</li> <li>4. They show the sadness.</li> <li>5. Children would cry.</li> <li>6. They will be depressed.</li> <li>7. Negative effects on the</li> </ol>	<ol style="list-style-type: none"> <li>1. Negative effects</li> </ol>

11. I get worries. 12. Next time she would ask for something else. 13. She would cry. 14. He will show his anger on his studies. 15. He wouldn't eat. 16. He won't be happy. 17. We need to pre fund. 18. Conflicts have negative effects on the happiness of the family. 19. They will be depressed. 20. Destructive behavior. 21. I wouldn't study if you don't that now. 22. Misguide her when getting the things she asked. 23. Even though Amma has money. 24. They will get confused. 25. They will be angry. 26. They show sad face. 27. They won't even sleep. 28. Bit worrying. 29. Crying at the shops. 30. Comparing with other parents.	happiness of the family & child's behaviors.	
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DOI: **10.5958/2249-7137.2020.00529.7**

## USE OF INTERACTIVE METHODS IN THE FORMATION OF CREATIVE QUALITIES OF STUDENTS

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### ABSTRACT

*The article gives a brief information on pedagogical and interactive teaching methods and the effective results of their use in the educational process. Each student expresses his / her opinion orally to the question asked by the educator in oral form. Learners state their answers clearly and concisely. In the written form, students write their answers to the question on paper cards in a short and visible way. The answers are fastened to the board (using magnets) or to the "pinboard" board (using needles). They need to be able to find a solution to the problem posed, otherwise when they fail to find a solution, the learners lose interest and lose their self-confidence. When using the "problem situation" method, learners learn to think independently, analyze the causes and consequences of the problem, find a solution.*

**KEYWORDS:** *Interactive Methods, Brainstorming, Project, Role Play, Problem Situation, Role-Playing Method and Etc.*

### INTRODUCTION

We all know that the modern field of education requires the abandonment of outdated trends and uniform teaching methods and the search for new methods that meet the requirements of the times. In order to fulfill this important task, today interactive teaching methods are widely used in the educational process. The application of modern teaching methods not only leads to high efficiency in the teaching process, but also plays a vital role in shaping their creative qualities.

In the selection of methods in the educational process, it is advisable to choose based on the didactic function of each subject studied. These methods are called interactive or interactive methods.

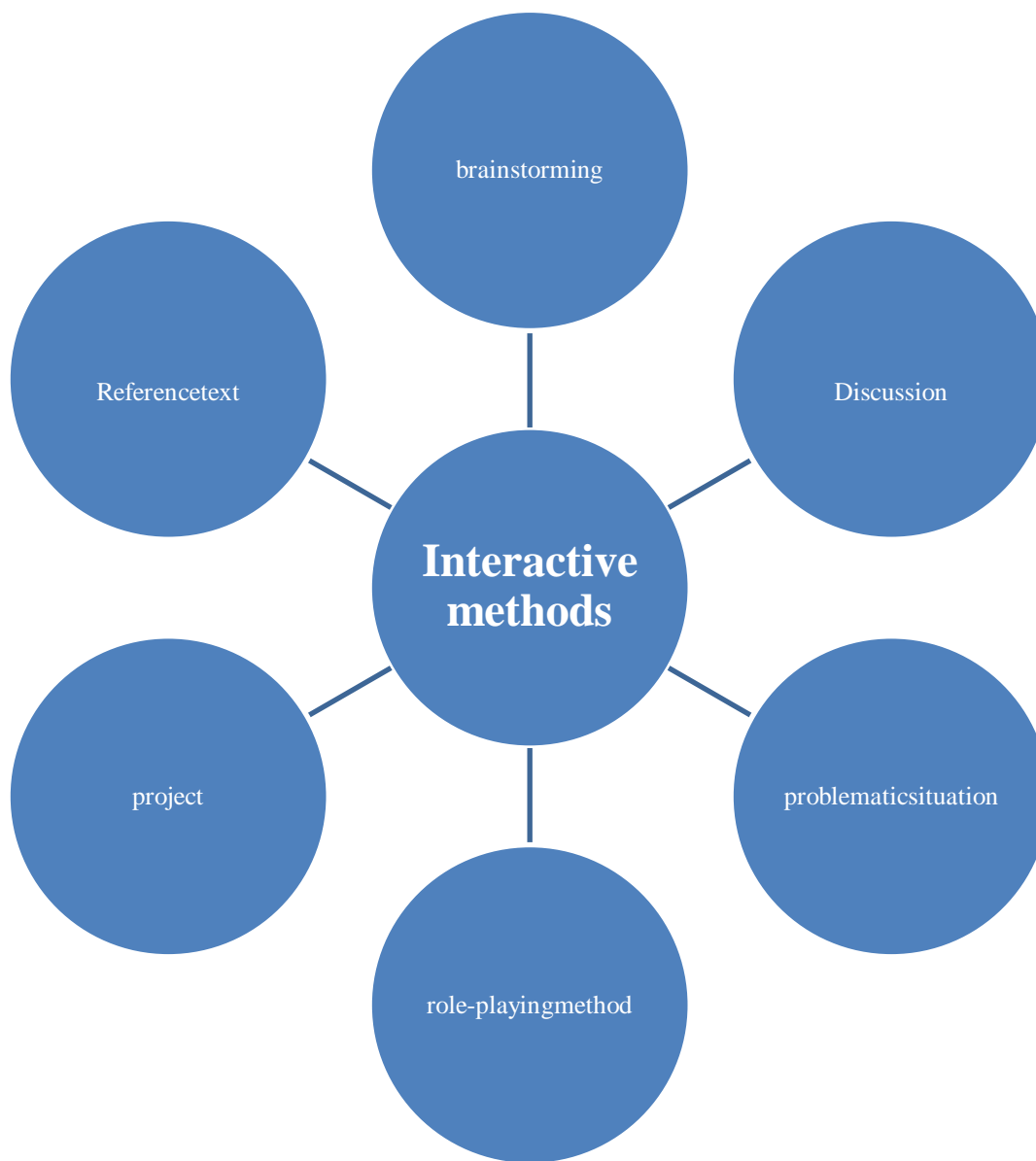


*Interactive methods* are methods that activate learners and encourage independent thinking, learning at the center of the learning process. When these methods are used, the educator encourages the learner to actively participate. The learner is involved throughout the whole process. The benefits of a student-centered approach include:

- + more effective learning;
- + high level of motivation of the student;
- + taking into account previously acquired knowledge;
- + adapting the intensity of reading to the needs of the learner;
- + support for the initiative and responsibility of the student;
- + Study through practice;
- + creation of conditions for bilateral discussions.

The use of interactive teaching methods, enriching them with methods that activate the activities of learners, leads to an increase in the level of mastery of learners.

To do this, the lesson process should be organized rationally, the teacher should constantly stimulate the interest of students in the learning process, divide the teaching material into small pieces, open their content, brainstorm, debate, problem situation, reference text, project, role-playing techniques and encouraging learners to perform practical exercises independently.



“*Brainstorming*” is a method of collecting free ideas and feedback from learners on a problem and using them to come up with a solution. There are written and oral forms of the "mental attack" method. Each student expresses his / her opinion orally to the question asked by the educator in oral form. Learners state their answers clearly and concisely. In the written form, students write their answers to the question on paper cards in a short and visible way. The answers are fastened to the board (using magnets) or to the “pinboard” board (using needles). In the written form of the method of "mental attack" it is possible to group the answers according to certain characteristics. When used properly and positively, this method teaches a person to think freely, creatively, and non-standardly. When using the method of "brainstorming" it is possible to involve all learners, including the formation of a culture of communication and discussion in learners.

Learners develop the ability to express their opinions not only orally but also in writing, the ability to think logically and systematically. Failure to evaluate the opinions expressed leads to the formation of different ideas in learners. This method serves to develop creative thinking in learners. The method of "mental attack" is carried out depending on the purpose set by the teacher:

- ✚ When the goal is to determine the initial knowledge of the learners, this method is done in the introductory part of the lesson.
- ✚ This is done in the transition section to a new topic when the goal is to repeat the topic or link one topic to the next topic.
- ✚ Reinforcement of the topic covered is done in the reinforcement part of the lesson, after the topic, when the goal is set.

*"The role-playing method"* is a method in which learners demonstrate different life situations by staging them. The difference between role-playing games and business games is that evaluation is not conducted. At the same time, while role-playing learners are content to play roles in a scenario developed by the educator, business learners are free to decide for themselves what tasks to perform in a given situation.

In a role-playing game, the participants work together to solve a problem, such as a business game. Role-playing games develop interpersonal skills in learners. The role-playing educator must have prior knowledge of the learners. Because in playing roles, the individual character and behavior of each learner plays an important role. The topics chosen should be appropriate to the level of mastery of the learners. Role-playing games help to motivate learners in the learning process.

The *"project" method* is the process by which learners collect, research, and implement information on a specific topic over a specified period of time, individually or in groups. In this method, learners participate in the planning, decision-making, implementation, verification, and inference and evaluation processes. Project development can be individual or group, but each project is a coordinated result of the collaborative work of the study group.

In this process, the learner's task is to develop a new product or find a solution to another task within a specified time. From the learners' point of view, the task should be complex and it should be a task that requires learners to be able to apply their existing knowledge in other situations. The project should be able to serve learning, put theoretical knowledge into practice, and enable learners to independently plan, organize, and implement.

*The "problem situation" method* is a method aimed at developing students' skills in analyzing the causes and consequences of problem situations and finding solutions to them. The complexity of the problem selected for the "problem situation" method should be appropriate to the learners' level of knowledge. They need to be able to find a solution to the problem posed, otherwise when they fail to find a solution, the learners lose interest and lose their self-confidence. When using the "problem situation" method, learners learn to think independently, analyze the causes and consequences of the problem, find a solution. The use of interactive teaching methods, enriching them with methods that activate the activities of learners, leads to an increase in the level of mastery of learners. This, in turn, serves as a key tool in shaping the creative qualities of learners.

In the Action Strategy for the five priority areas of development of the Republic of Uzbekistan for 2017-2021, paragraph 4.5 on improving the state youth policy, the following *“Support and realization of creative and intellectual potential of the younger generation, formation of a healthy lifestyle among children and youth, their participation in physical culture and sports goals and objectives such as broad involvement”*. Achieving these goals and objectives requires the use of new, modern interactive methods in the educational process.

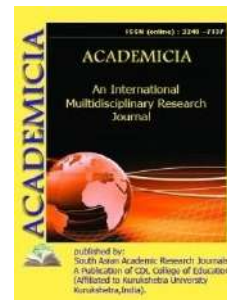
In conclusion, the rational organization of the educational process for the formation of creative qualities requires the teacher to increase the interest of students and constantly encourage their activity in the educational process. At the same time, the learning process requires the use of interactive teaching methods such as brainstorming, discussion, problem situation, reference text, project, role-playing games, and encouraging learners to perform practical exercises independently.

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E-learning resources:

1. [www.pedagog.uz](http://www.pedagog.uz)
2. [www.ziyonet.uz](http://www.ziyonet.uz)



DOI: **10.5958/2249-7137.2020.00530.3**

## INFORMATION MODELING BASED ON IMITATION ROLE IN MODERN ECONOMIC THEORY

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### ABSTRACT

*We currently use a number of roles in our pedagogical work. It is important to note that they are not artificially selected, but are real real roles that can be played by students of the relevant specialization. This paper presents a number of ideas on the relevance of information modeling based on imitation role from the perspective of modern economic theory.*

**KEYWORDS:** *Information Modeling, Prediction, Imitation Role, Methodology, Computer, Computer Telecommunications.*

### INTRODUCTION

We explain the relevance of the role modeling information modeling (IRAAM) methodology from the perspective of modern economic theory. We can express the famous proverb that “we are responsible for who we teach”. We want our students to not only be successful people, but to contribute to the betterment of society. Because we cannot escape taxes, trade, and the like.

### Purpose

It was emphasized that the need for marketing research in modern society from an economic point of view is related to three situations: “growth of market scale; transition from price to priceless competition; transition from consumer needs to consumer needs”. In terms of our study, the third case is the most interesting. Indeed, “consumer demand” is a need that has a

specific form depending on the individual of the individual. People's needs are well known and here higher education graduates cannot compete with experienced professionals who have worked in the goods and services market for a long time. Consumer needs are often difficult to predict, predicting them to "feel" requires intuition.

### **Scientific novelty of the article**

George Poya said, "Let's learn to guess!" "There is no absolutely correct method for guessing, so there can be no absolutely correct method for teaching how to guess," he said. It should be noted that the assumption that leads to discovery, the original solution, comes only to those who work diligently to solve any problem.

Therefore, A.D. De Grot concluded that "any creative product is not the result of intuitive perception, innate genius, etc., but rather the result of a person's unique development associated with long-term accumulation and stratification of experience that is always useful for that field of activity".

We believe that IRAAM will help increase the competitiveness of future professionals as it helps to "feel" the needs of people working in different roles. To teach students to predict exactly what this or that consumer wants or this or that market segment, it is necessary to teach students to rely on different perspectives in developing data models, to organize the discussion of developed information models in terms of this or that role.

One of the most important concepts in role theory (J. Mead, G. Bloomer, E. Hoffman, M. Kun) is to "accept the role of another," that is, to put yourself in the shoes of your partner and understand his or her role. In addition, a person conducts his or her role in relation to that person in a way that is appropriate to his or her social role. Without such adaptations, there can be no interaction, and man may not understand the importance and responsibility of his own actions and deeds.

In his book *The Art of Being Different*, V.L. Levi writes, "If you divide your attention to yourself and to others in a ratio of 1: 2, you will achieve everything, you will survive and you will win." To study the psychologist is to "look, listen, pay attention, observe, understand the essence, achieve, grieve, put oneself in the place of another, accept his point of view, values, way of thinking." By teaching this, the scientist has developed a system of specific tasks and exercises that consist of the need to perform certain actions (real) or specific actions through an imaginary existing or imagined character. In addition, the author describes ten practical results of such actions, called "exercises for spiritual refreshment": improving mood, lifting; increase confidence; strengthening the will; sensitivity and attention to memory; increase performance; facilitating communication; increase the ability to understand and be understood; development of creative power; noted the expansion of the scope of talent.

The use of the 'roles' approach is well known in the pedagogy of children of preschool and primary school age. A.A. Gin (1999) cites nine roles for learners who have proven themselves in practice: "why", "knowledge sponsor", "communicator", "navigator", "lawyer", "disbeliever", "conclusion-maker", "psychologist", "time saver." For example, as a communications officer, a student should establish a link between today's material and previous knowledge, including other academic disciplines. A law student, for example, should collect all complaints about homework and rationally defend students' interests. A.A. Gin has divided all the roles applied into didactic and organizational aspects.



Apparently, the author of this work, in his video lectures "Computer. Lessons for Beginners" proposed a humorous classification of users of personal computers (senior bosses, junior bosses, experienced users). Each of the suggested roles allowed the teacher to effectively demonstrate some of the features of the programs studied (at the time it was the NORTON COMMANDER shell).

Subsequently, the author (along with H.H.Yunova) successfully used role-based information modeling to study database functions when working in a spreadsheet environment (the role of a football commentator required to obtain information in real time, which can only be achieved in a computer setting using special tool functions) was possible). They used the role of sports journalist and others in the generalization phase of the repetition of the material.

The author's student, V.A. Akininina, in particular, suggested the roles of travel agency executives, which allowed students to explore non-trivial opportunities to learn text editing, spreadsheets, and databases. In A.P. Telengi's research, the role of a member of the network community to implement the content of "Computer Telecommunications" content, etc., has been very effective.

S.A. Beshenkova and E.A. Rakitina points out that "during training, a person plays several roles at the same time, which are often associated with different behaviors and different modes of activity ... entered. "

The authors used three roles in teaching programs in their practical pedagogical activities: programmer, user, and external observer. It should be noted that the first two of the roles proposed by eminent scholars are used in the process of implementing information preparation for our higher education students. Today we use a number of roles in our pedagogical work. It should be noted that these are usually not artificially selected, but rather real-life roles that can be played by students of the relevant specialization.

### **Results and practical applications**

Modeling is basically an algorithmic activity, so there are no clear recipes, algorithms for selecting optimal roles in various aspects of data preparation. Role selection can be formalized in solving some didactic tasks, while for others it depends in many ways on the teacher's experience and level of intuition.

As for this antinomy, (it is defined as follows: "antinomy is the union of two real positions with the same opposite, and antinomism is a method of combining these contradictions and balancing them, not averaging and eliminating them)" , in particular, pedagogy antinomically combines the rationalism of science and the emotional improvisation of art ".

We list some of the roles we use, providing a description of the didactic functions that are dominant for them.

Used roles	Didactic tasks that are dominant
Sports commentator	“Spreadsheets” are a way to motivate students to explore a more complex topic in database functions. Role selection is related to the need for real-time selection of sports commentator data.
Sports journalist	A sports journalist increases the effectiveness of the organization of a generalized repetition of the studied software features, which have specific features in their professional activities
Assistant Chief	Creating motivation in students to learn document preparation technology through collaboration.
Software product customer	To motivate students to critically analyze electronic documents in terms of their appearance, protection, and adaptability to editing all the objects that make up the document.
Bad teacher	Encourage students to independently search for the most difficult questions asked by a “bad” teacher; look for “problems” in electronic documents that he definitely pays attention to.
Prospective Chief	Emphasizing not only the functional but also the operational features of the developed information models helps students to develop the skills of correctly defining the tasks used in information technology.

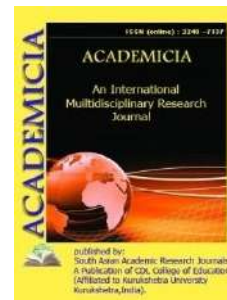
## CONCLUSIONS AND SUGGESTIONS

It should be noted that the peculiarity of IRAAM, its advantage and perhaps perhaps one disadvantage is that it can be used only by sufficiently qualified educators (teachers) in practical work. The slightest change in task setting not only develops students' active, independent thinking, but also requires teachers to have an in-depth knowledge of the many possibilities of the ever-improving media. Therefore, one of the important tasks of the modern education system should be to develop effective mechanisms to motivate teachers who are constantly improving their skills in the field of computerization.

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DOI: **10.5958/2249-7137.2020.00531.5**

## ISLAMIC FINANCE, OPPORTUNITIES AND PROBLEMS OF ITS DEVELOPMENT

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### ABSTRACT

*The purpose of this article is to identify the current development, principles, norms and tools of Islamic finance. The second is Islamic financing opportunities. The third is the Challenges of Islamic finance. This article reveals the many reasons that lead to the development and growth of Islamic finance and the challenges facing this system. Despite the fact that a number of measures have been taken to introduce this system, it still faces many challenges. However, the differences between theory and practice, as well as the diversity of opinions of practitioners and financial professionals, pose great challenges.*

**KEYWORDS:** *Islamic Finance, Islamic Finance Development, The prohibition of usury, Sharing risks, Money as "potential" capital, Prohibition of speculative behavior, Murabaha, Leasing, Modaraba, Musharaka, Sales contracts, Opportunities, Challenges.*

### 1. INTRODUCTION

Islam is a belief that encompasses not only man's relationship with God, but also the law that governs the entire way of life of Muslims. The Qur'an contains concepts that form the basis of justice, equality, morality and other Islamic systems. Based on Islamic law (Sharia law), Islamic finance dictates the distribution of risk and profit, prohibits the payment of interest, and encourages moral investment that contributes to the growth of society. Islamic finance does not belong to any particular jurisdiction, but there are Muslims anywhere in the world who want to conduct financial transactions in accordance with their beliefs. In Uzbekistan, for example, there

is a great need for Islamic finance and the economy in a predominantly Muslim society. The Islamic financial system allows you to exchange interest on income from investment activities and operations that bring additional wealth. This article is divided into four sections. After an introduction to the topic, the second section describes the Islamic financial system. The third section discusses opportunities for the development of Islamic finance. The fourth section discusses the challenges of Islamic finance.

## 2. Islamic financial system

### 2.1 The emergence of Islamic finance.

Although the history of Islamic finance dates back to the late seventies and eighties, its foundations certainly date back to the time of the Prophet Muhammad (peace and blessings of Allaah be upon him). Allah has forbidden usury because usury has harmed the economy and people of the country, causing funds to accumulate in the hands of large capitalists.

Most appeals against commercial or commercial activities in accordance with Islamic principles were made under the umbrella of “interest-free” or “Islamic” banking. Prohibition of the receipt and payment of interest is at the core of this system, but it is supported by other principles of Islamic teaching that protect the sanctity of the distribution of risks, the rights and obligations of individuals, property rights and contracts. Similarly, the Islamic financial system is not limited to banking activities, but covers all forms of capital formation, capital markets, and financial intermediation (Osmani, 2005; Pervez, 2008).

### 2.2 The basic principles of the Islamic financial system can be summarized as follows:

**The prohibition of usury**, as stated in verses 2: 275 of the Holy Qur'an, prohibits usury, which means paying usury for the use of money. More precisely, it means that money is added to the loan without any added value. This prohibition is based on social justice, equality, and property rights. **Sharing risks** involves the supplier of financial capital and the entrepreneur sharing business risks in return for a share of the profits. **Money as “potential” capital**. Islam recognizes the temporal value of money, but it is realized not only when there is no “potential” capital, but also when it acts as capital. **Prohibition of speculative behavior**. The Islamic financial system prohibits fundraising and prohibits transactions involving excessive uncertainty, gambling, and risk. (Job, 2005) A Shariah - approved activity is a business activity that does not contradict the rules of Sharia.

### 2.3 Instruments of Islamic Finance.

-The **murabaha** means that The investor undertakes to supply specific goods or commodities, incorporating a mutually agreed contract for resale to the client and a mutually negotiated margin.(Usmani 2005).

-**Leasing** is designed for financing vehicles, machinery, equipment, and aircraft. Different forms of leasing are permissible, including leases where a portion of the installment payment goes toward the final purchase (with the transfer of ownership to the lessee).(Pervez, 2008).

-**Modaraba** is a contract between an Islamic bank and a Client whereby the Islamic bank provides a specific amount of funds to the Client for an enterprise for defined purposes in exchange for a reasonable and highly predictable profit. The Client receives a share in the profit as compensation or a fee for his know-how and management. (Usmani 2005; Pervez, 2008)

- **Musharaka** financing is the same financing contract as Modaraba except that the Client also provides a part of the capital, in addition to providing management and know how. On the other hand, the Investor may provide a part of the management and know-how, in addition to capital.

- **Sales contracts** . Deferred-payment sale (bay' mu'ajjal) and deferred-delivery sale (bay'salam) contracts. In a deferred-payment sale, delivery of the product is taken on the spot but delivery of the payment is delayed for an agreed period. Payment can be made in a lump sum or in installments, provided there is no extra charge for the delay. A deferred-delivery sale is similar to a forward contract where delivery of the product is in the future in exchange for payment on the spot market. (Usmani, 2005; Pervez, 2008).

### 3. Development opportunities of Islamic finance

Islamic finance is one of the fastest growing markets in the global financial industry. In the early 1990s, the field of Islamic finance emerged from the “field of experimentation” as a noteworthy but yet very young participant in the global financial market. Naturally, there are a number of important and favorable factors for the development of Islamic finance in the world, including Uzbekistan. Including:

- Acceptance of the idea of Islamic finance by the international community;
- The use of English, which is now the world's financial language, in the field;
- Growth and expansion of Islamic banks and financial opportunities;
- The emergence and development of Sharia councils in Islamic banks;
- Establishment of various international coordination centers (agencies);
- Activation and development of ijtihad in the field of fiqh of commercial agreements;
- Consensus among lawyers of the four sects on most important issues;
- Islamic finance contracts should be clear to both traditional investors and access to international financial / capital markets;
- The position of coordinating organizations and political leaders of the countries that have introduced the Islamic banking and financial system and laid a solid foundation for the development of Islamic finance.

In general, the development of Islamic finance can be attributed to the high demand for this system among the population of a number of Muslim countries and the favorable economic situation. Aware of the potential of Islamic finance, as well as the limited capabilities of classical Islamic finance contracts, a number of major Western banks, law firms and other stakeholders have created complex Islamic finance products and contracts that meet modern requirements and international standards and practices. will be a factor contributing to the spread of Islamic finance in countries around the world.

International bankers and advocates of the harmonization of the Islamic financial system with the world financial system have begun to work closely with lawyers in the field of Islamic jurisprudence to ensure high growth rates, as well as the creation of new financial products. creates easy opportunities to do.



The widespread use of English in Islamic finance has also been a factor in expanding its capabilities. In general, the introduction of English is a matter of course for Islamic banks in the context of the globalization of financial markets. Until now, however, agreements have been legally reviewed, approved and monitored in Arabic (especially in the Gulf states). The fact that most Islamic lawyers, who are members of the Shariah Councils of banks, do not speak English, has greatly complicated the communication between bankers and Shariah councils. Therefore, instead of examining the relevant documents and agreements in detail, the members of the Shariah Councils only considered the summary information prepared by the employees or advisers of the Islamic banks. Naturally, such summary data do not allow for a complete and detailed coverage of all the processes, indicators and factors required for a legal assessment of the document and the correct formulation of products. Of course, as a result, the original meaning is completely or partially lost, and the result is the same. This situation has slowed down the development of Islamic finance to date.

#### **4. Problems of Islamic finance**

The Islamic Financial Movement faces many serious challenges. Differences between theory and practice, as well as the diversity of opinions of practitioners and financial professionals, pose great challenges. The level of reliability of the Islamic financial system is causing controversy among Sharia scholars and modern financial experts. The subsequent growth and development of Islamic finance faces a number of other challenges, including system constraints and the development of problems. What are the obstacles, prospects and tasks on the agenda of the new generation of Islamic financiers?

a) As mentioned above, since the 1990s, Islamic finance has come into play in a large area of traditional financial systems and secular legal systems. In other words, Islamic banking and financial institutions have entered into direct competition for customers with the traditional banking and financial system, which operates smoothly and efficiently. This has shifted the attention of the Islamic financial system from the creation of unique and complete proposals to the "reverse engineering" of traditional financial products, ie traditional lawyers and Islamic bankers have been able to comprehensively study traditional banking and financial products. and began to create Islamic products that would give customers a similar financial result in mathematical terms. Naturally, all the documents were drawn up in accordance with the required standards. The same assimilation of Islamic finance and its focus on "lending" has led to serious criticism and accusations. Critics have argued that Islamic finance is losing its unique character, its role and importance in reducing poverty in society, increasing the financial coverage of vulnerable groups, creating new jobs and economic growth. According to them, if Islamic finance continues to take such a "formal" approach to the issue, it will lose its essence and become one of the "pillars" of the existing traditional banking and financial system.

Therefore, the turning point and the main problem for the industry is the development and activation of the real economy, fair and efficient distribution of funds among economic entities, as well as the creation of an alternative financial system to the traditional banking system. is to have a clear understanding of the original goals and objectives in increasing coverage.

b) Increasing the share and importance of Islamic microfinance institutions. Today, two-thirds of Islamic finance is concentrated in Islamic banks. Most of the population and small businesses in most Muslim countries do not have access to Islamic banking due to the lack of stable and

sufficient income of potential customers, lack of collateral and credit history, high risk of projects and business activities, and other reasons. . Although Islamic microfinance institutions have all the necessary tools to work with the most vulnerable segments of the population, this opportunity is rarely used in practice. As a result, large sections of society are stranded in poverty. Moreover, the share and importance of such institutions in the Islamic financial system is very small. At the same time, there is a great opportunity to use tools such as hasanah, zakat, waqf and modern financial methods (fintek) to finance the needs of the population in need of social protection and reduce poverty.

In this sense, increasing the importance of Islamic microfinance institutions, creating financial products that meet the needs of vulnerable groups and small businesses and their ability to pay, and the use of information and communication technologies and social financing methods will alleviate the mass poverty observed in many countries. It is able to overcome and involve a large segment of the population in the financial and economic process, thereby accelerating economic activity and creating the necessary conditions for healthy economic growth.

c) There are a number of countries where the population is predominantly Muslim or where the majority of the population is Muslim. At the same time, for various reasons, there is a misconception or bias towards Islamic finance by the population, at the state level or within the traditional banking community. This is one of the main reasons for the low importance of the industry in society, its low level of implementation, development and use.

Therefore, the experience of international Islamic organizations, the scientific community, educational institutions, Islamic banking and financial institutions and groups, and the experience of countries that have successfully introduced Islamic finance among the population and national coordinating organizations, financial market participants and officials it should be widely disseminated and thereby increase the level of acceptance and understanding of the essence of Islamic finance.

Islamic finance has successfully overcome the global financial crisis, proven its resilience to systemic risks, its resilience and resilience in a secular legal environment, and has made a significant contribution to overall economic growth. At the same time, it provides opportunities for those who apply to Islamic finance based on their religious beliefs, as well as for those who intend to meet their financial needs more fully through this system.

Another problem is that the traditional banking community exaggerates the “threats of the Islamic banking system” by worrying about its declining share of the financial market and the mass transfer of customers to Islamic banks. However, the experience of the development of the Islamic banking and financial system over the past 30 years shows that even in Muslim countries, which have preserved their religious traditions and beliefs, the main share of the financial sector is in the traditional banking system. is coming. For example, if we look at other Gulf countries besides Saudi Arabia (where the share of both systems is equal), Pakistan, Bangladesh, Malaysia, Indonesia, Egypt, Turkey and other countries, all of them have a lot of Islamic banking system. has been satisfied with a very small share for years. At the same time, it is the Islamic banking system that is pulling large amounts of free money out of the hands of the population and attracting it to the real economy, thereby significantly boosting the economy, trade and welfare of the population. Therefore, within any legal system and under any

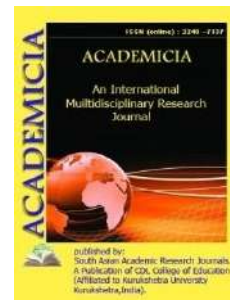
circumstances, Islamic banks can be seen as a source of economic activation and growth, as well as an alternative system that provides healthy competition in the banking and financial sector.

**d)** Islamic finance is successful in a number of countries. The Islamic financial system, which has evolved over the years into a startup, has gained enough experience, and now it is time to go international to share that experience. Islamic banks and representatives of the entire sector are encouraged to enter new markets (i.e., beyond their national borders), engage in business cooperation, and engage in a 'south-south' approach (i.e., between developing countries, such as the Organization of Islamic Cooperation) To promote and support international trade between the OIC members, as well as to cooperate with local coordinating organizations to create a full-fledged Islamic financial infrastructure in countries implementing the Islamic banking and financial system It is advisable to put.

There are a number of other challenges facing Islamic finance, as "complexity and problems" are common to any system. Understanding and acknowledging problems is the starting point for finding effective solutions. This makes the system and all its "components" healthier. Even if the industry solves at least some of the problems mentioned above, it would be a huge step forward in the development and growth of the system.

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DOI: **10.5958/2249-7137.2020.00532.7**

## THE IMPACT OF USING MINERAL FERTILIZERS AND INOCULATING WITH NITROGEN BEFORE SEEDING SOYBEAN ON THE EFFICIENCY OF THE SOIL AND PRODUCTIVITY OF THE CROP

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### ABSTRACT

*In this article, it is given data about influence of fertilizers and inoculated nitrogen before soybean seedling on the efficiency of the soil and productivity of the crop, climate and conditions for conducting research on the field, method of experiment by using manures and inoculated nitrogen, and taken result of them in the research are described.*

**KEYWORDS:** Soybean, Frequentative Crop, Mineral Fertilizers, Ore Fertilizers, Rhizobium, Gray Soil, Humus, Layer, Duration, Crop Rotation, Vegetation, Growing Season.

## INTRODUCTION

The acceptance of Presidential Decree № 2832 from March 14, 2017 by the President of the Republic of Uzbekistan on “the measures of increasing planting soya and organizing planting soya legumes in the Republic during 2017-2021 years” provides growing soya beans on the 92 266 hectares of the land as a main crop, on the 40 557 hectares of the land as a repeated crop and serves on improving the productivity of the land, satisfying the demand of population for food and animal feeding products.

In the soil of the Republic of Uzbekistan does not contain the bacterium named “*Rhizobium*” (that exists on the roots of legumes), therefore it is preferable to inoculate with the drug of *Rhizobium* bacterium (nitrogen) before planting the seedlings of legume and grain.

As for Atabaeva (2004), Atabaeva, Mamedov (2007) who note that soybean plays the main role in increasing the efficiency of the soil and the existence of *Rhizobium Japonica* in its roots enriches the soil with nitrogen and leads to gathering average 70-100 kilo/ha of biologic nitrogen in a year. For this reason, the remaining roots and residuals from the crop is considered to be crucial in preserving and increasing the efficiency of the soil.

According to the information of Z.Islamova (2011), using mineral fertilizers with nitrogen, more specifically, versions of  $P_{90} K_{60} + \text{nitrogen}$  and  $N_{30} P_{90} K_{60} + \text{nitrogen}$  provides the highest amount of gathered *Rhizobium* and the increase in productivity by 3.3-5.4 cent/ha. Increasing the amount of nitrogen leads to decreasing *Rhizobium* or non-existence at all, increased productivity is observed only due to the increased amount of nitrogen.

The data of B.Mavlonov, A.Hamzaev, Z.Bobokulov (2018) shows that *Rhizobium* that lives in the roots of legume-grain products inhabited the nitrogen in the atmosphere and enriches the soil with nitrogen. Asian bean, soybean and pea gather easily from 40 kilos to 120 kilos of nitrogen from each hectare of the land in the condition of Uzbekistan. The most of nitrogen inhabited by legume grain products stays in the plant itself and some part of it stays in the root and returns to the soil in the form of residuals after the crop has been gathered.

The researches of I.Anarboyev, M. Sattarov (2012) and E.R.Ollohberdiev indicate that the soya which is planted after autumn cereal products as repeated crop enriches the soil with nitrogen. Moreover, it leaves 40-50 kilos fresh biologic nitrogen from each hectare.

## MATERIALS AND METHODS

We conducted research and experiments on the effectiveness of processing the different norms of mineral fertilizers before planting soya beans as a frequentative crop after wheat on the efficiency of the land and productivity of soybean crops during 2015-2017 years on the experimental land fields of the Scientific-Research Institute of Selection, seeding and growing cotton agro technology.

Field experiments have been conducted on the environment of typical gray, sandy with heavy mechanical content, irrigated from the past, located in deep irrigated (18-20 m) unsalted soil of Tashkent region.

In the experiment, processed and unprocessed nitrogen *Bradyrhizobium japonicum* SB5 with the following types of unfertilized mineral fertilizers: PK 90:60, NPK 30:90:60, NPK 60:90:60 and NPK 90:90:60 kilo/ha with different norms are tested before planting soybeans.

In order to detect agrochemical component of soil of experimental land before conducting experiment, samples from 5 points of diagonal layers 0-30 and 30-50 cm have been checked.

## RESULTS

According to obtained results, the soil of 0-30 cm layer of experimental lands consist of 0.725% humus, 0.061% total nitrogen amount, 0.116% phosphorus.

The arable base of the land, 30-50 cm layer contained 0.598% of humus, 0.598% of total nitrogen and the phosphorus between 0.099%.

According to information on mobile shapes of nutritional elements, the followings have been detected: the amount nitrogen on the arable layer of the soil (0-30 cm), 2.26 mg/kilo on the underneath of arable layer (30-50 cm), the mobile phosphorus on the 0-30cm layer of the soil - 15.2 mg/kilo, 11.80 mg/kilo on the 30-50cm layer of the land. The amount of substitutable potassium was 318 mg/kg in the 0-30 cm layer of soil and 282 mg/kg in the 30-50 cm layer.

### Chart 1

**The impact of norms of mineral fertilizers and frequentative crops on the amount nutritional substance, in percentage term (2016 year)**

№ treat	The layers of the soil, cm	Total form, %			Mobile form, mg/kg		
		Humus	N	P	N-NO <sub>3</sub>	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
	The beginning period of praxis (2016 year, summer)						
	0-30	0,725	0,061	0,116	3,81	15,20	318
	30-50	0,598	0,053	0,099	2,26	11,80	282
	The ending period of praxis (2016 year autumn)						
1	0-30	0,724	0,059	0,115	3,92	15,14	315
	30-50	0,596	0,052	0,097	2,33	11,65	279
2	0-30	0,749	0,063	0,119	4,25	16,01	324
	30-50	0,608	0,054	0,100	2,74	12,10	288
3	0-30	0,755	0,070	0,126	5,18	17,42	330
	30-50	0,611	0,056	0,104	3,02	12,94	294
4	0-30	0,751	0,068	0,122	5,01	16,25	326
	30-50	0,610	0,054	0,102	2,89	12,66	290
5	0-30	0,727	0,062	0,118	3,95	15,21	320
	30-50	0,599	0,053	0,099	2,36	11,92	283
6	0-30	0,754	0,067	0,122	4,36	16,84	328
	30-50	0,610	0,056	0,103	2,81	12,19	290
7	0-30	0,762	0,073	0,130	5,33	17,53	336
	30-50	0,616	0,061	0,107	3,15	13,01	298
8	0-30	0,758	0,071	0,125	5,10	16,42	330
	30-50	0,612	0,059	0,104	3,05	12,83	296

It shows that, the typical gray soil of researched land area (Scientific Research Institute of Agro technology of Cotton seed breeding and cultivation) is found to be provided with the very low



amount of nitrogen and phosphorus, and the high level of interchangeable potassium, based on the classification of nitrogen and phosphorus (presented in the chart 1).

The impact of using mineral fertilizers norms for planting and growing soybean seedlings as a frequentative crop on the agrochemical properties of the soil is observed. During the ending period of vegetation, processing the soybean seedlings before planting, using different norms of mineral fertilizers showed its effect on the amount humus in the soil. The amount of humus in the arable layer of the soil (0-30cm) is equal to 0.727% when none of mineral fertilizers have been used before soybean seedlings, while it is equal to 0.762% when NPK 30:90:60 kg/ha mineral norms is processed with nitrogen. It provided the increase in the amount of humus by 0.037% in comparison with initial indicators, while 0.033% increase was detected in the version NPK 60:90:60 kg/ha in comparison with initial indicators.

The total amount of nitrogen in the arable layer of the soil (0-30cm) is equal to 0.0627% on the occasion of not using any mineral fertilizers before soybean seedlings, while it is equal to 0.073% in the method of processing nitrogen with NPK 30:90:60 kg/ha mineral norms. This, in turn, led to the increase of 0.012% in comparison to the initial indicators before planting soybean seedlings. 0.01% increase in comparison with initial indicators was obtained in the case of implementing NPK 60:90:60 kg/ha. The above law was also observed in the total amount of phosphorus and nutritional on the mobile shapes of the composition of the soil.

The crop productivity of soybean gave the following results: The highest level of soybean productivity is obtained in the eighth version of processing soybean seedlings with Rhizobium which actively inhabits nitrogen and mineral fertilizer with the amount of NPK 60:90:60 kg/ha before planting them as frequentative after autumn wheat, the average crop is equal to 26.9 c/ha in three years; the version of experimenting without fertilizers yields 14.2 c/ha, 17.1 c/ha in the case of processing Rhizobium which actively inhabits nitrogen and without fertilizers. In the fourth version of using NPK 90:90:60 kg/ha norm yields 24.7 c/ha crop (chart 2).

**Chart 2**

**The impact of norms of mineral fertilizers on the productivity of soybean, c/ha**

№ treat	The norms of ore fertilizers, Kg/ha (NPK)	Productivity of the crop by years, cent/hectare			average
		2015	2016	2017	
1	Without fertilizer	13,1	13,6	15,8	14,2
2	N <sub>30</sub> P <sub>90</sub> K <sub>60</sub>	21,9	22,2	23,0	22,4
3	N <sub>60</sub> P <sub>90</sub> K <sub>60</sub>	25,4	26,4	27,0	26,3
4	N <sub>90</sub> P <sub>90</sub> K <sub>60</sub>	23,2	24,6	26,2	24,7
5	Without fertilizer + Nitrogen	16,2	17,1	18,0	17,1
6	P <sub>90</sub> K <sub>60</sub> + Nitrogen	19,5	20,7	21,9	20,7
7	N <sub>30</sub> P <sub>90</sub> K <sub>60</sub> + Nitrogen	25,1	26,2	27,4	26,2
8	N <sub>60</sub> P <sub>90</sub> K <sub>60</sub> + Nitrogen	26,0	27,7	27,1	26,9

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## CONCLUSIONS

The above studies indicate that, in the system crop rotation for short period, processing soybean with nitrogen before planting its seedling as frequentative crop after autumn wheat provides reduction in the expenditure of processing ore fertilizers during the growth of soybean by 20-25%, as well as serves to reduce processing norms of ore fertilizers which are used to care agriculture products during the growth of upcoming years.

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DOI: **10.5958/2249-7137.2020.00533.9**

## INTERRELATION OF LANGUAGE AND CULTURE: REFLECTION OF NATIONAL-CULTURAL TRADITIONS OF "FAMILY AND MARRIAGE" IN THE LINGUOCULTUROLOGY OF THE ENGLISH AND UZBEK PEOPLES

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### ABSTRACT

*This article is devoted to the study of the importance of the relationship between language and culture in the reflection of the traditions of "Family and marriage" inherent in the linguocultural culture of the English and Uzbek peoples. An anthropocentric approach to the study of linguistic phenomena in linguistics requires the study of the interconnectedness of language and culture, and the results of such research demonstrate their importance in interethnic relations. The connection between language and culture has been studied by many scholars since the last century. However, there are no studies devoted to linguocultural, linguistic research in the analysis of family traditions with national-cultural color, which are characteristic of the linguocultural culture of the English and Uzbek nations. The article outlines the following ways to solve the above problems. First, the theory of the interdependence of language and culture, the views of scholars on the importance of this theory in the study of the specific national and cultural characteristics of language phenomena in the linguistic culture of two or more languages are presented in the theoretical part of the article. Second, the main part of the article provides information about the concepts of "family", "family traditions" in English and Uzbek, and explains their content. Third, the types of "family and marriage" traditions inherent in the linguistic culture of the English and Uzbek peoples were identified, as well as the analysis of family traditions in English and Uzbek through English, Uzbek proverbs and sayings reflected in the linguistic landscapes of the English and Uzbek worlds. The concluding part of the article reveals the differences and peculiarities of the "family - marriage" traditions of English and Uzbek linguoculturology. To achieve this goal, content analysis methods were used, which are*

*comparative, descriptive and linguoculturological methods, as in the research methods of linguistics. Proverbs and sayings reflecting family traditions from the English and Uzbek paremeological funds were selected as the subject of the study. The results of the comparative analysis will contribute to the study of English and Uzbek languages, cultures, the development of intercultural dialogue and the prevention of conflicts and misunderstandings that may arise in it, as well as in the field of translation studies.*

**KEYWORDS:** *Linguoculturology; Uzbek Languages; Culture; Family Traditions; Intercultural Communication.*

## 1.INTRODUCTION

The growing demand for learning a foreign language can be clearly seen in recent years. One of the main reasons for this is that in the XXI century, under the influence of the development of science and technology, it has become easier to communicate with foreign countries. However, the help of technology alone is not enough to communicate with people of other nationalities. Language is the most important tool in communicating fully with people of other nationalities and cultures. After all, a person who knows a foreign language can not only speak with native speakers, but also get acquainted with the history and culture of speakers of this language, learn their worldview, thinking. Hence, language learning is directly related to a number of vital factors. One of such factors is the culture of the country where the language is studied, because in order to fully understand the opinion of a representative of a particular nation, it is necessary to be aware of his worldview and mentality. As a result, since the middle of the twentieth century, scientists have become increasingly interested in studying language not as a system but as a living organism. The study of language in relation to culture has dramatically changed attitudes toward this theory of language. The reason is that culture and language are closely intertwined, that they require each other, that culture is reflected in language. Such research contributes to the above-mentioned intercultural and interethnic dialogue. Communication between the two nations will be facilitated, the development of interstate relations in various fields: social, political, economic, cultural, etc. In strengthening the national-cultural, social relations and ties of the English and Uzbek peoples, it is possible to study the comparative, linguoculturological study of the "family traditions" of the linguistic culture of the peoples of these nations. This study examines the similarities and differences between family traditions in English and Uzbek linguoculturalism. The aim of the study is to facilitate intercultural dialogue between the British and Uzbek peoples, to provide the two nations with their first understanding of the family in their own culture, and to differentiate between the two different cultures. to prevent misunderstandings and conflicts. The results of this comparative analysis are expected to be an acceptable theoretical basis for future learners of foreign languages (English, Uzbek), researchers in culture, sociolinguistics, psycholinguistics.

As the first scholars to study the interdependence of culture and language, the American anthropologist F.J. Boas and British social anthropologist B. Malinowski should be mentioned. Boas emphasized the importance of learning by linking language and culture in 1911, noting that each of them played an important role in the development of language and culture (F. Boas, 1906). According to Professor Z.K Tarlanov, language and ethnos are inextricably linked. "Language is not only a means of communication within the ethnic boundaries of the speakers,

but also a source of knowledge passed down from generation to generation, the memory and history of the people, its culture, worldview, psyche, upbringing and preparation for life" (Z.K. Tarlanov, 1993). From the point of view of linguoculturology, the linguistic landscape of the world has a national character and reflects the national-cultural character of the speaker, and the national identity of the linguistic landscape of the world is determined by the cultural, historical development, traditions and customs, national mentality, stereotypes. "To describe the national peculiarities of the linguistic landscape of this or that world is to determine its historical and etymological origin, to show the process of linguistic formation of a particular nation's perception of the world" (R.X. Khairullina, 2001). As proof of his word, he compared words from a dictionary of two cultures. This can be seen in the following example: in the Uzbek dictionary there are two words for the baby to rest - "beshik" and "swing". Even if two devices are used for the same purpose, they are two different things. In particular, the "cradle" is a value of the culture of the Uzbek people, an element of the pineapple. In English and Russian culture, we did not find the national-cultural sign of the words "cradle" and "kolybel". In addition to objects, a certain nation reflects a particular nation, people's nationality, climate, geographical conditions, and similar factors. For example, we know that the climate in the UK is humid and its territory is often covered by rain and fog, for example, in the works of Jerome K. Jerome one can often find depictions of the English weather (J.K. Jerome, 1889). Probably, the purpose of the creation of such works is to reflect the climate of the land, the culture of that people, the richness of vocabulary. It is obvious that the English people are eager to discuss and talk a lot about nature, today's weather, natural phenomena. An even clearer example is the word "fog" mentioned above. In English-Uzbek and English-Russian dictionaries (<https://www.context.Reverso.net>), the word "district" is often used in both Russian and Uzbek. The English dictionary is much richer than this word - fog- mist, mist- gira-shira mist, haze- smoke / dust mist, brume - mist (<https://woordhunt.ru/word/fog>). This means that the number of climate-related words in English lexicon, both in terms of content and number, has become a stereotype in the linguistic landscape of the English world. Yu. S. Stepanov writes: "Language is created in the human model, and this dimension is sealed in the structure of language itself, and language must be studied accordingly" (Stepanov, 1985). In this opinion, the scientist wants to emphasize that language is the most important thing in human life, it is a human model, a copy.

Today, language is also studied by psycholinguistics and sociolinguistics. Regarding the study of the relationship between culture and language, we can cite the opinion of V.A. Maslova: "Language is inextricably linked with culture: language emerges from culture, develops in it and expresses culture" (V.A. Maslova, 2001). As a confirmation of the above idea, E. It is worth quoting Bartminsky's comment: "The process of stereotyping of culture and language is a question of the development and socialization of this ethno-society. Therefore, it is one of the most important questions to be studied" (E. Bartminsky, 2005). Much here is determined by the physiological and psychophysiological capabilities of speech activity. For example, in all the languages of the world, the existence of a chain of exchange of vowels and consonants, as well as many sounds, is connected with nature, not with culture. Consequently, man cannot form a speech with vowels or consonants alone. Russian sociologist N. B. Mechkovskaya claims: "On the relationship between language and culture, he writes: "Nature determines the deep features of the structure of language and the laws of text formation and reception. Culture, on the other hand, determines the content of language" (Mechkovskaya, 2000). For centuries, the problem of language and culture has been multifaceted, which is why cultural scientists, linguists,



philosophers, psychologists, ethnographers and literary critics have different approaches to this issue. However, the linguistic side of the issue is largely twofold, as language and culture are interrelated. Accordingly, two questions arise: 1) how do different cultural processes affect language? 2) How does language affect culture? The opinion of the Russian linguist G.O. Vinokur that “any linguist who studies a language, of course, the language of his choice becomes a researcher of the culture of which it is a product” (Vinokur, 1959) has already been confirmed. Gerder writes, “The four basic phenomena of human activity are intertwined: language, culture, society, and national spirit. Language, by its very nature, is associated with culture, and it evolves with society. The organic connection of language with culture makes it an important component of the national spirit ”(Gerder, 1977). The relationship between language and culture is described in detail in Wilhelm von Humboldt's *The Differences in the Structure of Human Languages and Their Influence on the Spiritual Development of the Human Being* (Humboldt, 1984). 2) any culture is national, its national character is expressed in language through a specific means of seeing the world; the language has its own internal form peculiar to each nation; 3) the internal form of language is an expression of the "spirit of the people" and its culture; 4) language is the ring between man and the world around him (V. Humboldt, 1984). Sepir can be mentioned the scholar who has studied the connection between language and culture most deeply and comprehensively. E. Sepir's "Selected Works on Linguistics and Cultural Studies" covers issues related to "language and culture". It also raises the question that causes the most observation - did language come into being first or was it culture? He answers: “... language originated before culture, because language was considered a means of expressing meaning in relation to culture. Language appears as the main form of national culture and its expression, but according to Sepir, language is a product of social and cultural development, and language is a socialized part of culture ”(Sepir, 1993). Both culture and language require conceptual choice. Second, both languages and cultures are rarely self-sufficient. E.Sepir explained the difference between these two phenomena as follows: “Culture can be determined by what society does and thinks, and language by how it thinks” (E.Sepir, 1993). In determining the place of language in intercultural communication, GS Ter-Minasova concludes that language is not only a means of communication, a way of communicating to the listener, but also a way of life, its cultural level, the culture of a particular nation, tradition. -The main weapon in the expression of customs, traditions, values, their world is the weapon of culture (G.S.Ter-Minasova, 2000).“Thus, language, thought, and culture are so closely intertwined that, in practice, they form an integral whole consisting of the same three elements, none of which can exist or exist without the other two. Together, they interact with the real world, oppose it, depend on it, reflect it and at the same time shape it ”(G.S.Ter-Minasova, 2000) writes G.S.Ter-Minasova. Indeed, if we take the culture of a nation, how will that nation pass on its cultural heritage to the next generation over the centuries? How do the values and traditions of a community, a family, come to life? The only answer to these questions is, of course, through language, speech, and oral or written expression. K. Levi-Strauss writes: “Language is both a product of culture and an important component and a condition of the existence of culture. In addition, language is a factor in the code of culture formation, a unique way of culture's existence ”(K. Levi-Strauss, 2001). In other words, learning a language and culture is learning the whole and half of it.

The family is a social stratum formed by the division of a vast generation. The main components of the family are husband and wife, children. Family members will be interconnected with each



other as spiritual, social, material and other needs. The Arabic word “family” is a horse with the suffix at (un) of the verb “ala” meaning “looking after the dependents” and means a social group in which parents and children live together (Dictionary, 338). “However, the cultural context of the family also includes the extended family. They are non-blood members who entered the family through marriage”(Williams, Sawyer & Whlstorm, 2005).

Recognition of the interdependence of language and culture serves for a deeper understanding of the concepts that exist in language. However, each concept belongs to a particular people, nation, culture. One such concept is "Family Traditions", which is unique to the culture of each nation. The family traditions that have been formed since ancient times, passed down from generation to generation, and have been formed to this day, have been reflected in the linguistic culture of the English and Uzbek languages. According to the Glossary of Modern Uzbek Active Words, “tradition” is “... attitudes, customs, rituals, attitudes, customs, traditions, etc., passed down from generation to generation over the centuries (Glossary of Modern Uzbek Active Words, 2001). “Family is not only a concept described by its family members, but also defined by its dynamics. Family dynamics refers to the ways in which families communicate with each other. These include traditions, behaviors, types of communication, and emotional freedom (Bowen, 2011).

## 2. MATERIALS AND METHODS

### 2.1. *Instruments.*

To conduct the research, a dictionary of articles containing English and Uzbek folk proverbs and examples from the literature were used. was made. The dictionary of proverbs includes articles on family traditions, in particular, family and marriage - rituals, customs, values, traditions in both languages, and according to the content of the articles they are divided into the following subgroups:

- 1) The tradition of choosing a future spouse;
- 2) Matchmaking traditions
- 3) Wedding ceremonies;
- 4) Peculiarities of married life

So, the articles were selected and they were compared between the two languages. In the process of comparison, similarities, differences and peculiarities of the above-mentioned family traditions in English and Uzbek linguoculturology were identified.

#### 2.1.1. *For example.*

The Uzbek proverb "Let there be a wedding, even if it is Atala" means that the wedding is such a good event, it ends with the formation of a new family, which is why you have to have a wedding, even if it is small. The process of marrying the children of both parties is said to be the most interesting and exciting part of the wedding. It is known that the wedding of the Uzbek people is impossible without advice. The owner of the wedding usually makes a wedding plan in consultation with relatives, neighborhood, friends. The same relationship is reflected in these proverbs: "The wedding will be with the council", "The wedding belongs to everyone, to the bride". In English culture, the day and the moon play an important role in the wedding: "Marry in May, rue for age", that is, they believe that a certain moon is unlucky for a wedding. The

proverb “One wedding brings another” is considered to be an event that brings joy and happiness to a wedding. However, in the culture of the English people, marriage is also manifested as an event that deprives a person of liberty, which is likely to be half-true, half-joking. This can be understood in the following articles: “Better to marry than to bury”, “Wedlock is a padlock”.

### **3.Results.**

The analysis shows that family traditions in English and Uzbek linguoculturologys are similar, different and unique, that is, have unique features. There are sharp differences in the tradition of choosing a future spouse, if the representatives of English culture say that the person who wants to get married is the right decision, in the Uzbek nation a young girl or boy usually chooses a husband or wife with the thoughts and advice of parents. The tradition of courtship is a kind of irony and humor in English culture. We came to this conclusion after analyzing the examples in the studied English classical literature. Since there are traditions in English culture that are now disappearing, there are no English proverbs and sayings that express this tradition. In Uzbek linguoculturology, on the other hand, the opposite is true, the tradition of gift-giving has survived to the present day, and this tradition is reflected in Uzbek proverbs. In addition, Uzbeks are positive about the tradition, emphasizing that it has a role to play in helping young people get married in the future. We found that a comparative analysis of wedding ceremonies was largely based on religious beliefs. English weddings are held in the church on the basis of Christianity, following certain customs, and in the Uzbek nation, marriages are performed in accordance with the rules of Islam. The main similarity is that in both Uzbek and British weddings take place in the company of family and friends with joy, fun, celebration. Life after marriage is life in marriage, and the proverbs of both nations have henceforth studied the proverbs that reflect the traditions of husband and wife living together in the same house. If the English people consider marriage in most proverbs to be a prison, a lock, a deprivation of liberty, in the Uzbek people it symbolizes happiness on the one hand, and the struggle to overcome the difficulties of marriage on the other.

### **4.DISSCUSSIONS**

The analysis confirms the hypothesis put forward in the results of our study. The comparative analysis showed that the family traditions of English and Uzbek linguistics are not identical and do not differ radically, on the contrary, the family traditions of both nations are derived from the culture, mentality, worldview, religion, beliefs, climate, geography of these nations.

This research work we have conducted is interrelated with scientific research in the fields of linguistics and linguocultural studies. Because the main purpose of linguoculturology is to illuminate the linguoculturology of a nation through these linguistic language units. The results of this research will naturally contribute to the development of linguoculturology, sociolinguistics, psycholinguistics, because tradition, values are part of a higher level of culture, these traditions have their own social status among people, so family and family traditions are unique to each nation greatly contributes to the improvement of the sciences.

Future research on the comparative study of family traditions requires not only linguistic, linguoculturological, but also sociolinguistic and psycholinguistic approaches.

## 5.CONCLUSION

The family traditions reflected in the linguistic landscapes of the English and Uzbek worlds more clearly explain the concept of the direct family. However, the definition of the concept of family in a cultural context shows that universal experience serves as a general condition for learning. At the same time, the uniqueness of these traditions is reflected in English and Uzbek lexicons, proverbs as well. Figurative national components such as "Sovchilik" and "Toi" are strengthened in English and Uzbek languages through the actualization of certain situations, stereotypes, national mentality and psychology in the understanding of the English and Uzbek peoples. What defines "Uzbekness" in the linguistic landscape of the Uzbek world? In our opinion, it is primarily due to the spirit of the Uzbek people, its way of life, the quality of the phenomena of "Uzbek pride", "childish people", formed over thousands of years of history and culture of the Uzbek people and embodied in their ideas about life, people, traditions and mentality. determined. Thus, in the linguistic landscape of the Uzbek world, the originality of family and marriage traditions arising from the Uzbek character is reflected. The landscape of the "English" world in English is characterized by original national-cultural traditions and ceremonies. The nature of calmness, courtesy, gentleness, gentleness of the representatives of the Royal State developed and formed on the basis of the established rules of etiquette of the Royal Family, and the name "English character" is passed down from generation to generation. Thus, the family and marriage traditions of the English people, reflected in the linguistic landscape of the English world, reflect not only the national mentality, life experience, but also the rules of etiquette and morals established thousands of centuries ago, the emotional, positive qualities of the English people.

Our research consists of analyzes that support the multifaceted relationship between the British and Uzbek peoples over a number of years, and to some extent contribute to the solution of problems and issues that may arise in the social sphere between the representatives of these two nations.

The analysis of family and marriage traditions of the two nationalities compared in the article is not only a practical aid to the learner of this or that language and culture, but also rich in facts aimed at resolving possible conflicts and misunderstandings between them.

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DOI: **10.5958/2249-7137.2020.00534.0**

## THE PROBLEM OF CLASSIFICATION OF LITERARY TERMS IN “THE CONCISE OXFORD DICTIONARY OF LITERARY TERMS” BY CHRIS BALDICK

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### ABSTRACT

*The degree of study and significance of literary terms are carried out in the given article. The article gives information about the significant aspects of dictionary by Chris Baldick “The Concise Oxford Dictionary of Literary Terms” and semantic analysis of literary terms. Terms belong to epic, lyric and dramatic literary forms are discussed and the analyses of some literary terms given by Chris Baldick are explained in the article.*

**KEYWORDS:** Terminology, Literary Terms, Concept, Etymology, Dictionary, Prose, Poetry, Epic, Lyric, Drama, Chiasmus, Decorum.

### INTRODUCTION

The analysis of scientific literature indicates that the terms in different spheres were not studied identically. The study of terminology in former USSR was led off in 1931 publishing D. Lotte's work on the technical terminology [see Lotte 1931], followed by E. Drezen in 1934, by G. Vinokur in 1939 and in 1986 by A. A. Reformatsky. On the basis of these studies, the main directions of working on terminology were defined: A.A.Reformatsky (1986), B.N Goloven (1981), N. P. Kuzkin (1962), L.Kapanadze (1965) and others studied the terminology, O.S.Akhmanova(1990), V.P.Karpovich (1978), R.Yu. Kobrin(1991), V.M.Leychik (1986), V.D.Tabanakova (1998), E.N.Tolikina and others worked on semantic features of terminology, A.S.Gelt (1991) focused on the relationship between terminology and nomenclature units, M.V. Oganisyan (2003), O.V.Dovbysh (2003), S.V.Sakhneevich (1998) on translation problems of terminology and Z.M. Polyutina (2002) studied civilization approaches on terminology.

## MATERIALS AND METHODS

The scientific and practical studies about linguistic terms are based on ideas of Akhmanova (1966, 1990), Vasileva (1998), Gwishiani (1986, 1990), Golovin (1976), Kulikova (2002), Petrosyants (2004), Podolskaya (1988), Slyusarova (1983, 2000), Shelov (1998) and others. In recent years, studies on linguistic terms have been published and we can see these studies on Roman language terminology in works of Nikulina (1990), Utkina (2001), Emelyanova (2000), Vermeer (1971), Zakharenkova (1999), German (1990), Golovkina (1996) [7, 11-41].

If we pay close attention to the aforesaid studies, we can see that literary terms which is the object of our research project has been studied relatively rarely in Slovenian, Roman and German languages. Therefore, the study of philosophical, cultural, ethical, aesthetical, religious, linguistic, and especially literary terms are one of the pressing issues.

According to E.G.Petrosyants, there are currently more than 70 dictionaries, encyclopaedias and reference books on linguistics. However, dictionaries, encyclopedias and reference books on literary terms are relatively rare. This situation indicates that the terms of literature have not been adequately studied and information on them is not systemized [7; 11-41].

The problem of literary term system has already been one of the most controversial issue that is not a completely new field of study. It has developed and is still developing from the simple human need to name and identify. Its precise definition and scope are, however, still not clearly defined. During the past several decades, the theory of terminology has been a subject of debates in various circles. According to certain sources there are four scholars can be identified as the intellectual fathers of terminological theory: “Alfred Schulman from Germany, the first one to consider the systematic nature of special terms; the Swiss linguist Ferdinand de Saussure, the first one to have drawn attention to the systematic nature of language; E. Dresen, a Russian, a pioneer in underscoring the importance of standardization; and J. E. Holmstrom, the English scholar from UNESCO, who was instrumental in disseminating terminologies on an international scale” [3; 56].

Chris Boldick's “The Concise Oxford Dictionary of Literary Terms” was first published in 1990 and republished in 1991 by Oxford University Press. This was followed in 1996 by a revised edition of the new volume. The second edition, which was chosen to investigate for our work was published in 2001. “The Concise Glossary of Literary Terms” by Chris Boldick is a book of hard words alphabetically arranged and briefly explained. It cannot purport to fulfil the functions of a balanced expository guide to literary criticism or literary concepts, nor does it attempt to catalogue the entire body of literary terms in use. It offers

instead to clarify those thousand terms that are most likely to cause the student or general reader some doubt or bafflement in the context of literary criticism and other discussion of literary works. Rather than include for the sake of encyclopaedic completeness all the most common terms found in literary discussion, I have set aside several that I have judged to be sufficiently well understood in common speech (*anagram*, *biography*, *cliche* and many more), or virtually self-explanatory (*detective story*, *psychological criticism*), along with a broad category of general concepts such as *art*, *belief*, *culture*, etc., which may appear as literary critical problems but which are not specifically literary terms. This policy has allowed space for the inclusion of many terms generated by the



growth of academic literary theory in recent years, and for adequate attention to the terminology of classical rhetoric, now increasingly revived. Along with these will be found hundreds of terms from literary criticism, literary history, prosody, and drama. The selection is weighted towards literature and criticism in English, but there are many terms taken from other languages, and many more associated primarily with other literatures [2; 3].

## DISCUSSION

This article is devoted to the semantic classification of “The Concise Oxford Dictionary of Literary terms” written by Chris Baldick that includes literary forms: prose, poetry and drama. Before starting our classification it would be better to give some brief information about these literary forms.

Poetry evokes a concentrated imaginative awareness of experience or a specific emotional response through language chosen and arranged for its meaning, sound, and rhythm. It is a vast subject, as old as history and older, present wherever religion is present, possibly—under some definitions—the primal and primary form of languages themselves [8; 119].

It is known that prose is a form of language that exhibits a natural flow of speech and grammatical structure rather than a regular rhythmic structure as in traditional poetry, where the common unit of verse is based on metre or rhyme. Though, as T. S. Eliot noted, while “the distinction between verse and prose is clear, the distinction between poetry and prose is obscure” [5; 76]. Developments in modern literature, including free verse and prose poetry have tended to blur any differences. And the drama is a mode of fictional representation through dialogue and performance. It is one of the literary genres, which is an imitation of some action. ... In simple words, a drama is a composition in verse or prose presenting a story in pantomime or dialogue.

## Results

We tried to classify 1060 literary terms of “The Concise Oxford Dictionary of Literary terms” by Chris Baldick. We have found out that 160 of these terms are devoted to prose, while of terms are 328 to poetry, 109 terms belong to drama, 210 terms can be included to all three literary forms: prose, poetry and drama and 56 terms which defines figurative language were included to this group as well. When working with the dictionary, we came across terms that do not belong to any of the thematic groups we have identified. Although they are literary terms, they do not belong to any of the literary forms or genres, they are simply literary concepts. We have formulated similar terms as a separate group. And remained 197 terms were included into this group.

Here we will try to give examples of terms related to prose, poetry, and drama: *chiasmus* [ky-az-mus] (plural-mi), a \*FIGURE OF SPEECH by which the order of the terms in the first of two parallel clauses is reversed in the second. This may involve a repetition of the same words ('Pleasure's a sin, and sometimes sin's a pleasure'—Byron), in which case the figure may be classified as \*ANTIMETABOLE, or just a reversed parallel between two corresponding pairs of ideas, as in this line from Mary Leapor's 'Essay on Woman' (1751):

***Despised, if ugly; if she's fair, betrayed.***

*The figure is especially common in 18th-century English poetry, but is also found in prose of all periods. It is named after the Greek letter chi (X), indicating a 'criss-cross' arrangement of terms [2; 38].*

The definition of the term above refers to figure of speech, that is, concrete concept. It is known that in any type of literary form or genre we can face the usage of such devices. The author also gives a few examples to prove his point. As with all terms, the author relies on broad and narrow meanings in his interpretation of the term. And, as always, it goes from narrowly interpreting the term to its broader meaning. In general, since figures of speech are found in prose, drama, and poetics, we decided to include this term in this group.

***decorum** [di-kor-um], a standard of appropriateness by which certain styles, characters, forms, and actions in literary works are deemed suitable to one another within a hierarchical model of culture bound by class distinctions. Derived from Horace's *Ars Poetica* (c.20 BCE) and other works of classical criticism, decorum was a major principle of late \*RENAISSANCE taste and of \*NEOCLASSICISM. It ranked and fixed the various literary \*GENRES in 'high', 'middle', and 'low' stations, and expected the style, characters, and actions in each to conform to its assigned level: thus a \*TRAGEDY or \*EPIC should be written in a high or 'grand' style about high-ranking characters performing grand deeds, whereas a \*COMEDY should treat humble characters and events in a 'low' or colloquial style. The mixture of high and low levels, as in Shakespeare, was seen as indecorous, although it could be exploited for humorous effect in \*BURLESQUES and \*MOCK-HEROIC works. The strict application of these principles of decorum was overturned by the advent of \*ROMANTICISM; although in a general sense writers always suit style to subject-matter according to their purposes [2; 61].*

This term is a term that falls into the last group, which does not belong to any of the literary forms or genres, it is simply a literary concept. According to this definition, there must be differences between each literary genre. It is emphasized that there should be differences in their writing style, characters, and even the behavior of the characters. It is also expected that there are differences between the different genres belonging to the same forms. For example, comedy should be distinguished from tragedy by the actions, lives, and even speech of the protagonists. As in the definition of all terms, the history of the origin of the term and the stages and manifestations of its development are given first.

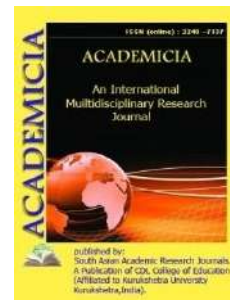
**CONCLUSION**

The formation and development of literary terms are inextricably linked with the development of word art and literary criticism, as well as literary language. The main purpose of *The Concise Oxford Dictionary of Literary Terms* by Chris Baldick was not to explain common terms, but to explain pure literary terms that are difficult to understand. . The terms in the book are arranged alphabetically, and the dictionary contains more than 1,000 terms. On the whole, it does seem that "The Concise Oxford Dictionary of Literary terms" written by Chris Baldick is one of the most important and useful dictionaries with full of literary terms. We have found out that 32 percentages of the terms are devoted to poetry, while 16 percentages of terms are on prose, 10 percentages belongs to drama, 26 percentages can be included to the group of terms which takes prose, poetry and drama. And other 16 percentages terms do not belong to any of the literary forms or genres, they are simply terms which define literary concept. To conclude, we can say

that definitions and explanations given in “The Concise Oxford Dictionary of Literary terms” are plain and easy to understand, especially for those who are interested in literary terms.

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DOI: **10.5958/2249-7137.2020.00535.2**

## ORGANIZATION OF COMPUTER MONITORING IN ASSESSING STUDENT KNOWLEDGE OF A COMPUTER SYSTEM

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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*

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

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### 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.

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## LITERATURE REVIEW

The strategy we used to create the search strings was as follows [4] [20]: • 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] [20] that there are two main issues on conducting an SLR search which are the sensitivity and specificity of the search. In our preliminary search, when we used the complete search string defined above we retrieved a very high number of articles. For instance, Google scholar, Scopus, ProQuest education, IEEEExplore, Science Direct, Springer Link retrieved more than two hundred results. Therefore, we have deepened our search and used this search string: (Adoption OR Usage) AND (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. [9]

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. [10]

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. [11]

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. [12]

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 [13].

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. [14]

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. [15]

"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. [16]

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. [17]

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. [18]

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. [19]

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. [21]

## 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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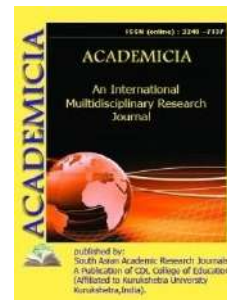
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DOI: **10.5958/2249-7137.2020.00587.X**

## IMPACT OF RASHTRIYA SWASTHYA BHIMA YOJANA IN HEALTH SECTOR DEVELOPMENT IN MALABAR REGION (KERALA)

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### ABSTRACT

*The benefit is administered by a central organization such as a government agency, private business, or not-for-profit entity. Even then large amount of people are there who are not able to take the advantage of the same due to some reasons mainly concerning to income. Rashtriya swasthya bhima yojana is such a scheme that mainly focuses on the low income category and enables them to have better and cashless hospitalization. Pre-existing conditions are covered from day one and there is no age limit. Coverage extends to five members of the family which includes the head of household, spouse and up to three dependents. Beneficiaries need to pay only Rs. 30/- as registration fee while Central and State Government pays the premium to the insurer selected by the State Government on the basis of a competitive bidding. The benefit is administered by a central organization such as a government agency, private business, or not-for-profit entity. According to the Health Insurance Association of America, health insurance is defined as "coverage that provides for the payments of benefits as a result of sickness or injury."*

**KEYWORDS:** Hospitalization, Pre-Existing, Sickness Or Injury, Beneficiaries

### INTRODUCTION

Insurance is the equitable transfer of the risk of a loss, from one entity to another in exchange for payment. It is a form of risk management primarily used to hedge against the risk of a contingent, uncertain loss.

Health insurance is insurance against the risk of incurring medical expenses among individuals. By estimating the overall risk of health care and health system expenses, among a targeted group, an insurer can develop a routine finance structure, such as a monthly premium or payroll

tax, to ensure that money is available to pay for the health care benefits specified in the insurance agreement. The benefit is administered by a central organization such as a government agency, private business, or not-for-profit entity. According to the Health Insurance Association of America, health insurance is defined as "coverage that provides for the payments of benefits as a result of sickness or injury.

RSBY has been launched by Ministry of Labour and Employment, Government of India to provide health insurance coverage for Below Poverty Line (BPL) families. The objective of RSBY is to provide protection to BPL households from financial liabilities arising out of health shocks that involve hospitalization. Beneficiaries under RSBY are entitled to hospitalization coverage up to Rs. 30,000/- for most of the diseases that require hospitalization. Government has even fixed the package rates for the hospitals for a large number of interventions. Pre-existing conditions are covered from day one and there is no age limit. Coverage extends to five members of the family which includes the head of household, spouse and up to three dependents. Beneficiaries need to pay only Rs. 30/- as registration fee while Central and State Government pays the premium to the insurer selected by the State Government on the basis of a competitive bidding.

Rashtriya Swasthya Bima Yojana or RSBY started rolling from 1st April 2008.

### **CONCEPTUAL BACKGROUND OF STUDY**

The root cause for the emergence of study is the increased number of health issues among the common public and the unavailability of sufficient resources to get rid of the same. The study gives an insight and an increased amount of awareness regarding cashless hospitalization for the deprived group of society.

### **OBJECTIVES OF STUDY**

- To elicit the public opinion regarding RSBY.
- To know the merits and demerits of the RSBY scheme
- To analyze the extent of success in implementing the scheme in Malabar Region.
- To estimate the type of disease for which maximum the scheme is utilized in relation to age.
- To assess the hospitalization care provided for the RSBY card holders.
- To measure the satisfaction level of beneficiaries of RSBY scheme.

### **SCOPE AND LIMITATIONS OF THE STUDY**

The study is aimed at identifying the role played by RSBY scheme in developing the health sector in entire Malabar region. The study is intended to analyze the extent of success in implementing the scheme in Malabar Region and to know the hospitalization care provided for the RSBY card holders. Further, focus is put on measuring the level satisfaction of beneficiaries of RSBY scheme.

This study is not exception to limitations because, people were reluctant to give answers as they had a thought that it may affect them adversely. There is lack of awareness among people regarding the scheme hindered them from giving more reply. Further, the sample size is too small when compared to the total population.



**RESEARCH METHODOLOGY****RESEARCH DESIGN**

Descriptive research has been made use in the work.

**SAMPLING METHODOLOGY****POPULATION:**

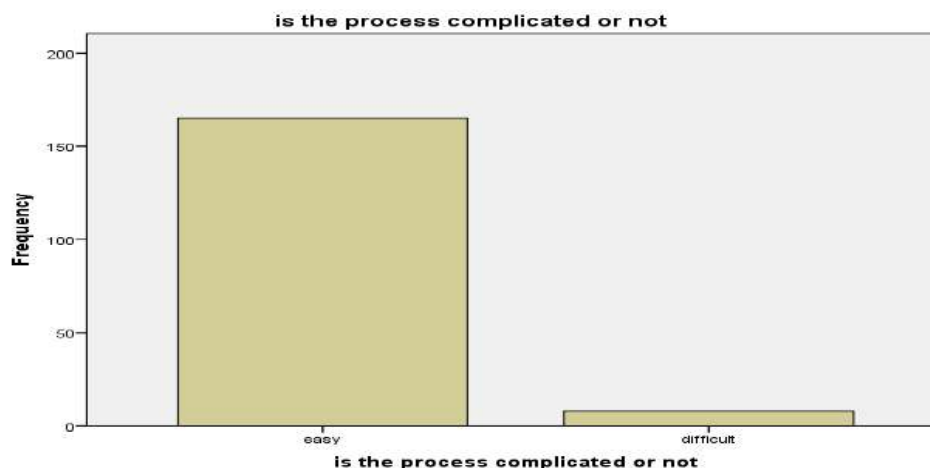
RSBY beneficiaries of Malabar region forms the population of the study

**SAMPLING TECHNIQUE:** convenient sampling

**SAMPLE SIZE** : sample size of the study is 173.

**RESULTS AND DISCUSSIONS:****OBJECTIVE1****TO IDENTIFY THE PUBLIC OPINION REGARDING RSBY****RSBY PROCESS**

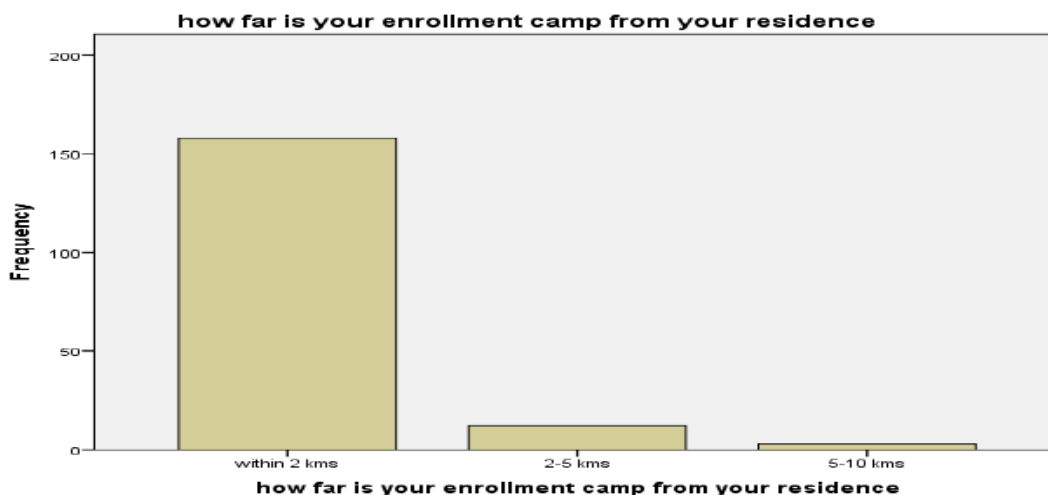
	Frequency	Percent
Easy	165	94.4
Difficult	8	4.6
Total	173	100



About 94.4% people opines that the process of getting enrolled under RSBY scheme is easy, whereas 4.6% opines that it is difficult

**ENROLLMENT CAMP AND RESIDENCE**

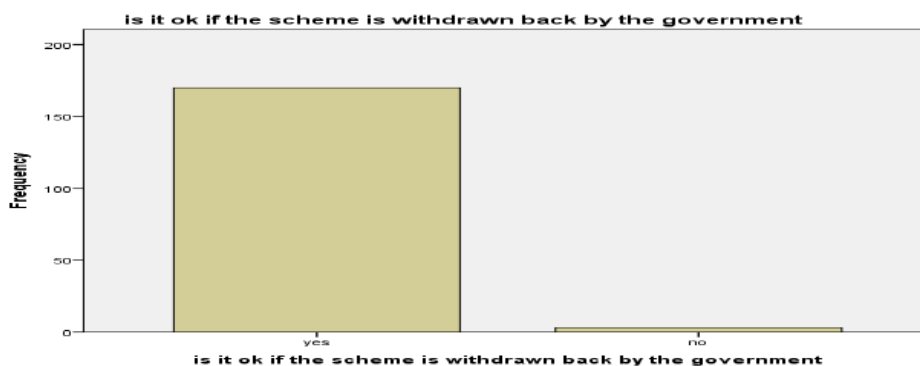
	Frequency	Percent
Within 2 kms	158	91.33
2-5 kms	12	6.93
5-10 kms	3	1.2
Total	173	100



Most of the enrollment camps are situated within 2 kms from the respondent's residence that is 91.33%

#### SCHEME WITHDRAWAL BY GOVERNMENT

	Frequency	Percent
yes	170	97.8
No	3	1.2
Total	173	100



About 170 respondents are against the decision if the scheme is withdrawn by the government and it is not an area of concern for 3 respondents

#### OBJECTIVE:2

#### TO KNOW THE MERITS AND DEMERITS OF RSBY SCHEME

#### MERITS

The merits and demerits are arrived at after studying the RSBY website and also through direct interview with the respondents

- Cashless hospitalization
- Enrollment of whole families under single scheme
- Premium free insurance coverage
- Helpful for low income people

### DEMERITS

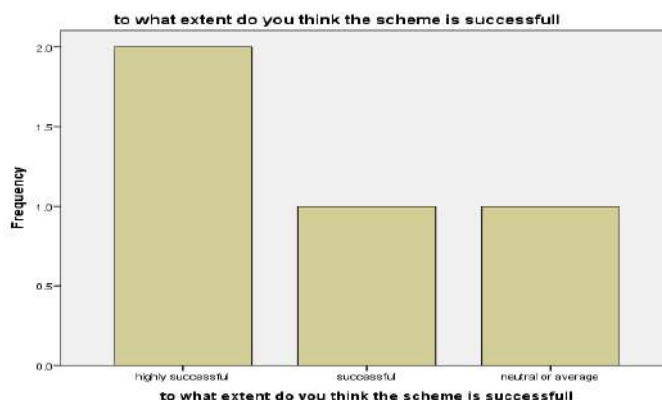
- Not fully advantageous for joint families
- Low income people who falls under above poverty line are excluded
- The amount provided for 5 members is insufficient in many cases.
- Claim settlement process is too lengthy

### OBJECTIVE3:

#### TO ANALYZE THE EXTENT OF SUCCESS IN IMPLEMENTING THE SCHEME

#### EXTENT OF SUCCESS FOR RSBY SCHEME

	Frequency	Percent
highly successful	2	50.0
successful	1	25.0
neutral or average	1	25.0
Total	4	100.0



According to the hospital authorities, the scheme is highly successful that is about 50% and 25% opines it is just successful and rest 25 is neutral

### OBJECTIVE:

4

TO ESTIMATE THE TYPE OF DISEASE FOR WHICH MAXIMUM THE SCHEME IS UTILIZED IN RELATION TO AGE.

### CHI-SQUARE TEST

H0: there is no significant association between age of the respondent and the disease suffered

H1: there is significant association between age of the respondent and the disease suffered

		Disease For Which Treatment Is Aailed				Total
		Medical	Surgical	Obstetrics/Gynecological	Others	
Age Of The Respondent	21-30	35	0	0	0	35
	31-40	49	0	0	0	49
	41-50	29	36	0	0	65
	More Than 50	0	14	8	2	24
Total		113	50	8	2	173

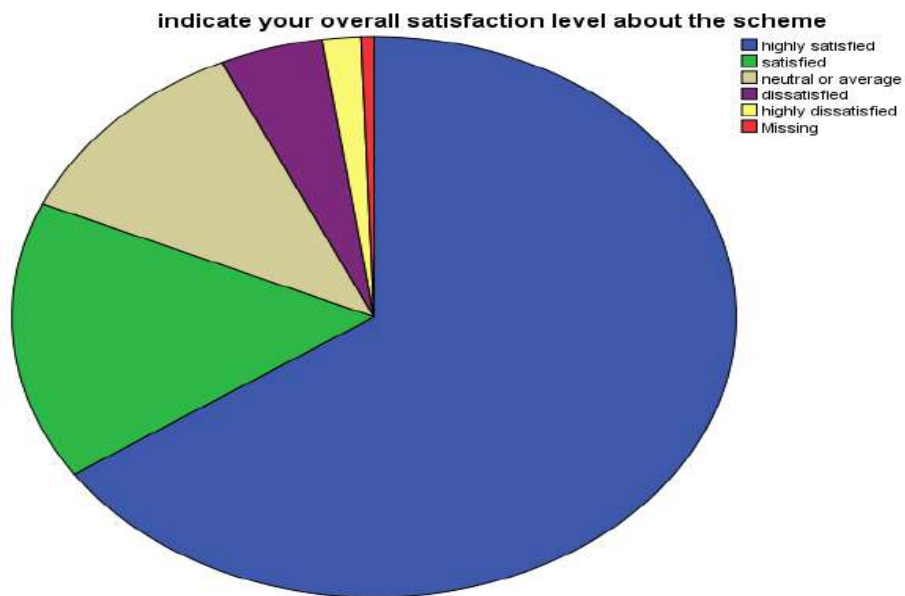
	Value	df	Asymp. Sig. (2-Sided)
Pearson Chi-Square	144.737 <sup>a</sup>	9	.000
Likelihood Ratio	155.440	9	.000
Linear-By-Linear Association	87.130	1	.000
N Of Valid Cases	173		

From the above table it is clear that the Chi square value is 0.000. Since the value is lesser than 0.05, null hypothesis is rejected and alternative hypothesis is accepted. There is significant association between age of the respondent and diseases suffered

## OBJECTIVE: 5

### OVERALL SATISFACTION LEVEL OF BENEFICIARIES TOWARDS THE SCHEME

Particulars	Frequency	Percentage
Highly Satisfied	114	65.5
Satisfied	28	16.1
Neutral Or Average	20	11.5
Dissatisfied	8	4.6
Highly Dissatisfied	3	1.7



The overall satisfaction level of the respondents towards the scheme is high. 114 people are highly satisfies, 28 satisfied, 20 neutral, 8 dissatisfied and 3 respondents highly dissatisfied

#### CHI SQUARE TEST

4. H0: there is no significant association between number of patients treated and success of the scheme.
5. H1: there is significant association between number of patients treated and success of the scheme.

		To What Extent Do You Think The Scheme Is Successful			Total
		Highly Successful	Successful	Neutral Or Average	
How Many Patients Have Been Treated Under This Scheme Till Now	400-500	0	1	0	1
	Above 500	2	0	1	3
Total		2	1	1	4

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-Sided)
Pearson Chi-Square	4.000 <sup>a</sup>	2	.135
Likelihood Ratio	4.499	2	.105
Linear-By-Linear Association	.091	1	.763
N Of Valid Cases	4		

From the table we can see that the chi-square value is greater than 0.05 so we accept the null hypothesis and reject the alternative hypothesis. There is no significant association between number of patients treated and success of the scheme

### FINDINGS

- Among the total respondents, majority portion is occupied by males rather than females.
- Major consumers of this insurance scheme are Muslims and that too mainly with a family size of 4 members.
- Majority of the respondents have not acquired higher studies. most falls under the category up to 10<sup>th</sup> class
- Scheme is having high confidence in the minds of public with regard to enrollment process, further formalities and claim settlement.
- According to the hospital authorities, the scheme is highly successful that is about 50%
- Age of the respondent and the disease suffered are having greater amount of association.
- The overall satisfaction level of the respondents towards the scheme is high.. 114 people are highly satisfies, 28 satisfied, 20 neutral, 8 dissatisfied and 3 respondents highly dissatisfied

### SUGGESTIONS

- More mount of awareness must be provided about the scheme so that all the low income people can avail to this insurance scheme.
- Claim settlement must be made faster.
- Implementation of latest software should be made.
- Proper training and education to be given to the associated people.
- Efforts must be made to increase the money amount and also the number of members that can be covered under the scheme.

### CONCLUSION

Health insurance sector is improving day by day. Even then large amount of people are there who are not able to take the advantage of the same due to some reasons mainly concerning to income. Rashtriya swasthya bhima yojana is such a scheme that mainly focuses on the low income category and enables them to have better and cashless hospitalization. This enriches the



health of the general public by availing better treatment. It covers about 5 members in a family and provides sufficient amount for each year of enrollment. This has drastically improvised the health sector in Malabar region.

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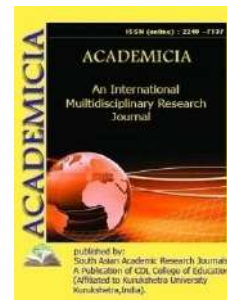
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DOI: **10.5958/2249-7137.2020.00656.4**

## COVID-19: TOURISM HAS BEEN HIT HARDEST BY THE PANDEMIC

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### ABSTRACT

*Due to the spread of the 2019-nCoV coronavirus, which the World Health Organization has recognized as a pandemic, thousands of popular tourist destinations around the world have been banned. The article examines the impact of the pandemic on the tourism sector. Forecasts and reports of the WTO and other international organizations are analyzed. Recommended ways to resume air traffic, which were adopted by a Special Commission of the Republic of Uzbekistan.*

**KEYWORDS:** *Impact of Pandemic On Tourism, Long-Term Existence, Red Flights, Safety Of Tourism, Health Risks, Tourist Arrivals*

### INTRODUCTION

The COVID-19 pandemic has had a significant impact on tourism industry due to the resulting travel restrictions as well as slump in demand among travelers. The tourism industry has been massively affected by the spread of corona virus, as many countries have introduced travel restrictions in an attempt to contain its spread. The United Nations World Tourism Organization estimated that global international tourist arrivals might decrease by 20-30% in 2020, leading to a potential loss of US\$30-50 billion. In many of the world's cities, planned travel went down by 80-90%. Many tourist attractions around the world, such as museums, amusement parks and sports venues are closed.[1]

Today, tourism is among the sectors most affected by the effects of the COVID-19 pandemic. According to UNWTO estimates, the number of international tourist arrivals at the global level may decrease by 30% this year, which will consequently lead to a reduction in international tourism revenues by about 450 billion US dollars.<sup>1</sup>

During such a difficult period, the COVID - 19 pandemic affected all sectors of the economy, and the tourism industry was also vulnerable to the threat of corona virus. Experts have begun to forecast the state of the economy in recent months, and estimate that the world economy is at the stage of the crisis, along with this, the tourism sector has also lost huge billions. However, each subsequent crisis created opportunities for the development of other types of services in the tourism industry. For example, after the financial crisis in 2008, sales of tour packages fell sharply, but services such as Airbnb and BlaBlaCar began to develop, allowing consumers to travel and create their own tours economically.

### **Literature review on the topic**

After the World Health Organization declared the situation associated with the corona virus outbreak a pandemic, many scientists around the world began to devote their scientific work to forecasts of its impact on various sectors of the economy of both countries and the world.

“Compared to other major sectors of the economy, tourism has suffered the most from the [COVID-19] pandemic: because countries have closed their borders, people are staying at home,” said Zurab Pololikashvili[2], Secretary-General of the World Tourism Organization. He called on governments to quickly ease and then lift restrictions on movement as soon as it is safe to do so.

Tourism, he claimed, “is vital for the millions of people employed in this sector, especially in developing countries.” The restoration of tourism will allow people to return to their jobs and ensure the flow of funds necessary for the development of countries as a whole.

In foreign and domestic scientific literature and journals on tourism, it is the lack of research work to assess the impact of the COVID-19 corona virus pandemic on the tourism industry and the lack of coverage of scientific research on the safety of tourists in tourist destinations that shows how this problem is scientifically relevant. This research work was studied only by foreign scientists, and in our country research in this direction was not conducted. One of the main reasons for this is that such a large-scale negative impact on the economy of our country has not been observed in practice.

The safety of tourism in a destination is a factor that has a positive impact on the development of the tourism industry and tourists choose the destination where the safety risk for travel is the lowest. (Reisinger, Mavondo, 2005) In the scientific literature in the field of tourism, there are different approaches to assessing the risks of tourist security in different crisis periods, which are studied in three groups:

- 1) Risk in an era of crisis that covers the entire world and as a result of which very difficult situations arise. For example, SARS, the COVID-19 corona virus pandemic.
- 2) The risk of a crisis caused by a natural disaster or epidemic that occurred in the country or tourist destination. For example, the earth is shaken, floods, forest fires, tsunamis, volcanic eruptions, and so on.
- 3) The risk of a crisis that threatens the safety of tourists as a result of circumstances involving the human factor. For example, a terrorist act or a coup d'état.

When assessing the health risks of tourists in the tourism sector, studies were also conducted on the prevalence of infectious diseases and non-compliance with hygiene requirements (Mason et al., 2005; Vall, 2006; Jonas et al., 2011; Chien et al., 2016).

In the field of tourism, there are models for overcoming the crisis, which is recommended for the duration of the crisis process related to the safety of tourists and the validity of the activities of the entities involved in it, they are considered similar in terms of creation and consist of 3-6 stages. These models consist of at least 3 phases in terms of periodic continuity: pre-crisis, crisis, and post-crisis.

All scientific work and research in the field of forecasting the impact of the pandemic on the tourism sector are not accurate since no one knows how long the pandemic may continue. So, in our opinion, the forecast of the impact of corona virus on the tourism sector cannot be predicted accurately, as the second wave of corona virus and its long-term existence is expected.

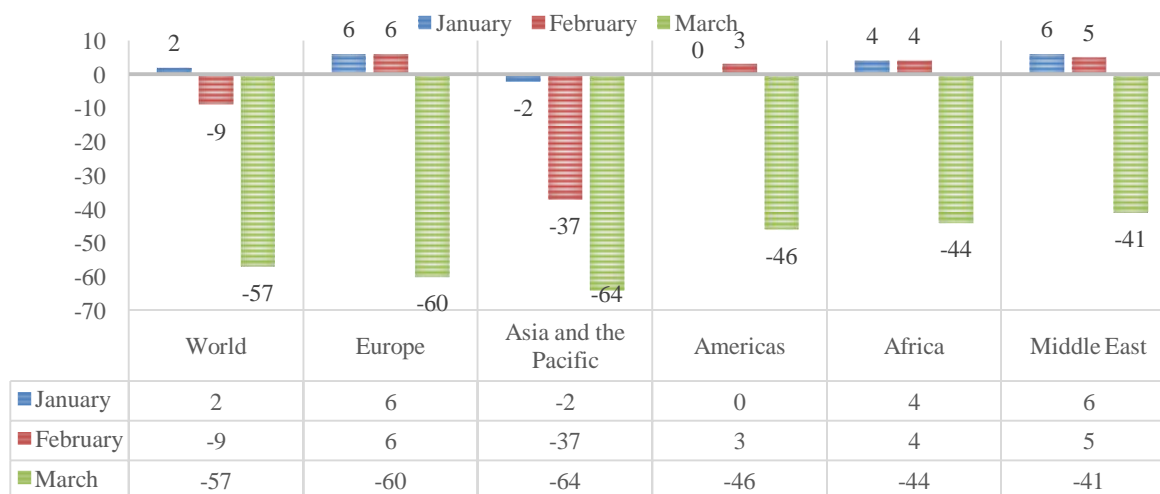
### Data source and research methodology

Analysis and synthesis, scientific abstraction deduction, classification, generalization, comparative, theoretical interpretation, and analytical methods were used in the methodology of this article, as a result of the bibliographic study, the direct and indirect factors affecting them and the prospects for further development were identified.

The information used in the article is mainly obtained through two sources: the official web pages of the State Committee of the Republic of Uzbekistan for Tourism development and UNWTO.

### Analysis and results

As for statistics, as of April, the UNWTO estimates a decrease in tourist activity by 20% - 30 %, as a result, the world economy will receive less than \$35 billion. up to \$60 billion. Many tourist organizations have already started to close or declare bankruptcy.



**Figure 1. International tourist arrivals, Jan, Feb, March 2020 (% change)<sup>2</sup>**

As can be seen from figure 1, international tourist arrivals fell sharply in March and continue to fall as the borders of countries are still closed due to the isolation regimes imposed by the governments of the countries.

Travel marketers believe that it is now necessary to wait for the recovery of outbound tourism for a few more months and until full recovery for another year. We believe that first of all, it is necessary to pay attention to domestic tourism. In addition, we assume that there will be refusals from mass tourism, as it is impossible to allow the accumulation of people. People will start to travel individually and choose a place and book everything they need online.

Domestic tourism will also be targeted in other countries affected by the COVID-19 pandemic. As soon as the quarantine is completed and restrictions are removed, the loading of hotels, restaurants and other establishments will depend on their own citizens. And foreign tourists will distance themselves for a few more years for fear of being charged with the virus. An extremely likely consequence of the crisis will be a much greater attention of travelers to their safety, sanitary and epidemiological situation.

Currently, the State Committee of the Republic of Uzbekistan for tourism development is working on a new Online Tourism platform. This is the first time in Uzbekistan and encourages everyone to create Online Tourism owners of restaurants, hotels and other establishments will be able to send photos of establishments. Tourists will be able to view photos of places to visit from the Internet in advance. It is no secret that this type of tourism already exists in many countries.

As for the state's support for the tourism industry, they are provided with a number of benefits during the pandemic. They are exempt from land tax and pay social tax at a reduced rate (1%) for accommodation facilities, restaurants, and other entities.

It is possible to mitigate the consequences of the pandemic on the world tourism market, including Uzbekistan, in stages. According to experts, the spread of the coronavirus is expected to decrease very soon, so that all sectors of the economy will slowly return to their activities. To restore the tourism sector, it is proposed to make changes in the pricing policy of some of its sectors. At first, the demand will not be the same as before, since people lost a lot of money during their stay in quarantine. Given this fact, some countries can give tax incentives to entrepreneurs in the field of tourism, and the States themselves can facilitate the visa regime or reduce the number of visa fees. It is also recommended to reduce the burden of airports and facilitate tax policy, including reducing or eliminating taxes on travelers, such as airport, port and hotel fees, which increases the cost of travel. The recovery of tourism around the world, as well as the economy, will undoubtedly happen, but it will take time.

Restrictions on international travel of tourists imposed in connection with the pandemic by all states, without exception, will lead to huge losses in the tourism industry. In March alone, the number of international tourists decreased by 67 million and resulted in economic losses of \$ 80 billion. The World Tourism Organization is calling for the restoration of tourism as soon as possible.

In total, there are 217 tourist destinations in the world: this includes countries, territories and islands. Today, travel restrictions continue to apply to everyone. And 156 States and territories – 70 percent of them - have completely closed their borders to international tourism. To date, these measures have not been lifted or relaxed in any of the areas.

The World Tourism Organization is monitoring measures taken since the end of January when the World Health Organization declared COVID-19 a public health emergency of international significance.

According to available data, international tourism was banned in 83 per cent of destinations in Europe, 80 per cent in the Americas, 70 per cent in Asia and the Pacific, 62 per cent in the Middle East and 57 per cent in Africa.

The World Tourism Organization works closely with international organizations, governments and the private sector to ensure that they can start restoring tourism in a timely and responsible manner. Over the past two weeks, the Secretary-General of the Organization has repeatedly appealed to the Ministers of the G20 and the EU to give priority to tourism in overcoming the crisis.

According to the UNWTO interim report “Global review of travel restrictions related to COVID-19”, from the end of January to April 6, 2020, 209 countries around the world have introduced travel restrictions, which is 96% of the total. The main conclusions drawn from the report are as follows:

- 90 countries have completely or partially closed their borders;
- 44 countries implement border closures in a more differentiated manner, restricting entry to the country for travelers from countries such as China, the Republic of Korea, Iran, and the EU;
- 56 countries have completely or partially suspended international flights;
- 19 countries apply various restrictive measures, such as:
  - a) A requirement for immediate self-isolation or quarantine during the
  - b) 14 days after entering the country;
  - c) Cancellation of the visa or termination of the visa on arrival;
  - d) Travel bans for passengers arriving from certain regions;
  - e) Requiring medical certificates for passengers crossing the border with negative COVID-19 results.

Regionally, all countries (100%) in Africa, Asia and the Pacific, and the Middle East have imposed travel restrictions, while in the European region – 93% of the total number of countries in Europe and in the Americas – 92%.

Travel restrictions have expanded geographically as the number of confirmed cases has increased. After the WHO declared COVID-19 as a pandemic between 9 and 24 March this year, the number of countries that adopted travel restrictions increased 2.2-fold (from 81 to 181).

In addition, as indicated in the report, as of April 6 this year, none of the countries had lifted the travel restrictions imposed in the context of COVID-19.

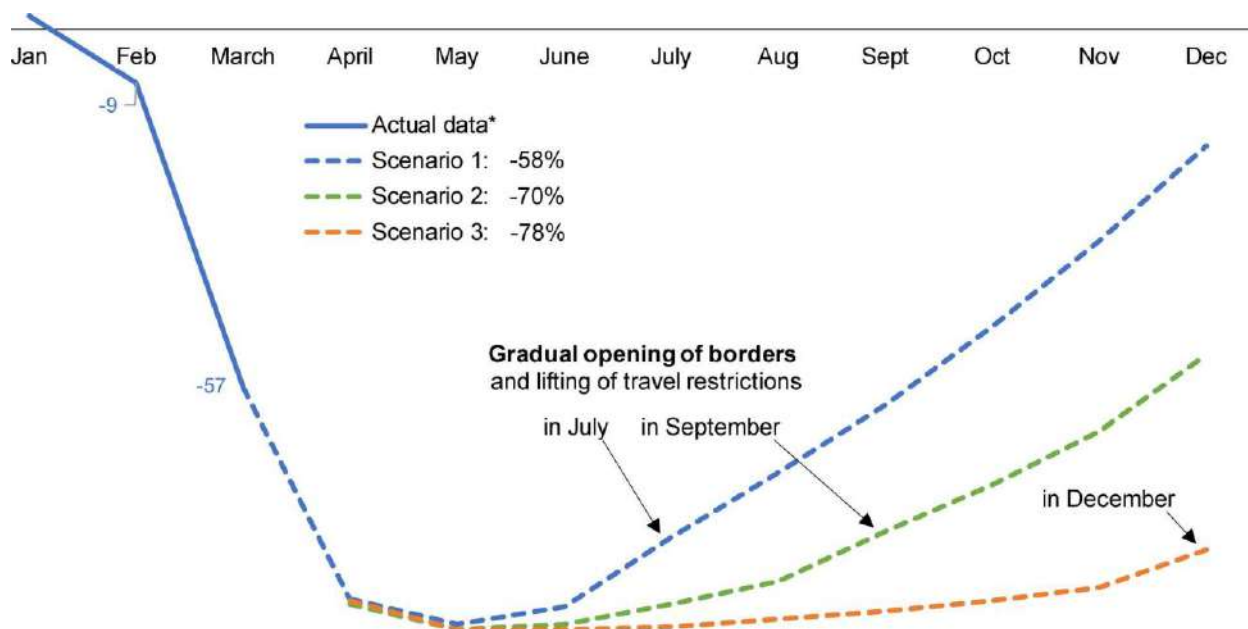
It should be noted that on February 27, 2020, an official Procedure for the implementation of measures by tourists arriving in Uzbekistan was developed and introduced. Since March 16 of the same year, the entry and exit of citizens across state borders is prohibited, and it is recommended to suspend measures for organizing domestic tourism. Since March 17, tourist



companies, public organizations and large industrial enterprises have been recommended to suspend activities for the development of domestic tourism until the situation with the spread of corona virus in the country stabilizes. Since March 20, passenger transportation by buses, cars, railways and air transport to international destinations has been suspended. Since March 27, traffic between the regions has been completely suspended. At the moment, the restrictions have been extended until May 10 of this year.

However, the World Tourism Organization, in cooperation with all countries, is taking measures to reduce the impact of corona virus on the industry, providing them with various recommendations and suggestions. According to the data, from the end of January to April 6, 2020, 209 countries have introduced travel restrictions, which is 96% of the total.

The World Tourism Organization in connection with the pandemic has announced three possible scenarios for the development of tourism in the near future. (Fig. 1)



**Figure 1. International tourist arrivals in 2020: three scenarios (YoY monthly change, %)<sup>3</sup>**

As stated in the WTO report, the above three scenarios for the development of international tourism in 2020 are not forecasts and should not be interpreted as such.

They reflect three possible patterns of monthly changes in arrivals from April to December 2020, assuming that travel restrictions will begin to be lifted and national borders will open in early July (Scenario 1), early September (Scenario 2), or early December (Scenario 3). They are based on available tourism data for January-March and other information, such as the closure of all national borders as of the end of April, although they are still subject to high uncertainty.

However, these scenarios have already lost their relevance, as since June, many countries that have overcome the corona virus, open their borders mainly to the same countries that have eased the isolation regime in the country.

In particular, starting from June 15, Uzbekistan opened air links with other countries. At the same time, the most optimal way to ensure the safety of air travel was selected as next: “Green”, “yellow” and “red” flights<sup>5</sup>

The category of countries with a stable sanitary and epidemiological situation (“green” flights) includes Japan, South Korea, China and Israel. If arrivals have been in these countries for 14 days, they will not be quarantined upon arrival.

The category of countries where the number of cases of coronavirus is decreasing includes the countries of the European Union, Malaysia, Thailand and Singapore (“yellow” flights). If arrivals have been in these countries for 14 days, they will be taken into home quarantine upon arrival.

The category of countries where the number of cases of coronavirus is not decreasing includes other countries, including the UAE, Turkey, Iran, Afghanistan, Russia and other CIS countries (“red”, evacuation flights). Upon arrival, passengers will be placed in a 14-day quarantine.

In our opinion, the leaders of all countries need to implement the above-mentioned mechanisms for resuming air traffic.

## CONCLUSION

As a result of the global pandemic outbreak in the world, outbreaks of corona virus pandemic, COVID-19 in the world, the crisis in the economic sectors through the spread of global pandemics could also negatively affect the tourism sector of our country and require a long period of time to restore this sector to have been made following research proposals to attenuate the adverse effects of corona virus pandemic and the global crisis on the tourism sector of our country:

- implementation of a standard based on uniform sanitary and hygienic standards for businesses and tourists serving the tourism sector;
- develop a special plan of measures to support economic entities operating in the tourism sector, which is under the jurisdiction of the state;
- planning of the crisis recovery process adapted to different phases of the scenario model, mainly to the form of service and type of activity provided by a foreign enterprise engaged in tourism activities;
- implementation of diversification of tourist services;
- develop a strategy for digitizing a specific tourism sector for each region, city, and tourist destination;
- development of information and communication technology infrastructure for the development of the digital economy in the tourism sector of our country;
- development of mobile applications in foreign languages aimed at improving individual tourist monuments and architectural monuments, museums and other attractions for each tourist destination;
- preparation of audio and video materials in foreign languages with a wide coverage of historical monuments, natural monuments and natural resources of our country;
- knowledge of tourism activities through further development of domestic tourism to maintain existing jobs by providing income to employed businesses;

- ensuring the safety of visitors through the introduction of innovative technologies in the field of tourism;
- regular disinfection of elevators, rooms, halls and other places in hotels and other accommodation facilities;
- compliance with the rules for maintaining social distance in restaurants and other public catering establishments, shops and entertainment establishments;
- encourage the scientific study of Persian cases and crises that may arise in various sectors of the economy.

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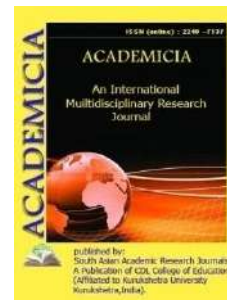
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DOI: **10.5958/2249-7137.2020.00657.6**

## FROM THE HISTORY OF THE ART OF BOOK IN CENTRAL ASIA DURING THE TIMURIDS

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### ABSTRACT

*The article is devoted to the study of specific aspects of the history of the art of the book in the Timurid period. It says that the Timurid rulers and masters of the art of the book who worked in the court-libraries made a great contribution to the development of Oriental art of the book. The artistic and technical aspects of the manuscripts of the Timurid period are described. It is written about the patronage of the Timurid rulers Shahrukh Mirza, Baysunghur Mirza, Husayn Bayqara to the art of the book.*

**KEYWORDS:** *Timurids, Art of the Book, Manuscripts, Library-Workshops.*

### INTRODUCTION

The technology of book-making occupied a special place in the division of labor in the Middle Ages. The increased demand for books due to the demands of cultural life ensured the creation of book production enterprises. Manuscripts are a collaboration product, their creation is a unique process based on the exchange of creative experiences between different cultural centers and traditions that have been used for a long time, masters in various fields of book art worked in this process. The presence of mutual coherence and proportionality in their creative and practical work ensured unity, integrity and technical perfection in the style of the manuscript. In Central Asia, the term “book work” was originally used to refer to the process of preparing manuscripts. The Arabic script, which is one of the strong bonds that unite all Muslims, is also of universal importance for the expression of fine arts and ornaments. This position of this writing is due to the fact that Islamic teachings, primarily the Quran, are expressed through this letter. The ancient manuscripts of the Qur'an of the 8th-9th centuries are written on parchment with the letters Kufic

and Hijazi, which is one of the earliest forms of Arabic writing. The discovery and mass production of paper as a written material led to a significant change in the history of the book, an increase in the number of books, and an improvement in their quality. The history of paper production in Movarounnahr is connected with the city of Samarkand. Samarkand paper was of high quality. The famous calligrapher Ibn al-Bawwab (d. 1022) wrote about the restoration of the pages of the manuscript of the Koran, which was written by the Baghdad calligrapher Abu Ali Muhammad ibn Ali ibn Mukla al-Shirazi (885-940): "I went to the library and searched among the old paper for a paper resembling that of the Qur'an. There were several sorts of old Samarqand and China paper in the library" (Bosch G., Carswell J., Petherbridge G., 1981, p. 26).

### **The development of the art of the book in the Timurid period**

The emergence of a powerful centralized state in Central Asia at the late of the fourteenth and fifteenth centuries contributed to the development of the economy, the restoration of caravan routes, the expansion of trade, the growth of crafts and agriculture, cultural and spiritual progress. In this period the production of artistic manuscripts than ordinary manuscripts began to develop, and from the same period, book work rose to the level of book art. The creators of the manuscript - a group of masters of various fields - were involved in the workshops of the palace libraries and another group of masters involved in the bookmaking process came together separately and worked individually for readers, including intellectuals and the common people, because in addition to books rich in ornaments made to order by high-ranking officials, there was also a high demand for ordinary books for literary, scientific and book lovers. Since the end of the 14th century, the masters of art of book brought by Amir Temur to Samarkand, the capital of the country, have made a significant contribution to the formation and development of book art. At that time, there were neighborhoods in Samarkand inhabited by craftsmen working in various areas of book art, such as Kouyi Nakkashan (this refers to the streets of carving masters) (Pugachenkova G.A., Galerkina O.I., 1976, p. 6).

According to historical sources, many artists of the Amir Temur Library in Samarkand in the late 14th and early 15th centuries were led by the famous Baghdad master Abdulhay. Describing the biography of fourteenth-century artists, Dost Muhammad (d. 1560) writes: "After the Khwaja Abdul-Hayy's death all masters imitated his works" (Dost-Muhammad, 1989. p. 345).

Amir Temur's interest in large-scale books is expressed in the story about famous calligrapher of that time Umar Aqta in the book of the historian Kazi Ahmad Qummi (d. 1546), "Gulistan-I hunar" ("Rose Garden of the Art"): "Omar Aqta wrote another copy, extremely large, each of its lines being a cubit (dhar') in length, and even longer ... the sultan came out to meet him, accompanied by all the clergy, dignitaries, amirs, and pillars of the state, and rewarded the calligrapher with great honors. One folio of this copy was in the possession of Maulana Malik" (Minorsky T., 1959, p. 64). From the middle of the 18th century, this manuscript became known as the Qur'an of Baysunghur Mirza. The pages of the manuscript are today preserved in various book treasures, including the Metropolitan Museum of Art in New York (New York, The Metropolitan Museum of Art. No. 1972.279.).

The historian Ibn Arabshah (1392–1450) in his book provides valuable information about the cultural environment in the palace of Amir Temur and cites the names of Ibn Bandgir, Abdul Qadir, and Tajuddin Salmani as the most skilled calligraphers of that period (Ibn Arabshah, 1992, pp. 82-83). The first artistic manuscripts made during the reign of Amir Temur and



preserved to this day are the volume manuscripts, which were made under the patronage of Prince Pirmuhammad of Timur (1374–1407). The first manuscript (Dublin, The Chester Beatty Library. Ms. 114) is “Shahnama” (“Book of Kings”) by Abu’l Qasim Firdausi (935–1020), was copied by Muhammad Said Hafiz al-Qari in 800/1397-98 in Shiraz (James D., 1981, p. 14).

The second manuscript (London, The British Library. Or. 2780.) consists of Asadi Tusi's (d. late 1080) “Garshaspnama” (“The Epic of Garshaps”), Ahmad Tabrizi's “Shahanshahname” (“The Book of the King of Kings”), Hakim Azari Tusi's (1380–1462) “Bahmannama”, and Hakim Iranshan ibn Abulkhay's (XI-XII centuries) “Kush-nama”. The manuscript is dated Šafar 800/October 1397. [Rieu C., 1894. №201).

After Amir Temur, during the reign of the Timurids, more attention was paid to the development of book art. But the division of the kingdom into Movarounnahr and Khorasan did not fail to have an impact on the cultural life of the region. But the patronage of rulers and princes in various fields of science, culture and art laid the foundation for the development of cultural and spiritual life. In 1411, the Timurid ruler Shahrukh Mirza (1377–1447) appointed his son Ulugbek (1394–1449) as governor of Movarounnahr and Turkestan. Ulugbek decides to return most of the masters brought to Samarkand by Amir Temur. As a result, opportunities were created for the organization and operation of art workshops in different regions of the kingdom. Patronage of art was not limited to the palace of Shahrukh Mirza, governors appointed to different provinces competed with each other in the creation of works of fine art. During the reign of Shahrukh Mirza Iskandar Sultan (1384–1415) and Ibrahim Sultan (d. 1435) in Shiraz, Mirzo Ulughbek in Samarkand, Baysunghur Mirza (1397–1433) in Herat contributed to the formation of the Timurid's the art of the book. The patronage of the Timurid princes in various fields of art led to the formation of the relationship between art and ideology.

As today's Afghanistan, Iran, and Central Asia were ruled by the Timurids as a single state, the culture of the Turkic peoples developed in part in Khorasan, especially in the capital, Herat. That is why this stage is one of the brightest periods of Uzbek culture. During this period, along with Herat, the most beautiful examples of Timurid manuscripts were created in art centers such as Bukhara, Tabriz, Mashhad, Shiraz, Baghdad. At the beginning of the 15th century, in Tabriz there was a center of book art under the patronage of Sultan Ahmad Jalairi, and in Shiraz - under the patronage of Iskandar Sultan. Events such as the enthronement of Shahrukh Mirza in Herat, the death of Sultan Ahmad in 1410, and the overthrow of Iskandar Sultan in 1414 led to the eastward shift of the center of the art of the book art. Shahrukh brings the book treasure of Iskandar Sultan to Herat, inviting masters of the art of bookmaking.

Historical sources have very little information about the book process under the patronage of Shahrukh. The historian Davlatshah Samarkandi (c. 1436 / 37–1495) mentions the name of Mavlono Khalil as an artist of Shahrukh Mirza's library (Samarqandi Mir Davlatshah, 1989. p. 21). Qazi Ahmad Qumi wrote that after the conquest of Iraq by Shahrukh, the calligrapher Mawlana Maruf brought the Calligrapher Baghdadi to Herat to work in his library. In addition, Qazi Ahmad Qumi mentions that Abdullah Tabbakh was a native of the capital, Herat, was an excellent calligrapher, wrote admirably and was a remarkable master in “gold sprinkling” and restoration (Minorsky, T., 1959, p. 64). Manuscripts (Istanbul, Aya Sofya. No.3353, Suleymaniye Library. No.4155, Topkapi Saray Library. Bagdad 282, Hazine 1653, 1654, Ahmet III 3059, Turk ve İslam Eserleri Muzesi. No. 1992; London, India Office Library. Persian MS.



232, The British Library. MS. Add. 7628; Paris, Bibliothèque Nationale de France. Suppl. pers. 1113, 67, 209, Suppl. Turc. 190; Vienna, Österreichische Nationalbibliothek. A.F. 112; Saint-Petersburg, Hermitage VR-1000) that have survived from the books of Shahrukh Mirza's library testify to his interest in historical, religious and scientific literature

Prince Giasiddin Baysunghur ibn Shahrukh (1397–1433), known in the Islamic world as a book lover, founded the palace's scientific institution and library, which ushered in a new era in the development of Oriental book art. Prince Giasiddin Baysunghur ibn Shahrukh (1397-1433), known in the Islamic world as a lover of books, founded a scientific institution and a library of the palace, who ushered in a new era in the development of oriental book art. Baysunghur himself was a skilled calligrapher and artist, and wrote poems in Turkish, Arabic and Persian. During the reign of the Timurid ruler Shahrukh Mirza, the first steps were taken to create the Herat style of book art in the center of the country, and under the leadership of Baysunghur Mirzo, Herat developed as a center of book art.

In 1420, the leader of the Kara-Kyunli (1375–1468), Kara Yusuf (d. 1420), was defeated and Tabriz was recaptured. Dust Muhammad (d. 1560) wrote that Baysunghur Mirza came to Tabriz on November 21, 1420, and from there he brought with him the masters of art of book Sidi Ahmad Naqqash, Khoja Ali Musavvir and the binder Qavammiddin Mujallid Tabrizi to Herat (Dost-Muhammad, 1989, p. 346). At that time, calligraphers Kamaliddin Ja'far Ali Baysunghuri Tabrizi (d. 1433) and Khoja Ghiyasiddin (second half of the 14th century) worked in the workshop of the ruler in Herat. Hoja Ghiyasiddin Naqqash participated in the embassy of Shahrukh Mirza, who was sent to China in 1419–1422, as one of the two representatives of Baysunghur Mirza (Samarkandiy A., 2008, p. 375). The establishment of diplomatic relations between the Timurids and China, as well as the creation of opportunities for not only political but also cultural contacts as a result of embassies, influenced the activities of the Herat Workshop. In particular, in the works of masters working in the library, the emergence of symbols typical of Chinese art, led to a change in the style of decoration (Sugimura T., 1981; Yu Y., 2018).

The library of Boysunqur Mirzo gathered specialists in various fields of book art and created masterpieces of book art, most of the masters created under the name of Baysunghuri. The main calligrapher of the library Kamaliddin Djafar Ali Baysunghuri Tabrizi (d. 1433) from time to time informed Baysunghur Mirza about the activity of masters. The official report Arzadasht, prepared for Boysung'ur Mirza between 1427 and 1431, lists 25 masters of art of the book working in the library (Arzadasht, 1989). Mustafa Ali (1541–1600) in his work “Manaqibi hunarvaron” states that there were 40 calligraphers in the palace library of Baysunghur Mirza (Mustafa Ali, 2011, p. 206).

Under the patronage of Mirzo Boysungur, many manuscripts of a high artistic level were created, and today they are kept in various book treasures around the world (Berlin, Museen für Islamische Kunst. I. 4628, Staatsbibliothek Preussischer Kulturbesitz. Petermann I. 386; Dublin, Chester Beatty Library. No. 119, 120, 4183; Istanbul, Topkapi Saray Library,. Hazine 2310, 362, R. 1022, Türk ve İslam Eserleri Müzesi. № 1454; London, Gobineau collection of British Library. Or. 2773, Keir Collection. VII. 62, Oxford, Bodleian Library. Elliott no. 210; Vienna, Nationalbibliothek, Cod. N. F. 382; St. Petersburg, National Library of Russia, Dorn, № 268,

PNS. 233, 49; Library of Oriental Studies, St. Petersburg University № 578, Institute of Oriental Studies. B. 132; Tehran, Gulistan Palace Library. No. 61, Malik Library. № 6531).

After the death of Baysunghur Mirza, the workshop-library passed to his eldest son Alauddavla (1417–1460). After the death of Shahrukh in 1447, Mirzo Ulugbek brought some of the masters to Samarkand to continue the creative style typical of Herat, but in 1449, after the death of Mirzo Ulugbek, the workshop was abolished. It is known that Qutbiddin Shirazi's (d. 1311) work, copied by Muhammad ibn Ayaz ibn 'Uthman ibn Sadiq in 690/1231, was kept in the palace library of Mirzo Ulugbek. On the first page of the manuscript, Mirzo Ulugbek wrote in his autograph that he had read this work. The manuscript was put up for auction on October 15, 1984, at Sotheby's (Catalogue, 1984, №292). In addition, during the reign of Mirzo Ulugbek, several manuscripts were prepared. One of them is a copy of Abdurahman as-Sufi's (d. 986) *Suwar al-Kawakib al-Sabita*, prepared for the library of Mirzo Ulugbek in about 1430-1440, which contains images showing the exact location of the stars (Paris, *Bibliothèque Nationale de France. Suppl. Arabe. 5036*). The manuscript of Mirzo Ulugbek's "*Zij-i Koragoniy*" prepared for the author in 1440 is kept in the personal collection of Abolala Sudavar in the United States (Abolala, 1992, p. 67).

The Timurid book art flourished in Herat during the reign of Sultan Husayn Bayqara and his minister Alisher Navoi (1441–1501). Khorasan, especially Herat, was crowded with scholars, unique creators, each engaged in a particular craft. Zahiriddin Muhammad Babur (1483–1530) wrote, "The period of Sultan Husayn Bayqara is a wonderful period." Many manuscripts have been prepared in the library-workshop of Sultan Husayn Bayqara. Abolala Soudavar, *Art of the Persian Courts*. New York: Rizzoli, 1992. p. 67. cat. no 36; Cairo, General Egyptain Book Organization, *Adab Farsi* 908; Geneva, Bodmer Foundation. *Pers. Ms. 30*; Istanbul, *Türk ve İslam Eserleri Müzesi. №1905, №1926*; Paris, *Bibliothèque Nationale de France. Suppl. Turc. 993*; Tashkent, Institute of Oriental Studies of the Academy of Sciences, №1995; Tehran, Gulistan Palace Library. No.709). Initially, Mawlana Fasihiddin was the head of the Husayn Bayqara's court library. Mawlana Haji Muhammad Naqqash (d. 1507) first headed the library of Husayn Bayqara, then until 1499 in the library of Alisher Navoi, then Alisher Navoi's library was headed by Khandamir (d. 942 / 1535-36). Mawlana Haji Muhammad left Herat in 1498 and headed the library of Badiuzzaman (d. 1514) in Balkh. Kamoliddin Behzod (1456–1537), a great medieval artist and a representative of miniature art, first headed the library in the palace of Husayn Bayqara in 1500, and later, after leaving Herat for Tabriz, the library of King Ismail I (1502–1524) (Akimushkin O., 2004). Alisher Navoi's personal library had 11 calligraphers and 6 artists (Kadzyuki K., 1991).

In addition to the palace libraries, the Sufi khanaqah can also be cited as an institution where books are created. Muhammad ibn Muhammad ibn Mahmud al-Hafiz al-Bukhari (1345–1420), a Sufi known as Muhammad Porso, established a public library in Bukhara in the early 15th century. This library functioned until the XIX century (Dodhudoeva L., 1998).

The Timurid Herat library workshop underwent the last stage of its development under the leadership of Alisher Navoi during the reign of Husayn Bayqara and was destroyed by the Shaybanids after the conquest of Herat in 1507. Some of the masters spread to different parts of the Middle East and took with them Herat-specific artistic styles, the Herat style has influenced the artistic manuscripts created in various cultural centers.

In conclusion, from the late 14th century to the 15th century, the reign of the centralized Timurid state in Central Asia became a new period in the development of book art.

The development of Central Asian book art during this period was closely linked with the rulers' desire to respect and preserve the spiritual heritage, their interest in books, their efforts to earn the respect of the people through their attention to books, the establishment of permanent contacts between cultural centers and the rise of urban culture.

Manuscripts with beautiful calligraphy, gold and colorful ornaments made during the reign of Timurids testify to the golden age of this art, the high artistic spirituality of the period and the highly qualified circle that created them, as well as the great creative power of the masters. These manuscripts are distinguished among the art of all periods and peoples by their technical and artistic features and express the common qualities peculiar to the peoples of the East.

The role of general ideology, religious and secular views in the formation of artistic culture is high, and the masters of the East used in their works forms and methods belonging to both traditional and neighboring peoples, and this is reflected in the manuscripts of Timurids.

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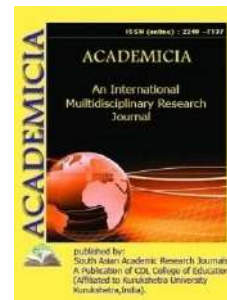
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DOI: **10.5958/2249-7137.2020.00658.8**

## OPTIMIZATION OF SOIL AND ATMOSPHERIC AIR VINCA LIGHTING, HEALTH (VINCA L) BAR ANATOMY OF INDIVIDUAL TYPES AND ENVIRONMENT

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### ABSTRACT

*The article provides information on the ecology and anatomy of the sheet Vincaerecta Regel. E.t Schamalh and Vinca minor. They purify the soil from heavy metals by accumulating those in the leaves; these types are promising for optimizing the urban environment.*

**KEYWORDS:** Vincaerecta Regel. E.T Schamalh, Vinca Minor, Epidermis, Mesophilus, Xylem, Phloem, Sheet.

### INTRODUCTION

In the current globalization, the Republic pays special attention to the biological improvement of the environmental situation, and laws are being adopted.

Decree of the President of the Republic of Uzbekistan dated February 7, 2017 N UP-4947 Implementation of measures to further develop the pharmaceutical industry in five priority areas of the development of the Republic of Uzbekistan for 2017-2021 and the need to prevent environmental problems that could damage the gene pool.

Given these pressing problems, the use of promising evergreen herbs to improve the urban environment is an urgent problem.

Our scientific observations are devoted to the study of the anatomy of leaves of green species, which are green all year round, which provide a good psychological mood to people and are used



as a lawn. Scientific observations were carried out at the experimental site of the Department of Ecology in the Botanical Garden of NUU in 2018.

### THE MAIN FINDINGS AND RESULTS

Cormorant is a perennial herb that contains strong alkaloids (vinervin, tombosin, vineredin, venin, pebescin and minor) in the upper and lower parts of the body and is used in medicine to treat nervous and vascular diseases [1, 1983; 2, 2016].

For the study, rhizome species (*Vincaerecta* Regel. Et Schmalh.) And a small wolf (*Vincaminor* L.) from the species of the Apocynaceae family was obtained.

Purpose of work. The study of the morphological and anatomical structure of the leaves of wolf species and the determination of their adaptation to living conditions.

*Vincaerecta* is an endemic plant in the mountainous regions of Central Asia [3, 2018].

The stem of a straight vein grows vertically and does not branch. Length 15-35 cm, diameter 0.1-0.4 cm. Leaves simple lanceolate or ovoid, without stripes, in the stem opposite the grass, whole without cut edges, 5,5-6 cm wide, 2,5-3 cm wide.

The leaves of the *Vincaerecta* plant are covered with cuticle and epidermal tissue above and below. The upper cells of the epidermis are larger than the lower. The upper epidermis has no mouth. In the middle cells of the epidermis with a parasitic type of mouth, there are many oral mammals (Fig. 1, a, b).

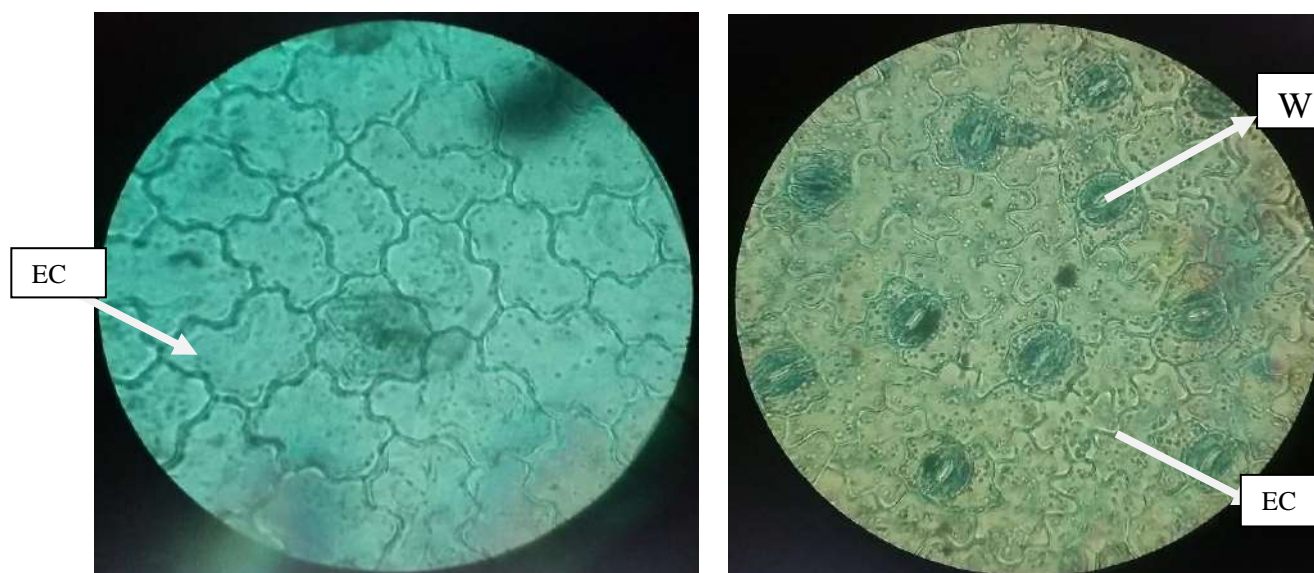


Figure 1 Upper (a), lower (b) tissue structure of the epidermis of the leaf of the straight crown (40x7).

W - word of mouth.

EC - epidermal cells.

*Vincaerecta* is a mesophilic dorsoventral leaf type, with two rows of columns under the upper epidermal tissue, and pores (cloud) tissue cells with 6-7 rows of wide cell ranges are located below them (Fig. 2 a, b).



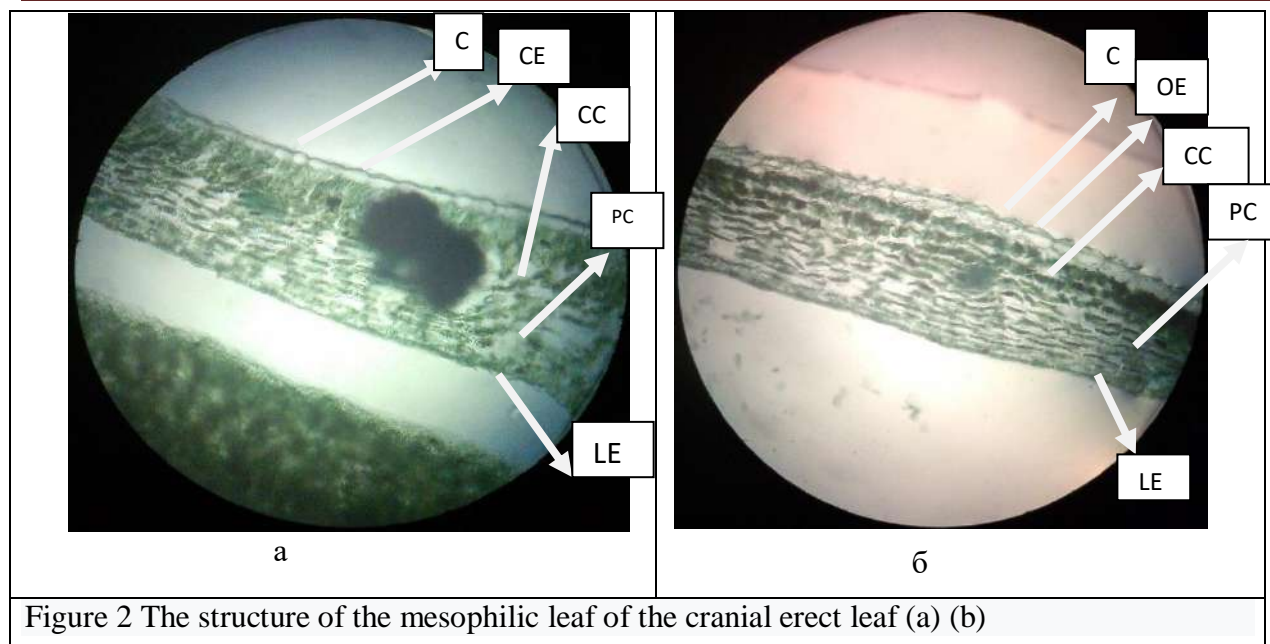


Figure 2 The structure of the mesophyll leaf of the cranial erect leaf (a) (b)

**C - cuticle.**

**CE - the old epidermis.**

**CC - columns of cells.**

**PC - porous cells.**

**LE is the lower epidermis.**

The main root of the leaves protrudes from the upper and lower sides of the leaf. In this appearance, the upper cells of the epidermis formed a single cell with short hairs. The conduction system of the main vessel consists of one ligament collateral type. The upper and lower layers of connective tissue (a type below the epidermal tissue) are surrounded by thick mechanical tissue (Fig. 3).

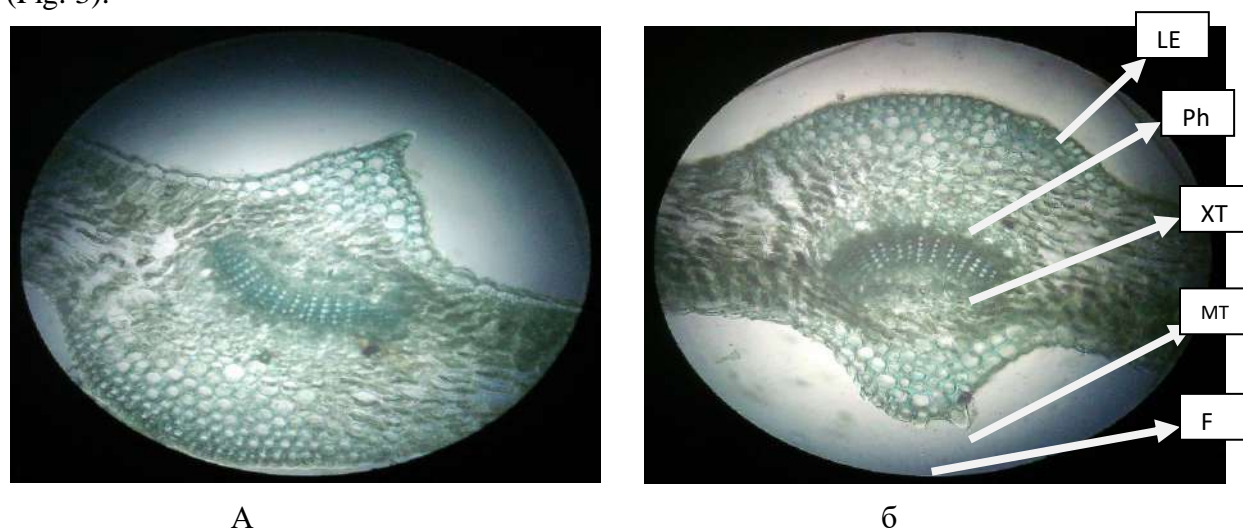


Figure 3. The structure of the main vein of the erect leaf vinca (Vincetoxicum).

F - Feathers.

MT- mechanical tissue

XT - xylene tubes

Ph - Phloem

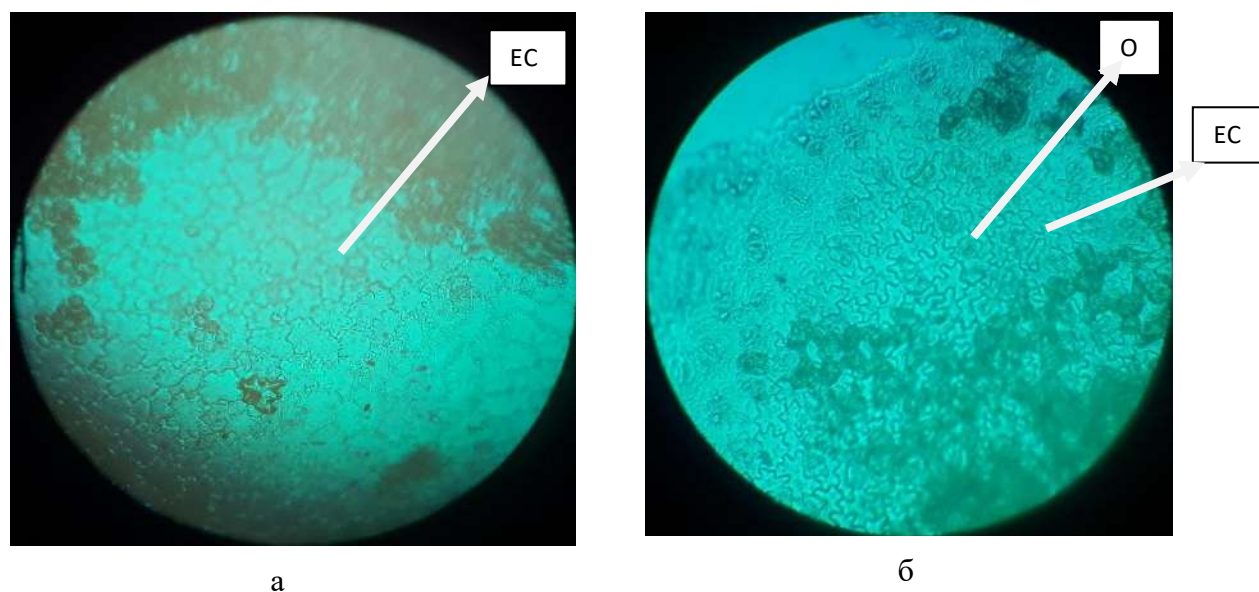
LE - lower epidermis

The periwinkle tower is always green, the root is stem, multiple (hemispherical, hemispherical), the upper part of the plant consists of two types of generative and vegetative stems. The joints of the generative branches are short and grow vertically, 30-35 cm in length. Vegetative shoots are long, spaced horizontally, with branches 100-150 cm long.

The leaves are simple elliptical, pointed, whole, shiny, thick, green on top, grayish below, 3-5 cm long, 1.5-2.5 cm wide, with short stripes opposite the stem.

Vinca Tower is a plant that is mainly grown in the shade, as well as in open, sunny places.

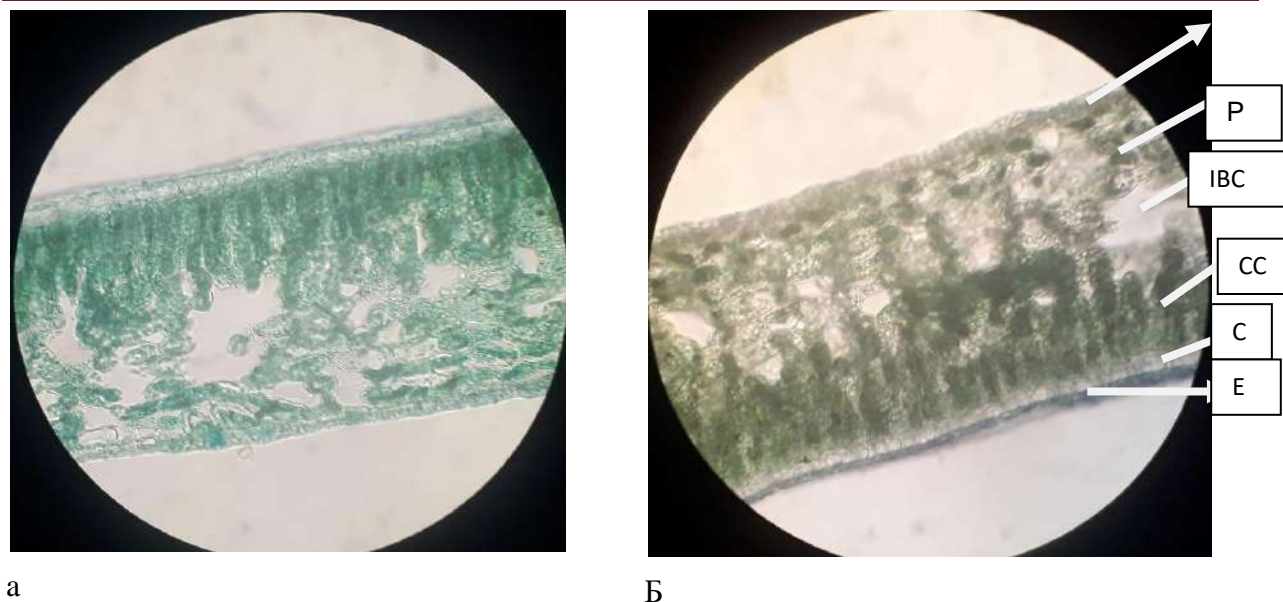
The leaves of the small periwinkle are covered with a thick cuticle and rows of epidermal tissues above and below. The cells of the outer tissue of the epidermis are curved, without a mouth. The crust of the underlying epidermal cells is strongly curved, with a large number of mouths. The lung apparatus belongs to the pacific type (Fig. 4 a, b).



**Figure 4 Cells of the upper (a) and lower epidermis (b) of the small leaf of periwinkle. (VincaminorL.)**

O- oystic

EC - epidermal cells



a

b

**Figure 5 the structure of the mesophyll leaf of the minor vinca (a) (b). (Vinca minor L.).**

C – Cuticle

UE - upper epidermis

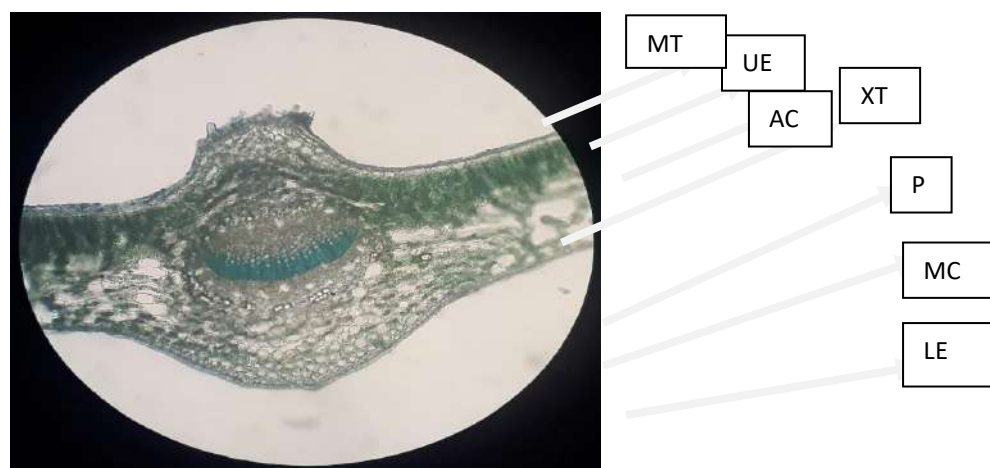
CC - column cells

IBC - Interval between cells

PC - porous cells

LE - lower epidermis

The main middle root of the leaves protrudes from the upper and lower sides of the leaf. The conduction system of the main vessel consists of many xylem tubes and phloem tissue. The type of binding is a calligraphic type surrounded by mechanical tissue with a thickness of the cell membrane above and below (Fig. 6).



**Figure 6 The structure of the main middle root of the small leaf of periwinkle. (Vinca minor L.).**

UE - upper epidermis

MT - a mechanical tissue

CC - column cells

XT - xylene tubes

P - phloem

MC - mechanical cell

LE- the lower epidermis.

Features of adaptation of wormwood species: thickness of epidermal cells with a thick curvature of curvature, absence of oral cavities in the upper epidermis, the presence of numerous mucous membranes in the upper mesophyll, the base of the dorsal cells, spinal cord Mechanical closure of tissues in the lower and lower parts, which indicates a large accumulation of dust and heavy substances in mesophilic tissues.

### CONCLUSION

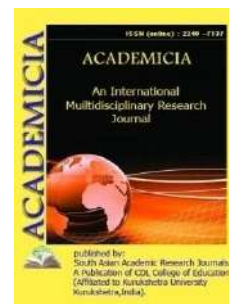
These studied species are promising for optimizing environmental conditions, such as cleaning soil and air from waste, and they should be planted around new homes as lawns in urban areas.

Given the healing properties, they are recommended for the preparation of medicines in a clean environment, which plays an important role in protecting human health.

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DOI: **10.5958/2249-7137.2020.00659.X**

## THEORETICAL ISSUES OF NATIONAL CLASSICAL MUSIC IN THE SCIENTIFIC WORKS OF UZBEK MUSICOLOGISTS OF THE XX CENTURY

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### ABSTRACT

*This article is devoted to the study of the theoretical foundations of Uzbek maqoms, the emergence of the theoretical foundations of Uzbek music in the twentieth century, their reflection in the work of various musicologists. What is the theory of Uzbek maqoms and what aspects of the theory should be considered in the analysis of maqoms, the means of musical expression in the composition, the relationship of mood and form, the characteristics of the structures are also considered there.*

**KEYWORDS:** *Uzbek Music, Maqom Art, Maqom Theory, Shashmaqom, Lad, Oriental Thinkers, Musicology, Maqom Studies, Music Theory, Music Forms.*

### INTRODUCTION

National maqoms are a specific system of musical culture developed on the basis of classical values. In practice, this system is now called the Uzbek Maqomat, and refers to the Bukhara Shashmaqom, Khorezm Six Half Maqom and DutorMaqom, Fergana-Tashkent Maqom. Recognized as an intangible heritage of world music culture, Shashmaqom is part of this system. That is why today the art of national maqom is the brightest example of our musical culture, a set of maqoms that form a whole system. Its general structure and practical foundations are known to the music community. However, some undiscovered aspects, in particular important features of the theory, require extensive scientific study.

### Main part

In the twentieth century, Uzbek musicology began to enter new concepts of social needs. The articles of the famous enlightener A.Fitrat "Uzbek classical music and its history"<sup>[1]</sup> and the

Russian ethnographer V.Uspensky "Classical music of Uzbeks"<sup>[2]</sup> published in 1927 in the Uzbek language can be noted on these bold steps.

In these studies, the issue of lad is given priority as a central scientific-theoretical problem. It should be noted that two priority synonymous terms in Uzbek and Russian languages are used in the researches of Fitrat and Uspensky. When Fitrat mentions "Uzbek classical music", he means classical maqoms. Therefore, the term maqom in the play refers to the concept of lad in Russian music. V.Uspensky, in his research, uses the term lad in Russian terminology to refer to the basics of status.

Even if we refer to the periods before Fitrat and Uspensky, we see that the terms lad and maqom were used in the same sense. A. Fitrat describes the Shashmaqom system as "consisting of six rows of melodies"<sup>[3]</sup>. From this point of view, first of all, what can be seen is a series of methods in the Shashmaqom complex and a set of maqoms based on six maqoms (lad).

In the research of twentieth-century Uzbek musicologists Fitrat and Is'hak Rajabov, we see that the terms maqom and lad, which we take as synonyms, are meant here.

Thus, the question of the mode of musicology from Farobi to Fitrat and I. Rajabov was used as the main foundation of scientific and theoretical doctrine.

From the point of view of the 1000-year history of Uzbek musicology, the notion of status and mode, which focuses on the basics of music and curtains, is a central problem of musical ideology, regardless of the language in which the terms are used.

Academician Yunus Rajabi is a well-known Uzbek musician and composer of the 20th century. As a collector and devotee of the Uzbek folk musical heritage, Yunus Rajabi also showed a special zeal in modernizing and promoting the performance of maqom, and disseminating them to the general public. In particular; it is possible to appreciate the work of Uzbek folk music and national classical music in the formation of a certain order. The fact that the sources of these notes are now widely used in music testifies to the brilliant knowledge of Uzbek music by Yu. Rajabi. His works on Uzbek music include Uzbek Folk Music (1955-19), Shashmaqom (1966-1975), and A Look at Our Musical Heritage (1978). In this unique study, he notes the system of Uzbek maqoms, classical instruments and songs, samples of folk music, as well as special comments on their theoretical and practical features. The role of this work in the Uzbek musical consumption today is invaluable.

Ishak Rajabov is a brilliant maqom scholar of his time, who studies the musical sources of medieval oriental scholars and expresses his views on the theoretical and practical aspects of maqoms. He studied these aspects of Uzbek music in his books "On the issue of maqoms" (1963), "Maqomlar" (doctoral dissertation 1970), "Fundamentals of maqom". The book "On the issue of maqoms" provides information on the process of historical formation of status, the theoretical basis of status, the Twelve status and status of Shashmaqom, Shashmaqom branches and their structures, types, other categories of status and performance. It should be noted that the scholar's views on status can be said to be an important basis for the emergence of the doctrine of authority today.

In the person of Ishak Rajabov, various specialties important for this field (musicologist, source scholar, philologist, orientalist) were harmoniously represented. On the one hand, he is a brilliant representative of the famous Rajabi dynasty, a great performer in the words of maqom, tanbur



and dutar, and on the other hand, he is well versed in the rules of classical poetry (aruz) and an expert in interpreting written sources of the past.

In the monograph "On the issue of maqoms" published in 1963, the Shashmaqom complex was initially widely used in palace music, formed as a natural development of the system of twelve maqoms, and its curtain-system, melody, percussion, avj-namud and the fact that the laws of other formal structures are components of this very whole system has been conclusively resolved. The study also discusses the Khorezmmaqoms and the Fergana-Tashkent maqom roads, which are other forms of the maqom system, and describes their relationship with the Shashmaqom. "The maqoms are examples of the classical style of folk music", said the scholar, who is now well-known among scholars. In fact, I. Rajabov, knowing the practical performance of the maqoms, was able to create a scientific concept that combines the historical and theoretical problems of this complex art.

Yu.G.Kon described the theoretical aspects of Uzbek music in his research. He also studied composition on a large scale. In particular, the introduction to the Uzbek folk music (1955), volumes III, V, VI, VII of the Uzbek folk music (1959-1960), "On the theory of folk modes" (1961), "Some issues of the modal structure of the Uzbek folk song and its harmonization"(Candidate's dissertation 1962).

Yu.Kon's musical-theoretical views on Uzbek music are described in his dissertation "Some questions of ladovogostroeniyauzeksoknarodnoy pesni i eyogarmonizatsii." It studies the moods of Uzbek folk music on the basis of the musical systems of medieval musicologists. In addition, valuable information and scientific-theoretical analysis of the general characteristics of the melody of Uzbek songs, the internal structures of the scales, the variability of the scales and the features of the theoretical harmony of melodic scales are provided.

Yu.Kon describes his work as follows: "Theoretical study of folk and national classical music and reliance on existing evidence helps to solve certain problems and opens a great way for the formation of composer's creativity. Based on Asafev's definition<sup>[4]</sup>, it is necessary to pay attention to the relationship between social consciousness and lad features. It is the fret that embodies important features in most people's understanding of music. Lad is also a leading factor in the formation of artistic images as art"<sup>[5]</sup>.

In a number of his books, the modern Uzbek scholar Otanazar Matyakubov has studied in detail the curtain systems, methodological frameworks, and form structures that are the constituent elements of statuses. In particular, his research on the tanbur line gave rise to new views on maqoms. On this topic O. Matyakubov's – "Farabi about the music of East" (1986), "Maqomot" (2004), "Bukhara Shashmaqom" (2018), "Khorezmmaqoms and the Six and a Half Status" (2018), "Uzbek classical music" books could be mentioned.

The book "Uzbek classical music" consists of 2 volumes, the first part of which describes the history of the development of Uzbek status. In the second volume, the theoretical side of the status quo is described in four chapters. The first section examines the basic concept of status - the basis of the mode. The historical formation of maqom lad systems, Farabi's views on lad, the transition from general lad circles to Shashmaqom's practical lad theory, the main lad units, their organization as a system, the use of types and averages, important features of lad composition are studied. We have prioritized the approach to the analysis of these modes in the process of

analyzing the key positions of this work. Because in this book we will see that the basics of Shashmaqom are studied in detail.

It should be noted that this study has a special place in terms of the history of the theoretical study of Uzbek status. Because today this research should be noted as an important source in the formation of the theoretical image of Shashmaqom and in-depth study of each of its components.

## RESULTS AND DISCUSSIONS

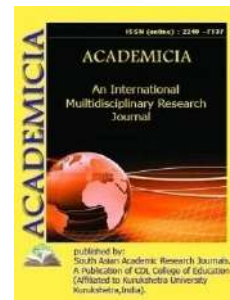
The study of the theoretical and historical process of Uzbek makoms has not lost its relevance today. The first views on this topic were formed in the early twentieth century, and continue to this day, and a number of works on the subject have emerged. In the formation of theoretical details of Uzbek classical music, in particular, on the structure of mood and form. In the works of V.Uspensky, A.Fitrat, Yu.Rajabiy, Yu.G.Kon, I.Rajabov, Yu.Plakhov, S.Galitskaya, R.Sultanova, N. Kokulyanskaya, O.Matyakubov, R.Yunusov, O.Ibrokhimov and other scientists we see the views of this topic.

## CONCLUSION

The problem of studying the patterns of Uzbek classical music has always attracted the attention of musicologists. Theoretical study of musical means of expression - lad, rhythm, form and other elements creates some difficulties, and the solution of these problems is controversial not only for musicologists but also for composers. Consequently, relying on proven data (materials) is very helpful in revealing important aspects. Accordingly, we will try to apply some of the methodological guidelines for the theory of status in this and other cases in a generalized way. Concepts on the structure of the mood and form of Uzbek maqoms, analytical methods are generalized on the basis of the views of some of the above musicologists and used in the analysis process.

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DOI: **10.5958/2249-7137.2020.00660.6**

## EUROPEAN TOURIST H. VAMBERI'S OPINIONS ABOUT SHARIF CITY BUKHARA

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### ABSTRACT

*Artistic thinking, which is an integral part of human conscious activity, and, accordingly, artistic and creative activity, are of great importance in the process of historical development of mankind. This article reflects the views of the European traveler H. Vamberi on the historical monuments and history of Bukhara, one of the centers of culture and development of world civilization, recognized as the "power" of Islam.*

**KEYWORDS:** Folk, Applied Arts, City, Monument, Historical, Heritage, Palace, Tourist, Decoration, Magnificent, Building, Wood, Unique, Ancient, Master, Artist, Tradition, Mosque, Development, Value, Youth, Baitullah, Ornament, Appearance, Construction, Harmony, Craft, Art, Work.

### INTRODUCTION

The art of decorative decoration serves as a specific criterion in the daily life and way of life of each period, directly the people. For this reason, applied art has a centuries-old history. The President of Uzbekistan Sh.M.Mirziyoev spoke about folk arts and expressed the following views: "Folk art, which is an integral part of universal culture, has a special place in the life of every nation in the world, in the development of its way of life and values. The emergence of handicrafts in the conscious life of mankind is the most important historical step towards civilization."

Bukhara has been the capital of various dynasties several times during its centuries-old history. In particular, in the second half of the VII century and VIII century dynasties such as the Bukhara gods, the last quarter of the IX century and the Samoni in the X century, the Shayboni in the XVI century, the Ashtarkhani in the XVII century and the first half of the XVIII century,

the Mangits from the second half of the XVIII century to 1920. Bukhara was their capital at the time.

For centuries, Bukhara was a city of feudalism, trade and crafts. Along with trade along the Great Silk Road, various nations and peoples, religions, the constant influx of news related to science, industry and other spheres of life, the abundance of minerals such as gold, silver, iron, zinc, favorable climate and natural conditions its existence was undoubtedly an important factor in the economic, political, cultural and enlightenment of this land and, of course, in the rapid development of handicrafts.

## THE MAIN FINDINGS AND RESULTS

In the centuries-old history of the Uzbek people, the folk arts and crafts, architectural monuments, its centuries-old traditions are rich and colorful and form the most world-famous part of our cultural heritage. One of the urgent task of today is to carefully preserve, enrich and bring to the world the unique applied arts, folk art, historical formation processes, artistic features and peculiarities, unique traditions. One of the important tasks of the further development of this field is to study the formation of applied art in architecture, inherited from our ancestors, in different periods.

Ancient and modern Uzbekistan is one of the centers of culture and development of world civilization, a fact known to many and recognized by the world today. Historical cities, architectural monuments and examples of applied art in the territory of our country are very ancient and unique, as well as scientifically based on a clear geometry. Many of them are included in the UNESCO World Heritage List and are an expression of the high respect of the world community for our priceless spiritual treasures.

When we think about these things, we involuntarily think of our ancient city, one of the glorious cities recognized as the "strength" of Islam - Bukhara. In particular, about the city of Bukhara and its historical monuments, our First President I.A. Karimov expressed the following views: "Bukhara Sharif is a sacred place that has introduced our nation and people to the world with its great children, dear saints and unique historical monuments.

When I say Bukhara, I mean, first of all, a hard-working people, whose heart is in Allah, whose faith is strong, who has endured many trials and tribulations. "

Indeed, Bukhara is a city with a long, tragic history and a difficult history. We turn to the information given by the involuntary Hungarian traveler Herman Vamberi in his memoir "History of Bukhara or Transoxiana". The translator of this book into Uzbek, Tahir Qakhkhor, begins the introduction as follows: "I think only the past shows the way to the future, that path passes through the chest of today. If the present is strong and powerful, it can lift the heavy bridge of the past and the future. For the construction of this bridge, through which the entire life of our people will pass, we need guides, knowledge of history. Herman Vamberi, a Hungarian scholar whose native land is old Turkestan, and his book "History of Bukhara or Transoxiana " are one such guide. In 1220, Genghis Khan invaded Bukhara, and the Bukhara army continued to resist the Mongols, who were several times more powerful. Nevertheless, they attacked the Mongols and were almost completely annihilated. A small number of them entered the city and survived. The people of the city were terrified and sent their elders to Genghis to ask for mercy. The Mongol khan entered the city with them. Genghis Khan's eye first fell on the mosque, which

was built by the great Samoni with magnificent ornaments. He and his son Tuli entered the mosque without dismounting and went to the pulpit and stopped. Tuli stood in front of the pulpit without dismounting. Genghis asked, "Is this the sultan's own palace?" He was told, "This is the House." He then dismounted. He climbed a few steps from the pulpit and shouted at the Mongols behind him. "The meadow is cut, feed your horses!" It was a sign of permission to loot. It is easy to imagine how the savage Mongols attacked the unfortunate Bukhara, how greedily the deserts, blinded by the splendor of the Central Asian capital, were thrown. All the houses were destroyed, all the chests were destroyed, countless treasures were looted. They did not spare even the sacred things, which seemed to have no value. The books were torn and scattered like straw under the feet of the animals. The boxes in which the holy was kept were used as stables for horses. The mullahs, who were the stars of knowledge, the sheikhs, like the slaves, served the distinguished warriors, and sometimes, to the Mongol bakhshis, for ridicule. Many dignitaries were forced to feed donkeys and mules. The Muslim historian narrates: "While it is a bit of an exaggeration to say that religious sentiment was insulted, after this first Mongol invasion, Bukhara undoubtedly suffered a lot and suffered terrors."

It is said that when the people of Bukhara disobeyed Genghis's order, he became extremely angry and ordered the city to be set on fire. Bukhara, which consisted mostly of wooden buildings, burned to the ground in a matter of days. Only mosques and palaces built of stone and brick became black stones and dots in the sea of grass. The administrative city over Zarafshan has become a wasteland.

However, the emergence of Temurbek from the Karegon branch of the Barlos clan was a great event. Amir Temur's contribution to the abolition of the Mongol invasion of Turkestan and the unification of our country into a single state is invaluable. This great man highly valued Bukhara, he made a great contribution to the prosperity of the country. As Herman Vamberi points out, he was primarily an Asian commander. He built a number of architectural monuments with his great creativity, and the unique prey of any country he conquered was the artists and craftsmen of that country. He loaded the books from the Bursa library onto the animals and moved them to Samarkand. Timur was determined to celebrate every success, every joyful event by creating an architectural masterpiece. To this end, he brought hundreds of skilled bricklayers from India, famous masters from Sheroz, Isfahan and Damascus to Transoxiana, who built beautiful buildings.

## CONCLUSION

In a word, today the magnificent buildings built by Sahibkiran Amir Temur in our country with their splendor are in the center of attention of tourists from all over the world. At the same time, in our country, as well as in the most developed countries of the world, architecture and creativity continue to flourish today. The construction of buildings and structures, residential buildings is improving, combining national and modern styles. The examples of architecture created by our ancestors, luxury buildings, in short, the transmission of our national cultural heritage to future generations should become our highest goal.

The difference between applied art and other types of art is that it is not only a work of art, but also used in everyday life for a specific purpose. That is, the objects of applied art have a social significance, and therefore applied art has become an integral part of the way of life of the



people. In particular, the connection of applied art with architecture further enhances its importance in everyday life.

In particular, Bukhara preserves many historical and architectural monuments, built during the IX-XX centuries, which are passed down from generation to generation without changing their original appearance. The interest in these architectural monuments, the works of art reflected in them, attracts the attention of people all over the world and most tourists who come to our country. Preserving these masterpieces of art that have come down to us from our ancestors and passing them on to future generations should be one of our priorities.

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DOI: **10.5958/2249-7137.2020.00661.8**

## ANALYSIS OF FORECASTING OF THE ASSORTMENT OF CHILDREN'S FOOTWEARS

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### ABSTRACT

*This article provides a brief description of the possibility of predicting the demand for the assortment for preschoolers and primary schoolchildren in the shoe market. Shoes from a hygienic point of view should protect the body from cooling and overheating, protect the foot from mechanical damage, help the muscles and ligaments, keep the arch of the foot in a normal*

*position, provide a favorable microclimate around the foot, and help maintain the necessary temperature and humidity conditions under any microclimatic conditions Wednesday. Shoes should meet hygienic requirements - be lightweight, comfortable, not restrict movements, fit the shape and size of the foot.*

**KEYWORDS:** *Market, Children's Shoes, Consumer Demand, Children's Feet, Requirements For Shoes, Shoe Function, Product Range, Shoe Properties, Marketing Research, Shoe Design Forecast And Production Volume Forecast.*

## INTRODUCTION

Shoes for children are selected in accordance with the sizes determined by the length of the foot: the distance between the most protruding point of the heel and the end of the longest toe. The millimeter is taken as the unit of measurement, the difference between the numbers is 5 mm. Shoes for children and adolescents are made in strict accordance with the length and width of the foot. When trying on shoes, you should pay attention to the fact that there is a space of 0.5-1 cm in front of the thumb. To do this, when trying on shoes, the child should stand, not sit. Only if the foot carries the entire mass of the body, you can find out the actual length and width of the foot. It should be borne in mind that the length of the foot does not remain unchanged, but increases, especially during movement or as a result of fatigue caused by long walking.

The child needs to change the size of the shoes approximately every six months. Shoes are better to buy light, bright colors.

## THE MAIN FINDINGS AND RESULTS

Shoes are part of the outfit. Various types of shoes are produced for children: round-season, summer, winter, spring-autumn. And also - everyday, model, home, sports, etc. Shoes from a hygienic point of view should protect the body from cooling and overheating, protect the foot from mechanical damage, help muscles and ligaments, keep the arch of the foot in a normal position, provide a favorable microclimate around the foot, help maintain the necessary temperature and humidity conditions under any microclimatic conditions of the environment. Shoes should meet hygienic requirements - be lightweight, comfortable, not restrict movements, fit the shape and size of the foot. Then the toes are placed freely and they can be moved. But it can cause a large number of deformities and diseases of the feet.

Tight and short shoes make walking difficult, shakes a leg, disrupts blood circulation, causes pain and, over time, changes the shape of the foot, disrupts its normal growth, deforms toes, promotes the formation of hard-to-heal ulcers, and in the cold season - frostbite, increases sweating. Too loose shoes are also harmful. Walking in it quickly tires, and abrasions may occur, especially in the area of lifting. Teenagers are not recommended to walk in tight shoes. Wearing it often leads to curvature of the fingers, ingrown nails, the formation of corns and contributes to the development of flat feet. Flat feet are also observed with long walking in shoes without any heels, for example, in slippers. Everyday wearing shoes with high (above 4 cm) heels is harmful for teenage girls, because makes walking difficult, shifting the center of gravity forward. The emphasis is transferred to the fingers.

The area of support and stability sharply decreases. The body leans back. Such a deviation, at an

age when the pelvic bones have not yet grown together, causes a change in its shape, changes the position of the pelvis, which in the future can adversely affect the generic function. In this case, a large lumbar bend is formed. The foot rolls forward, the fingers are compressed in a narrow toe, the load on the forefoot increases, as a result of which flattening of the arch of the foot and deformation of the fingers develop. In shoes with high heels, it is easier to tuck a foot in the ankle joint, it is easy to lose balance.

The sole should bend well. A rigid sole makes walking difficult (the angle of bending is limited, the back of the shoe is pulled down from the heel), reduces the working capacity of the ankle joint muscles, raises the temperature of the skin of the legs and perspiration.

As far as it is necessary to ensure maximum mobility of the forefoot, it is equally necessary to ensure maximum stability of the heel. The back should be strong, not allowing slipping of the foot. The back should protect, tightly cover the heel, prevent its deformation.

In winter, the shoes must be warm. For this purpose, fur, felt, cloth, felt are used. In cold winters with a stable snow cover, felted shoes (felt boots) are used. Its advantages are high heat-shielding properties and low weight, the disadvantage is the limitation of foot mobility. On cold winter days, at least –10 degrees Celsius, schoolchildren can wear boots and boots with porous rubber insulated with synthetic fur (polyester with cotton) or with a wool or felt lining. With chronic cooling of the legs, vasospasm occurs and serious nutritional disorders of the leg tissues develop due to obstruction of blood flow.

In the summer months, lightweight open-cut shoes with a wide neckline are the most hygienic - anklets, sandals, leather shoes, or shoes on a leather sole with a top made of textile and other materials with a porous structure (gunny, denim, etc.). Such shoes contribute to good ventilation and rapid evaporation of sweat due to air circulation around the foot (due to the selection of material, but more often the openwork pattern of the upper of the shoe).

In wet rainy weather, rubber boots or shoes with soles made of waterproof materials, rubber, rubber, nylon, etc. are comfortable. However, these shoes are characterized by low air permeability, so you need to wear them only with insoles that absorb sweat: felt, felt, and in summer from wicker straw or cardboard. Care must be taken to ensure that the lining does not become wet. It is recommended to wear thin woolen socks on the legs, as wool absorbs moisture well. Sometimes rubber shoes have to be worn in the cold season. In this case, it must be worn with two pairs of socks or stockings, as the air between the socks creates additional thermal protection.

Children are very susceptible to various diseases caused by prolonged exposure to various factors, therefore, hygiene requirements for it are very important.

Hygienic requirements for shoes for children and adolescents consist of requirements for the design of shoes, due to the peculiarities of the structure of the foot during the growth period, and to the materials from which the shoes are made. The size, style and rigidity of the bottom of children's shoes should not impede the development of the foot.

The foot of a child at an early age differs significantly from the foot of an adult in anatomical and physiological structure. For the children's foot, a radial shape is characteristic, in which the greatest width is noted at the ends of the fingers. The foot becomes fan-shaped. A different ratio of the heel and forefoot is that children have a relatively longer back (heel), which should be

taken into account when designing shoes. The skeleton of the foot in childhood is formed by cartilage. Ossification is completed only with the end of growth (approximately 21 g), so the child's foot can easily be deformed under the influence of mechanical stress. In this regard, such qualities as thickness, sole flexibility, weight of shoes, as well as heat-shielding properties are subject to hygienic regulation.

The main elements of the shoe are the top - this is the toe, back, vamp, tibia and bootleg, and the bottom is the sole of the insole, the heel.

The toe should be wider than the bundle (part of the foot at the level of the metatarsophalangeal joints).

Toe - the outer part of the upper shoe, covering the surface of the toes to the level of metatarsophalangeal joints. A toe cap is a detail of the top located between the lining and the top in the toe portion to maintain its shape. It protects the toes of the foot from injury, and its length should not exceed the area of the metatarsophalangeal joints.

The backdrop is a detail of the upper of the shoe located in the heel of the foot to maintain its shape. The back should protect the heel, prevent its deformation, not allow the foot to slide up and to the back. For the manufacture of a backdrop, thicker genuine leather is used. Production of shoes without a backdrop is allowed for children over 11 years old.

Union - a leather patch on the toe and raising the boot, as well as the front of the shoe.

The bootleg is the part of the boot that covers the bootleg.

The height of the shoe is normalized depending on its type and kind. From shoes (insole, sole, heel) - must have optimal stiffness indicators - resistance (expressed in n / cm) to bending along the connecting head and metatarsal bones to an angle of 25 degrees.

"The flexibility of shoes is regulated and should be 7 n / cm for hussar shoes, 10 n / cm for preschool shoes, 9–13 n / cm for boy's school shoes, and 8–10 n / cm for girls's school shoes. "

The sole is the main element of the bottom of the shoe. The sole should have optimal flexibility, thickness, weight and heat-shielding properties. Thermal protective properties of plantar materials depend on their thermal conductivity. The lower the thermal conductivity, the higher their heat-shielding properties. Porous rubber in terms of heat-shielding properties significantly surpasses the skin and monolithic rubber. At the same time, with an increase in environmental humidity, the heat loss of natural leather made of wool (felt boots) increases, and the heat-shielding properties of porous rubber do not change. This creates the advantage of using porous rubber for soles in children's shoes, which can provide not only heat-shielding properties, but also the thickness, flexibility and anti-slip properties of shoes. In the summer, wearing shoes with rubber soles, including microporous ones, leads to increased sweating of the feet due to the complete absence of steam and air permeability.

For children's shoes, thread and combined fastening methods are allowed, which provide greater flexibility in the beam region, ease of use of porous rubber, polyurethane and other materials. It is possible to use adhesive and injection fastening methods that provide waterproof shoes, which is necessary in the autumn-spring and winter periods. The thickness of the sole is normalized depending on the materials and type of shoes.

The insole is an internal part of the shoe that has contact with the skin of the foot and contributes to the creation of a comfortable temperature and humidity regime in the footwear space. It must have high air and vapor permeability. It should be made only of genuine leather.

Heel - artificially increases the arch of the foot, increasing its springiness, protects the heel from bruises on the soil, and also increases the durability of shoes. When relying on a footless foot (without a heel), most of the load falls on the back of the foot. The lack of heels is allowed only in shoes for young children (booties), while the child does not walk. In shoes with a heel of 2 cm, the load is distributed evenly between the front and rear foot. In shoes with high heels, that is, above 4 cm, most of the load falls on the forefoot (with a heel height of 8-10 cm, the load on the forefoot is 7 times more than the back). Heel height: for preschool children - 5-10 mm, for schoolchildren 8-10 years old - no more than 20 mm, for boys 13-17 years old - 30 mm, for girls 13-17 years old up to 40 mm.

Children's shoes should have a reliable and comfortable fastening on the foot, not interfering with movements. For this, various types of fastening are used: lacing, Velcro, belts, zipper, etc. "Open shoes without fasteners (such as "boats") are not allowed for school shoes."

The weight of the shoe depends on the materials used, the design and type of attachment. The norm of mass of boots is normalized.

Genuine leather is recommended for the top of all-season children's shoes, as it has high air and vapor permeability, softness, flexibility and heat-shielding properties for summer shoes along with leather, various textile materials or their combinations with leather are used: gunny, jeans and others. In warmed shoes for the upper, cloth, drape, wool and half-woolen are recommended materials, felt, felt, etc. For lining, genuine leather and cotton materials are recommended. For the manufacture of children's shoes can be used polymeric materials or natural with the attachment of chemical fibers, which are regulated by sanitary norms and rules. Shoes for everyday wear on the street or at school should be simple, comfortable in shape, with a wide low heel (1-2 cm). Then walking will not be tiring. The output shoes of older girls can be on average, but be sure to have a stable heel, not more than 3 cm high. Fanciful styles should be avoided.

An analysis of the modern market for children's shoes shows that products manufactured by domestic manufacturers do not always meet customer needs.

Children's shoes are one of the most difficult to prepare and design. The difficulty lies not only in the fact that the children's foot has its own structural features and is in constant development, but also in the fact that it is rather difficult to determine the needs for shoes of one or another gender and age group.

Today, the method of forming an assortment of light industry products based on marketing research is widely practiced. Unfortunately, according to manufacturers, this is not enough to create a cost-effective assortment. Undoubtedly, the use of marketing research allows us to analyze the situation on the market and make adjustments to the range of products, but to make forecasts, other forecasting tools and techniques are needed.

Forecasting the trading assortment based on anthropometric studies is a laborious and expensive process. It requires large-scale anthropometric studies of the feet. Such studies in different years were carried out by leading scientists in this field: Zybin Yu.P., Fukin V.A., Klyuchnikova V.M., Kochetkova T.S., Gorbachikov V.E., Kostyleva V.V. and their students. In addition, some shoe



manufacturers themselves conduct anthropometric studies. The data of such measurements are scarce. Their results, as a rule, are not disclosed and therefore cannot give a reliable picture.

Planning of commercial assortment should be connected with the characteristics of consumption of each region, as in these calculations, the demographic situation takes on significance. However, at present there is no reliable information on the basis of which manufacturers could create shoes in the right dimensional and weight scales for various age groups. Ultimately, non-compliance with regional characteristics in terms of anthropometric and demographic indicators leads to unsatisfied demand for it.

Previously conducted scientific research, as a rule, was focused either on marketing research or anthropometric, while it is necessary to solve the complex problems of forming an effective children's assortment of shoes.

An important direction of research on the formation of the industrial assortment is the improvement of approaches to the development of shoe designs for children, since the child's body is constantly evolving and in order to maintain the health of the child, reasonable data are needed.

An analysis of the assortment of children's shoes by foreign and domestic manufacturers and the situation on the market for children's products showed that increasing the competitiveness of enterprises is associated with predicting not individual characteristics of shoes, but their combination, both in the field of artistic modeling and in the field of ergonomic design.

International practice shows that the company that uses forecasting methods that take into account all product requirements for any age group of consumers wins. Of interest to study are the "preschool" and "primary school" shoe groups, because it was at this time that both the body and the personality as a whole were actively formed. During this period, the cognitive, social, physical and psychological development of the child is laid, the foundations of a universal human culture are developing. External attributes are involved in the development of these systems.

An important point for forecasting the industrial assortment is the volume of the assortment produced. For a children's assortment, it may not be stable, as this is due to the birth rate of children by year. That is why the total curve of the normal distribution of foot sizes does not have a characteristic horizontal section; it is replaced by a concave or convex one. Therefore, the demographic factor is important.

Types of forecasts differ in time as operational, short-term, medium-term, long-term and long-term. It is proved that in order to increase the competitiveness of the enterprise, it is advisable to carry out medium-term and long-term assortment forecasts.

The forecasting approach that requires less money and time to obtain a forecast can be considered preferable. Especially if the forecast model can be used repeatedly, only being adjusted and supplemented in the future.

When forecasting the size and species assortment, it is necessary to use different approaches, a forecast for the design of shoes and a forecast for the volume of output.

When assessing the specific assortment of shoes, consumers use their personal preferences. The choice is influenced by the social relations and psychophysiological characteristics of the buyer



that have developed in society.

To clarify the characteristics of the factor, its specificity and position when constructing the forecast from a possible list, we can distinguish socio-psychological, constructive-ergonomic and anthropometric groups of factors.

Changes in anthropometric parameters are relatively simple to calculate, as well as to predict the population. The group of socio-psychological factors is the most laborious in assessing, analyzing, and obtaining numerical values of the criteria.

The interconnection of anthropometric and socio-psychological factors is carried out using constructive-ergonomic. Constructive-ergonomic factors are a material representation of verbal preferences. When forming the criteria for evaluating these factors, the capabilities of the production itself are taken into account, and the issues of shoe comfort are addressed.

Methods for predicting factors are presented from the aesthetic category: socio-psychological and constructive.

To work with socio-psychological factors and criteria for their assessment, a study was conducted of consumer preferences when choosing children's shoes on the example of local markets. A survey was conducted not only among direct buyers, that is, parents, but also created graphical questionnaires for interviewing children. The results are transferred to the disposal of regional industrial and commercial enterprises.

In order to forecast structural factors, a database of the design characteristics of children's shoes was formed. Illustrative materials for the period 2010 - 2019 are considered. In the period under review, several criteria could be popular. For this reason, in some cases, the number of criteria is increased. For the formation of databases, preparatory tables on designs taking into account the type of shoes were compiled. The specificity of forecasting design factors is the use of non-numerical characteristics of shoes for predicting.

To verify the reliability of the selected mathematical apparatus, a preliminary forecast is made based on the available data. Since the database of designs for children's shoes was formed before 2019, the forecast was made for the nearest 2020. The reliability of the forecast is confirmed by real models of 2020.

The analysis of design factors made it possible to identify for each of them the areas of acceptable values that must be used in the development of a mathematical model for predicting shoe designs for preschoolers, schoolchildren - girls, and schoolchildren - boys.

A completely different approach to forecasting requires a group of anthropometric factors. Forecasts of this group of factors are based on data obtained as a result of measurements of the feet of the population, medical data and are more reliable than factors relating to the prediction of the aesthetic component. To forecast the size assortment, it is also necessary to study demographics. As a rule, demographic forecasts are presented in the middle version of the calculation, considered as the most likely outcome.

## CONCLUSION

Our analysis of modern methods of forming the assortment of light industry products allows us to identify the relationship of enterprise competitiveness with the concept of assortment

formation. In addition, it is possible to predict the demand for the assortment for preschoolers and primary schoolchildren in the shoe market.

Approaches to forecasting the structure of the assortment are considered. Learn the types of forecasts. To show that in the current economic situation, medium-term and long-term forecasts are most relevant for shoe manufacturers. To propose the forecasting of new shoe models using modern modeling methods.

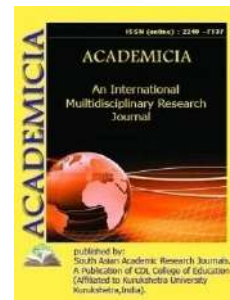
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DOI: **10.5958/2249-7137.2020.00662.X**

## INTER-SUBJECT COMMUNICATIONS IN THE TEACHING OF CHEMISTRY IN THE PREPARATION OF A FUTURE BIOLOGY TEACHERS

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### ABSTRACT

*This article reveals pedagogical conditions aimed at the effective instruction of prospective teacher of biology: strengthening of inter-subject links between the curricula for studying methods of teaching chemistry and biology in a pedagogical higher educational institution; improvement of the curricula for studying methods of teaching chemistry and biology in a pedagogical higher educational institution due to introduction of pedagogical teaching technologies.*

**KEYWORDS:** *Inter-Subject Links, Pedagogical Technologies, Chemistry, Biology, Prospective Teacher, Pedagogical Conditions.*

### INTRODUCTION

Having gained independence, Uzbekistan is experiencing a new period of socio-economic development in order to gain a foothold in the world. At the same time, the Concept of Education for Sustainable Development, adopted globally until 2030, emphasizes that "the science of

chemistry has a practical, convenient and sustainable solution that is closely connected with other areas of achieving sustainable development” [1].

In the process of ongoing reforms, new requirements for the content of education are moving in the context of professional training of teachers. In this regard, graduates of vocational schools should be competitive in the labor market. A future teacher should be able to organize not only collective, but also individual activities of students, as well as, comprehending innovative pedagogical technologies, creatively implement them in his own professional pedagogical activity.

In this regard, a higher school is able to prepare teaching staff adapted to work in a modern school. A future biology teacher is required to possess modern technologies of pedagogical influence on students, which can increase the attractiveness of studying the basics of biology with the prospects of the individual in further professional education. The preparation of a biology teacher for work at school is intensively conducted at the Kokand State Pedagogical Institute [10; -pp. 191-194]. Modern scientific and pedagogical experience of teaching biology teachers at the university has shown that it is necessary to clarify and rethink in many ways the goals, content, forms and methods of preparing a future biology teacher for work at school. One of the conditions for such improvement is the establishment of a system of holistic and continuous training for students of a pedagogical university, including the specialty “Chemistry and Biology” [2; -pp.131-132].

### THE MAIN FINDINGS AND RESULTS

In this direction, the following trends have developed, aimed at effectively preparing the future biology teacher:

- 1) The strengthening of interdisciplinary relations between courses in teaching chemistry and biology at a pedagogical university and special-scientific disciplines;
- 2) Improvement of courses in teaching chemistry and biology at a pedagogical university through the introduction of more effective pedagogical teaching technologies.

One of the basic scientific disciplines studied by students of chemical and biological specialties of a pedagogical university is the course “Chemistry”. Its importance for teacher training is increasing due to an increase in the volume of biochemical content in school courses in organic chemistry and general biology. However, the methodological potential of the course, based on inter-subject communication, is not used to the full extent in a pedagogical university.

Consider each of the trends we highlighted in preparing the future biology teacher for pedagogical activity.

In our study, by interdisciplinary relations we will understand the reflection of relations between sciences, in the content of educational material, in its structure and teaching methods [3; pp.10-20].

A survey of the faculty of the Kokand State Pedagogical Institute showed that 76% of respondents attribute the implementation of interdisciplinary ties in the educational and cognitive activities of students to promising areas of activation of this activity, contributing to the improvement of the content of higher education [9; pp. 223-224].

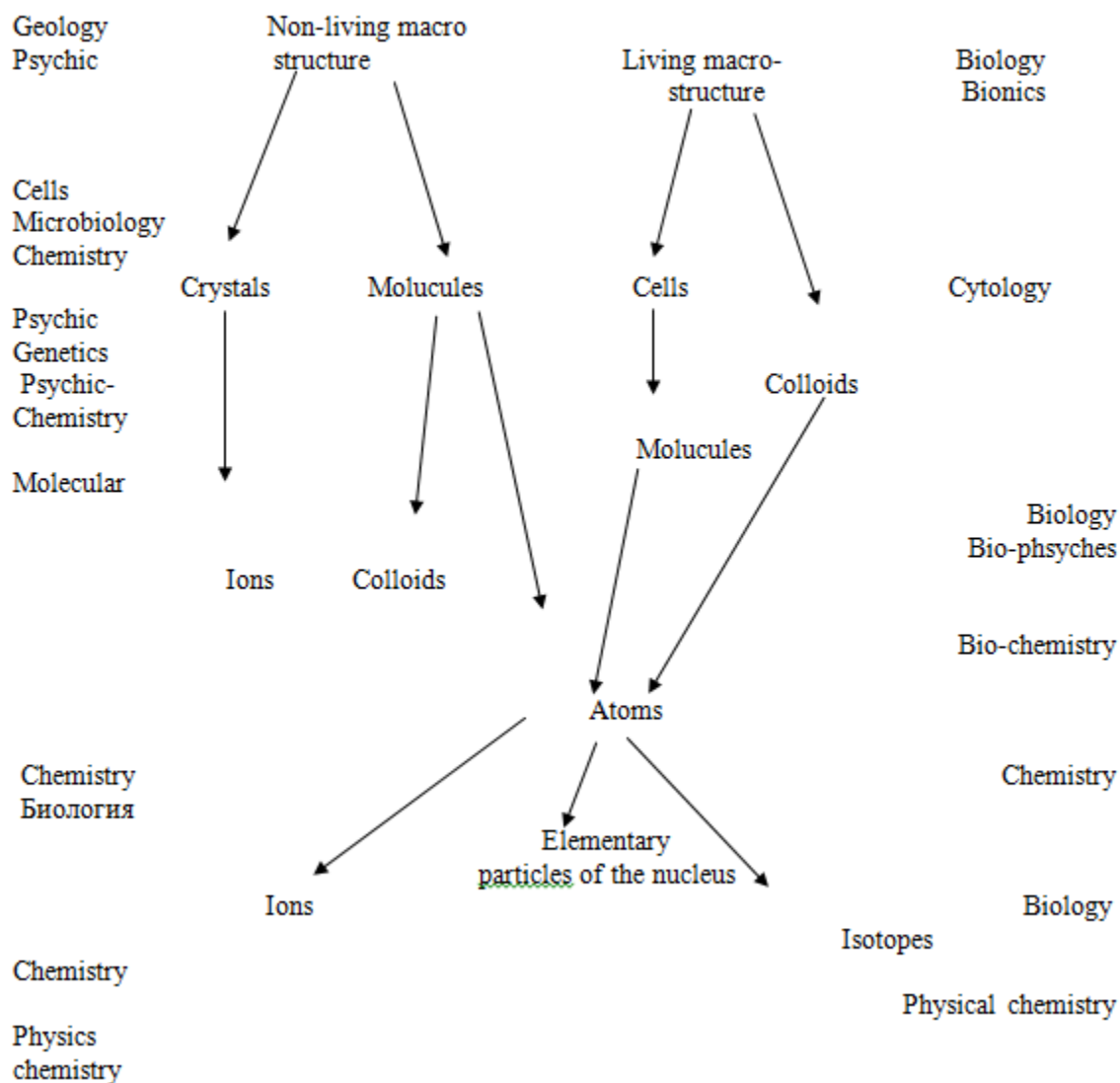
Interdisciplinary integration is a combination of knowledge, conviction and practical action at all stages of specialist training, a synthesis of all forms of classes regarding each specific goal of education at a university.

It is indisputable that the natural sciences are in organic connection with each other, i.e. such a connection in which they “relate to the very essence, the internal integrity of something” [5; P.459].

V.T. Fomenko identified types of interdisciplinary communication by the way content is deployed over time. “Vertical” interdisciplinary communication - logical and temporal relations do not coincide. “Horizontal” connection - blocks of selected disciplines are studied simultaneously, in parallel, but with varying degrees of interpenetration. [4; pp. 208-209]. Horizontal interdisciplinary communication involves the identification of several major courses, which include other courses. Each discipline is divided into block modules. Vertical interdisciplinary communication determines the sequence of training at different levels of training, as well as a unified methodology, methodology, terminology of the approach to the study of the cycle of natural sciences. In this case, it is necessary to carry out organizational and methodological measures, including editing the existing curricula, covering the interconnection of natural science disciplines. The foregoing makes it necessary to prepare the future biology teacher for the ability to develop an individual plan for the implementation of inter-subject communications in biological courses. This requires knowledge of the methodology of the teacher’s creative work, which includes a number of stages:

- 1) Studying the section "Inter-subject communications" for each biological course and supporting topics from programs and textbooks of other subjects, reading additional scientific, popular science and methodological literature;
- 2) Lesson planning of inter-subject communications using course and thematic plans;
- 3) The development of tools and teaching methods for the implementation of inter-subject communications in specific lessons;
- 4) Development of methods for the preparation and conduct of integrated forms of organization of training;
- 5) The development of methods for monitoring and evaluating the results of the implementation of inter-subject communications in training.

As you know, chemistry and biology are related sciences in the educational process of higher pedagogical educational institutions. They complement each other and fully participate in the formation of a universal natural-scientific picture of the world [7; pp. 58-59]. Given the fact that the material world is divided into inanimate and living nature, the role and relationship of the natural sciences can be represented as follows:

**Non-living nature****Live nature****RESULTS AND DISCUSSION**

An analysis of current state educational standards (GOS) and the content of education in the field of education “Methods of Teaching Chemistry and Biology” show that there is a whole system of concepts that is universal for the sciences of the natural science cycle:

1. Substances and their elemental components.
2. Elemental units of substances involved in occurring phenomena and processes.
3. Material units that provide the relationship of animate and inanimate nature.

We consider it appropriate to carry out inter-subject communications in the teaching of chemical and biological disciplines in the following areas:



1. The structure of substances and mechanisms of occurring phenomena and processes that are universal for chemical and biological sciences.
2. Generality in the essence of the laws available in the scientific foundation of chemistry and biology.
3. The relationship and complementarity of theories of chemistry and biology.
4. The use of chemical knowledge to explain the mechanisms of biochemical processes.
5. The use of biological knowledge for the formation of chemical, environmental and environmental concepts.
6. The mutual application of the methods, means and methods of these sciences in the teaching of chemistry and biology.

Inter-subject communications of chemistry and biology, as a powerful lever, can fruitfully serve to form a natural-science picture of the world and a holistic and general scientific worldview [8; pp.78-83].

Interdisciplinary connections at the level of facts (actual) are the establishment of the similarity of facts, the use of general facts studied in chemistry, biology courses, and their comprehensive consideration in order to generalize knowledge about individual phenomena, processes and objects of nature. So, in teaching biology and chemistry, future teachers can use data on the chemical composition of the human body. Conceptual inter-subject communications are the expansion and deepening of the attributes of subject concepts and the formation of concepts common to related subjects (general subjects). The general concepts in the courses of the natural science cycle include the concepts of the theory of the structure of substances - body, substance, composition, molecule, structure, property, as well as general concepts - phenomenon, process, energy, etc.

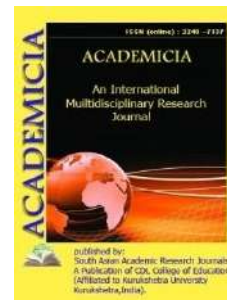
## CONCLUSION

These concepts are widely used in the study of the processes of assimilation and dissimilation. Moreover, they deepen, concretize on biological material and acquire a generalized, general scientific character. A number of general biological concepts reflect such complex processes of living nature that it is impossible to disclose even at the first stage of their introduction without involving chemical concepts. So, the concept of photosynthesis has developed in science as a result of studying this process by plant physiology and borderline sciences - biophysics and biochemistry. Theoretical interdisciplinary communication is the development of the basic principles of general scientific theories and laws studied in the lessons on related subjects, with the aim of assuming students a holistic theory.

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DOI: **10.5958/2249-7137.2020.00725.9**

## **A STUDY OF TALENT ACQUISITION PRACTICES IN ITS INDUSTRY: INNOVATIONS IN HR STRATEGIES**

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### **ABSTRACT**

*Today's business success hinges on strategic agility and the ability to execute in a timely manner. In a continually evolving global business environment, opportunities for growth are juxtaposed against a shrinking pool of high-performing Talent that can quickly seize those opportunities. The ability to anticipate Talent needs, optimize a Talented workforce, and keep retention rates high—despite constant change—is the key to a company's sustainable competitive advantage. According to the Price Waterhouse Coopers 11th Annual Global CEO Survey, "access to Talent" remains a major issue. Less than half of all CEOs agreed that their HR teams were equipped to handle the change required to compete for Talent. Talent Management is one of the biggest challenges facing organisations this century. The demand for superior Talent far outweighs supply, and more and more companies are feeling the impact as they compete in the global market (Frank & Taylor, 2004). Globalization, workplace reform and changes in the demographic composition of the workforce have affected how Talent needs to be managed (Nankervis, Compton & Baird, 2005). These factors also reinforce the importance of having a flexible Talent Management system. The growth potential of organisations worldwide depends on the ability of companies to have the right people, in the right place at the right time. Research demonstrates that companies with enlightened Talent Management policies have higher returns on sales, investments, assets and equity (Caudron, 2001). "Savvy companies understand the competitive value of Talented people and spend considerable time identifying and recruiting high caliber individuals wherever they can be found. The trouble is that too many companies pay too little attention to allocating their internal Talent resources effectively." (Bryan, Joyce & Weiss, 2006)*

**This research paper aims to understand :**

1. The dynamics of Talent Management
2. Significance of Talent Management in IT Industry
- 3What are the fundamental talent acquisition practices followed in the organization

**RESEARCH METHODOLOGY:**

**Population:** Large Scale IT Industries in Pune Region Sampling frame: Software companies in software development, services, applications management etc. **Sampling Method:** Convenience sampling **Sample Size:** 30 large scale IT Companies in Pune Region **Data Analysis:** was conducted by ascertaining the population proportion and frequencies – maximum data points for a particular question. The interpretation was then based on the frequency outcomes.

**Conclusion:** Talent Acquisition needs innovative HR Approaches to enrich its results.

**KEYWORDS:** *Talent Management, Talent Acquisition, Business Challenges, Talent Management for the New Generation, HR Innovations*

**I. INTRODUCTION:**

Today's business success hinges on strategic agility and the ability to execute in a timely manner. In a continually evolving global business environment, opportunities for growth are juxtaposed against a shrinking pool of high-performing Talent that can quickly seize those opportunities. The ability to anticipate Talent needs, optimize a Talented workforce, and keep retention rates high—despite constant change—is the key to a company's sustainable competitive advantage. According to the Price Waterhouse Coopers 11th Annual Global CEO Survey, "access to Talent" remains a major issue. Less than half of all CEOs agreed that their HR teams were equipped to handle the change required to compete for Talent. Talent Management is one of the biggest challenges facing organisations this century. The demand for superior Talent far outweighs supply, and more and more companies are feeling the impact as they compete in the global market (Frank & Taylor, 2004). Globalization, workplace reform and changes in the demographic composition of the workforce have affected how Talent needs to be managed (Nankervis, Compton & Baird, 2005). These factors also reinforce the importance of having a flexible Talent Management system. The growth potential of organisations worldwide depends on the ability of companies to have the right people, in the right place at the right time. Research demonstrates that companies with enlightened Talent Management policies have higher returns on sales, investments, assets and equity (Caudron, 2001).

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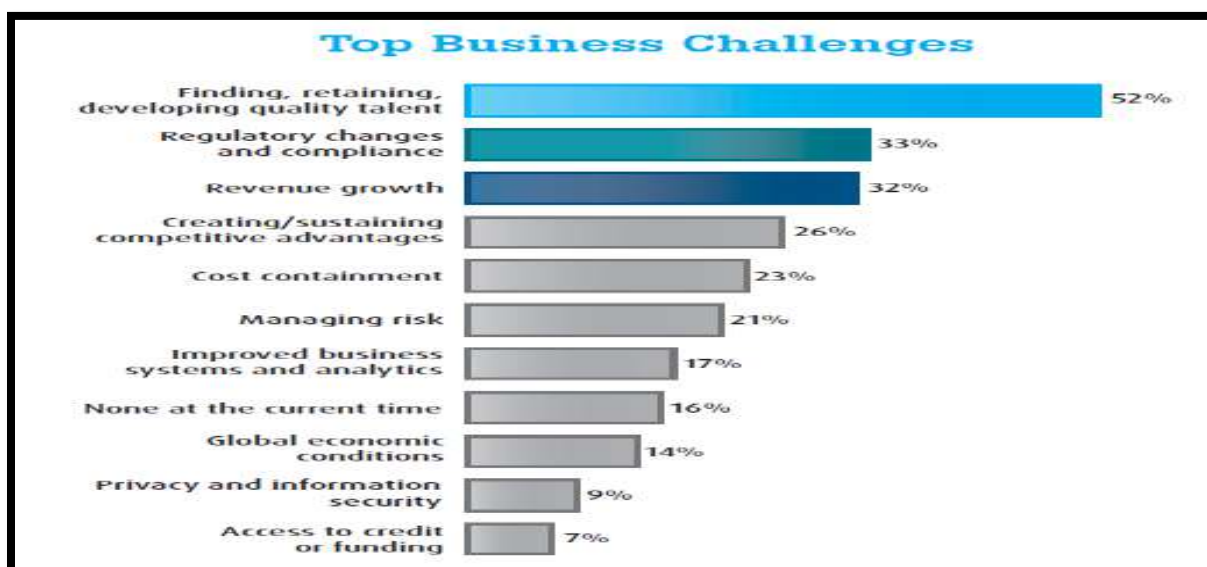
## Business Challenges

In a world where knowledge doubles every year and skills have a half-life of 2.5 to 5 years, leaders need constant development. This ongoing need to develop leaders is also driven by the changing expectations of the workforce and the evolving challenges businesses are facing, including two major themes: globalization and the speed and extent of technological change and innovation.

Talent acquisition and access continues to be one of the most important things companies do. In a skills-constrained environment, a company's ability to find, attract, and access highly skilled people is critical to success. This area is going through a significant disruption as a result of globalization, technology, social media, changing workforce expectations, and the shrinking half-life of skills and technical knowledge. Tools such as LinkedIn, Facebook, Twitter, and others are changing recruiting into a strategic function focused on marketing, branding, and new tools and technologies.

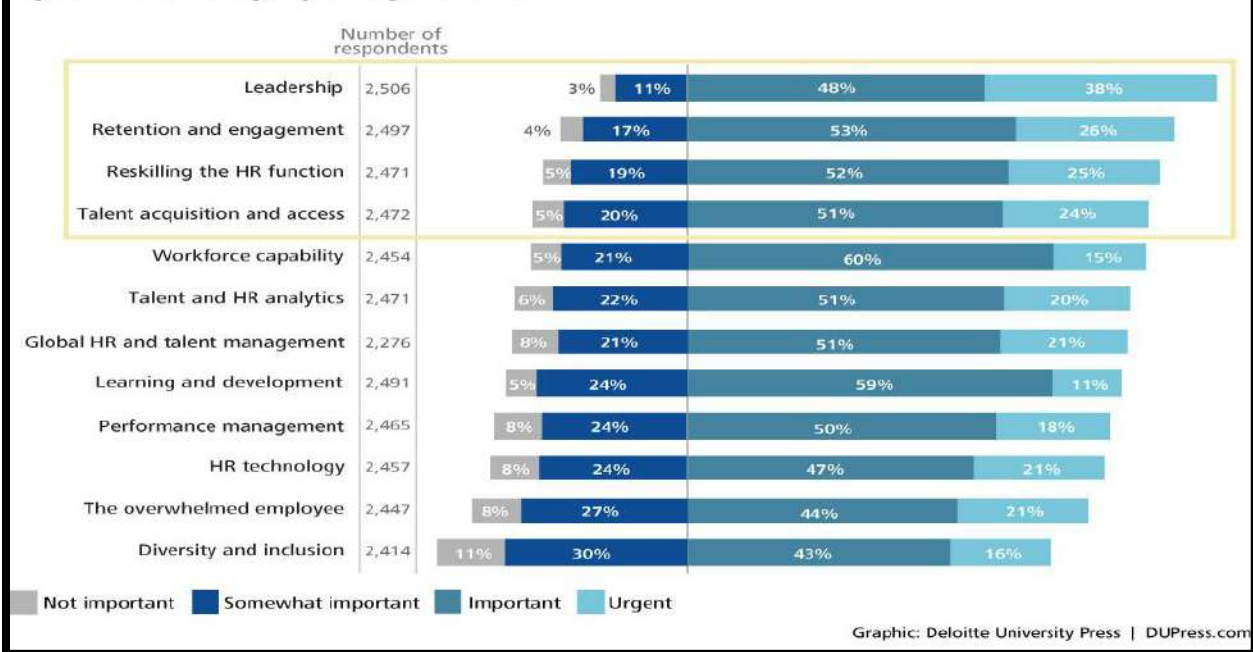
### Business Challenges:

#### 1. Top Business Challenges:



Source: 2013 Hire Right Employment Screening Benchmarking Report

**2. Leadership, retention, HR skills, and talent acquisition are the top global trends in perceived urgency**

**Figure 1. Perceived urgency of 12 global trends**

## II. Talent Management for the New Generation

Most of the organizations do not feel much about managing their Talent. Here is why they should

- Typically, labor accounts for about 65 % of every business in any industry. The percentage is more for labor intensive businesses for example those in manufacturing.
- The performance difference between Talented and lesser talented employees is huge.
- Employees and how they are managed is the most important source of most organizational competencies and strengths.

Talent Management is not only important for hiring people as per the need, it is also important for determining when to hire. In the traditional model of hiring supply meant developing people internally for future. There was an upfront investment in candidates recovered through an enhanced performance over time. This was a good perspective; there were equal chances of making and losing money by investing in your people.

Hiring from outside or temporary employment on the other hand was seen as something that cannot fetch you substantial returns and or act as potential source of knowledge and competitive advantage.

These trends lost sheen over a period of time with the rise of the great corporate career. Consider this - In 1950's — 1960's an average fortune 500 executive had been with his/her company for average 24 years. Not anymore, the traditional and lifetime model was breaking up and giving way to a new model. Outside hiring increased along with the increased employee turnover.

The change was brought over by organizations failing to plan. Increased pressures from market for speed of delivery and variety of goods, the third wave of corporate restructuring and failure to keep up with new management practices brought chaos to planning.



In a survey conducted in 2003 by SHRM it was found out that 60% of the firms have no succession planning of any kind. Surprisingly more than 70 % had it in that late 1970's! IPMA-HR survey of the workforce as a whole in the year 2004 found out 63 % have no workforce planning of any kind; the same was an integral component of virtually all companies in 1950's. A new trend had taken shape, shortage - go outside and hire!

On the employee side, the trend of lifetime employment has diminished now. Talking in terms of the percentage of lifetime employees - in 1980's 53 % of employees worked as life time employees, the same decreased to 34 % in 2009. The questions that arises is how do we manage the next generation employees and what exactly do people expect from jobs.

The new generation employees it seems do not believe in the old philosophy of 'we will stick around till you need us'. They are more enterprising and will to take risks in their career; they accept failures easily and are prepared for them. People now prefer flat hierarchies, build careers around jobs and want a clear performance management system.

There are work-life balance concerns, issues of job flexibility all of which calls for renewing the social contract with the employees. The employees, their psyche, their beliefs and most important their attitudes are changing - Talent Management can't afford to sit back. It needs evolution.

### **III Talent Management in IT Industries:**

Today where the new mantra for the development is "Information Technology", this mantra has changed the image of India in the global arena. Even if the results of development of IT in India are more visible after globalization, its development got rooted almost before 50 years

Panchamukhi (2000, 840) noted this potential of IT industry and opined "*If the sectors of agriculture, knowledge and information industries are encouraged to grow in a consistent manner then the problems of poverty, unemployment can be solved*". Further as rightly observed by Unni and Rani (2000) IT allows leapfrogging which can help countries skip generations of technology and stages of growth and place them directly in a service-dominated economy. That's why even without having a fully matured manufacturing sector, India is experiencing shift in its economy due to its service sector development which is dominated by IT.

**Information technology (IT)** industry in India has played a key role in putting India on the global map. IT industry in India has been one of the most significant growth contributors for the Indian economy. The industry has played a significant role in transforming India's image from a slow moving bureaucratic economy to a land of innovative entrepreneurs and a global player in providing world class technology solutions and business services. The industry has helped India transform from a rural and agriculture-based economy to a knowledge based economy.

Information Technology has made possible information access at gigabit speeds. It has made tremendous impact on the lives of millions of people who are poor, marginalized and living in rural and far flung topographies. Internet has made revolutionary changes with possibilities of e-government measures like e-health, e-education, e-agriculture, etc. Today, whether its filing Income Tax returns or applying for passports online or railway e-ticketing, it just need few clicks of the mouse. India's IT potential is on a steady march towards global competitiveness, improving defense capabilities and meeting up energy and environmental challenges amongst others.

India's Information Technology industry is expected to touch the Rs 1.75 lakh crore mark by 2016, helped by rise in IT services and software segments, a report by Boston Consulting Group (BSG) said.

"The domestic IT industry is expected to grow at 12 per cent over next 4 years, reaching a size of Rs 1.75 lakh crore by 2016, driven primarily by the services and software segments," the BCG-CII report added.

#### IV. Challenges faced by Indian IT Industry

Still this growth is not free from some inherent problems and criticisms. **Sustainability of this growth itself is questioned by the researchers for several reasons.** Too much export orientation besides the composition and direction is a cause of concern.

There lies huge gap between actual and potential performance. On an average the Indian software industry is utilizing less than 50% of their potentiality. The average technical efficiency of Indian software companies recorded highest at 45.22% in 1996 and it declined thereafter. Further they found more of a negative effect on the efficiency of software companies in India due to deregulation. Inadequate attention to the domestic market" as Kumar and Joseph (2005) observed, the Enclave nature of the operation of IT industry generated little knowledge spill over for the domestic economy. Emerging competitors like Ireland, Canada, China, Mexico, Russia, Philippines, Thailand and other countries are in the race. It is posing serious threat to the Indian IT industry. Because attrition pushing up the manpower cost which is eroding the cost advantages and other countries are becoming comparatively cheap. Problem of attrition and shortage of manpower is haunting IT industry. After recession again it reached double digit. Shifting of companies from employees in search of better salary, status, growth opportunities and other reason is quite common. This is increasing the costs of the firms in two ways. To retain the employees firms have to increase their expenditure on pay and perks at another side attrition leads to increased HR costs for further recruitment, training etc. Already Indian IT industry is experiencing the shortage of technical manpower. And as per NASSCOM the shortage is of 2 million for the year 2008

#### V. RESEARCH METHODOLOGY

##### Why Talent Acquisition?

We define Talent acquisition as "a strategic approach to identifying, attracting and onboarding top talent to efficiently and effectively meet dynamic business needs."

An organization has to develop blended talent acquisition strategies to attract and hire top candidates — creating sourcing plans that include social media and employer branding. You also have to find recruitment technology not only to reach candidates but also to assess and provide analytics on those candidates. Find the right individuals who will transform the company, and build comprehensive talent recruitment plans that unify business goals and talent aspirations.

- It is estimated that at least 1/3 of business failures are due to poor hiring decisions and inability to attract and retain the right talent.
- The average cost of replacing a manager or professional is 1.5 to 3 times salary.
- The cost of working around an under-performer can run as high as six figures

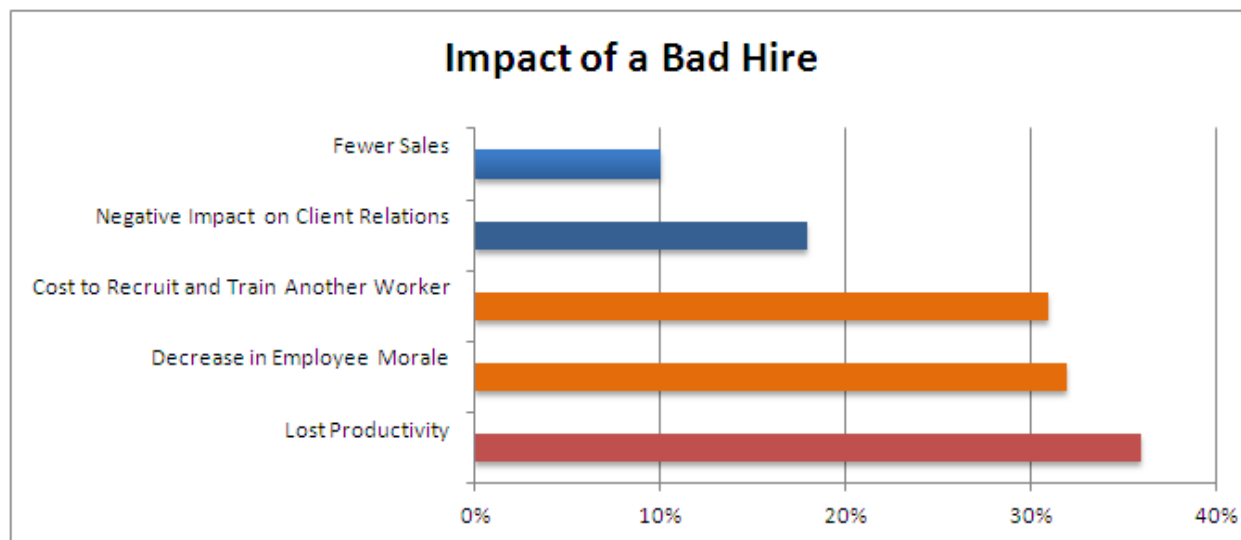
- The cost of consistently failing to attract and retain good talent – including declining productivity, morale, culture and reputation - is inestimable.
- Each vacant position costs an organization Rs. 60,000 on average. For some management positions, it can easily run into six figures...

Bad Hire Calculator	
<b>Cost to Advertise the Position</b>	
4 Number of ads placed	\$ 550.00 Price of each ad
<b>HR Staff Costs</b>	
25 Hours involved	\$ 44,800.00 Annual HR salary
<b>Costs to Interview</b>	
5 Number of candidates interviewed	3 Number of interviewers
\$ 40,000.00 Average salary of interviewers	
<b>Productivity Losses</b>	
\$ 30,000.00 ENTER the position's salary	
<b>Relocation Costs</b>	
\$ 9,708.00 ENTER 0 if relocation does not apply	
<b>Cost of Training</b>	
3 Number of months spent training	
<b>Recalculate</b>	
<b>Total Cost of a Bad Hire</b>	
\$ 50,379.15	

\*Averages were compiled from: *USA Today* 2004 Classified Advertising Rates; *Workforce Management*, March 2003: "Estimating the Financial Value of Staffing-Assessment Tools" by Dr. Charles Handler and Dr. Steven Hunt; 2002 SHRM/EMA Cost Per Hire Survey; *HR Magazine*, November 2003: "HR Compensation Special Report"; *Workforce*, January 2001: "The Importance of Cost Per Hire" by Barbara Davison.

Despite continually high unemployment rates, employers are still challenged with acquiring qualified talent, as evidenced in a recent CareerBuilder survey. More than half of employers from the world's ten largest economies reported that they have experienced a bad hire. In the United States, the rates are even higher: two out of three U.S. employers reported making a hire that ended up not meeting expectations, or was a poor fit for the position. Emerging economies, like China, India, Brazil, and Russia, had greater incidences of bad hires, with rates near 90 percent. The impact of a poor hire can reverberate throughout the organization and can be costly. In the United States, 27 percent of employers reported that the cost of a bad hire exceeded \$50,000.

Other costs of a bad hire cited by respondents to the survey include:



Source: CareerBuilder, May 2013

### Research Question:

What are the fundamental talent acquisition practices followed in the organization?

**Geographical Scope:** The study was carried out in large scale IT companies in Pune Region.

### Data Sources:

**Primary Data :** In this research the primary data was collected by interviewing the HR Managers/Heads through structured questionnaire.

**Secondary Data:** The secondary data was collected through various research Journals/ text books/ reference Journals and Internet

### Sampling:

**Population:** Large Scale IT Industries in Pune Region

**Sampling frame:** Software companies in software development, services, applications management etc.

**Sampling Method:** Convenience Sampling

**Sample Size:** 30 large scale IT Companies in Pune Region

**Data Analysis:** was conducted by ascertaining the population proportion and frequencies – maximum data points for a particular question. The interpretation was then based on the frequency outcomes.

**VI. Data Analysis****Data MAP of Strengths' & Weaknesses of factors for : 'Talent Acquisition Practices'.**

Sr. No	Process	Frequency Parameter (Maximum)	Frequency	% companies	Strong/ Weak
1	We have an effective internal job posting process and policy that facilitates growth and movement within the organization	'Often'.	19%, 54%	36.66% have effective internal job posting	Weak
2	We provide incentives for employees to refer candidates	'Always'.	42%, 78%).	60% provide incentives	Moderate
3	We have processes in place that ensure compliance with government regulations and laws	'Always'.	46%, 81%).	63.33% have processes in place	Moderate
4	<b>Use of Technology and Integration</b> Leverage recruitment technology in all aspects of the recruitment process	'Agree'.	26%, 61%	43.33% leverage recruitment technology	Weak
5	Interview job applicants using competency-based and/or behaviorally-based techniques	'Agree'.	35%, 71%	53.33% -interview on competency/behaviorally based techniques	Weak
6	Link candidate screening criteria to other talent management processes such as performance management,	'Agree'.	22%, 58%	40% Link to Talent Management Processess	Weak

	development, and succession planning				
7	<b>Attracting Quality Candidates</b> We have a strong pipeline of diverse candidates	'Agree'.	22%, 58%	40% agree to have a strong pipeline	Weak
8	Our high quality applicants tend to accept our job offers	Agree'.	26%, 61%	43.33% accept job offers	Weak
9	We consistently attract high quality applicants	Agree'.	22%, 58%.	40% companies attract quality applicants	Weak
10	<b>Recruiting Metrics Tracked</b> New hire first year performance rating	'80 – 100%'.	11%, 42%	26.66% companies track recruitment metrics between 80 – 100%	Weak
11	Percent of critical/key positions filled	'60 – 80%'	11%, 42%	23.33% track Critical positions filled metric between 80 – 100% and 26.66% track between 60 – 80%	Weak
12	Percent of external hires	'40 – 60%'.	16%, 50%).	33.33% track metric percent of external hires	Weak
13	Percent diverse hires	Same for each category	Equally distributed	23.33% track diverse hires almost equal distribution to all categories	Weak
14	Offer acceptance rate	'60 – 80%' & '80 – 100%'	11%, 42%	26.66% offer acceptance rate between 80-100%	Weak
15	Number of applicants per hire	40 - 60%'.	11%, 42%	40% have avoided giving answer 36.66% have said that between 40- 60% applicants per hire	Weak
16	Time to fill open positions	40 – 60days	11%, 42%	26.66% say that they require 40 – 60 days to fill open positions	Weak
17	Rehire percent	3 - 5%.	14%, 46%	36.66% have not answered. 30% reported rehire percent between 3-5%	Weak



18	Referral hiring percent—Percent of total hires that joined the organization via an internal employee referral	20% & above'	11%, 42%	26.66% companies reported referral hiring between 20% and above	Weak
19	<b>Internal management hiring</b> —Source Percent of Management requisitions that were filled by internal management candidates	10 - 20%'	8%, 38%	23.33% reported internal management hiring between 10 -20% 36.66% have not answered this question	Weak

**H<sub>0</sub>:** Talent Acquisition practices are practiced in IT companies

**H<sub>a</sub>:** Talent Acquisition practices are less practiced in IT companies

**From the above data analysis we can conclude that all the factors in “ Talent Acquisition Factors are weak “ hence H<sub>0</sub> is rejected and H<sub>a</sub> is accepted**

## VII. FINDINGS

### **Part1: Fundamental Talent Acquisition Practices**

1. 36.66% have effective internal job posting
2. 60% always provide incentives for employees to refer candidates
3. 63.33% 'Always'. have processes in place that ensure compliance with government regulations and laws

### **Part2: Use of Technology and Integration**

1. 43.33% agree Leverage recruitment technology in all aspects of the recruitment process
2. 53.33% Agree. Interview job applicants using competency-based and/or behaviorally-based techniques
3. 40% Agree Linking candidate screening criteria to other talent management processes such as performance management, development, and succession planning

### **Part3: Attracting Quality Candidates**

1. 40% agree to have a strong pipeline of diverse candidates
2. 43.33% Agree, high quality applicants tend to accept their job offers
3. 40% Agree, on consistently attracting high quality applicants

**Part4: Recruiting Metrics Tracked**

1. 26.66% track new hire first year performance rating, between '80 – 100%'.
2. 23.33% track Percent of critical/key positions filled '60 – 80%'
3. 33.33% track metric percent of external hires between '40 – 60%'
4. 23.33% track diverse hires almost equal distribution to all categories
5. 26.66% offer acceptance rate between 80-100%
6. 40% have avoided giving answer 36.66% have said that between 40- 60% applicants per hire
7. 26.66% say that they require 40 – 60 days to fill open positions
8. 36.66% have not answered. 30% reported rehire percent between 3-5%
9. 26.66% companies reported referral hiring between 20% and above
10. 23.33% reported internal management hiring between 10 -20% 36.66% have not answered this question

**HR innovations in Talent Acquisitions:**

Companies face an urgent need to develop leaders at all levels—from bringing younger leaders online faster to developing leaders globally to keeping senior leaders relevant and engaged longer. Leadership remains the No. 1 talent issue facing organizations around the world. 21st-century leadership is different. Companies face new leadership challenges, including developing millennial and multiple generations of leaders, meeting the demand for leaders with global fluency and flexibility, building the ability to innovate and inspire others to perform, and acquiring new levels of understanding of rapidly changing technologies and new disciplines and fields.

Talent Acquisition has evolved from a tactical back office process to a strategic endeavour that directly impacts organizational growth. Organizations struggling to identify and attract talent must rethink their current strategies in order to align with corporate objectives

**Following HR innovations can strengthen Talent Acquisition process in the organizations.****Online Candidate Assessments**

To ensure that managers see candidate slates that include high quality prospects, hiring managers are relying more heavily on technology for initial screening. More than ever, candidates are being required to complete online forms to help determine skill sets.

**Shortened Hiring Process**

Delays in the hiring process wastes time and virtually assures losing talented candidates. To remedy this, many companies are taking steps to streamline their hiring process by eliminating unnecessary steps and multiple rounds of interviewing.

**Pursuit of Global Leaders**

Due to continued globalization and the demand for top skills and management experience, companies are on the prowl for global leaders at a greater rate. Companies are seeking to recruit professionals with global exposure, corporate acumen and cultural understanding.

**Growing Importance of Soft Skills**

Companies are requiring more from candidates than academics, knowledge and experience. They are looking for the right set of "soft skills" that will complement their company culture and ensure high performance on the job.

**Mobile Recruiting**

Through mobile recruiting, hiring managers are able to reach out to prospective talent through a variety of mobile devices. It is a very effective way for hiring managers to keep in touch with job seekers anytime and anywhere.

**Employer Branding**

More and more companies are learning how to effectively communicate their employment brands through social media outlets. Facebook and Twitter are the favorites. However, their content needs to improve. More often than not, their posts are a bit boring and self-promoting when they should be interesting and engaging.

**Positive Candidate Experience**

Creating a positive candidate experience is helping companies to attract the best talent and stay competitive in the job market. A positive candidate experience includes everything from an easy to navigate website and career page, favorable social media presence, pleasant interactions with personnel, shortened interview process as well as a smooth on-boarding process.

**Behavioral Interviews**

Based on the premise that past performance is the best predictor of future performance, behavioral interviews assess how a candidate deals with situations in the workplace. Companies utilizing behavioral interviews are able to better determine if there is a fit between the skills of a candidate and the position.

**CONCLUSION:**

As workforce demographics shift and average employee tenure shrinks, the competition for hiring the best job candidates is fierce and getting more so every day. As such, human capital management (HCM) directors and recruitment professionals face a host of challenges, including:

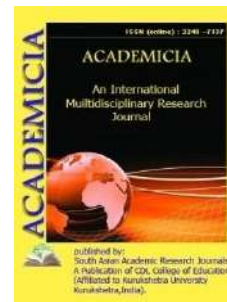
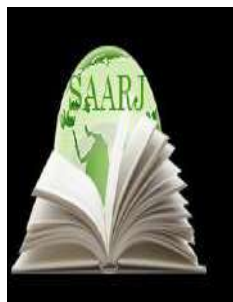
- Difficulty attracting “best fit” job candidates to the organization.
- Inability to reach candidates that fit job profiles for critical roles at the moment of need.
- Frustration of desirable candidates due to complex processes.
- Misalignment of localized recruitment and hiring processes with the needs of a global organization.
- Inflated cost-per-hire or inability to assess talent acquisition costs.

Today, it's more important than ever for employers to have strategies in place to fill key roles within their organizations. Most employers are aware that talent is no longer available on demand, and that talent acquisition strategies require a forward-thinking approach. According to Manpower Group's 2013 Talent Shortage Survey, 35 percent of employers worldwide are having trouble finding staff with the right skills. When organizations don't have the right talent at the

right time, the cost comes in the form of missed opportunities, dissatisfied clients and a negative impact on the bottom line. The companies that come out on top will be the ones that plan for talent shortages today and learn when it's best to buy talent (hiring from outside the company) and when it's more effective to build it (creating a talent pipeline from within the organization).

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DOI: **10.5958/2249-7137.2020.00607.2**

## ADAPTATION OF MODERN TEACHING TASKS ON THE DEVELOPMENT SPEAKING

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### ABSTRACT

*The following article deals with the methods of developing modern learning tasks to develop speaking skills in Uzbek language classes in groups of higher education institutions teaching in other languages, the mechanism of formation of listening comprehension, speaking, reading and writing skills through a single text.*

**KEYWORDS:** *Speaking Skills, Development, Modern Assignments, Reading Assignments, Listening Comprehension, Reading, Speaking, and Writing Skills.*

### INTRODUCTION

In higher education institutions, texts are mainly used in a simple conversational style. However, the specialization of the student in other language groups must be taken into account. Introduction of innovative approaches to Uzbek language teaching methods, PISA, PIRLS international assessment requirements should be developed to meet the existing assessment requirements in the world's advanced teaching methods. Of course, these requirements should be based on the specifics of the Uzbek language.

In recent years, a number of scientific and methodological studies have been conducted on the methodology of teaching Uzbek as the state language. The teaching of Uzbek to other speakers began in the late 19th century, leaving some information about teachers who taught Uzbek in Russian-language schools, early curricula, and dictionaries. However, scientific-methodical and educational-methodical research related to the teaching of the Uzbek language in Russian groups began to develop after the 60s of the XX century. Scholars such as H. Asalov, IA Kissen, K. Kholikberdiev, M. Usmanova, E. Azlarov, O. Azizov, G. Sharipov, who worked on the methodology of teaching the Uzbek language during this period, also studied the issues of comparative grammar of the Uzbek and Russian languages. were also engaged in. Scholars such

as R.Yuldashev, R.Tolipova, R.Rasulov, N.Mahmudov, B.Tukhliev, A.Rafiev devoted their activities in the field of teaching the Uzbek language in Russian groups, mainly to the creation of textbooks, manuals, dictionaries. It should be noted that until the 1990s, only a few Methodist scholars were engaged in teaching Uzbek in Russian groups, but after independence, the scope of research in this area expanded, and a number of studies on Uzbek language teaching at various stages of education. In particular, M.Ergasheva, M.Rixsieva, Q.F.Umarova, G.Ahrorova, D.Tashkhodjaeva, G.Muhamadjonova, G.Akhmedova in schools where Russian language of instruction is used to increase the speech of foreign language groups, increase their vocabulary, their text His work on teaching composition has been studied.

In the researches of N.Dadajonova, G.Kurbanova, L.Yu.Akramova, M.Karahojaeva, S.Adilova, M.Juraev, N.Umarova, higher education institutions in Russian groups should enrich the speech of students with professional-sectoral terms, the use of special combinations in the Uzbek language issues of teaching, use of modern pedagogical and computer technologies in Uzbek language lessons. In particular, A.Rafiev on the teaching of Uzbek language in groups with other languages of instruction<sup>1</sup> I.Mirzaev, M.Boltaev for Russian groups; M.Buronov, Sh.Yuldasheva and D.Kabulova conducted a number of scientific and methodological researches for Karakalpak language groups. However, the rapidly evolving textbook, methodical manual and methodological recommendations require modernization and improvement of the content of educational tasks.

Learning tasks do not fully form speech competence in pupils and students. Monographic research on the teaching of the Uzbek language in groups with other languages of instruction in the system of continuing education is carried out systematically by Doctor of Pedagogical Sciences, Professor H. Muhitdinova. It should be noted that this study focuses on the issue of continuity in the content of programs and textbooks in the teaching of the Uzbek language, mainly in Russian groups.<sup>2</sup> H. Mirzohidova thinks about the convenience of teaching phonetics in Uzbek schools in comparison with the Kyrgyz language and sister languages.<sup>3</sup> In this case, G. Khamroev<sup>4</sup> it is worth mentioning the theory of didactic differentiation of exercises and assignments in the course of the lesson. There are two main types of homework assignments used in Uzbek language teaching practice. These are exercises and assignments. In fact, repetitive exercises are almost non-existent in Uzbek language textbooks and manuals. The content of assignments is not as fully specialized in the formation of skills and competencies as in the practice of foreign language teaching. Exercises and assignments, in general, learning assignments should be designed to form speech competence rather than generating knowledge. In teaching Uzbek, the initial lesson should be pronunciation exercises. In doing so, the teacher must, of course, organize the process of comparison based on comparative pronunciation. Then other sections are effectively mastered based on this approach. It is important to keep in mind that a student will usually learn another language or subject based on their native language.

In this study, a bank of non-traditional texts and a modern system of assignments - new methodological recommendations have been developed, which will allow to develop the speaking skills of students in groups taught in other languages through Uzbek language classes.

Modern learning tasks are formed on the basis of texts, so all the criteria should be taken into account when choosing a text.



It is recognized in many countries that **listening comprehension, reading, writing and speaking skills in language learning**, which are recognized in the world experience, allow the development and assessment of the student's speaking competence. In particular, it is bearing fruit in teaching foreign languages in our country. This foreign experience can be used directly in the teaching of Uzbek as a second and state language. If the level of knowledge of the Uzbek language of other nationalities living in Uzbekistan meets the minimum requirements for **listening comprehension, reading, writing and speaking** (as in English, for example), the science of the Uzbek language will fulfill the social order.

Below are examples of modern learning assignments. These learning assignments are an approach designed to develop speaking skills that are easy to assess. Stages of working with the selected text for the lesson:

**I. Reading:** Practice reading the text "The bell that changed my life" about the fact that Jenisbek Piyazov who has achieved a lot despite his young age

Jenisbek Piyazov was born in Nukus in 1988, and has achieved a lot despite his young age: at the age of 19 he was awarded the "Nihol" Prize, at the age of 22 he was awarded the Medal of "Shukhrat", at the age of 23 he was awarded the title of Honored Artist of Karakalpakstan, and at the age of 25 he was awarded the title of Honored Artist of Uzbekistan.

During the meeting, young reporters asked Jenisbek Piyazov various questions:

- What are you doing today?
- There is a lot of work to be done these days, both politically and creatively. Creative trips are like creative meetings.
- It is well known that your live concert in Tashkent caused quite a stir. Do you plan to give a similar concert in Nukus?
- You know, 120 people were behind the concert, they are choir, orchestra and other assistants. Their equipment, machinery, apparatus, lamp supply. There is a lot of work to be done on this. But, God willing, we have a plan: to give a concert in front of the Savitsky State Museum this year.
- What was the last phone call for you?
- The most memorable thing is that they called me and told me that in 2007 I was awarded the Nihol Prize. At that time, no one knew that I was preparing for the opera. Because I have been preparing for 2-3 years. When I said that I was participating in the opera and passed to the republican stage, they didn't pay much attention to me. Here I am, the winner. This is the first time I've been on a plane (laughs) and I can say that that day and the bell were sealed as one of the most memorable events in my life.
- What did you have to give up to reach this level?
- Tchaikovsky said that success depends on 1% talent, 99% hard work. There are people who can show their talent, and with it they can reach many heights. I can't say I have sacrificed much to reach this level. Because when you come up with something out of the ordinary, then they have to re-think their position. If you can be where you need to be. Show me what you can do! Don't be shy. A person is not jealous of anyone. That's the way to go. 30

- What qualities do people enjoy without you?

"I don't choose people, but I don't approach them." In addition to my family members, I have a number of relatives. I feel like I can't get my relationship with someone who once abused my trust back to normal.

During the conversation, Jenisbek Piyazov said that a gala concert dedicated to the works of Muslim Magomaev will be held on April 21-22 at the Istiqlolsan Art Palace. I would like to mention that Jenisbek Piyazov won a grant at the Muslim Magomaev Opera Competition in Moscow in 2012. It was because of his respect for the singer's work that he named his son Muslim.

## **II Speaking:**

Say an important sentence in the text.

Please tell, what's the story of them big puppies .....

Read lines 30-35 and tell yourself what qualities make you happy and what you don't like.

## **III Grammar:**

When composing a biographical text, the part of speech is in the first person singular, mainly in the past tense:

I was accepted to study, I was born.

I Read; we read

II Read; did you read

III Read ; read.

## **III Writing:**

In lines 15-20, write the verbs that have the past tense suffix separately.

Read lines 25-30 and express your opinion about talent and hard work in one sentence.

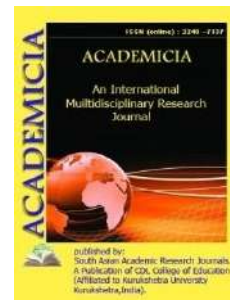
Based on the content of the text, state in writing what the secret to success using what you have learned, write a short biography text about yourself.

In conclusion, when a modern system of assignments is developed, listening comprehension, speaking, reading and writing assignments are used systematically in existing textbooks and manuals, and ethnographic materials are used effectively in teaching Uzbek in other language groups, students' interest in lessons will increase. At the same time, a sense of national pride and patriotism emerges, recognizing the importance of the material and spiritual heritage left by our ancestors. The study used a modern approach to working with text. It was found that the presented methodological recommendations, along with the study of the Uzbek language, allow students to think logically, to demonstrate the skills learned in the classroom, to stimulate interest in reading and work, to evaluate their own performance. In order to develop students' listening comprehension, speaking, reading and writing skills, the topics of the selected texts should be relevant to the reader, relevant to the requirements of the time, and examples of all speech styles should be available. In the lessons, students should be age-appropriate, motivated to read with enthusiasm to strive for great goals. If the teacher directs the student to think in a creative approach to the text, he will learn the language and improve as a person.

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DOI:10.5958/2249-7137.2020.00608.4

## THE USE OF INTERACTIVE METHODS IN THE DEVELOPMENT OF CRITICAL AND CREATIVE THINKING

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### ABSTRACT

*This article raises the problem of that the essential traditional system of communicative preparation of students is isolated from life and work of a specialist. It is over-theorized, limited in terms of time and content, which is manifested in the fact that students are deficient in communication, suffer from the lack of its active methods; form the insufficient level of the students. Emphasized in the article the value of the development of the technological cards of the lessons, which combines the lesson plan with the dosage time, purpose and objectives, conceptual contents, methods, techniques and means, guaranteed result, the list of necessary literature and sources, and other components of the lesson.*

**KEYWORDS:** *The Critical Thinking, The Creative Thinking, Training, Brain Storm, The Education System, Syndikate, Modern, Method, Teacher, A Method Of Discussion.*

### INTRODUCTION

New millennium determines hopes of people for favorable changes, expectations accomplishment of far-reaching plans. It is difficult to speak about plans for the future without education. In many respects the education defines human life, his prosperity and the main thing - an opportunity of self-realization. Moral and intellectual principles are necessary for the person for his most full development in compliance with his abilities and inclinations. Correct thinking and kind customs – are a basis of the education formed already in the 8<sup>th</sup> century.

To bring up the free moral person, it is necessary, first of all, to aspire to form and develop intellectual skills of independent critical and creative thinking.

The critical thinking allows to the person to analyze the information, to select the necessary facts, to comprehend them logically, to draw conclusions and summaries, allows to form own point of view on various social, cultural and political phenomena of the life.

The creative thinking allows to the person to predict development of those or other phenomena, events, to generate own ideas, to search for arguments in confirmation of the position.

The development of the critical and independent creative thinking should become a basis of education and development of the person. In this sense we understand essence of the developing training. The 21<sup>st</sup> century demands essentially new approaches to the education. The training should be developing in contest of the plan for development of the independent critical and creative thinking. But it is insufficient the presence in the system of teacher and a book, which reflecting one point of view accepted in certain society for reaching of this purpose. It is necessary wide field of information activity, various sources of the information, various sights, the points of view on the same problem, inducing pupils to independent thinking, search of own argued position. It needs new methods and means of the training for reaching of this purpose.

The education system – is integral, but open system, one of which essential characteristics is its self-descriptiveness. This information system does not mean that in the education system is supposed only the mastering of the information. The main thing is an active work with the information in which basis is provided independent critical and creative thinking. Now it is considered insufficient the purpose of transfer and mastering of the experience which has been saved up by mankind. Only an active purchase of own experience of knowledge, independent purchase all new knowledge on the basis of application of before acquired things can meet needs of modern generation of youth.

“The critical thinking can be formed only on problem statement of the material, necessity of search of the additional information, discrepancy of the points of view” [3]. The creative thinking is formed also at presence of the problem demanding of search of the decision, sometimes original approach, and needs of self-expression. The modern education system, basing on traditional sources of the information and the control of process of knowledge, such as school textbooks, the manuals, sold under the direction of the teacher, demands an expansion of the information field. Such system demands also other didactic methods, other methods and technologies of the training adequate to the personal-guided approach in the education.

Pupils receive the information besides the specified sources from mass media, global telecommunication network like Internet, which's recognition, comprehension and analysis also it is necessary the existence of the critical thinking.

For the formation of the critical and creative thinking it is possible to result some strategy of the pedagogical technologies which are activating an independence of the pupils during the training.

### **1. A method of discussion.**

Discussion is an exchange of opinions, ideas or knowledge between the teacher and students under the certain circuit and with observance of the order.

Advantages of the discussion:

- Understanding of many factors and motives;
- Persuasiveness of conclusions;
- Activation of students.

**2. Brain storm.**

Brain storm – is a well-known, widely used method of the decision of the problems, stimulating participants to use own imagination and creativity. It helps to find the big number of decisions of any set problem.

Rules on carrying out of brain storm:

1. During considering it is not allowed to do any estimation.
2. It is necessary to encourage all on consideration of big circle of the most unexpected ideas
3. Everyone can be based on another's ideas and changes of them.
4. All ideas are fixed by group of people which are not participating in discussion

**3. Syndicates, as a method of the training.**

Syndicate (subgroups) are created in the big group for discussion, carrying out of exercises or business games, work on the project or other practical work. In syndicates it is provided personal participation of everyone in work, and it pushes each pupil to considerate the phenomena, well determines knowledge of pupils.

**4. Role-playing games (RPG).**

This method allows to beat and dramatize, that what can take place in real vital situation and to discuss, analyze the basic revelations of the problem.

Advantages of RPG:

- Storage;
- Availability;
- Entertaining character;
- Immersion in process of the training;
- Alive, visual obviousness;
- To reveal strong and weaknesses of pupils.

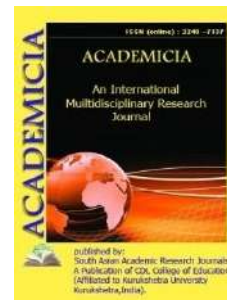
In the conclusion it is possible to note the statement of remarkable teacher Ya.A.Komenskiy "...the method of the training should reduce difficulties of the training so that it did not raise in pupils displeasures and not avert them from the further learning"[4].

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DOI: **10.5958/2249-7137.2020.00609.6**

## ORGANIZATION OF INNOVATIVE APPROACHES TO METHODS OF TEACHING MATHEMATICS

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### ABSTRACT

*The following article deals with the organization of an innovative approach on improving the effectiveness of teaching Mathematics with sources which students study. They stressed the need to pay special attention to the development of the primary education system, which is the main link in the upbringing of a harmoniously developed generation with a high level of knowledge and spirituality. The need for innovative pedagogical activity in society, culture and education in modern conditions is determined by a number of factors. Socio-economic changes that require radical changes in the education system, innovations in the education system, the need to use methods and technologies in organizing the educational process. This, in turn, has a positive effect on improving the quality and effectiveness of training. Also, one type of pedagogical innovation is the use of interactive methods to increase the interest of students in science. Increasing interest in science means achieving the goal set in the lesson.*

**KEYWORDS:** *Method, Innovative Education, Explanation, Analysis, Comparison, Problematic.*

### INTRODUCTION

"Innovative education" usually means the introduction of new (useful) elements into the educational process. Therefore, innovation in education is directly related to changes in the system. Such changes in the education system: purpose, content, method, technology, form of organization and management system, specificity of pedagogical activity and the organization of the learning process, the system of monitoring and evaluation of educational levels, teaching aids, the system of educational work, teaching depending on the plan and curriculum, student and teacher activities. The need for innovative pedagogical activity in society, culture and education in modern conditions is determined by a number of factors. Socio-economic changes

that require radical changes in the education system, innovations in the education system, the need to use methods and technologies in organizing the educational process. Innovative orientation of pedagogical activity is manifested as a means of updating educational policy, strengthening humanistic ideas through changes in the amount and composition of educational subjects in education, the introduction of new subjects that require regular organizational innovations in the education system. In such a situation, pedagogical knowledge and status among teachers will increase, and the professional skills of teachers will increase significantly. A change in the approach of educators to the application and assimilation of innovations. In conditions where the educational process requires strict adherence to time norms, teachers had certain limits not only in the voluntary choice of programs and textbooks, but also in the choice of methods and tools in their pedagogical activities. Today's innovative pedagogical activity is noteworthy for its selective and research nature. They stressed the need to pay special attention to the development of the primary education system, which is the main link in the upbringing of a harmoniously developed generation with a high level of knowledge and spirituality. To solve these problems, modern teachers need to be able to clearly understand the integrative nature of education, both organizationally and semantically, the integrative orientation of their future careers. In other words, the methodological training of teachers is effective only when viewed from the perspective of an integrative approach. Improving the organization and management of integrated-innovative approaches in education, modern approaches and international experience in the development of primary education, state requirements for their development, educational programs, the most active trends in the development of social competence of teachers and creative potential of primary education to discuss the existing problems in the creation of educational technologies and the work to be done.

The issue of systematically enriching and updating their teaching methods is one of the most important aspects in achieving high results in teaching and education in general. Teaching and learning methods are ways in which teachers and students work together to gain new knowledge, skills, and abilities. Novelty or innovation is characteristic of a person's various professional activities and as a result leads to interest, study and application. Innovations do not arise spontaneously, but emerge as a product of scientific research and the long hard work of qualified educators.

Teachers' abilities and thinking develop. Therefore, teaching methods enriched on the basis of advanced achievements of modern science and technology and information technology play an important role in increasing the effectiveness of education. In order to consciously choose from the existing teaching methods in practice that are relevant to the new content and new tasks of education, it is first necessary to consider all teaching methods and the classification of existing teaching methods. Teaching methods involve organizing, motivating, and supervising the interaction of teacher and students.

Interactive methods are methods that activate learners, encourage independent thinking and become learners at the center of the learning process. In using such techniques, the educator encourages learners to actively participate. Learners participate throughout the process. Interactive techniques include brainstorming, working in small 10 groups, problem situation, referral text, quiz, role play, business game, and more. The advantages of using interactive methods are:

- Leading to better mastery of teaching content;
- Ensuring timely feedback;
- High level of motivation;
- Good recollection of the material covered;
- Improving communication skills;
- Growth of self-esteem;
- Promote the formation of students who can think independently;
- It does not only help to master the content, but also helps to develop critical and logical thinking.

The purpose of any education is to form knowledge and skills and abilities to apply it in practice, as well as the necessary personality traits. As all the components of the goal are realized in the movement of learning activities, it is necessary to use different methods together. Therefore, the most important factor in choosing a method is the didactic function of the lesson. Each class can be selected in order to increase the effectiveness of the lesson, taking into account the age potential of the students and their relevance to the topic. The methods chosen by the students on the sources of knowledge create special conditions for the development of students' thinking. That is, if we consider the following methods:

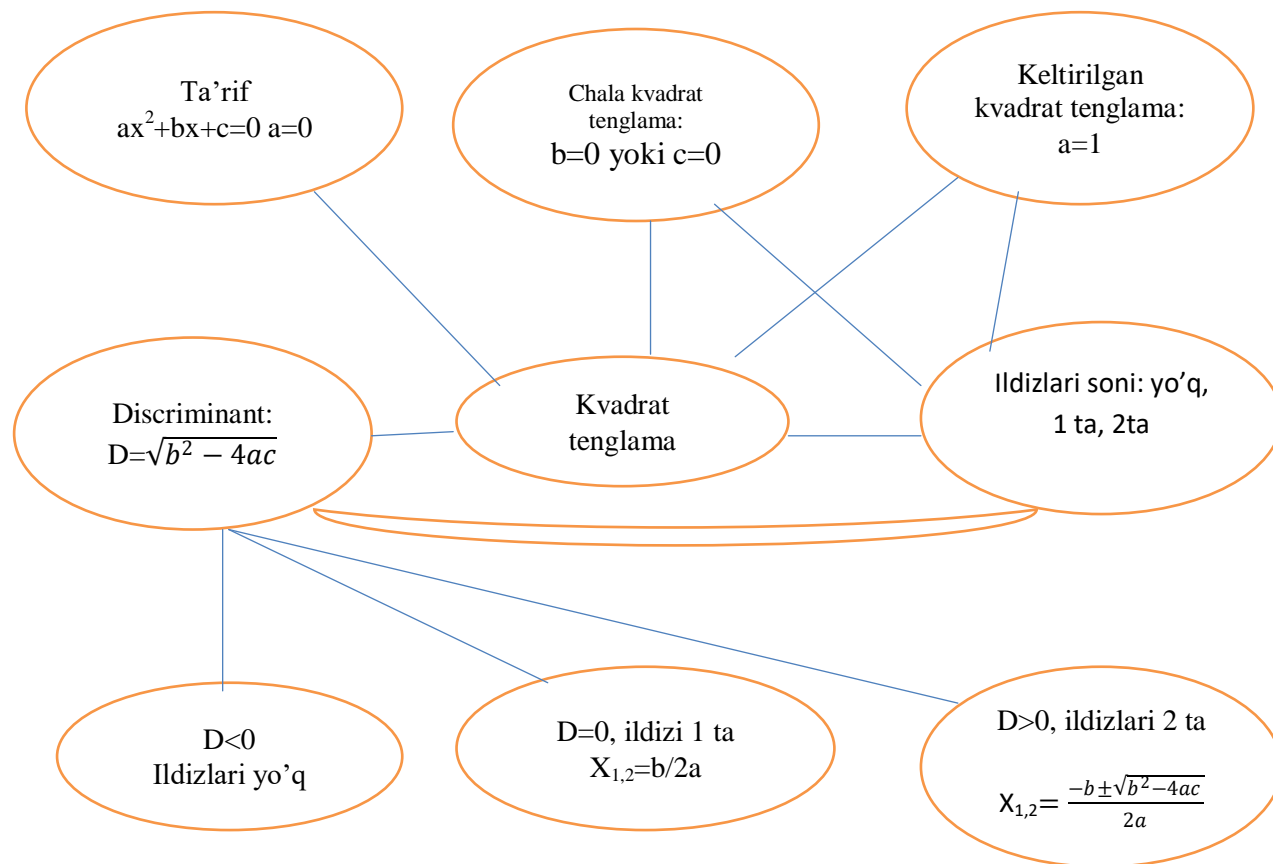
Brainstorming is about encouraging students to work creatively and interact on a common problem. Stages: causing a problematic situation; engaging students to find a solution; hear presentations of various solutions; comparing and selecting solutions, summarizing can be a great help in students working creatively on mathematical exercises, interacting, and understanding them.

Cluster method - *Cluster* (English Cluster - link) - refers to the combination of several single-element elements with specific properties into a single independent object according to their common properties. , helps to understand them and clearly describe their components and interrelationships. In this way, this method also helps to develop memory and self-assessment of the student's own knowledge. This method requires the identification of a structure that allows thinking about the relationships between different ideas. This method serves to ensure that the thinking activity is consistent until the learner has mastered a particular topic in depth and thoroughly.

For high school students, students will be given the following assignment after completing the quadratic equations topics and exercises.

**Task.** Create a concept link that is a “Quadratic equation”.

*At the end of the session you can create a cluster of the following appearance:*



Methods related to the process of forming and perfecting skills and competencies are practical methods. This includes oral and written exercises, practical laboratory work, and some types of independence. Exercises are mainly used as a method of strengthening and applying knowledge. An exercise is a repetitive performance that is organized in a planned way in order to master or reinforce an action. Exercises are used to develop numeracy skills, numeracy skills and competencies, and arithmetic problem solving skills. Exercises should be used in a particular system, following the principle of transition from light to complex. Exercises should develop students' independence in preparation, practice, and creative exercises. The first exercises to strengthen this or that practice, method, problem solving are performed under the guidance of a teacher. The teacher shows this or that help to the students for a while. After that, it is advisable to perform the exercises independently. Exercises of a creative nature include solving problems and examples in different ways, problem-solving on expression, problem-solving according to a short writing scheme, cognitive, puzzle-solving. Quantities are used in practical and laboratory work in the measurement of vapors. Conducting practical and laboratory work allows students to actively acquire knowledge, skills and abilities, elements of independent judgment and inference develop research skills, enrich students' imagination and expand their knowledge. That is why practical and laboratory work is one of the most effective methods of teaching.

**Research Method** The research method is the highest level of mastery. In this method, students conduct individual or joint research on a small issue that has not yet been explored based on their

knowledge, check and prove the correctness or incorrectness of the hypothesis based on the evidence sought.

### **Stages:**

- Identifying the nature of object of interest in the lesson or ask a question about it;
- Collecting of data for its study, research;
- Making assumptions, predictions about the solution of the problem or issue;
- Analyzing and prove the accuracy of each prediction based on the collected data;
- Drawing conclusions;
- To make a presentation in front of the class.

One of the main advantages of interactive teaching is the constant interaction of the teacher with the students. Interactive teaching methods help students to develop their intellectual abilities, analytical thinking and take responsibility for their own learning process.

Interactive teaching in the classroom can be organized at any stage of the study of the content. Different interactive methods can be used in the lesson depending on the content of the teaching material, the level of preparation of the class and other factors.

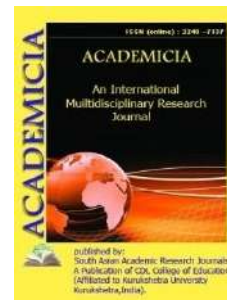
Any interactive method teaches students to think independently when used correctly and purposefully. Changes and updates in the education system provide students with new knowledge, skills and competencies. Interactive teaching methods affect the learning process. The theoretical foundations of interactive methods have been extensively studied by pedagogical scholars. The use of collaborative teaching in the learning process increases the effectiveness of education

In conclusion, it can be said that innovative education is aimed at developing professional skills in students and improving their quality related knowledge and relevant practical skills are achieved. This, in turn, has a positive effect on improving the quality and effectiveness of training. Also, one type of pedagogical innovation is the use of interactive methods to increase the interest of students in science. Increasing interest in science means achieving the goal set in the lesson.

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DOI: **10.5958/2249-7137.2020.00610.2**

## ISSUES OF OPTIMAL MANAGEMENT IN THE DEVELOPMENT OF CREATIVE COMPETENCE IN STUDENTS

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### ABSTRACT

*The following article deals with the main issues of optimal management and how to achieve the goal of developing creative competence in students. Therefore, the acmeological nature of the teacher's creative activity is reflected in his readiness to accept different children, their real learning abilities, peculiarities of behavior, providing them with appropriate care, regardless of their mental and physical state of health [3]. The proliferation of the need for higher education and the proliferation of personal computers among students remain one of the significant factors leading to a decline in interest in learning mathematics in higher education. This is the basis for the development of creative competence in students. The development of creative competence in students requires special attention to it. The process of working with such students is complicated. During the implementation of mathematical activities (activities aimed at the formation and development of mathematical competence of the subject), the student also realizes creativity, which we believe is the basis for the development of creative competence.*

**KEYWORDS:** Competence, Ability, Creativity, Creative Competence, Differential Equation, Optimal Management.

### INTRODUCTION

In order to improve the education system in our country, great attention is paid to the creation of a mechanism for training highly qualified specialists with modern knowledge and skills to apply pedagogical technologies, who make a worthy contribution to the socio-economic development of our country.

In the training of future professionals, it is important to increase the effectiveness of the process of formation of modern personnel with high culture, practical professional skills, thorough

knowledge of education, teaching methods and evaluation criteria. Therefore, it is necessary to increase the interest of students in education, to increase their motivation for academic subjects. The proliferation of the need for higher education and the proliferation of personal computers among students remain one of the significant factors leading to a decline in interest in learning mathematics in higher education. In this context, the acquisition of mathematical knowledge, skills and abilities of students, the stimulation of interest in science and the activation of independent creative thinking in the formation of mathematical culture are of particular importance. This, in turn, will be the basis for the development of creative competence in future teachers. In solving such problems, it is necessary to use a problematic learning environment.

It is well known that today, in addition to the scientific training of a specialist, it is important to have a number of qualities such as independence, ability to make important decisions, creative approach to any work, constant learning, initiative, cooperation and professional responsibility. This is the basis for the development of creative competence in students. The development of creative competence in students requires special attention to it. The process of working with such students is complicated. The reason is that to spend a lot of time working with them (especially in the early stages), it will be necessary to create conditions for them to be able to tell each other their results (for example, to organize small seminars).

The words "*creativity*" and "*creative*" came to us from the English in the 80-90s of the twentieth century, "*creativity*", "*creative*" and were used first in the business community, and later in other areas of society.

The first use of the term "*creativity*" in 1922 was the ability of a person to break the same stereotypes in thinking A. Simpson additionally states.[1; 632-p.]

The American psychologist Alice Paul Thorens wrote in 1974: "Creativity is the individual's non-standard, creative thinking ability, the individual's passion for problems and solutions, the ability to promote new ideas, the sensitivity to inconsistencies with existing knowledge. gave the definition. This definition can be compared with the definition of creativity in the psychological dictionary: "A person's creative abilities are determined by his intellectual variability, creative development of assumptions and intuition, ability to overcome the same stereotypes, high motivation to seek innovation, personal demand for self-formation." It is understandable that some points of the definitions of creativity and creation (variability of thinking, aspiration to search for novelty, ability to overcome stereotypes) are consistent, which indicates that these phenomena are of the same nature [2].

The starting point for the implementation of creative activity by the subject is his ability to surprise and know, as well as to generate ideas. The development of these personal qualities is the analysis and synthesis of existing information, the search for solutions to "specific" problems in non-traditional situations, work with professional issues that require the transfer of knowledge from other disciplines (especially mathematics), the development of rights, characteristics, relationships, student imagination and occurs in processes such as mold removal.

Creative activity, like others, has its own characteristics that apply to the type of professional activity.

Therefore, the acmeological nature of the teacher's creative activity is reflected in his readiness to accept different children, their real learning abilities, peculiarities of behavior, providing them

with appropriate care, regardless of their mental and physical state of health [3]. Another important aspect for pedagogical skills is the ability to work with another educator to develop a child's individual development program, which requires the ability to design, analyze and synthesize a comfortable learning environment, to enjoy different situations. The ability to master creative thinking skills, while acquiring new (or subjectively new) knowledge in this way, ensures that the teacher works on himself, which is an integral part of pedagogical activity.

This means that future teachers will have to gain creative experience in higher education. Thus, the formation and development of the skills and abilities of the educator listed above is one of the important areas of his professional training.

All this implies the presence of significant professional competence, creativity in the modern specialist. Some modern researchers recognize that a teacher's professional activity consists of creativity, i.e., only a high level of formation or professional competence in a subject.

We believe that not all students will be able to achieve such a result in the learning process, so the preparation for creative activities at that time should be available to every teacher, including primary school teachers. Accordingly, the need to develop creative competence arises as a full-fledged component of the professional competence of the educator.

The analysis of the presented scientific literature allowed to identify the following main directions of the study of problems of formation of creative competencies: formation of the existing creative educational gap in the process of higher pedagogical education; development of creativity in high school students as future entrants in the field of pedagogy; creative pedagogical activity in students and pedagogical training for the implementation of creativity.

The term "creative competence" was originally used by the American scientist Joseph Chilton Pierce to mean the creative mastery of the environment. R. Epstein defined the concept of creative competence as a readiness for adaptive application of acquired knowledge, independent completion of the knowledge system and the pursuit of self-improvement.

I.E. Brakova said about creative competence (future language teachers), she combines the ability to effectively solve professional problems and achieve maximum results, efficiency and success. In this case, the personality trait, which combines motivational, cognitive, operational, oxiological, reflexive components, understands the multifactorial phenomenon [22, p. 18]. It follows from this definition that the author focuses more on solving professional problems, and understanding creativity in terms of activities.

Based on the works of A. G. Nafieva, O. F. Chuprova, I.E. Bryakova, A.M. Davtyan, they recommend the following teacher's definition of creative competence: "knowledge, skills, stable characteristics of the person representing the relativistic experience of innovation in the pedagogical process" [42]. The authors try to integrate the personal and motor aspects of the concept of creativity, which we think is appropriate for this purpose.

In order to organize the development of creative competence of students in the educational process, mathematics teachers are required to have special methodological knowledge and skills, methodological training necessary for pedagogical practice.

Lets say the lesson covers the main issue of optimal management. Suppose we write the motion of an object and the effect of control on that motion by the following system of differential equations:

$$\frac{dx^i}{dt} = f^i(x^1, x^2, \dots, x^n, u^1, \dots, u^r) = f^i(x, u), i = 1, 2, \dots, n \quad (1)$$

Or as a vector,

$$\frac{dx}{dt} = f(x, u) \quad (2)$$

Here  $f(x, u)$  is a vector coordinates  $f^1(x, u), f^2(x, u), \dots, f^n(x, u)$ .  $f^i$  functions vector changes  $x \in X$  and  $u \in U$  determined at arbitrary values, and imagines as unlimited. We consider  $x^1, x^2, \dots, x^n$  as continuously differentiable by variables [6].

If the law of motion  $u = u(t)$  if permissible management is clear, equation will be as:

$$\frac{dx}{dt} = f(x, u(t)), \quad (3)$$

more optional  $x(t_0) = x_0$  the law of motion of the object under initial conditions or (3) equation  $x = x(t)$  solution a value is defined in some range. Really if to us  $t_0 \leq t \leq t_1$  in the range  $u(t)$  management is given,  $\theta_1, \theta_2, \dots, \theta_k$  — their (first type) and if there are breakpoints and lets imagine they are in  $t_0 < \theta_1 < \theta_2 < \dots < \theta_k < t_1$  order, (3) equation  $t_0 \leq t \leq \theta_1$  in the range of  $x(t_0) = x_0$  the initial condition can be said to be a typical Cauchy problem because the right-hand side of equation (3) is continuous in this interval. By  $x(t)$  the following equation  $x(t_0) = x_0$  we define the solution in the initial condition. If this solution is whole  $t_0 \leq t \leq \theta_1$  is defined in the range of  $y$  in  $\theta_1$  point  $x(\theta_1)$  assumes a value, in which case we obtain equation (3)  $\theta_1 \leq t \leq \theta_2$  in the range of  $x(\theta_1)$  we can look at the initial condition. We also define this solution through  $x(t)$ . So,  $x(t)$  solution continuous at all points in its field of detection and  $\theta_1$  “connecting” point as well. If  $x(t)$  solution is wholly defined  $t_0 \leq t \leq \theta_2$  in the range of  $\theta_2$  points  $x(\theta_2)$  we assume a value, we obtain equation (3)  $\theta_2 \leq t \leq \theta_3$  in the range of  $x(\theta_2)$  we can look under the initial condition, etc. Equation (3) obtained by this method  $x(t)$  solution is unlimited and  $\theta_1, \theta_2, \dots, \theta_k$  points will be continuously differentiable at other points. This solution (1) of the system  $x(t_0) = x_0$  satisfying the initial condition  $u(t)$  we call it as suitable management solution. This solution may not be defined in the entire range of  $t_0 \leq t \leq t_1$ .

Lets consider management of  $u(t)$ ,  $t_0 \leq t \leq t_1$  spatial point to pass from  $x_0$  condition to  $x_1$  condition, if (2) or (3) equation  $x(t_0) = x_0$  the one that satisfies the initial condition corresponds to it  $x(t)$  solution entire  $t_0 \leq t \leq t_1$  in the range of  $t_1$  is defined and in the final moment if

passes  $x_1$  point, that if satisfies  $x(t_1) = x_1$  task. Lets imagine Фараз қилайлик, another of  $\frac{\partial f^0}{\partial x^i}$ ,  $i=1,2,\dots,n$ , whole with special crops  $X \times U$  spatial unlimited  $f^0(x^1, x^2, \dots, x^n) = f^0(x, u)$  function is given. In that case, the key issue of optimal management can be described as follows.

$n$  dimensional  $X$  cases spatial two  $x_0$  and  $x_1$  points are given. From spatial point  $x_0$  condition  $x_1$  passes to  $u = u(t)$  find one of the permissible controls (if any exists) then

$$J = \int_{t_0}^{t_1} f^0(x(t), u(t)) dt \quad (4)$$

let the function take its smallest possible value; here  $x(t)$ —(2) equation satisfying the task  $x(t_0) = x_0$   $u(t)$  suitable solution to management,  $t_1$ — is  $x_1$  passed condition moment.

Once the topic is well explained, students are asked to create two questions about each of the concepts used, for example, at the beginning. If students are having this difficulty, examples are given and the subject is returned again, and so on. Let's give them examples: 1) Write the equation (1) in the form of a spread, write it in the form of a second-order linear system; 2)  $U$  collection can be a set, square, cube, parallelepiped, in what cases? 3)  $U$  collection is the set of a circle in the plane, write it analytically; 4) Can a permissible control be a fixed function with a fraction? 5) Write  $J$  the appearance of a function when  $f$  are simple functions [7].

Thus, solving problems on this topic selected from the course of differential equations is of great importance in identifying creatively gifted students and developing their creative activity. At the same time, solving and analyzing these types of issues allows students to develop creative competence.

Based on this, we define students' creative competence as an integrative dynamic personality trait that manifests itself in the ability to find original ways to solve certain problems, find new problems, and solve them using mathematical methods.

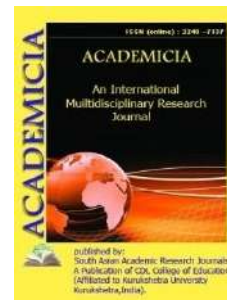
According to P.L. Kopitsa, the above-mentioned personality traits “can develop in the following main areas: the ability to scientifically generalize, - induction: the ability to apply theoretical conclusions to predict processes in practice - deduction and, finally, the contradictions between theoretical generalization and processes occurring in nature discovery is a dialectic” [8, 114 p.]. During the implementation of mathematical activities (activities aimed at the formation and development of mathematical competence of the subject), the student also realizes creativity, which we believe is the basis for the development of creative competence.

Thus, the competency-based approach of future teachers to teaching is important to talk about incorporating the development of the teacher's creative competence and mathematical activity into the structure of professional competence in the final process of implementation.

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DOI: **10.5958/2249-7137.2020.00611.4**

## **SPECIFIC FEATURES OF USING TRAINING AND COMPETITION METHODS IN ADAPTIVE PHYSICAL CULTURE AND PARA-OLYMPIC SPORT PSYCHO-EMOTIONAL FACTOR**

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### **ABSTRACT**

*Reviewed questions of introducing and adapting new and tested by world practice (including sport of the highest achievements) technologies of scientific and methodological support of training and competitive processes in physical education and sports activities for people with disabilities, taking into account its specific features. Particular attention paid to the directed, conscious regulation of the psycho-emotional state of athletes during training, as a leading factor for such adaptation and as an important factor of the training process as a whole.*

**KEYWORDS:** *Physical Culture, Sport, Sports Medicine, Training Process, Neurophysiology, Adaptive Physical Culture, Psycho-Emotional State, Para-Olympic Sport.*

### **INTRODUCTION**

Solving the problems of socialization for persons with disabilities began to acquire great importance. Around the world, considerable attention given to strengthening the role of physical education and sport in physical and social adaptation of persons with disabilities. One of the most important tasks of the adaptive physical education and para-Olympic sports is the introduction and adaptation of common technologies to scientific and methodological support of the training process according to the specific features of physical education and sports activities for people with disabilities.

Adaptive physical education integrates three areas of knowledge: physical education, medicine and corrective pedagogy. It includes a large number of educational and scientific disciplines: the theory and methodology of physical culture and sports, physical education, motor recreation, physical rehabilitation, etc. [2]. Therefore, an integrated approach to the training process and to the biomedical and psychological support of persons with disabilities is important, since only such approach provides the required effectiveness. This is not a simple accumulation and

unification of knowledge in the above areas, but the actual creation of new knowledge, theoretical, methodological and empirical foundations that allow us to solve specific goals and objectives of adaptive physical education and para-Olympic sports.

In modern practice of adaptive physical education, the introduction and application of new technologies occurs in the following main areas of development:

- Study and development of biomechanical aspects;
- Development of biomedical support;
- Creation of sports training systems taking into account the pedagogical aspect and specific features;
- Development of psycho physiological support, the study of psychological aspects: motivation, improving the quality of life, personality development [3].

Currently, the following components (types) of adaptive physical education are distinguish, according to the needs of persons with a temporary deviation in health status and for persons with disabilities:

- Adaptive sport (para-Olympic sport);
- Adaptive physical training (education), satisfying the needs of apersonality in his preparation for life and activity, in the formation of his positive, active attitude to adaptive physical culture;
- Adaptive physical rehabilitation, satisfying the need for treatment, restoration of temporarily lost functions;
- creative (artistic and musical) body-oriented practices that satisfy the needs for self-actualization, creative self-development, self-expression of a spiritual essence through various means of art; extreme types of motor activity, satisfying the need for risk, increased excitement, the need to test oneself in unusual, extreme conditions [4].

One more component should be singled out - adaptive motor reaction, which allows satisfying the needs of people in physical activity, relaxation, entertainment, interesting leisure activities, enjoyment, communication, which contributes to the restoration of psychophysical forces and the creation in their life of harmony and joy.

The main tasks of adaptive motor recreation are:

- The ability to switch from one type of activity to another;
- Restoration and optimization of the psychophysical state;
- Introduction to a healthy lifestyle and active rest;
- The formation of interest and need for various types of adaptive physical education, extreme and creative types of physical activity, etc. Getting pleasure and satisfaction from physical exercises;
- Expansion of social integration, overcoming psychological barriers, discomfort (insecurity, closeness, shyness, etc.), improving the overall quality of life [4].

In fact, adaptive motor recreation, although highlighted as a separate component of adaptive physical education, however, based on its tasks, goals and functions, is more likely the integral part and even a support (basis) for all other components. The psychological and emotional preparation of athletes take on leading roles, they should be consider as a set of motivational, meditative, fitness and neuro-programming methods, as indispensable component of all other methods.

Motivation and motives is one of the main issues in the study of sports psychology. For the physical culture and sports activities of people with disabilities, it is even more important. Motivation in adaptive physical education should reveal its current level and development prospects for each of athletes with disabilities and the sports team as a whole. The formation of motives is consider as a holistic process of situational and personal development of athletes with disabilities during the training and competitive processes [5].

An equally important factor is adjacent psycho-emotional (psychophysical) factor. Previously, the concept of the dichotomy of the mind and body prevailed; according to it, mental and physical health are consider as separate components of human well-being. Modern research casts doubt on these views. The harmony of the psycho-emotional and physical forces increases the reserves of health, creates the conditions for creative self-expression and is the fundamental basis for the harmonious development and well-being of the individual. he results of research and the practical application of psycho-emotional techniques emphasize their direct impact on the effectiveness of training exercises, the formation of sustainable motivation in achieving sports results and harmonizing the life of an individual in an ethical and social aspect.

The development of psycho-emotional techniques is directly relate to the development of research in such fields as emotional intelligence, physical intelligence and biological feedback. Currently gained popularity ideas about concepts such as:

- “comfort zone” is a state in which necessary, but not always sufficient, basic (physiological, mental and social) needs are realized;
- “enter the flow state” is the achievement of the peak state of a person’s activity when he focused on one thing and completely immersed in its implementation.

In doing so, usually implied that necessary, for personal (and physical) development, to leave the comfort zone (i.e., upset the positive emotional balance). In addition, conflicting techniques and practices are often recommended for enter the flow state (due to underestimation of the need to maintain, again, a positive emotional balance).

It seems more effective approach in which the training process and psycho-emotional preparation are based on the methodology of expanding the "comfort zone", when the process of performing exercises is organically included in this zone. Moreover, “enter the flow state” is present as a peak expansion of the “comfort zone”, which will use when performing exercises to increase strength and endurance, closely to the limit of possibilities. Most often, this happens spontaneously and is perceived as a useful but concomitant factor, however, it can be assumed, based on practice, that are the basis of almost all significant sports achievements, this expansion of the psycho-emotional state played a significant, and, sometimes, decisive role.

Based on the foregoing, a direct relationship traced between the physical, mental and emotional state (health) of a person, the mutual influence of physical exercise, mental stability and positive

emotional balance. It is necessary to develop a systematic, integrative approach to general physical training, especially in the field of adaptive physical education, to create complex types of training.

In the development and practical application of physical culture and sports technologies for athletes with disabilities, it is especially important to strive to ensure that sports activities and trainings are interesting and attractive, arouse feelings of joy and satisfaction in them, which will provide increasing training efficiency and consolidate the need for them. Therefore, it is especially promising and relevant to develop and apply complexes of physical education and sports exercises based on purposeful, conscious regulation of the psycho-emotional state in the training process - the so-called psychophysical training.

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DOI: **10.5958/2249-7137.2020.00612.6**

## INDICATIONS AND DYNAMICS OF INFECTION WITH SETARIALABIATOPAPILLOSA IN CATTLE

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### ABSTRACT

*The following article is devoted to the study of the indicators and dynamics of infection with the organism Setarialabiatopapillosa in cattle. In the conditions of S.labiatopapillosa in Uzbekistan, transmissible damage of animals during transmission by mosquitoes and Stomoxys calcitrans mosquitoes, which act as intermediate hosts of the parasite, and the intensity of the study of blood samples of cattle infected with S.labiatopapillosa have been studied. The rate of setariotic attacks at different times of the year was also studied. The collected results were analyzed and conclusions were given.*

**KEYWORDS:** *Setaria Labiatopapillosa, Cattle, Helminths, Epizootic Process, Nematodes, Pathological Processes, Microfilariae, Microstariiasis.*

### INTRODUCTION

Nowadays the livestock industry is a leader in the production of livestock products in the world. Milk, meat and other productivity features in the further development of the industry, in addition to improvement of the following sphere, much attention is paid to the detection of helminthiasis of large horned animals and the implementation of preventive measures against them. In many countries of the world, including Uzbekistan, helminthiasis is widespread, the destruction of livestock under their influence and a sharp decline in productivity is observed [2]. According to the prevalence of some trematodes of cattle, in particular paramphistomatosis, the intensity of the invasion was observed in animals of different ages at 40.7-75.4% [5]. The actuality of development of animal husbandry was emphasized in the law of the Republic of Uzbekistan "On



Veterinary Medicine", and resolution of the president "On Veterinary and Animal Husbandry of the Republic of Uzbekistan" which was adapted on March 28, 2019 №PP-4254.

Extensive research is being conducted on a large horn in the scientific centers of many countries of the world species diversity of animal helminthes, biology, life cycles, ecology, molecular biology and systematic development of methods for detection and control of helminthes. However, in the cattle of the unique Zarafshan valley, which is considered a vast region [5,6] our species diversity of parasitic helminthes, dominant until our study distribution of helminthiasis pathogens, cattle quantitative and qualitative indicators of damage, epizootic process specific features and damage to the final masters deadlines have not been determined. Disease control in animals effective methods have not been developed. Therefore, a variety of cattle diversity and density of helminthes in age groups identify, assess the epizootic status of dominant helminthiasis and taking into account the specific characteristics of the region the development of preventive measures against diseases is urgent issue.

In recent years, the livestock sector in the country has accelerated comprehensive measures taken for the purpose of development resulting in various infectious and invasive diseases of livestock significantly reduced. In the "Strategy of Actions of the Republic of Uzbekistan" was emphasized about livestock, to increase the productivity of farm animals, veterinary, to improve services and ensure epizootic tranquility development on a scientific basis.

From foreign scholars S.J.Sonhson, Th. Mercky, R.C.Anderson, K.I.Skryabin, V.M.Ivashkin and others, Uzbek scientists V.I.Gekhtin, M.A.Sultanov, D.A.Azimov, S.D.Dadaev, B.S.Salimov, A.S.Daminov and others have conducted extensive research on the study of faunal complexes, the distribution and ecology of helminthes, diversity and epizootology of bovine helminthiasis, the biology of the dominant pathogens common in wolves. Adequate study of the helminthological situation and epizootiology of helminthiasis in cattle in various biogeocenoses in Uzbekistan, as well as the improvement of modern prevention and control measures is one of the most actual issues today.

### **Used methods in the experience**

The methods of helminthological, parasitological, ecological, molecular-biological, biometric, statistical and comparative analysis were used in the research.

By the method of complete helminthological cleavage (K.I.Skryabin, 1928) a total of 96 heads from Samarkand (30 heads), Bukhara (33) and Navoi (33) regions the animals were examined. In addition, complete and incomplete helminthological cracking district and of the above regions using imaging methods separately in meat processing plants and poultry farms located in cities 926 sets of slaughtered animal organs were examined.

Collected helminths are generally fixated by the methods (Ivashkin, Kontrimavichus, Nazarova, 1971), parasitological the material was then processed under laboratory conditions. The study and identification of parasites were conducted temporary and permanent by local and foreign researchers on the basis of drugs (Ivashkin, Mukhamadiev, 1981; Azimov, 2015; Anderson, 2000 and others) were carried out in accordance with the identifiers and images given in their work.

Determining the degree of infestation of cattle with helminths invasive intensity for - IE (%) and invasive intensity - II (head) were used.

For the identification of some species of nematodes of the genus *Setaria* generally accepted methods in molecular biology (Favia et al., 2000; Kuznetsov, 2009; Abramato, 2012). In the biocenoses of cattle helminths Zarafshan valley dominant groups involved in the formation of the parasitic system and range of intermediate hosts of species (trematodes and nematodes) families of Lymnaeidae, Planorbidae, Physidae and Melanoididae for identification 3978 specimens of aquatic mollusks belonging to Muscidae, Simuliidae and Culicidae 3604 specimens from two-winged blood suckers known methods (Jadin, 1952; Kruglov, 2005; Zdun, 1961; Ginetsinskaya, 1968; Agrinskiy, 1961; Anderson, 2000).

### Part of the experience

Mature nematodes are absent in all infected animals located in different parts of the cavities. Large of cattle *S. labiatopapillosa* found in the lymph nodes of the laryngeal cavity (about 30%). This confirms for the first time that this type of setaria occurs in the lymphatic system of animals [2,3].

Pathologically altered lymph nodes rupture and setaria the release of animals into the surrounding spaces is recorded. Probably microfilariae born from females accumulate in the veins of the vaulus between the lymph nodes, then descend into the veins and accumulate in the peripheral veins. It is logical to explain this by the dispersion mechanisms of *S. labiatopapillosa* microfilariae in the affected vertebrate host organism. will be.

In the case of *S. labiatopapillosa* in Uzbekistan, the animals are transmissibly transmitted by the sucking blood of *Aedes caspius*, *Culex pipiens*, *Culex hortensis* flies and *Stomoxys calcitrans* flies, which act as intermediate hosts of the parasite. This usually happens during the warmer seasons of the year, from June to the end of October. Infection of animals can occur in pastures (*Stomoxys calcitrans*), on the territory of livestock farms and cattle ranches (*Ae. caspius*, *Sx. pipiens*, *Sx. hortensis*) is formed. It is known that microfilaria enter the stomach of the intermediate host with the blood sucked from the infected cattle, are released from the sheath, and pass into the breast muscles of the insect, where they reach the stage of invasion. From the muscles of the mosquito, they pass into the larynx of the insect. When bitten by two-winged blood-suckers, the invasive larvae pass through the injured skin into the blood of the last host animal. During migration, they enter the lymphatic system and the abdominal cavity and develop there until sexual maturity [5].

The intensity of the study of blood samples was studied as a function of the age of the cattle. At the same time, cetariosone invasion in young cattle was 1.3%, in animals from 1 to 4 years - 6.3%, in cattle from 6 to 10 years - 34.4% and in cattle over 10 years - 30.4%. 2.0; 4.5; 12.3 + 2.27; 1 ml of blood contains 15.8 + 2.50 and 11.4 + 2.36 microsetars. It is known that as cattle gets older, his infection with *Setaria labiatopapillosa* increases and at the same time the number of microcetarias in the blood increases.

The maximum attack by *Setaria labiatopapillosa* on large cattle was detected at 6–9 years of age. Infection in cattle at this age was 33.3%, with an average of 15.8 + 2.50 microsetariae detected in 1 ml of blood.

Setaria was found in animals of all ages except calves under one year of age. In cattle from 1 to 3 years of age extensinvasiveness is 11.5%, from 4 to 6 years of age - 22.7%, from 7 to 10 years of age - 40.0% and from 10 years and older to 31.6% of the intensity is 2.3 + 1.22, respectively. an

attack;  $4.6 + 0.84$ ;  $7.8 + 0.75$  and  $6.2 + 0.97$  ind / target. In livestock, the migration of larvae and young helminths through the surface of the serous membranes of the blood and internal organs leads to tissue damage.

Thus, the results of helminthological observation of the abdominal cavity confirm that blood test data show an increase in the prevalence and intensity of infection. Adult cattle were found to have maximal infection by ceteria.

According to blood sample studies, adult cattle are attacked by caterpillars at all times of the year. The intensity of attacks of catarrh in adult cattle ranged significantly from 18.4 to 56.2% during the year. The average rate of aggression was 34.5%. The maximum rate of attack in cattle was recorded in the summer period (50.0 - 56.2%), during which the maximum amount of microstaria in ml of blood was detected (17.9 - 19.3 ind.). The increase in the intensity of the summer invasion can be explained by the success of all, with the registration of puberty, as well as an increase in their reproductive capacity, which ensures the spread and circulation of the attack. In the fall, and especially in the winter, invasiveness dropped significantly in January to 18.4%, followed by an increase in invasion in the spring.

The average number of microstars in one ml of blood of adult cattle was  $14.0 + 3.21$  ind. with a decrease to the index of  $9.7 + 2.72$  in the autumn-winter period (January) and increased to  $19.3 + 1.90$  index in summer (in July).

According to the results of helminthological separation of the abdominal cavity and the study of serous membranes of this cavity in adult cattle, the rate of excitation by *S.labitopapillosa* was slightly higher, averaging 32.0 in January, 38.1 in April and 42.1 in August and 35.3% in October.

Thus, the rate of setariotic attacks at different times of the year was almost unchanged ( $P > 0.05$ ). Thus, helminthological autopsy data of the abdominal cavity are more objective. According to the results of the study of blood samples, the significant difference in the intensity of the attack of the parasite at different times of the year is explained not by an increase in invasion intensity, but by a change in the reproductive capacity of the samoka setaria.

## CONCLUSION

*Setaria labitopapillosa* in most biogeocenoses of Uzbekistan the biology of the nematode involves two blood-sucking birds, *Aedes caspius*, which acts as an intermediate host of the studied nematode, *Culex pipiens*, *Culex hortensis* mosquito species and *Stomoxys calcitrans* mosquito also plays the first *S.labitopapillosa* nematode population adult form parasitism in the lymph nodes of cattle detected. *S.labiata papillosa* nematode in the lymphatic system of cattle parasitic properties have been identified.

It is known that as an adult cattle gets older, his infection with *Setaria labiatopapillosa* increases and at the same time the number of microcetarias in the blood increases.

In all seasons, cattle are infected with *S.labitopapillosa*, the number of which remains almost unchanged throughout the year, except for a slight increase in the intensity of invasion in the spring. In this regard, the diagnosis of cetariosis in adult cattle can be made at any time of the year.

However, the presence of the largest amount of microsetars in the blood during the summer period allows diagnostic tests to be performed during this period.

### **Recommendation**

The most sensible way to prevent large cattle setariosis is the use of drugs from the group of macrocyclic lactones in parasitic mosquitoes may be before the early summer, as a single tool, they have a microfilicidal effect for 6 months, preventing the spread of intermediate host infection and invasion.

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DOI: **10.5958/2249-7137.2020.00613.8**

## ISSUES OF ENERGY DEVELOPMENT IN THE ARALSEA CONDITIONS

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### ABSTRACT

*The following article is devoted to the development of the energy sector in the Aral Sea region. Particular importance in the conditions of the Aral Sea are the modeling of the design and operating parameters of micro-hydropower plants, the improvement of their design, the development of technology to increase their efficiency. Therefore, the article focuses on the use of micro-hydroelectric power plants operating in low-pressure watercourses in the Aral Sea region to achieve high economic efficiency.*

**KEYWORDS:** *Micro-Hydroelectric Power Plant Operating In The Aral Sea Region, Energy Sector, Low-Pressure Watercourses, Structural Modeling.*

### INTRODUCTION

The country is implementing a long-term strategy for the development of the oil and gas, electricity, coal, chemical and construction industries, aimed at ensuring sustainable economic growth and improving the welfare of the population, continuously meeting the demand for fuel and energy resources.

At the same time, the existing capacity of the fuel and energy sector does not fully meet the growing demand for energy resources; the volume of energy consumption of the economy of our country is much higher than the average of developed countries.

Currently, the share of renewable energy sources are mainly generated by hydropower plants, accounts for only ten percent of the total electricity generated in the country. Despite its enormous potential, the potential of renewable energy sources such as solar and wind is not being fully exploited.<sup>1</sup>

In this regard, improving the energy efficiency of economic sectors and the social sphere, the widespread introduction of energy-saving technologies and renewable energy sources should remain one of the current directions of public policy at this stage.

Taking into account the advanced foreign experience, comprehensive organization of work to increase energy efficiency through the use of available resources and untapped potential, the widespread introduction of energy-saving technologies and renewable energy sources, drastic reduction of energy consumption in the economy and social sectors, as well as fuel - ensuring the rational and efficient use of energy resources is one of the most important issues of our time.

Scientific research is aimed at expanding the use of non-conventional and renewable energy sources, saving hydrocarbon fuel energy resources and stabilizing the ecological balance is gaining importance in energy practice worldwide. In this regard, the long-term national energy programs of developed countries are set to increase the share of renewable energy sources to at least 20%. In this regard, in the world practice, the use of micro-hydroelectric power plants, one of the largest sources of renewable energy in the power supply system of consumers, is carried out at a rapid pace, and in turn, special attention is paid to the development of this industry. In the world, special attention is paid to the scientific supply of reliable and environmentally relevant technologies for electricity generation. Particular importance is the development of the energy sector along the Aral Sea, modeling the design and operation parameters of micro-hydroelectric power plants, improving the design, the development of technology that increases the efficiency of use in the Aral Sea region. Also, special attention is paid to the qualitative development of the energy sector, which is an important sector of the economy, and the modernization of the technical and technological level of the industry on the basis of modern requirements, including the development of the energy sector along the Aral Sea. The Action Strategy for the further development of the Republic of Uzbekistan for 2017-2021, including "... reducing energy and resource capacity of the economy as a priority in the near future, the widespread introduction of energy-saving technologies in production, expanding the use of renewable energy sources ..." <sup>2</sup> functions are defined. One of the most important issues in the implementation of this task is including the development of the energy sector in the Aral Sea region, and to calculate the mode of operation [1, 2].

## RESEARCH METHODS

In the process of research have been used mathematical modeling theory, mathematical statistics in data processing, probability theory, and experimental planning methods.

Reliability of research results is that, the used methods meet the requirements, and determined by the use of methods of mathematical and statistical analysis, in the process was obtained empirical results and the reliance on statistical criteria of reliability and inevitability in the interpretation of quantitative indicators.

## Results of scientific research

The results of the development and testing in laboratory conditions of the development of the first sub-model of the hydro-hydroelectric power plant with the basic technological solutions of the mathematical model and design of the development of a hydro-hydroelectric power plant operating at low pressure water flows are given.



The dimensions of a micro-hydro water turbine depend on the flow velocity  $v$  of the water, the volume  $Q$  of the water hitting the blade at a fixed time moment, and the depth  $N$  of the water surface. The compactness and efficiency of the wheel when the outer diameter of the wheel is  $D/H \geq 2$  have been reported in the available literature [3,4].

Based on the above mathematical model, the numerical calculation of the wheel is given in Table 1.

**TABLE 1 DIMENSIONS OF MICRO-HYDROELECTRIC POWER PLANT**

№	Naming	Dimensions, mm
1	Outer diameter	$2000 \pm 3,72$
2	Inner diameter	$1000 \pm 2,3$
3	The inside of the blade	$509,44 \pm 0,875$
4	The outer part of the blade	$799 \pm 15$
5	Number of blades	12 pieces
6	Pulley diameter	350

**Results of testing and testing of a small model of a micro-hydroelectric power plant in the Table 2**

**TABLE 2**

Number of observations	Angle of wings, degree	Power electricity A	Voltage, B	Power, Vt
1	5	0,18	212	38,16
2	10	0,20	218	43,6
3	15	0,22	221	48,62
4	20	0,19	215	40,85
5	25	0,19	215	40,85
6	30	0,17	212	36,04
7	35	0,16	210	33,60

In Table 2, experimental work was carried out by changing the angles of the water wheel of the micro-hydroelectric power plant to an angle of  $5 \div 35^\circ$ . When the electricity generated by the generator connected to the device was checked using a measuring instrument, it was found that its voltage varies up to  $210 \div 221$  Volts, and the value of the measured current varies up to  $0.16 \div 0.22$  Amperes. According to the results of experimental studies, when the blades are placed at an angle  $\alpha = 15^\circ$ , the value of the electric current generated by the generator connected to the device (0.22 A) is high, and its voltage is much closer to the standard (221 V). Hence, the corresponding angle of the theoretically calculated feathers ( $\alpha = 16^\circ$ ) is optimal according to the results of experimental studies, so that the impact force depends on the mass of the affected water at the moment when the feathers of the waterfowl start to interact with water, and the minimum when the feather leaves the water is minimal [3].

It is difficult to compare the electricity generated by a generator connected to the proposed device with the definition of a centralized power supply system or other types of decentralized

power sources (high and medium pressure microelectric power plants, solar power plants, wind power plants). The reason is that the formation of other types of electricity sources requires specific geographical conditions. The developed device works in low pressure water streams. Such streams are often found in remote villages of the republic. Therefore, it is advisable to use this device in rural and coastal conditions.

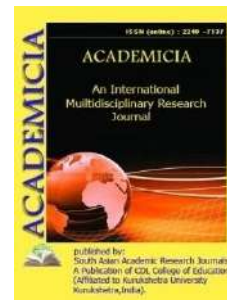
## CONCLUSIONS

Based on the generalization of the results of the study, the following conclusions can be drawn:

1. Improving the modeling and design of the design and operating parameters of the micro-hydroelectric power plant operating on low-pressure watercourses, allowed to increase the efficiency of their use in low-pressure watercourse systems.
2. The functional scheme of a low-pressure hydroelectric power plant is based on mathematical modeling, on the basis of which a new model of a low-pressure hydroelectric power plant is created.
3. On the basis of mathematical modeling to test and test the operating modes of the device in the laboratory, the first improved sub-model of a micro-hydroelectric power plant operating in low-pressure water streams was developed and successfully tested. The test results made it possible to develop a large-scale experimental sample of a theoretically based microhydroelectric power plant.
4. The quality indicators (voltage (V) and frequency (F)) of electricity generated using the test sample were checked. The results were compared with the value limits set out in the International Standard Normative Document. The identified sizes were found to fully comply with the specified requirements of the document. As a result, it is possible to provide consumers with quality electricity.
5. The design dimensions of the developed device are compact and easy to use. As a result, it is possible to reduce the costs associated with its production.
6. The use of micro-hydroelectric power plants operating on low-pressure watercourses in the conditions of the Aral Sea leads to high economic efficiency.

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DOI: **10.5958/2249-7137.2020.00714.4**

## THE EFFECT OF PROPERTIES OF ELECTRONIC ADVERTISING IN UNITED ARAB EMIRATES

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### ABSTRACT

*Electronic advertising is promoting that uses the Internet and different types of digital media to enable a business to advance and offer products and enterprises. It includes special commercials and messages conveyed through email, online advertising on search engines, and websites of social media, banner ads on Web sites or mobile and affiliates programs.*

*The reason for utilizing Electronic advertising is to achieve aextensive scope of potential customers by interfacing with them over the web. It is additionally significantly more financially effective as you can fund your advertising within the boundaries of your own budget. Another extravagance of Electronic advertising is 'Target Marketing'. This implies you can target your desired group of clients in light of an extensive variety of criteria, for example, age, area, sex and religion, in addition to significantly more.*

**KEYWORDS:** *Electronic Advertising, Target Marketing, Digital Media, Promotion, Online Promotion.*

### 1. INTRODUCTION

Electronic advertising is a marketing strategy that involves the use of the Internet as a medium to obtain website traffic and target and deliver marketing messages to the right customers. Electronic advertising is geared toward defining markets through unique and useful applications.

Since the early 1990s there has been an exponential increase in the growth of Electronic advertising, which has evolved into a standard for small and large organizations. Electronic advertising is also known as Internet advertising or Digital Advertising. (Tutaj et al, 2014)

A major advantage of Electronic advertising is the quick promotion of product information without geographical boundary limits. A major challenge is the evolving field of interactive advertising, which poses new challenges for Electronic advertisers.

Electronic advertising are purchased through one of the following common vehicles:

- Cost per Thousand: Advertisers pay when their messages are exposed to specific audiences.
- Cost per Click: Advertisers pay every time a user clicks on their ads.
- Cost per Action: Advertisers only pay when a specific action (generally a purchase) is performed.

Examples of online advertising include banner ads, search engine results pages, social networking ads, email spam, Electronic classified ads, pop-ups, contextual ads and spyware. (Farahat et al 2012)

## 2. The concept of Advertising

The term advertising refers to paid types of communication that are circulated at the activity of economic operators by methods for TV, radio, daily papers, flags, mail, Internet, and so on.) as part of an deliberate and systematic effort to influence individual attitudes and decisions in relation to the utilization of goods and services. (Briggs et al 1997)

This is obvious that a very wide conception that encompasses all types of promotional communication, paying little heed to e means or methods of distribution. Concerning promoting strategies and methods, a determined procedure of innovation continues to be driven by the imagination of advertisers, development of new marketing techniques and technological developments. New advertising means such as the Internet keep on emerging alongside traditional distribution methods, like dailies and periodicals, television, banners, direct marketing (phone calls, mailings and door-to-door sales), cinema, radio and product packaging itself. What it does exclude is exposure that is non-commercial, as in it makes no reference to financial exercises, for example, political purposeful publicity and social attention. (Lucian 2015)

Comparative advertising is referring to an advertising method in which the businesses use to promote their products and services by making comparison with the products of their competitors. The identification of genuine contenders may be implicit or explicit. The previous is known as indirect comparative advertising, and the last is known as direct comparative advertising. The structure of Electronic advertising is that it is distributed on the Internet, Electronic advertising give a hyperlink that redirects to the company's site, and it can involve animated movements in the advertisements. (Anand et al 2009)

## 3. History of Electronic Advertising

Electronic Advertising has become the fastest, and one of the most influencing advertising means in history. Nowadays, it is one of the major of a successful business, a media platform that facilitates interaction with customers in the creative and interesting ways, although there continues to be a large majority of irritated web users. (Goldfarb et al 2011)

For more sympathetic understanding of Electronic Advertising, let us tracing the history of Electronic advertising.

## The Origin of Spam

In 1970's, Monty Python 'a British comedy' first used the word "spam" in an early sketch of a couple at a restaurant, he was trying to order food without "spam" on it. This comedy had influence on forum users who began to use the word in their posts. After that, online marketers began to over post and flood users with junk mail, that repeatedly recounted spam.

By 1980, web marketers had replaced from 'flooding Usenet forums' to 'sending out emails', this practice that continues until today. The quantities of spam messages that are sent each day is a astounding 90 million, which isn't difficult to accept since 85% of our inboxes are screaming spam every hour. As a advertising procedure however, spam emails have little viability since most of people barely read any. (*Pieters & Rik 2008*)

The year 1994 saw the first online ad that was immediately followed by a period of experimentation on sponsor and publisher advertisement formats and technology. This phase ended with the launch of one of the main ad technologies, the 'Double Click in 1995'. The earliest advertisers knew of the contrasts between traditional and electronic advertising and undertook a objective statistical research. In any case, it wasn't until many years in following that the Internet was used as a 'full-blown medium' for powerful advertising. (*Jansen et al 2008*)

At the end 1990s, billions were invested in electronic advertising. Advertisers established the standard "468×60 pixel" banner ads that were highly demanded. With increase in market competition, there was a lot of money behind developing banner ads. At the time, Yahoo may charge anywhere between "\$30-\$100" to run banner ads. (*Li et al 2012*)

Banner advertisements today, as they were over 10 years back, are not viable online advertising mediums. With considerable outlining required, they are tedious and costly to create. Besides, the low profit for income spent on creating banner ads renders them useless to most online publicists. Of course thusly, by mid-2000, banner advertisements began to go away, and have turned out outdated at the time of writing. (*Laczniak, 2015*).

The effectiveness of search engine technology has supported online advertising. Due to its high dependability and rate of premium, the search engine market has demonstrated a steady development throughout the years, pulling online advertising numerous scores. Google began as a search engine however clearly, is a hundred times more than that today. Google's calculation shows the most suitable outcomes and for a long time, Google took a shot at its usefulness. Without selling anything, it kept on driving traffic until 2000, when it first presented Google Ad Words. Drawing far from banner advertising, still a famous form at the turn of the centuries, Google revolutionized online advertising by utilizing relevant text ads to offer. (*Johnson et al 2013-03-01*)

Google's success laid on presenting the click through rate that would gauge the significance of the advertisement, likewise ensuring host installment only when clients clicked on the ads. Pay-Per-Click advertising was not a Google unique. Google culminated PPC and changed the approach sponsors took to online advertising. Google AdWords urged advertisers to come up with comprehensive, significant ads instead of mere selling. (*Lee et al 2012*)

## Social Media Advertising

Social media is all over and has been in vogue since the previous five years. At its center, social media is a correspondence and networking tool, whose prevalence has been always ascending since its users can connect, share and communicate among themselves. Rather than being a minor informative reading interface, social media enables users to remark, rate and share news, views and data. (Schlee et al 2013-10-01)

*Social media can be divided into:*

- Social Networking Tools – Twitter, Facebook.
- Social News – Digg Propeller, Reddit
- Social Bookmarking – Simpy, Del.icio.us
- Social Photo & Video Sharing – YouTube, Flickr, Photobucket

Targeting the correct market is critical for any business and this is one of the greatest focal points of social media advertising. By gathering a user's demographic data, social media discloses to you where a business' objective market is most wide and dynamic. Advertisers would then use this information to tap their planned market. Social media advertising is viral, sweeping and free. Although genuine conversions cannot be followed from 'friends', 'follows', or 'likes', social media remains the best online promoting mediums. (Robinson et al 2007)

## The Current Face of Online Advertising

Electronic advertising has recovered and has been consistently rising since 2004. With the number of hours an Internet client spends browsing sites, advertisers have understood the significance importance and advantage of exploiting user tendency to scour the web. From blogs, SEO marketing and social media to sophisticated advertisements, interactive tools and marketing advancements, advertisers are presently utilizing a wide array of platforms to build business visibility.

Viral marketing is now a prominent method of advertising using video advertisements to market products. Websites like YouTube, Metacafe, and so forth, are famous product advertising platforms. But online advertising has barely been idealized. Irritating pop-up ads still exist while free sites like YouTube now incorporate commercials or pre-roll ads that cannot be avoided to the actual video. (Chen & Stallaert 2014)

## 4. Types of Electronic Advertising

Online advertising has developed since its humble beginnings as a static picture that pops up at the highest point of a site. Now, there is a wide assortment of advertising types you could utilize. We've listed the seven best types here.

### 1. Display Ads

The essential form of online advertising, these are visual advertisement that appeared on third party websites.

Display advertisements have created from the basic type of banner ads. display ads come as:

- Text - text ads: Those are developed by statistics to create text ads appropriate to the surrounding content.



- Static images: which is your essential banner or square ads that shown around the content.
- Wallpaper: these change the background of a website, filling the entire page.
- Floating banners: these float above the regular website's content or move across the screen.
- Popup ads: these are new windows which appear in front of the website content; displaying full ad on newly opened window, so visitors can see.
- Video: small video ads that auto-play.
- Flash - moving ads that flash different content at the viewer.

Display ads are usually very reasonable. In the event that you contact the third party site directly, their rates will differ from site to site. If you use a marketing site, they will charge you a base rate.

Some third party site like Google Display, take into account statistic for geographic, demographic, and behavioral targeting, these will help advertisers to reach the customers that are interested in your service or product. (*Hu et al 2012*)

## 2. Social Media Ads

Social network advertising, describe forms of web based advertising that emphasis on social networking services. One of the significant advantages of this type of promoting is that advertisers can exploit advantage of the users' demographic data and target their advertising appropriately.

Social media focusing on combines current targeting options (for example, geo-targeting, socio-psychographic targeting, behavioral targeting, and so on.), to influence the identification detailed target group. In social media targeting, adv are circulated to users based on data gathered from target group profiles.

Social network ads are not always the same as social media targeting. Social media targeting is a technique of optimizing social media ads by using profile information to convey advertisements directly to individual clients. Social media targeting refers to the way toward coordinating informal organization clients to target bunches that have been determined by the advertiser. (*Mai Frandsen et al 2014*)

## 3. Search Engine Marketing (SEM)

Search Engine Marketing (SEM) refers to multiple methods that utilized to enhance market visibility and exposure for a brand, item or administration. SEM mechanisms involve "Search Engine Optimization" (SEO), "social networking", bid "placement, pay-per-click" (PPC), contextual promotion, paid inclusion, geo-mapping, AdSense and AdWords, multiple media formats (e.g., YouTube and geo-specific marketing, like Foursquare).

### Search Engine Marketing tools include:

- **Search Engine Optimization (SEO);** Maximizes search result exposure by focusing on and driving Web traffic and ultimately delivering increased deals. The larger part results of search engine page come from organic or unpaid search. SEO enhances websites to guarantee top search engine arrangement, e.g. Google, as just 15 percent of searchers proceed beyond page one.

- **Social Media Marketing (SMM);** Focuses on marking, reputation improvement and upgraded client benefit through social networks like (Facebook, Twitter, YouTube and LinkedIn). Smaller SMM channels include; Wikipedia, Digg, Delicious, and MySpace. Social networks are visited by a more than one-billion people. Subsequently, even the simplest marketing efforts, like paid advertising contact possibly huge groups of people.
- **Paid Search;** Examples of paid search incorporate include banner, sponsored links, and sidebar ads, where relevantly produced advertisements are depend on organic search results. (Mai Frandsen et al 2014)

#### 4. Native Advertising

Native advertising is a type of paid media where the advertisement encounter takes after the common shape and capacity of the client involvement in which it is put.

The biggest social platforms in the world monetize with native, in-channel advertisements, including "Facebook, Instagram, Twitter, and Tumblr". The publishing business is rapidly following suit, as organizations for example, "Time Inc., Forbes, New York Times, Wall Street Journal, and USA Today", keep on to introduce new advertising mixes on mobile and desktop that match both the form & capacity of their editorial feeds. (Interactive Advertising Bureau 2013)

#### 5. Remarketing-Retargeting

The most ideal approach to market to individuals who already know about your product and administration is to remarket to them. Or on the other hand retarget. Depends upon who you're conversing with.

At the point when people visit your website site, you drop a cookie on them so that, as they travel around the web, your advertisements will show up again over and over to remind them about your product or administration.

This type of advertising is cheap and, if done right, can be more successful than PPC. It expands conversions because it helps individuals to remember you who already know your identity.

You can endeavor to set this up yourself on "Google Remarketing, Facebook Remarketing and more". (Interactive Advertising Bureau 2013)

#### 6. Video Ads

These include online display advertisements that encapsulate video within them, but it is generally accepted that it refers to promoting that occurs previously, during as well as after a video stream on the web.

The advertising units utilized as a part of this occurrence are pre-roll, mid-roll, and post-roll and all of these advertisement units resemble the traditional spot advertising you see on TV, although they are "cut-down" to be a shorter rendition than their TV partners if they are run online.

Communicate sites, for example, Sky.com and itv.com have such promoting on their sites, for example newspaper websites such as The Telegraph, and The Guardian. In 2010, video advertisements represented for 12.8% of all videos saw and 1.2% of all minutes spent survey video online.

In July 2014 Facebook paid an about \$400 million to gain Live Rail, a video promoting distributor which uses Real-time offering to place in excess 7 billion video advertisements a month. (Richang Hong et al 2013)

## 7. Email Marketing

Email marketing is the focusing of consumers through email. Regularly associated with information mining, email marketing can be used to affect consumers in a variable ways. email marketing is a more advanced, digital type of traditional direct mail advertising.

Email marketing is otherwise called as direct email advertising.

In a common email marketing situation, an organization manufactures an email list to reach or advise established and prospective clients. An email rundown might be supplemented by a marketing database that takes into account customization, information mining, precise targeting or different purposes. However, universal and spontaneous email, also called as spam, has made it troublesome for moral email marketers. Most email and Internet service organizations providers have huge filters to block spam, so getting real messages crosswise over is simpler than done. Email marketing has advanced into a specific specialty in computerized marketing.

(Mari Hartemo 2016)

## 5. Advantages of electronic advertising

### A. Cost

The low price of electronic communication decrease the cost of displaying electronic ads compared to offline advertisements. Electronic ads, and in certain social media, provides a low cost means for marketers to engage with huge established population. Electronic ads shows better returns than in other media. (R. Dedrick, 1995)

### B. Measurability

Electronic advertisers can collect information on their effectiveness of ads', like the size of the potential audience or real audience response, how a customer's reached their ads, and whether the ads resulted in a sale, and if an ads actually loaded within a customer's view. (Farah at et al 2012)

### C. Formatting

Advertisers have a wide assortment of methods for exhibiting their promotional messages, including the capacity to pass on pictures, audio, video, and links. Not at all like numerous offline ads, can online advertisements be interactive. For instance, a few promotions let clients input questions or let users follow the sponsor via social media. Online promotions can even join games. (Li et al 2012)

### D. Targeting

Publishers may offer promoters the ability to achieve limited market sections for targeted advertising. Electronic advertising may utilize geo-focusing to show relevant ads to the user's geography. Advertisers can redo every individual advertisement to a specific user based on the user's past preferences. Advertisers can know whether web users have just observed a certain

advertisement in order to reduce undesirable exposures and give sufficient time gaps between exposures. (Farahat et al 2012)

#### E. Coverage

Electronic ads can reach international market, and online ads can influence offline sales. (Li et al 2012)

#### F. Speed

When advertisement configuration is finished, electronic ads can be sent immediately. The delivery of online advertisement does not need to be linked to the publisher's production publication schedule. Besides, online advertisers can change or replace advertisement copy more quickly than their offline counterparts. (Farahat et al 2012)

### 6. Regulation

The consumer insurance laws apply similarly to online and offline activities. In any case, there are inquiries over which locale's laws apply and which administrative agencies have requirement authority over trans-border action.

As with offline promoting, industry members have undertaken various efforts to self-manage and create industry standards or implicit rules. Many US promoting industry associations published together Self-Regulatory Principles for "Online Behavioral Advertising". (Stephanie Flosi et al 2013)

European advertisement associations published a comparative document in 2011. Essential fundamentals of the two reports incorporate purchaser control of information exchange to third parties, information security, and consent for accumulation of certain health and financial information. Neither structure, however, punishes violators of the codes of accepted rules. (Goldfarb et al 2011)

#### Privacy and data collection

Privacy control regulation can require clients' consent before an advertiser can track the client or communicate with the client. agreed consent can be troublesome and costly to get 60 Industry members.

Different wards have adopted distinctive strategies to privacy issues with advertising. The USA has particular restrictions on online following of children in the Children's "Online Privacy Protection Act"

Conversely, the European Union's 'Privacy and Electronic Communications Directive' confines sites' capacity to use consumer data much more comprehensively. The EU limitations limit focusing by online advertisers. (Evans et al 2009)

### 7. CONCLUSION

Electronic Advertising on Website has numerous favorable circumstances and hindrances. I think that the favorable circumstances exceed the impediments. Having on the online advertisement, enabling your ad to be seen internationally all around the globe, takes your business to an unheard of level focusing on significantly more gathering of people. Its ease, offers private

venture to put resources into internet promoting chopping down in introductory cost of advertising.

Web's huge scope additionally enables every day users to encounter more services gave by business and makes it a helpful spots for customers. It permits individuals get additional time out of their life, that other conventional traditional methods, for example, heading to a store to pay bills. With the assistance of the web, it has helped us people in many ways. It turns out to be the premier commercial technique along all other media, and ensures comes about without fail.

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DOI: **10.5958/2249-7137.2020.00621.7**

## 2-LOCAL MULTIPLIERS ON ASSOCIATIVE, LIE AND JORDAN ALGEBRAS

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### ABSTRACT

*The present paper is devoted to 2-local multipliers on associative, Lie and Jordan rings. It is proved that every 2-local left (right) multiplier on an arbitrary associative or Lie ring is a left (respectively right) multiplier. Also, it is proved that every 2-local Jordan multiplier of a Jordan ring is a Jordan multiplier.*

**KEYWORDS:** Associative Ring, Multiplier Operator, Lie Ring, Jordan Ring, 2-Local Mapping  
 2010 MSC: 16W25, 46L57, 47B47, 17C65

### INTRODUCTION

The present paper is devoted to 2-local multipliers on associative, Lie and Jordan rings. In 1997, P. Semrl [1] introduced the notion of 2-local derivations and described 2-local derivations on the algebra  $B(H)$  of all bounded linear operators on the infinite-dimensional separable Hilbert space  $H$ . A similar description for the finite-dimensional case appeared later in 2004 [2]. In the paper [3] Y. Lin and T. Wong 2-local derivations have been described on matrix algebras over finite dimensional division rings. In 2012 Sh. Ayupov, K. Kudaybergenov suggested a new technique and have generalized the above mentioned results for arbitrary Hilbert spaces [4]. Namely, they considered 2-local derivations on the algebra  $B(H)$  of all linear bounded operators on an arbitrary (no separability is assumed) Hilbert space  $H$  and proved that every 2-local derivation on  $B(H)$  is a derivation. Later Sh. Ayupov, K. Kudaybergenov and F. Arzikulov extended the above results and give a proof of the theorem for arbitrary von Neumann algebras [5], [6].

In the given article it is introduced and studied a concept of 2-local left (right) multipliers on an arbitrary associative or Lie ring. It is proved that every 2-local left (right) multiplier on an arbitrary associative or Lie ring is a left (respectively right) multiplier. Namely, we prove that for any element  $x \in \mathfrak{R}$  there exists an element  $a \in \mathfrak{R}$  such that  $\varphi(x) = ax$ .

Besides, in the present paper, it is introduced and studied a concept of 2-local Jordan multiplier on an arbitrary Jordan ring. Finally, it is proved that every 2-local Jordan multiplier  $\varphi$  of a Jordan ring  $J$  is a Jordan multiplier, i.e. there exists an element  $a \in J$  such that  $\varphi(x) = ax$  for every element  $x \in J$ .

### 1. 2-local left multipliers.

**Definition.** Let  $\mathcal{R}$  be an associative ring. Then, if for a map  $\varphi: \mathcal{R} \rightarrow \mathcal{R}$  and for every pair of elements  $x, y \in \mathcal{R}$  there exists  $a \in \mathcal{R}$  such that  $\varphi(x) = ax$  and  $\varphi(y) = ay$  ( $\varphi(x) = xa$  and  $\varphi(y) = ya$ ), then  $\varphi$  is called 2-local left (right) multiplier.

**Teorema 1.1.** Let  $\mathcal{R}$  be an associative unital ring, and let  $\varphi: \mathcal{R} \rightarrow \mathcal{R}$  be a 2-local left (right) multiplier. Then there exists  $a \in \mathcal{R}$  such that

$$\varphi(x) = ax \text{ (respectively } \varphi(x) = ax) \forall x \in \mathcal{R}.$$

**Proof.** By the definition for every  $x \in \mathcal{R}$  and identity element  $e \in \mathcal{R}$ , there exists  $a \in \mathcal{R}$  such that

$$\varphi(x) = ax\varphi(e) = ae = a.$$

In its turn, for every element  $y \in \mathcal{R}$  and  $e \in \mathcal{R}$  there exists  $b \in \mathcal{R}$  such that

$$\varphi(y) = by\varphi(e) = be = b.$$

Hence,  $a = b$ . Since the elements  $x$  and  $y$  are chosen arbitrarily we have there exists  $d \in \mathcal{R}$  such that

$$\varphi(z) = dz \forall z \in \mathcal{R}.$$

The proof is completed.

**Theorem 1.2.** Let  $\mathcal{R}$  be an associative (non necessarily unital) ring and, let  $\varphi: \mathcal{R} \rightarrow \mathcal{R}$  be a 2-local left (right) multiplier. Then there exists  $a \in \mathcal{R}$  such that

$$\varphi(x) = ax \text{ (respectively } \varphi(x) = ax) \forall x \in \mathcal{R}.$$

**Proof.** Let  $\mathcal{R}_1 = \mathcal{R} \oplus Z$  be the unitization of  $\mathcal{R}$ . For every left multiplier  $L_a$  on  $\mathcal{R}$ , we define  $\tilde{L}_{(a,0)}$  on  $\mathcal{R}_1$  by  $\tilde{L}_{(a,0)}((x, \lambda)) = \tilde{L}_{(a,0)}((x, \lambda)) = (a, 0)(x, \lambda)$  for all  $x \in \mathcal{R}$  and  $\lambda \in Z$ . It is easy to check that  $\tilde{L}_{(a,0)}$  is a left multiplier on  $\mathcal{R}_1$ . Similarly, we define  $\tilde{\varphi}$  on  $\mathcal{R}_1$  by  $\tilde{\varphi}((x, \lambda)) = \tilde{L}_{(a,0)}((x, \lambda))$ , where  $a$  is an element in  $\mathcal{R}$  such that  $\varphi(x) = L_a(x)$ .

First, we show that  $\tilde{\varphi}$  is a 2-local left multiplier on  $\mathcal{R}_1$ . Since  $\varphi$  is a 2-local left multiplier we have for  $a, b \in \mathcal{R}$  there exists a left multiplier  $L_a$  on  $\mathcal{R}$  such that  $\varphi(x) = L_a(x)$  and  $\varphi(y) = L_a(y)$ . From this it follows that  $\tilde{\varphi}((x, \lambda)) = \tilde{L}_{(a,0)}((x, \lambda))$  and  $\tilde{\varphi}((y, \mu)) = \tilde{L}_{(a,0)}((y, \mu))$ . This implies that  $\tilde{\varphi}$  is a 2-local left multiplier on  $\mathcal{R}_1$ .

By theorem 1.1  $\tilde{\varphi}$  is a left multiplier on  $\mathcal{R}_1$ . This completes the proof.

Let  $\mathcal{R}$  be an associative ring.

**Definition.** Let  $\varphi: \mathcal{R} \rightarrow \mathcal{R}$  be a linear mapping. If, for any  $x, y \in \mathcal{R}$ ,  $\varphi(xy) = \varphi(x)y$  ( $\varphi(xy) = x\varphi(y)$ ), then  $\varphi$  is called a weak left (respectively right) multiplier.

Let  $L: \mathcal{R} \rightarrow \mathcal{R}$  be a mapping. If there exists  $a \in \mathcal{R}$  such that  $L(x) = ax$  ( $L(x) = xa$ ) for any  $x \in \mathcal{R}$ , then  $L$  is a weak left (respectively right) multiplier, i.e. every left (right) multiplier is a weak left (respectively right) multiplier. Such weak left (right) multiplier we denote by  $L_a$  (respectively  $R_a$ ). Every weak left (right) multiplier of a unital associative ring  $\mathcal{R}$  is a left (respectively right) multiplier [7].

By theorem 1.2 we have the following theorem.

**Theorem 1.3.** Let  $\mathcal{R}$  be a unital associative ring, and let  $\Delta: \mathcal{R} \rightarrow \mathcal{R}$  be a 2-local derivation on  $\mathcal{R}$ . Suppose that there exist a 2-local left multiplier  $\varphi$  and a 2-local right multiplier  $\psi$  such that

$$\Delta(x) = \varphi(x) - \psi(x), x \in \mathcal{R}.$$

Then  $\Delta$  is an inner derivation on  $\mathcal{R}$ .

**Proof.** By theorem 1.2 there exist  $a, b \in \mathcal{R}$  such that

$$\varphi(x) = ax, \psi(x) = xb, \forall x \in \mathcal{R}.$$

By the definition for the identity element  $e \in \mathcal{R}$

$$\Delta(e) = \varphi(e) - \psi(e) = 0.$$

Hence,  $a = b$  and

$$\Delta(x) = ax - xb, x \in \mathcal{R}.$$

The proof is complete.

## 2.2-local Lie multipliers

**Definition.** Let  $\mathcal{R}$  be a Lie ring. Then, if for a map  $\varphi: \mathcal{R} \rightarrow \mathcal{R}$  and for every pair of elements  $x, y \in \mathcal{R}$  there exists  $a \in \mathcal{R}$  such that  $\varphi(x) = ax$  and  $\varphi(y) = ay$ , then  $\varphi$  is called 2-local left multiplier.

**Teorema 2.1.** Let  $\mathcal{R}$  be a unital Lie ring, and let  $\varphi: \mathcal{R} \rightarrow \mathcal{R}$  be a 2-local left (right) multiplier. Then there exists  $a \in \mathcal{R}$  such that

$$\varphi(x) = ax \text{ (respectively } \varphi(x) = xa) \quad \forall x \in \mathcal{R}.$$

**Proof.** By the definition for every  $x \in \mathcal{R}$  and identity element  $e \in \mathcal{R}$ , there exists  $a \in \mathcal{R}$  such that

$$\varphi(x) = ax\varphi(e) = ae = a.$$

In its turn, for every element  $y \in \mathcal{R}$  and  $e \in \mathcal{R}$  there exists  $b \in \mathcal{R}$  such that

$$\varphi(y) = by\varphi(e) = be = b.$$

Hence,  $a = b$ . Since the elements  $x$  and  $y$  are chosen arbitrarily we have there exists  $d \in J$  such that

$$\varphi(z) = dz \quad \forall z \in \mathcal{R}.$$

The proof is completed.

Similarly we can prove the following theorem.

**Teorema 2.2.** Let  $\mathcal{R}$  be a (non nesserally unital) Lie ring, and let  $\varphi: \mathcal{R} \rightarrow \mathcal{R}$  be a 2-local left (right) multiplier. Then there exists  $a \in \mathcal{R}$  such that

$$\varphi(x) = ax \text{ (respectively } \varphi(x) = xa) \quad \forall x \in \mathcal{R}.$$

**Proof.** Let  $\mathcal{R}_1 = \mathcal{R} \oplus Z$  be the unitization of  $\mathcal{R}$ . For every left multiplier  $L_a$  on  $\mathcal{R}$ , we define  $\tilde{L}_{(a,0)}$  on  $\mathcal{R}_1$  by  $\tilde{L}_{(a,0)}((x, \lambda)) = \tilde{L}_{(a,0)}((x, \lambda)) = (a, 0)(x, \lambda)$  for all  $x \in \mathcal{R}$  and  $\lambda \in Z$ . It is easy to check that  $\tilde{L}_{(a,0)}$  is a left multiplier on  $\mathcal{R}_1$ . Similarly, we define  $\tilde{\varphi}$  on  $\mathcal{R}_1$  by  $\tilde{\varphi}((x, \lambda)) = \tilde{L}_{(a,0)}((x, \lambda))$ , where  $a$  is an element in  $\mathcal{R}$  such that  $\varphi(x) = L_a(x)$ .

First, we show that  $\tilde{\varphi}$  is a 2-local left multiplier on  $\mathcal{R}_1$ . Since  $\varphi$  is a 2-local left multiplier we have for  $a, b \in \mathcal{R}$  there exists a left multiplier  $L_a$  on  $\mathcal{R}$  such that  $\varphi(x) = L_a(x)$  and  $\varphi(y) = L_a(y)$ . From this it follows that  $\tilde{\varphi}((x, \lambda)) = \tilde{L}_{(a,0)}((x, \lambda))$  and  $\tilde{\varphi}((y, \mu)) = \tilde{L}_{(a,0)}((y, \mu))$ . This implies that  $\tilde{\varphi}$  is a 2-local left multiplier on  $\mathcal{R}_1$ .

By theorem 2.1  $\tilde{\varphi}$  is a left multiplier on  $\mathcal{R}_1$ . This completes the proof.

Let  $\mathcal{R}$  be a Lie ring.

**Definition.** Let  $\varphi: \mathcal{R} \rightarrow \mathcal{R}$  be a linear mapping. If, for any  $x, y \in \mathcal{R}$ ,  $\varphi(xy) = \varphi(x)y$  ( $\varphi(xy) = x\varphi(y)$ ), then  $\varphi$  is called a weak left (respectively right) multiplier.

Let  $L: \mathcal{R} \rightarrow \mathcal{R}$  be a mapping. If there exists  $a \in \mathcal{R}$  such that  $L(x) = ax$  ( $L(x) = xa$ ) for any  $x \in \mathcal{R}$ , then  $L$  is a weak left (respectively right) multiplier, i.e. every left (right) multiplier is a weak left (respectively right) multiplier. Such weak left (right) multiplier we denote by  $L_a$  (respectively  $R_a$ ).

**Theorem 2.3.** Every weak left (right) multiplier of a unital Lie ring  $\mathcal{R}$  is a left (respectively right) multiplier.

**Proof.** By the definition, for every pair  $x, y \in \mathcal{R}$  of elements,  $\varphi(xy) = \varphi(x)y$ . Let  $e$  be an identity element of  $\mathcal{R}$ . Then, for every  $x \in \mathcal{R}$ ,

$$\varphi(x) = \varphi(ex) = \varphi(e)x.$$

Here  $\varphi(e)$  is a constant value. Let  $a = \varphi(e)$ . Then

$$\varphi(x) = ax, \quad x \in \mathcal{R},$$

i.e. the element  $a$  generate the mapping  $\varphi$  and  $\varphi$  is a left multiplier. This completes the proof.

By theorem 2.2 we have the following theorem.

**Theorem 2.4.** Let  $\mathcal{R}$  be a unital associative ring, and let  $\Delta: \mathcal{R} \rightarrow \mathcal{R}$  be a 2-local derivation on  $\mathcal{R}$ . Suppose that there exist a 2-local left multiplier  $\varphi$  and a 2-local right multiplier  $\psi$  such that

$$\Delta(x) = \varphi(x) - \psi(x), x \in \mathcal{R}.$$

Then  $\Delta$  is an inner derivation on  $\mathcal{R}$ .

**Proof.** By theorem 1.2 there exist  $a, b \in \mathcal{R}$  such that

$$\varphi(x) = ax, \psi(x) = xb, \quad \forall x \in \mathcal{R}.$$

By the definition for the identity element  $e \in \mathcal{R}$

$$\Delta(e) = \varphi(e) - \psi(e) = 0.$$

Hence,  $a = b$  and

$$\Delta(x) = ax - xb, x \in \mathcal{R}.$$

The proof is complete.

### 3.2-local Jordan multipliers

**Definition.** Let  $J$  be a Jordan ring. Then, if for a map  $\varphi: J \rightarrow J$  and for every pair of elements  $x, y \in J$  there exists  $a \in J$  such that  $\varphi(x) = ax$  and  $\varphi(y) = ay$ , then  $\varphi$  is called 2-local multiplier.

Similarly we can prove the following theorem.

**Teorema3.1.** Let  $J$  be a unital Jordan ring, and let  $\varphi: J \rightarrow J$  be a 2-local multiplier. Then there exists  $a \in J$  such that

$$\varphi(x) = ax \forall x \in J.$$

In its turn theorem 3.1 allows us to prove the following theorem.

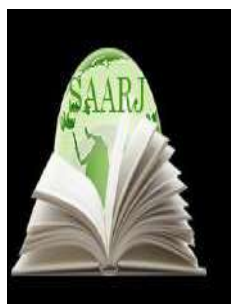
**Theorem3.2.** Let  $J$  be a (non necessarily unital) Jordan ring and, let  $\varphi: J \rightarrow J$  be a 2-local multiplier. Then there exists  $a \in J$  such that

$$\varphi(x) = ax \forall x \in J,$$

i.e.  $\varphi$  is a Jordan multiplier.

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DOI: **10.5958/2249-7137.2020.00614.X**

## IMPROVING THE CULTIVATION OF PERSIMMON VARIETIES, STORAGE AND DRYING OF FRUITS IN UZBEKISTAN

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### ABSTRACT

*The content of this article deals with improving the cultivation, storage and drying of persimmon varieties in Uzbekistan in various ways. At the same time, 6 varieties of persimmon grown in Uzbekistan were studied as the object of research as a qualitative and quantitative composition, raw materials for storage and processing. When persimmons are dried, the change in quality indicators is scientifically based. Physicochemical changes in the fruits of oriental persimmon during the drying process lead to changes in their chemical composition, as well as some changes in their nutritional, taste properties. It also reveals the theoretical and practical significance of the collected results, provides recommendations for the implementation of research results in practice.*

**KEYWORDS:** *Persimmon Varieties: “Khachiya”, “Khiakume” “Jiro” “Sidles”, “Zanjimaru”, “Tamopan”, Processing, Storage, Drying Of Date Fruit.*



## INTRODUCTION

Fruits grown in Uzbekistan have long been known for their taste and high quality. At the same time, processed products from fruits grown in Uzbekistan are of high quality (dried fruits, juices, syrups, etc.). The level of development of horticulture and viticulture in Uzbekistan does not fully meet the requirements of modern horticulture. Therefore, we need to increase the efficiency, productivity and area of horticulture and viticulture in our country by using modern technologies.

Persimmon is a subtropical plant that has many species. Persimmons are grown wild in China and imported from Japan and CIS countries. They grow on the coasts of Georgia, Azerbaijan, Tajikistan, Crimea and the Black Sea. They are deciduous, 6-12m tall, unisexual or bisexual plants. Flowers appear on annual branches. Persimmon change shape, color, and taste depending on the type and navigation of the fruit. The fruit is eaten in wet days; it is very useful for human health. The fruits are thinner at first and sweet when slightly ripe, and propagated by sowing and grafting seeds.

Yields are bred in 3–4 years after planting and they are resistant to frost in subtropical plants. Most are pollinated from the outside, only some of them can bear fruit without seeds, without grazing [1,2].

The fruits are finished at the ends of annual branches, and ripen in November; the fruits of most varieties ripen after harvest. The fruit is cut with garden shears and then the fruit band is removed.



Persimmons often do not choose land, but grow well in fertile soils and give abundant yields and they are eaten wet and dried.

In addition, the fruit is used in the preparation of various desserts, such as jam and trees can withstand 18 ° C frost, when the cold reaches 20 ° C, surface branches severely damages if annual branches exceed it. More resistant to dry air, but moist enough in the soil otherwise it will shed its fruit. It is a light-loving plant. In Uzbekistan, the planting of persimmon begins in February.

Persimmons are mostly found in Surkhandarya region and Fergana valley. But in recent years, with the help of amateurs began to multiply in the gardens of the region, where winters are cold.

Here are some common **widespread varieties** of persimmon:

**Zanju-maru** – Variety adapted for planting in Sukhandarya region. Other date varieties do not pollinate well. The branch is black. The average weight of the fruit is 100-120 g, round, oblong-round, the seeds in the fruit are numerous, the growth period lasts 220-230 days. Seedlings are harvested from 3–4 years after planting. When fully harvested, 50-60 kg of dates can be obtained from each bush. The fruit contains 12-17.5% sugar and 0.13-0.16 acid. The trees are self-pollinating. The fruits are stored up to 2–3 months.

**Tamopan** – Localized date variety for Surkhandarya region. The tree grows on the ground, frost tolerant, and fruits are big (about 400gr).

The skin is thick, shiny, the flesh is juicy, fibrous, and the sour taste disappears when fully cooked. The fruits are stored for 2–3 months. This variety is suitable for sending to distant places.

A fertile bush yields 150 kg and more. The fruit is eaten as dried and candied forms. This tree is native to Central Asia not damaged by pests and diseases.

**Khiakume** – The height of the bushes is 5-6 m, the branches are dome-shaped. The fruit is round; the surface is covered with waxy powder, light red in color, dark red when ripe. The flesh of the seeded fruit is brown and the sweet, seedless fruit is flat with a bright red color. The meat will be sour until fully cooked. The fruits ripen in late October. It is well preserved without spoiling after harvesting. The flower is pollinated from the outside. Among the persimmon varieties, the Xiakume variety differs in that it can withstand considerable cold. Yields in 3-4 years, full yield begins to bear fruit in 7-8 years. The average yield is 60-80 kg. In late October, November fruits are harvested [1,2,3].

Currently, persimmon growing is one of the leading fruit crops in Uzbekistan. They are very diverse in terms of quality according to varietal characteristics. As there is a demand for fruits both in fresh form and in the form of raw materials for processing, the issues of improving the technological processes of fruit storage and processing are relevant.

#### **Research methods and state standard features:**

1. "Methodical recommendations: on the primary study of Oriental persimmon" (Paseykov A.K.);
2. "Study of subtropical fruit crops. Methodological guidelines" (Vitkovsky V.L. and others, 1989);

3. "The order of research work"

4. "Frozen fruits and berries. General specifications";

5. "Guidelines for research with fast-frozen fruits, berries and vegetables" (Anisimov V. Ya. and others 1984) [4,5]

The objects of study were oriental persimmon varieties: Jiro, Zanzi Maru, Sidles, Khachia, and Khiaku.

The research program provides the following experience:

1. Experiment №1: Variety, commodity-technological and biochemical evaluation of oriental persimmon fruits (A).

2. Experiment 2: Storage of Eastern persimmon fruits at different temperature conditions (B).

3. Experiment 3. Development of processed products from oriental persimmon (B).

### **Scientific research works**

The research is focused on: the characteristics of the formation of quality indicators of persimmon fruits during planting are analyzed; technological features of fruit storage according to varietal characteristics; the data used in the processing of persimmon have been discussed in detail.

The object of research was the qualitative and quantitative composition of the fruits of 6 varieties of persimmon are grown in Uzbekistan, as a raw material for storage and processing. Special attention has been paid to the technological parameters of storage and processing.

***Storage and drying of persimmon fruits.*** Red persimmon varieties last for 4 months or more when stored at temperatures between -1 and 0 degrees. The non-perishable Fuyu variety is usually stored at a temperature of 5 degrees, but if each fruit is placed separately in 0.06 mm thick polyethylene bags, at 0 degrees the fruit can remain intact for up to 5 months. Mature, hardy varieties can be stored in a cold room for at least 1 month. These fruits can be frozen and stored for 6–8 months [1,4,5,6].





**Drying of fruits.** Outdoor drying of persimmon is a common activity in Japan and Brazil, as after the ripe but not yet softened fruits are cut, the peel is peeled off and hung from the band. When pruned, a small amount of peel should remain on the tip of the fruit, otherwise a lot of liquid will flow out. Hanging fruits are dried in the sun for 30–50 days. It needs to be hand-kneaded every 4–5 days to have a uniform texture and improve the taste. After drying, it is wrapped in balls for “sweating”. As a result, sugar crystal grains are formed on the surface of the palm. Finally, it is hung again to dry in the wind.

In Japan and China, Khachiya fruits are harvested in a tense manner. The skin is peeled off. The wire is attached to poles or poles for air drying. It is dried under the roof for 30–50 days. Sugar crystal grains are formed on the skin of the fruit. The composition of the fruit can contain up to 50% sugar. Drying eliminates redness. Use “Khachiya” and “Khiakume” varieties for drying. Dried fruits should be stored in tightly closed containers to prevent spoilage.

Drying of fruits can be done in a home oven at room temperature. Fruits arching part of the peel. Cut into slices 6 mm thick. Place on a baking tray (list). Set the oven temperature to 60 degrees. Fruits are considered dried when they lose their stickiness. Store dried fruits in a tightly closed container, otherwise they may spoil. Do not dry Fuyu, Jiro, Suruga varieties. Drying non-malt varieties does not give good results. The fruit part hardens and hardens.

The above-mentioned varieties were selected for drying palm fruits, which accumulate more than 16.0% soluble solids and have a durable structure. The fruits are dried with whole fruits and sliced in a dryer with infrared rays (IR rays), which reduces the drying time by an average of 1-2 hours and maintains the attractive appearance of the finished product.

Physicochemical changes in the fruits of Eastern persimmon during the drying process, along with changes in their chemical composition, lead to some changes in their nutritional, taste properties (Table 1).

**TABLE 1 WHEN PALM FRUITS ARE DRIED, THE QUALITY INDICATOR CHANGES**

Variety	water (%)	Купы к модда (%)	General amount of sugar (%)	Glucose amount (%)	Fructose (%)	Acidity	Vitamin C (%)	Carotene (%)	Pectin substances (%)	Degustative valuation in points
Khiakume	0,9	7 9,1	6 3,0	4,1	4 8,9	0 ,69	1 78,2	1 8,2	0 ,17	4 ,6
Jiro	9,7	8 0,3	7 1,8	4,9	5 6,9	0 ,45	1 62,3	2 1,1	0 ,16	4 ,5
Khachia	7,0	8 3,0	6 6,7	3,8	5 2,9	0 ,66	1 84,4	1 7,3	0 ,17	4 ,1
Sidles	8,5	8 1,5	5 9,6	2,6	4 7,0	0 ,39	1 75,7	2 0,9	0 ,16	3 ,7
Zanjimaru	1,2	7 8,8	5 5,2	3,1	4 2,1	0 ,51	2 02,0	2 2,4	0 ,16	3 ,1
<b>average</b>	9,5	8 0,5	6 3,3	3,7	4 9,6	0 ,54	1 80,5	1 9,9	0 ,16	4 ,0

On average, the moisture content of the varieties is 19.5% - from 17.0% in Khachia fruits to 21.2% in Zanj Maru. The amount of solid dry matter ranged from 78.8% (Zanji Maru) to 83.0% (Khachia) - an average of 80.5%. The total amount of sugar in dried fruits increased almost 4 times compared to fresh ones and averaged 63.3% for varieties [6].

An increase in vitamin C, carotene and acids has been noted in the dried fruits of Eastern persimmon.

During drying, the content of pectin and tannins decreases sharply, which leads to evaporation and loss of astringent taste and improvement of organoleptic properties.

## CONCLUSIONS

The fruit is characterized by the largest variety of Khachia, that fruits are round, slightly conical in shape, with a ratio of fruit length to width 1.04. Sidles fruits are rectangular in shape, with a length and width of 0.59. The small Maru fruit has an almost round shape, with a coefficient of 0.97.

Oriental date fruits contain 14.6 (Hyakume) to 17% (Zanji Maru) sugar, depending on the variety, and have a low content. titratable acids - from 0.14 (Hyakume) to 0.22% (Khachia). The daily norm of carotene is 3.4 mg% (Hachia) to 4.2 (Khyakume) which is 5 mg. Vitamin C from 48.8 (Khyakume) to 93.6% (Zanji Maru) requires 90 mg per day. Pectins range from 0.46 to

0.55%, tannins from 0.48 to 0.81%. Persimmons are rich in minerals, especially with iodine (0.11-0.23 mg / product).

The chemical composition of persimmon fruits was found to vary depending on the specific characteristics of the growing season and weather conditions, but varietal dependence was maintained. Small varieties of Tamopan, Gosho-Gaki, Sidles, Fuyu, Zanzi Maru with very high solubility (up to 20.0%) and sugar content (16.0%) were identified. In terms of vitamin C content (more than 30 mg / 100 g) - Giro, Sidles, XX century, Gosho-Gaki; Giro, Nitari, Sidles, Khachia, Fuyu, Tamopan small, containing vitamin R (256.0-278.0 Mg / 100 g); in terms of p-carotene content (2.8-3.1 mg / 100 g) - Giro, Khachia; in terms of amino acid content (up to 199, 3 mg / 100 g), and Tamopan is relatively small.

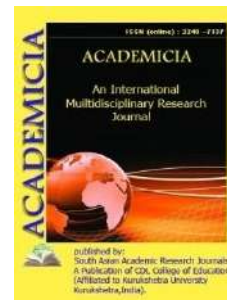
### **Recommendation**

1. The fruits of Khachia, Khyakume, Jiro, Zenji-Maru varieties of dates are recommended for growing fast-frozen Eastern persimmon when ripe.
2. It is recommended to use Oriental persimmon in different proportions to produce multi-component mixtures with increased nutritional value.

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DOI: **10.5958/2249-7137.2020.00615.1**

## DEVELOPMENT OF GENERAL CREATIVE ABILITIES AS A PROBLEM OF EDUCATIONAL PSYCHOLOGY

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### ABSTRACT

*The article considers the specifics of general creative abilities, their difference from special abilities, defines the essence of such general creative abilities as variability, hypothetical, improvisation and transference. The indicators on the basis of which it is possible to judge the level of their development are identified, the ways of developing general creative abilities in the educational activities of schoolchildren are determined. Possible directions of the study of general creative abilities in educational psychology and pedagogy are indicated.*

**KEYWORDS:** *Personality Traits, Individual Characteristics, Abilities, Creativity, Creative Activity, Creativity.*

### INTRODUCTION

One of the urgent tasks of educational psychology is to identify the conditions for successful mastery by each rising generation of the necessary social experience accumulated by previous generations. Among such conditions, undoubtedly, the development of individual personality abilities can be called. Therefore, the solution of the above problem is impossible without a detailed and deep psychological analysis of the problem of abilities.

The concept of abilities is one of the controversial, debatable in psychology.

Often, any processes, states and functions of our psyche are unreasonably attributed to abilities. So, people still sometimes talk about a person's ability to think, to perceive, to remember, about the ability to experience emotions, etc. Of course, we are not talking about abilities in the strict sense of the word. With the same success, this list can include a person's ability to walk directly and to digest food.

Until the turn of the 19th and 20th centuries, it was widely believed in psychology and pedagogy that abilities are a high level of knowledge, skills, which provides a person with a certain level of success in performing various types of activities. This understanding of abilities is partly used at the present time. Indeed, the high level of formation of these characteristics largely ensures the success of the activity. But with such an understanding of abilities, it cannot be explained why, for different people in the same activity, knowledge, skills are developed at different speeds and with different successes. As far back as the 40s of the 20th century, one of the classics of Russian psychological science S. L. Rubinstein [4] pointed to "abuse" of the concept of "ability" in psychology, as a result of which this concept was discredited. And to this day, the overly wide use of this term in psychology, pedagogy leads to a erosion of the deep meaning, the essence of the concept of "ability".

By analyzing the literature, one can find various definitions of abilities, which can be divided into two main general directions.

The so-called functional-genetic approach to determining abilities was proclaimed by L. S. Vygotsky [1] and was also considered in the works of Ya. A. Ponomarev [3] and others. According to this approach, abilities are defined as properties of functional systems that implement individual mental functions having a certain measure of severity, manifested in the success and quality of the originality of the development and implementation of individual mental functions. In this definition, abilities act as general essential qualities of mental functions, in contrast to the definitions of another approach, in which abilities are divided by type of activity.

This second approach, personal-activity, goes back to the works of S. L. Rubinstein [4]. S. L. Rubinstein defines ability as a complex synthetic formation, which includes features without which a person would not be capable of any activity, and properties that can be developed only in the course of a certain way of organized activity. Moreover, it can be specific types of activities or any of its generalized manifestations. Thus, in the context of the above approach, abilities act as individual psychological properties necessary for the successful performance of an activity (one or more of its types). It is this approach that has been fixed as the most commonly used in Russian psychology.

The content of the concept of "ability" highlighted above, as we have already indicated, goes back to the point of view of S. L. Rubinstein. It was he who said that "all ability is the ability to something, to some kind of activity. The presence of a certain ability in a person means his suitability for a certain activity. ... The ability should include various mental properties and data necessary due to the nature of this activity and the requirements that come from it "[4].

A modern understanding of abilities cannot reduce them to experience, to knowledge, to skills, although it emphasizes the close connection of these sides of our personality with each other. According to S. L. Rubinstein, abilities have two components. Firstly, the system of operations and methods of activity, which are the essence of the activity itself and provide the possibility of

its implementation. Secondly, the quality of the processes governing these operations. The quality of the processes is the “core” of abilities, which provides not only the opportunity, but also the success of the activity. The “core” of abilities is the so-called “by-product” of an activity, an additional effect of its fulfillment, a by-product of gaining experience. This is what makes abilities a property of the personality, its inalienable quality. In this regard, the concept of “ability” should be considered as a level characteristic of the personality, which determines the degree of transition from the process to the personality property, indicating the degree of stability for a given person of the corresponding level of activity.

Currently, the development of creative abilities is gaining the greatest relevance. The division of abilities into creative and reproductive is carried out depending on the degree and nature of the novelty of the product obtained in various types of activities that realize and form different abilities. In addition, it is known that the concept of “ability” determines the success, ease and speed of the activity both in the presence of complete information and in conditions of its deficit. It can also serve as a possible basis for the division of abilities into reproductive and creative.

Reproductive abilities are distinguished by the fact that they determine the success of human reproduction of the experience already accumulated by mankind. They are realized in conditions of complete information and are expressed in the success of a person’s mastery of knowledge, skills, in the success of the formation of personality traits. Moreover, the experience a person receives, although it has a subjective novelty for him, but does not have an objectively new character, this is just a reproductive assimilation of the experience of previous generations.

The special significance of creative abilities for the psychological and pedagogical problems of today is due to the specifics of modern social experience that subsequent generations must learn, due to the dynamic and unstable nature of this experience.

Firstly, at present, the information flow is sharply increasing, and its volume is such that it is fundamentally impossible to master it. Creative abilities allow you to successfully carry out activities in the face of a lack of information. Secondly, in conditions of an ever-accelerating process of development of various aspects of society, the ability to see and find the right solutions to constantly emerging new problems is becoming more important than before. Thirdly, the emergence of more and more new professions, significant changes in the requirements for existing professions require a certain mobility of the person, which also requires the development of creative abilities.

The volatile nature of social experience requires modern people to develop not just creative abilities, but creative abilities of a general nature. The division of creative abilities into special and general is determined by the range of activities in which they are implemented.

Special creative abilities are associated with specific types of creative activity and ensure success in certain areas of creativity. We can distinguish musical, artistic, choreographic, literary abilities, as well as the ability to visual, technical, scientific, managerial, pedagogical activities, etc. In each case, special abilities rely on certain specific inclinations and require the development of a unique set of intravitaly formed personality traits that develop precisely in this type of activity. Most clearly, special creative abilities are manifested in a person’s inclinations, that is, in the preference of precisely those types of creative activity for which there are inclinations, in deriving pleasure from performing this particular activity, in the most complete self-realization of the personality in it.

General creative abilities, unlike special ones, are realized in a wide range of activities and ensure success in the most diverse fields of creativity. These abilities provide the individual's readiness for successful activity, regardless of its specific content. This type of creative ability not only gives a person the opportunity to adequately reflect the world around him in his essential connections and relationships, but also allows him to choose creative ways of interacting with the surrounding reality as habitual and sustainable. It is due to these qualities that success is achieved in the most diverse types of creative activity (as they say, a talented person is talented in everything). So, we can say that creative ability is a level characteristic of a personality, which implies the presence of a certain property that ensures novelty and originality, ease and speed of performing various types of activities, i.e., creative ability is a fairly high level of development of any human ability. Indeed, as soon as the manifestation of the ability leads to the novelty and originality of the product of activity, it becomes possible to interpret this ability as creative. The question of what kind of abilities can be attributed to the general creative, as well as the definition of abilities, is debatable in nature and is decided differently by different authors. In foreign psychology, the problem of general creative abilities is often considered in the aspect of the problem of creativity and creative personality traits.

"Creativity (lat. Creatio - creation) is a systemic (multidimensional, multilevel) mental education, a system of general creative abilities and individual personality traits that contribute to the independent advancement of problems, their unconventional solution, and the generation of a large number of original ideas." J. Guilford [7] identifies a number of common abilities in the structure of creativity: originality - the ability to produce distant associations; semantic flexibility - the ability to highlight the functions of an object and offer it a new purpose; figurative adaptive flexibility - the ability to change the shape of the stimulus so as to see new opportunities in it; semantic spontaneous flexibility - the ability to produce a variety of ideas, relatively not limited by the situation.

The listed characteristics show that the author considers general creative abilities as qualities of thinking. At the same time, creative thinking, according to the author, differs from standard thinking with a divergent (divergent) character, that is, a varied search for a solution to a problem. The same "cognitive" line is continued by E. Torrens. Both of these authors include common creative (creative) components in the structure of human intelligence.

There are many more authors' points of view on the allocation of general creative abilities, but no matter how many were considered, one can see that many of them often characterize similar psychological phenomena, although they use different terms to designate them.

There are four creative abilities: the ability to vary, the ability to be hypothetical in the process of solving problems, the ability to improvise in various situations, and the ability to transfer. In order to give a specific characterization of these abilities in the aspect of pedagogical psychology, it is necessary, firstly, to determine their essence and outline the basic psychological mechanisms that underlie each ability; secondly, to identify indicative indicators of their development; thirdly, to determine the general directions of the focused development of the allocated abilities. In this logic, we consider each of the common creative abilities.

Variability is a general creative ability that allows you to highlight a variety of original ways to solve problems, both practical and theoretical, to generate a large number of different ideas. The psychological mechanism of the functioning of this ability is primarily based on the analytical

components of thinking, which make it possible to specify the general problem in the form of a set of particular properties, signs and conditions. In addition, the so-called divergent thinking - productive thinking, aimed at the possibility of obtaining a whole fan of the right solutions to the problem (as opposed to convergent thinking, striving for the only right solution) can serve as the psychological basis for variability. Also, the psychological mechanism of variability is associated with individual properties of creative divergent thinking - with its fluency and flexibility, which determine not only the total number of ideas put forward, but also their wealth, the variety of associations that arise, logical connections.

When considering indicators of the development of variability, it is first of all necessary to determine how many possible solutions are proposed when solving a problem. It is necessary to monitor not only the total number of proposed solutions, but also the number of groups, classes of these solutions. It is important to consider whether an assumption is made about the various ways to solve a particular problem, how substantiated are these assumptions, what a person relies on, proposing solutions. An indicator of the development of variability can also serve as a positive attitude to this action arising in the process of searching for solutions. One can also judge the development of variability by the extent to which the subject is aware of the need and significance of the search for various solutions to the problem. Another significant indicator can be the breadth of manifestation of this ability, that is, how widely represented are all these characteristics when solving standard and non-standard tasks, tasks related to educational activities, communication and moral behavior. Highlighted indicators allow you to see the main directions of the targeted development of the ability to variability. The formation of the ability to variability involves a special selection of tasks that require finding different solutions, and with their sequential complication in all of the intended parameters. It is necessary to form a stable positive attitude towards this personal property, revealing its importance and significance for a person's creative activity, thereby increasing the level of awareness of the search for varied solutions. It is important that the proposed tasks be both standard (at first) and non-standard in nature, and also gradually expand the scope. So, students can be offered not only learning tasks of a variable nature, but also variational tasks in the field of communication and moral behavior.

Hypotheticity is a general creative ability, which consists in the ability to express various, well-grounded assumptions about the prospects and reasons for the development of any phenomena of reality. The psychological mechanism underlying hypothesis is primarily associated with the functioning of the general mental action of establishing causal relationships. The ability to see the connection of causes and effects in the phenomena of the real world allows us to successfully put forward hypotheses both perspective (facing the future) and retrospective (facing the past). Also, for successful hypotheses of a promising nature to be put forward, it is necessary to carry out a general mental planning action that allows one to mentally calculate the course of events. In addition, as in the case of variability, divergent thinking with its flexibility and fluency properties is required for the manifestation of hypothesis, which allows us to put forward a significant number of various hypotheses. According to our assumption, several parameters may serve as indicators of the development of hypothetics in its experimental study. In assessing the development of this creative ability, one can focus on the number of hypotheses put forward, although in this case this indicator is not paramount, it is more characteristic of variability. For hypothesis, it is important that it acts as the basis for hypothesizing how fully and thoroughly the hypotheses are justified. First of all, it is necessary to pay attention to the correctness of



hypotheses, the peculiarities of their verbal expression, accuracy and correspondence to reality. The formation of the ability to hypothetical, as in the case of variability, should be carried out with a constant complication of the proposed tasks, which creates conditions that increasingly make it difficult to advance and substantiate hypotheses. Based on the psychological mechanism of hypothesis, when it is formed, it is necessary to develop the mental actions of planning and establishing causal relationships with the help of appropriate tasks.

It is advisable to start the process of the targeted development of this ability with training in the development of retrospective hypotheses, that is, looking into the past, since this provides the subject with the appropriate experience of activity to a greater extent. In this case, hypotheses, as in the formation of variability, can relate not only to educational tasks, but also to problems of communicative and moral content. Improvisation is a general creative ability, consisting in the ability to generate creative products in a short period of time on the basis of intuitive creative activity. You can give another definition of this ability: improvisation is a general creative ability that allows you to see the essence of the problem without preliminary preparation for solving a problem that has suddenly arisen, and also to solve it in an original way for a limited period of time. As a psychological basis of this ability, one can consider a person's experience of creative activity, the variety of methods for solving creative problems accumulated by him in this experience. In addition, improvisation is based on intuitive unconscious processes associated with the activity of the right hemisphere of our brain, providing incubation and the birth of a creative idea. For successful improvisation, in our opinion, special properties of higher nervous activity are also necessary, such as a high rate of the course of nervous processes and their lability. In addition, the functioning of improvisation is associated with a motivational orientation on the publicity of creative activity.

The interconnection of these components determines the psychological basis of the improvisational process and the improvisational qualities of a person. An indicator of the development of the ability to improvise, first of all, should be a characteristic of the reaction speed to changing conditions, and the change in conditions should be quite unexpected in nature, generated by a lack of information. To evaluate improvisation, it is important to consider the measure of transformation of existing experience in solving an improvisational task. Another important indicator of the development of this ability is a positive attitude towards improvisational activity. Perhaps, it is equally important when studying improvisation to monitor the process of awareness of one's own actions, the possibility of explaining them, describing hidden unused one's own abilities in such situations, and clarifying other possible reactions to changing conditions. However, it is rather difficult to use these indicators due to the unconscious nature of the core of improvisational activity, and in addition, such indicators can only be used in relation to adult subjects, but not to children, whose level of awareness of activity is much lower compared to adults.

Since improvisation is a reaction in conditions of lack of information, the formation of this ability should be carried out in conditions of changing the maximum available measure of this information. It is also necessary to consistently increase a person's ability to fill in the missing information, learn to rely on existing experience and become more fully aware of the system of actions that must be carried out for sound improvisation, anticipate the consequences of improvisation and be responsible for its outcome. A special direction in the formation of improvisation should be devoted to the development of the ability to heuristic solutions, which in



principle cannot be taught, but can and should be taught. A gradual change in the maximum available measure necessary to solve the creative problem of information stimulates the possibility of heuristic thinking, and contributes to the development of a search for approaches to heuristic solutions. The ability to transfer takes a special place in the proposed classification of general creative abilities, since the development of the above abilities as stable personal characteristics is possible only in conditions of transfer. But transference can also be considered as an independent creative ability. Transfer is a general creative ability that allows the subject to use the existing knowledge, abilities in new, unusual conditions in an unusual and original way.

The psychological basis of the transfer can be considered: the existing experience of various types of activities (including creative ones), the methods of solving various problems (including non-standard ones) accumulated in this experiment. In addition, transference is based on general mental actions of generalization and abstraction, as well as fluency and flexibility of thinking. In addition, for the successful transfer, high general adaptive abilities of the individual are necessary, that is, the possibility of its flexible and adequate response to changing environmental conditions. The generally accepted main indicator of the development of transfer in the experimental study of this ability is its breadth or, in other words, the degree of remoteness of the new conditions in which it appears. Indirect indicators of this can be the level of development of abstraction and the flexibility of thinking, the rate of adaptation in changing conditions.

To form the ability to transfer, on the one hand, it is necessary to learn to isolate the invariant, common in increasingly distant objects, phenomena, and on the other hand, to find different things in ever closer objects and areas. It is also important to carry out focused work on the formation of mental actions of generalization and abstraction. At the same time, as in the case with all other abilities, the content of developmental tasks can concern not only educational and cognitive activity, but also moral behavior, as well as the sphere of communication. In identifying the areas of purposeful development of the above-mentioned general creative abilities, along with the specifics of each of them, we were faced with the possibility of identifying common approaches that ensure their development.

Considering all of the above abilities as stable personal properties, psychological characteristics of a person, it is necessary to include the cognitive (knowledge about the essence of this ability), emotional (stable attitude to ability) and behavioral (ways of implementing the ability in activity) components in the structure of each of them. Thus, the formation of any common creative ability implies purposeful development in the relationship of their three structural components. This will allow developing abilities as stable characteristics, mental properties that are part of the structure of a person's personality. In addition, these areas are universal in nature and can contribute to the formation of all creative abilities of a general nature.

Research work in these areas will allow to establish the dependence of the development of such general creative abilities as variability, hypothetics, improvisation and transference on several factors. From our point of view, these factors are the specificity of the creative ability itself, the type of creative activity (artistic, technical, research) in which these abilities are manifested, the age and sex of the students, their individual personality characteristics, and the conditions of their learning. Establishing the relationship of these factors will allow us to substantiate ways to optimize the process of purposeful development of common creative abilities among the younger

generation, which will undoubtedly contribute to solving urgent problems of educational psychology.

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DOI: **10.5958/2249-7137.2020.00616.3**

## ABDURAUF FITRAT IS ONE OF THE EARLIEST RESEARCHERS OF UZBEK FOLKLORE

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### ABSTRACT

*The following article deals with Abdurauf Fitrat's activity as a folklorist and his role in the Uzbek folklore of the 20th century of the Uzbek Literature. While the first line confuses folklore with tradition, the second interprets it only from a literary point of view. Neither direction is correct, of course. In recent years, folklore has been described as "Folk Art", "Folk Art", "Folk Oral Art". In this way, young people realize that their country is eternal, has its own sacred history and unique traditions, and national values. With this in mind, from time immemorial, scholars and poets have focused on the collection and study of samples of folk literature.*

**KEYWORDS:** *Abdurauf Fitrat, The History Of Literature, Literature, Literature Sciences, Folklore, "Nation's Literature", Folklorism.*

### INTRODUCTION

Along with a number of social sciences, such as language, literature, philosophy, and history, Fitrat's contribution to the development of folklore was great. Fitrat has a role in the formation of Uzbek folklore and in determining its methodological basis.

It can be said that Fitrat is one of the founders of twentieth-century Uzbek folklore and this can be fully confirmed by his theoretical views on folklore. Because the scientific ideas expressed by Fitrat in this regard were further developed in the later stages of our folklore and played an important role in defining its theoretical foundations, and its specific poetic laws.

The Uzbek scholar Temur Khoja oglu, who lives in Turkey, wrote in his article "Forgotten works of Turkestan scholar Abdurauf Fitrat in the field of Turkology" that "to describe Fitrat literally ... we would like to cite some of these qualities: reformer, politician and statesman, publisher,

editor, publicist, he is a storyteller, poet, playwright, literary historian, literary critic, linguist, music historian, and folklorist as well.

This means that Fitrat's work as a folklorist is well known abroad. After all, folklore is one of the areas of activity of the owner of a comprehensive, encyclopedic heritage. The aspects of his activity as a literary critic, linguist, historian, lawyer, musicologist, folklorist, pedagogical scientist have been studied to a certain extent nowadays, but it is also necessary to study the contribution of a great talent to folklore.

Looking at Uzbek folklore as a whole system, Fitrat put forward the first ideas about the theoretical problems related to its specific genres, which then has served as a program for our researchers. Especially noteworthy is his 1926 book, *The Rules of Literature (A Guide for Literary Teachers and Literary Enthusiasts)*, which was written to train literary scholars. In this book, which served as a textbook on literary criticism for scholars of the 1920s, literature, that is, concepts related to the theory of folklore. The important point is that Fitrat's views on this subject have not lost their validity from the point of view of literature and folklore.

Fitrat, trying to reveal the peculiarity of folklore, said of him: "We have a literature which strives to preserve itself with its solitary sincerity. These are the works of our poets, who came from among the people, wrote and spoke to the people and nation" he said.

It should be noted that Fitrat uses the verb "wrote" here. However, folklore works are considered to be oral works.

Folklore works help the current generation to learn about our long-standing culture, artistic traditions, our struggle for freedom and liberty, as well as the sense of patriotism and creativity inherited from our ancestors. In this way, young people realize that their country is eternal, has its own sacred history and unique traditions, and national values. With this in mind, from time immemorial, scholars and poets have focused on the collection and study of samples of folk literature. Many artists have created unique folklorism using the simple form and style of folklore, traditional epic images and motifs, playful and lively tone, in order to quickly reach the hearts of the people.

Abdurauf Fitrat, a brilliant representative of Uzbek literature of the 20th century, a literary scholar, a brilliant poet, prose writer and playwright, is notable for combining these two aspects in his work.

Fitrat's passion for folklore awoke from an early age under the influence of his mother's singing of popular songs, and this passion accompanied him throughout his life. Fitrat, first of all, paid great attention to "folk literature" and put forward valuable theoretical views on its nature, genre system and composition. His views on this issue played an important role in laying the foundation stone of Uzbek folklore. In particular, the difference between folklore works and written works, specific features of folklore, his comments on the nature of the genre of Uzbek folk songs, his attitude to various genres of folklore still retains its scientific value.

Fitrat's knowledge of folklore is also further illustrated by the example of the works of art he created. The folklorisms found in the poems, prose and dramatic works of the artist are distinguished by their uniqueness.

Fitrat, as one of the profound scholars of folk art in his time, became its tireless propagandist. For the first time in his anthology "Samples of Uzbek literature" (1928) there are examples of folk literature. However, so far in Uzbek literature and folklore, these services of Fitrat have not been specially studied and evaluated objectively. However, it is necessary to study Fitrat's multifaceted activity as a scholar, propagandist and researcher of Uzbek folklore, folklore in his art. Because this issue is very important, first of all, in terms of the use of folklore in the early twentieth century, its peculiarities, as well as Fitrat's style and skill in the use of folklore in poetry, prose and drama.

Abdurauf Fitrat was not only the founder of realistic Uzbek literature and literary criticism, but as a comprehensive theoretical scholar, he achieved great results with the aim of solving a number of theoretical problems of literature, music and folklore. His theoretical views on this subject are reflected in a number of scientific treatises, such as "Rules of Literature", "About Aruz" and music "Uzbek classical music and its history." In these works, along with a number of sources of classical and modern Uzbek literature, various materials of folklore are addressed and commented on, because folklore is an important part of the national culture of each nation. In this regard, Abdurauf Fitrat published a small study on folklore called "Folk Literature" in the "Rules of Literature". The oral tradition of the Turkish people attracted the attention of writers such as Mahmud Kashgari, Abulqasim Mahmud Zamakhshari, Alisher Navoi, Abulgazi Bahodirkhan, Muhammad Sharif Gulkhani centuries before Abdurauf Fitrat. They collected samples of folklore in the genres of song, lament and proverb and included them in their works. At the same time, some theoretical ideas about them were also expressed. This is proof that our folklore has an extremely ancient origin. By the beginning of the twentieth century, folklore was formed as a science in many countries of the world; the collection of samples of folk art, their study had already begun. In our case, let alone the formation of it as a science, special collection work had not yet begun. This shortcoming did not go unnoticed by the sensitive Abdurauf Fitrat. He was captivated by the fascination with the oral art of the people. Therefore, one of the main tasks of the circle "Chigatay Gurungi", organized by the encyclopedic scholar, was to collect folklore materials. The Crimean-Tatar Turkologist Bakrbek Choponzoda (1893-1937) briefly describes the path taken by the Gurungs: and were also active in educating poets, collecting folklore materials, and organizing popular theaters. In the 1920s, with the enthusiasm and call of Abdurauf Fitrat, the recording of examples of folklore began. As a result, dozens of folk epics, hundreds of folk tales, songs, lapars, riddles and proverbs were recorded. On this basis, Uzbek folklore was formed as a science. Hisao Kumatsu, a professor at the University of Tokyo, wrote in his article "Chigatay Gurungi" that Fitrat is recognized as the organizer of this literary circle, was attracted to the world of science by talented young nationalist scholars of his time, who wrote folklore materials.

So, Abdurauf Fitrat is one of those who made a worthy contribution to the formation of this science, laying the foundation stone on its foundation. However, this aspect of the writer's work has not yet been specifically studied.

For a hundred years, the question of "folklore" has been hotly debated. Although Russian folklorists have cleverly clarified the issue, the debate is still ongoing. The mistakes stem from a different understanding of what is often called "folklore". In the past, the concept of folklore included reality, such as ancient customs, rituals, myths, proverbs. In the following periods, two contradictory trends emerged in defining the object of folklore, the scope of the concept: one - to

consider the whole folk culture as folklore, to expand the boundaries of the concept, the other - to limit the object of folklore only to works of art extremely narrowed. While the first line confuses folklore with tradition, the second interprets it only from a literary point of view. Neither direction is correct, of course. In recent years, folklore has been described as "Folk Art", "Folk Art", "Folk Oral Art". According to Russian folklorists, the concept of "folk art" accurately and completely expresses the essence of folklore. They still say that folklore is not the whole folk art (for example, folk applied decorative art is not included in it), but folklore, as V.E. Gusev defines, is the part of folk art that artistically reflects the existence of collective folk art in word-musical-choreographic and dramatic forms). So, Abdurauf Fitrat is one of those who made a worthy contribution to the formation of this science, laying the foundation stone on its foundation. However, this aspect of the writer's work has not yet been specifically studied.

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In other words, Russian folklorists believe that folklore as a science should study not only the artistic creation of the people, but also the creation of folk music and folk performing arts (such as folk theaters, dance).

Abdurauf Fitrat called the phenomenon "folk literature" and, tried to reveal its aesthetic essence, and was able to accurately and clearly express a number of features at that time. It is true that in the early twentieth century there was not a single term for the expression of folk art, and when the phenomenon was called by various terms such as "folk literature", "public literature", "folk art", Abdurauf Fitrat called it "folk literature". Although the term "to some extent" indicates his peculiar approach to the phenomenon, there was a certain flaw in the term. Indeed, the term "folk literature" has a broad meaning and refers to literature in general, including written literature, but because it could not express the oral nature of folklore, the people could not be equally equivalent to oral poetic creativity. The fact that the scientist clearly defined the boundary of written literature and folk literature, that is, the object, is significant in that it coincides with the scope of understanding that the oral poetic creativity of the people now represents.

Commenting on the differences between oral and written literature, Abdurauf Fitrat noted that "the difference is that it is not written, or the owner is unknown," noting that "every epic, proverb, riddle, song is written mainly by one person and then generalizes" he said, noting that the work of folklore also begins with individual creativity, and then "generalizes" into a product



of collective creativity. At the same time, he sees the essence of folklore in the infusion of the folk spirit: "What separate folk literature from "Literature" (narrow artistic literature) is not its unwritten things, but its SPIRIT. It's simple, it's natural, and it's fun for everyone!"[1]

In this sense, folklore is a science about the people themselves, who are the creators of symbolic oral artistic and spiritual wealth.

In our scientific work we have tried to reveal and substantiate another aspect of the encyclopedic scholar by studying the activities of Abdurauf Fitrat in the field of folklore and folklore, his theoretical views, as well as the influence of folklore on the writer's art.

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DOI: **10.5958/2249-7137.2020.00617.5**

## PSYCHOLOGY OF PERSONALITY OF THE HEAD OF MODERN COMPREHENSIVE SCHOOLS

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### ABSTRACT

*The psychological portrait of the head of modern comprehensive schools, the influence of management style on the general climate in the team, the modern requirements of managers is one of the urgent problems. In addition, the modern director of the school must have adequate professional self-esteem; otherwise he will not be able to analyze his activities and the activities of the teaching staff. High self-esteem does not allow the leader to grow, because he is sure that he is competent in all matters and does not seek further self-improvement. A leader must have different qualities and abilities for comprehensive management. The same requirements apply to high school principals. Organization is the creation of a system consisting of the following three components: implementation groups, economic relations and technical means that are logically interconnected.*

**KEYWORDS:** *Leader, Management, Manager, Abilities, Managerial Functions, Team.*

### INTRODUCTION

One of the tasks of our time is to educate a healthy and independent person who must be perfect in every way. Man is the foundation of society. In his report at an expanded meeting of the Cabinet of Ministers dedicated to the results of the country's socio-economic development in 2016 and the most important priority areas of the economic program for 2017, “Critical analysis, strict discipline and personal responsibility should become an everyday norm in the activities of each leader,”[1] said The President of the Republic of Uzbekistan his opinion on managers and management style.

If you look more deeply at the nature of management, you will see that it is very diverse. A leader must have different qualities and abilities for comprehensive management. The same requirements apply to high school principals. Modern high school principals should not only be pedagogue, they should also be able to manage.

One of the earliest work on management is the work of Henri Fayol,"[5]. In 1916, Henry Fayol published his "14 Principles of Management" in the book "Administration Industrielle et Générale. "Fayol's "14 Principles" was one of the earliest theories of management to be created, and remains one of the most comprehensive. He's considered to be among the most influential contributors to the modern concept of management, even though people don't refer to "The 14 Principles" often today.

#### Principles of Fayol:

1. Division of Work – When employees are specialized, output can increase because they become increasingly skilled and efficient.
2. Authority – Managers must have the authority to give orders, but they must also keep in mind that with authority comes responsibility.
3. Discipline – Discipline must be upheld in organizations, but methods for doing so can vary.
4. Unity of Command – Employees should have only one direct supervisor.
5. Unity of Direction – Teams with the same objective should be working under the direction of one manager, using one plan. This will ensure that action is properly coordinated.
6. Subordination of Individual Interests to the General Interest – The interests of one employee should not be allowed to become more important than those of the group. This includes managers.
7. Remuneration – Employee satisfaction depends on fair remuneration for everyone. This includes financial and non-financial compensation.
8. Centralization – This principle refers to how close employees are to the decision-making process. It is important to aim for an appropriate balance.
9. Scalar Chain – Employees should be aware of where they stand in the organization's hierarchy, or chain of command.
10. Order – The workplace facilities must be clean, tidy and safe for employees. Everything should have its place.
11. Equity – Managers should be fair to staff at all times, both maintaining discipline as necessary and acting with kindness where appropriate.
12. Stability of Tenure of Personnel – Managers should strive to minimize employee turnover. Personnel planning should be a priority.
13. Initiative – Employees should be given the necessary level of freedom to create and carry out plans.
14. Esprit de Corps – Organizations should strive to promote team spirit and unity.

As well in the countries of the CIS and Uzbekistan, such scientists as R. Lippit (1958), B. G. Ananiev (1969), B. Parygin (1971), E. S. Kuzmina (1974), A.N. Leontiev (1975), I.S. Mangutov (1975), A.L. Svintsitsky (1986), A.G. Kovalev (1978), F. Fidler (1978), V.S. Ageev (1986), N.N. Obozov (1990), M.G. Davletshin (1998), B. B. Shaumarov (1998, 1999), E.G. Gaziev (1999), V.M. Karimova (1994), O.R. Shamiev (2000) and others conducted their research on the problems of management and personality the leader.

In his article, "Substantial Characteristics of the Psychological Portrait of the Personality of the Head of a Modern Secondary School," Falunin V.F. and Falunina E.V. define several criteria for a successful school leader [2]:

- To understand the existential value of life "here and now";
- to take a humanistic position as a value priority of interaction, which gives the actions, behavior and relations of the leader clarity, stability, poise, confidence and justice;
- share the values of a self-actualizing personality;
- believe in people and the power of human capabilities, which can become a solid foundation for building true interpersonal relationships and lead to natural sympathy and trust in social interaction;
- To be open to new experiences and ready for the ever-changing reality of the modern world;
- Strive for self-realization - a feeling and awareness of one's need, relevance and value in the modern world;
- To be a mentally healthy, holistic, harmonious person;
- have a strong sense of confidence in their abilities and capabilities in a harmonious combination with sincere trust in the world around us, other people;
- Along with clear planning and existential logic, be prepared for spontaneous action;
- have a high level of autosympathy, which is the basis of mental health and integrity of the individual;
- have the ability to establish strong and friendly relations with others;
- be flexible in communication, adequate in self-expression, free of social stereotypes, prone to self-disclosure, ready for self-feeling and oriented towards empathic listening;
- have developed empathy, which correlates with a person's high ability to feel the problems of others;
- It is distinguished by well-being in life - it is successful and attractive not only in the professional sphere, but also in the personal space;
- have a pronounced level of development of self-confidence, which, according to the theory of V.D. Shadrikov characterizes him as a person who is able to act in accordance with the rights and freedoms of other people, without prejudice to his rights and personal freedoms. He achieves the desired goal without harming others;
- to have a high level of development of tolerance as the ability to recognize and accept the personal, ethnic and professional subjectivity of the Other, with an understanding of his rights to

a different lifestyle, free expression of his views and values, a positive attitude towards ethnic, social and sub cultural differences;

- Combine own interests with state guidelines and universal values, be focused on the future;
- respect the past, which has become history, and focus on the future, while bearing full responsibility for the present at the level of personality, socio-cultural and universal.

Also, the leader must have several management functions: planning, organization, control [3].

Planning is the beginning and the basis of managerial activity. Prepared plans show when and by whom planned activities will be completed.

Planning includes past experience, analysis of current conditions and setting real tasks for the future.

Organization is the creation of a system consisting of the following three components: implementation groups, economic relations and technical means that are logically interconnected.

Control is the organization, classification and evaluation of events in a predetermined form. With the help of the control, an initial classification of the socio-psychological characteristics of objects according to their severity (expert assessment) is carried out.

In addition, the modern director of the school must have adequate professional self-esteem; otherwise he will not be able to analyze his activities and the activities of the teaching staff. High self-esteem does not allow the leader to grow, because he is sure that he is competent in all matters and does not seek further self-improvement. Low self-esteem, on the contrary, inhibits the development of personality, the leader is not confident in himself, is afraid to introduce innovative technologies into the educational space of his school. Adequate professional self-esteem (namely, the most realistic assessment of their professional abilities, their place in the team, and the consequences of decisions) is the path to professional success. Professional self-esteem must be formed in the process of training at a university, but in the process of labor activity, the formation of professional self-esteem [4].

Summing up the above, it is possible to determine some aspects of the psychological portrait of the director of a modern school: this is, first of all, adequate personal and professional self-esteem, a locus of control with a tendency towards internationality, and, of course, professional orientation of the business. These qualities will help the leader to be successful in modern conditions, adequately make decisions and be responsible for the results of his activities.

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DOI: **10.5958/2249-7137.2020.00622.9**

## RELIGIOUS SPEECH AND PHONETIC INTERFERENCE

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### ABSTRACT

*The lexical units connected with religion in Uzbek are borrowed from Arabic. In the process of assimilation, phonemes that do not exist in the Uzbek language are replaced by similar alternatives, and this is the norm for the speakers of the Uzbek language. However, in the speeches of religious preachers, we see that Arabic phonemes are pronounced in accordance with the rules of the Arabic language, not Uzbek alternatives. This is a feature peculiar only to the religious texts.*

**KEYWORDS:** *Phonetic Rules, Orthoepic Norms, Arabic Borrowings, Speech Of Religious Preachers.*

### INTRODUCTION

Phonetics is one of the independent branches of linguistics that studies sounds and their inherent properties. As a phonetic feature of a text, first of all, the place of the emergence of sounds, the peculiarities of their pronunciation are studied. In religious texts in Uzbek, the basic vocabulary is derived from Arabic, therefore in the speeches of religious preachers, even if they preach in Uzbek, we observe the phonetic peculiarities of Arabic in borrowings. Our study is the first scientific study to analyze the phonetic features of religious texts specific to the Uzbek language, and the article describes the orthoepic features of Arabic assimilations in the speeches of religious preachers.

### LITERATURE REVIEW

Religion is closely connected with language in its social nature and features. Religion also plays an important role in human life as part of culture and is reflected in the language. For this reason, in the 60s of the twentieth century, a new field of linguistics related to religion - theolinguistics - emerged and began to develop as one of the fields of study of the relationship between language and the human factor.

The term theolinguistics is derived from the English words *theo* - religion, god and *linguistics*. In dictionaries we find the following definition of the term theolinguistics: "Theolinguistics is the study of religious language" (www.definitons.net). Theolinguistics as a new direction of linguistics is a science that studies the relationship between language and religion; human language and religious views are the object of study of theolinguistics.

A number of studies were conducted on the relationship of theology and linguistics. The issues between religion and language have been studied extensively by philosophers, theologians, sociologists, psychologists, and linguists, and the first insights into the nature of religious linguistics were created by linguists such as David Crystal, Jean-Pierre van Noppen, and William Samarin.

While Western linguistics began to study theolinguistics in the 1960s, it was not until the 1990s that the first ideas about the field began to emerge in the countries of the former Soviet Union. Religious linguistics is being studied in detail by Russian and Polish linguists. A major part of these researches consists of ideas on religious style. Works on the study of religious vocabulary also play an important role. Linguists such as V.Postovalova, K.Timofeev, M.Voytak, Yu.Mikhaylova, M.Goryushina, S.Bulavina, A.Gadomsky, I.Matey have conducted research on the issue of religious style and religious vocabulary.

Few studies have been conducted in Turkology on the problems of religion and philology, including the language and style of translation of the Qur'an into Turkic languages (Suyargulova), the Qur'anic tradition in Kazakh literature (Serikbayeva), Plot of the story of Yusuf in the Qur'an and the plot of Kul Gali's "Qisai Yusuf" (Sharyafetdinov).

Religious linguistics is one of the developing branches of Uzbek linguistics. Theolinguistics is relatively little studied in Uzbek linguistics, and the researches of linguists such as N.Ulugov, T.Yuldashev, M.Umarkhodjaev, M.Galieva, Sh.Sultanova cover some features of religious linguistics.

Whereas religious style and religious lexis were studied widely, a little attention was paid towards phonetic features of religious texts.

Russian researcher O.A. Prokhvatilova focuses on the intonational features of religious sermons, as well as research on the external dialogism that manifests itself at the phonetic level of the sermon was done by her. E. Roslova studies the prosodic structure of the speaker's speech on the example of liturgical sermons, and determines the characteristics of the temp, accent, pause, etc. in religious sermons. In her article, the scientist V. Postovalova studies the features of words and silence in the works of the religious poet Aygi. Turkish scholars Zahide Buyukatalay, Muhammed Gokmen, Sibel Yildirim, and Gursel Dursun have studied voice-related pathologies specific to religious figures and teachers. Religious preachers, like teachers, are recognized as professionals whose voice is important in their work.

Our investigation is the first research in Uzbek linguistics in the field of religious phonetics.

## MATERIALS AND METHODS

Va'zs (lectures) of Sheikh Muhammad Sodiq Muhammad Yusuf, one of the most famous religious scholars in Uzbekistan and the entire Islamic world, were chosen as materials to conduct this research. 38 videos recorded on tape during the life of the Sheikh were used. These

videos were downloaded from the telegram channel of the press secretary of the Tashkent Islamic Institute – Abror Mukhtor Ali (official channel address: t.me/AbrorMukhtorAliy). The study used video materials with a duration of 01 minute 31 seconds to 25 minutes 11 seconds.

Method of observation and comparative method were used in the study.

## RESULTS AND DISCUSSIONS

“Every phoneme, whether it is vowel or consonant, is required to adhere to the orthoepic norms of literary language. Because each phoneme has a formal tone specific to literary speech. When a person belonging to one language community reads a text belonging to another language, he reads the phonemes of that language in the pronunciation specific to his own language. As a result, the orthoepic norm of the second language is "violated" at the moment of speech. This is one of the peculiarities of interference at the level of language phonemes”. (Berdialiyev)

In the speeches of those who are unfamiliar with the rules of the Arabic language and its pronunciation, or who have not mastered them well, we observe such an Uzbek pronunciation, a violation of the Arabic orthoepic norms. However, a characteristic feature of religious texts and the speeches of religious preachers is that there is no negative interference in their speech, religious scholars pronounce each phoneme according to the orthoepic norms of the Arabic language.

During the research, it was found that in the Arabic borrowings, mainly in the pronunciation of the sounds  $\text{إ}$  i,  $\text{و}$  v,  $\text{ه}$  h,  $\text{ع}$  ' ,  $\text{ض}$  z and  $\text{غ}$  g' we encounter peculiarities.

It is known that most of the religious words and terms in the Uzbek language were borrowed into Uzbek by learning Arabic. Not all the Arabic words were taken into the Uzbek language as they are pronounced in Arabic, but to a certain extent, they were adapted to the sound system of the Uzbek language. This is evident in the phonetic features of the words.

### Vowels

It is known that in Arabic there are 3 short vowels (a, u, i) and 3 long vowels (a :, u :, i :). But Uzbek vowels correspond to short vowels, therefore the short vowels in the structure of Arabic words taken into the Uzbek language did not change significantly. In the current system of literary Uzbek vowels, there are no long vowels, so long vowels in words derived from Arabic are usually replaced by short vowels. One of the vowels in Arabic, the pronunciation of the “i” sound, differs from that in Uzbek and is pronounced in an elongated form. While interference, the long sound “i:” in Arabic words was adopted into a short form. However, according to the phonetic rules of the Arabic language, this sound must be pronounced longer. For this reason, we find that in the speeches of religious preachers, unlike others, it is pronounced longer in accordance with the Arabic rules. For example: *himmat* - a form adopted in the Uzbek language; *hi: mmat* is a form peculiar to the speech of preachers.

### Consonants

The sound “ $\text{و}$ ” of Arabic differs from the Uzbek sound “v” in its formation. “V” in Uzbek is a fricative sound, and “ $\text{و}$ ” in Arabic is a labial sound formed by the convergence of two lips. For example, in English there are the phonemes fricative “v” and labial “w”. That is why in English when pronouncing Arabic words, labial sound is pronounced and it is represented by the letter

“w” in writing. However, the Arabic labial consonant “و” does not exist in Uzbek, so the fricative consonant “v” is accepted as an alternative. While the pronunciation of Uzbek fricative “v” is usually the norm in Arabic words, we observe that in the speeches of religious preachers the labial sound “و” in words borrowed from Arabic is pronounced according to the rules of Arabic phonetics. For example, in words such as *va*, *avvalgi* when the public pronounces the sound “v” as a fricative sound, in the speech of religious scholars it is pronounced as a labial sound.

In addition, in Uzbek, usually if there is consonant after the “v” sound, the sound is changed and “v” becomes “f”. But according to the phonetic rules of the Arabic language, each sound must be pronounced in its own way, without changing into another sound. For example, the word *tavsiya* is pronounced in the Uzbek language as “tafsiya”. But in the speech of religious scholars, the word is pronounced as “tavsiya” in the form of “v”.

The sound “ه” is pronounced lighter than the sound “h” in Uzbek. The lighter, softer pronunciation of the “ه” sound in Arabic is evident in the sermons of religious scholars: the pronunciation of the “h” sound in words such as *hisob*, *Hayyon*, *harakat*, *hifzi himoya*, *Ahmad ibn Hanbal*, *hakim*, *himmat*, *muhabbat*, *suhbat*, *halovat* differs from the speakers of Uzbek.

There are 8 peculiar consonants in Arabic. One of them is the consonant ع. It is a deep throat sound according to its formation, explosive according to the method of formation, resonant according to the presence of sound and noise. During the pronunciation of this sound, the walls of the deep throat touch each other, and the air coming from the lungs explodes here. The pronunciation of ع is difficult and requires a lot of practice from the learner.

Due to the complexity of the pronunciation of the consonant ع, in Uzbek this sound is almost not pronounced, it is represented by the sign “ ’ ” in the text. In the speech of religious scholars, this sound is pronounced in the same way as in Arabic. In words such as *jome’*, *ne’mat*, *ma’rifat*, *vog’e’a*, *va’da*, *ta’lim*, *ma’sum* we observe specific features in the pronunciation of this sound.

Another consonant specific to the Arabic language is the consonant ض. In order to pronounce it, the front part of the tongue must be pressed firmly against the upper palate. In the Uzbek language, there is no phoneme presenting ض sound.

Therefore, in the Uzbek language, the letter ض, which represents the sound "d", is pronounced as "z". For example, Uzbek people pronounce as “roziyallohu anhu”. On the contrary, in the speeches of religious preachers, we see that this compound is pronounced as "rodiyallohu anhu" according to the rules of the Arabic language.

The consonant غ is not the consonant peculiar to only Arabic, but in pronunciation we find features that are different from the Uzbek language. In the Uzbek language, after the sound “ g’ ”, if there is a consonant, the sound “ g’ ” is replaced by the sound “h”. But according to the phonetic rules of the Arabic language, this sound should not be exchanged, it should be pronounced as “ g’ ”. For this reason, we observe that it is pronounced as “ g’ ” in religious speech. For example, we see that the word *mag’firat* is pronounced as "mag’firat" in religious speech and not as “mahfirat” or “mahpirat”.

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**CONCLUSION**

One of the traits of religious texts is the must of pronunciation as in the Arabic script. But lack of knowledge and skills, ignorance of the Arabic pronunciation or the absence of such sounds in the Uzbek language for Arabic sounds lead to negative phonetic interference. However, in the speeches of religious scholars and preachers, words that have undergone certain changes in the process of borrowing into the Uzbek language are pronounced in strict accordance with the phonetic rules and orthoepic norms of the Arabic language.

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DOI: **10.5958/2249-7137.2020.00623.0**

## THE FIFTH ANGER AND JEALOUSY IN THE ECTOMORPHIC CHARACTERS OF SHAHNAMEH

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### ABSTRACT

*We are all aware that self-purification and self-improvement play an important role in one's worldly, hereafter, social, and individual happiness. So that it can be boldly said that a person who is unable to conquer the inside and dominate his soul will be prevented from achieving happiness and attaining perfection. All the problems in the world and the kinds of troubles that human beings are facing today are all due to human negligence in their spiritual and moral construction. The death of moral values causes great spiritual crises and bends the human back. Spiritual light, which enlightens hearts and calms hearts, is completely destroyed, and the principles and standards that are necessary for a healthy human life are forgotten. All the progress that is not accompanied by the reformation within man is like the soaring palaces built on top of a volcanic peak. When the compass of the soul, which is called Amara, is released unbridled, and there is no force in front of the crooked faces and forerunners of this pious horse, this is the time when the fall of man into the regression of darkness is inevitable. Just as victory over this great enemy means overcoming all the enemies of human happiness and perfection. The very famous hadith of the Prophet (PBUH) (which has been said: "The number of enemies of the soul between the prophets" is also a proof of this. As Rumi has also written: Hear in the news, do not listen to this advice between my prophets, but I will listen to you. Make ugliness ugly, make ugly ugliness suspicious Mawlawi, 1731/064) Of course, in the culture of mystical terms, six types of nafs have been mentioned: Second, it is a matter of patience, contentment, humility, repentance, patience and endurance 1. Third, it is certain that it includes trust, humility, worship and contentment, and fourth, statistics that include stinginess, greed, resentment, arrogance, anger and jealousy. The fifth is Razieh, which includes dignity, sincerity, piety, austerity, and remembrance, and the last of which is called Marzieh, which is thought. Considering that the*



*subject of this article is to examine the characteristics of anger, resentment and jealousy in the behavior of some heroes of Shahnameh, in this article we have tried to trace the effects and signs of these characteristics which are the characteristics of Astenic type and Octomorph character in the behavior of some heroes of Shahnameh. Let's take a picture .By Allah Tawfiq and Against Taklan Zahra Safari, PhD student in Persian Language and Literature, Fall 1111 The present article, entitled "Study of the characteristics of" anger, resentment and jealousy "in asthenic people) of ectomorphic personality (based on the theories of two psychologists named Karchammer and Sheldon), is a type of theoretical research that has been done using documentary and descriptive-analytical methods. The purpose of this article is to identify these behavioral characteristics among the characters of Ferdowsi's Shahnameh. The German psychiatrist Ernest Krechmer, according to physical measurements, such as shoulder width, slimming or obesity, divided people into three types: Picnic 1, Asthenic 2, and Atlantic 7 split, followed by William Sheldon, an American scientist, using statistical methods and given the further growth of each embryonic layer, three personality traits: ectomorph, mesomorph, and endomorph (in specific individuals). In Shahnameh, Ferdowsi seems to believe in the various types of characters in his stories, a kind of correspondence between behavior and physiological type. It makes all sense.*

**KEYWORDS:** Kerchmer, Sheldon, Character, Shahnameh, Anger, Resentment And Happiness , Pyknic ,Asthenic ,Athletic2

## INTRODUCTION

The character, along with the plot, is the most central and important element of the story. The element of character in old and new fiction is a constant and important element, and forms the cornerstone of a literary work.

Suffice it to say that if there is no character in the story, there will be no adventure. Ferdowsi in Ferdowsi's Shahnameh, which can be considered as a fictional work, has had a lot of insight and attention to the character element as well as other elements of the story. Characterization is a factor by which the characteristics, moods, thoughts and other characteristics of the character can be clarified for the reader. Therefore, in this research, an attempt has been made to analyze Ferdowsi's approach to his characters and his characterization methods according to psychological theories.

One of the important teachings of Shahnameh is Ferdowsi's careful presentation of subtle points that are related to human psychology and the search for their psychological motives. In fact, it should be said that Ferdowsi, like a modern novelist, while organizing the general aspects of the stories and unique scenes of Bazm, Gham and Shadi, while paying attention to his speech, puts the characters of his story in a way that It is very wise to show the influence of human sensibilities in making decisions. For example, by showing off some of the good qualities and good qualities of the characters, he admires them and vice versa. With such psychological work, Ferdowsi shows us the inner heroes of the Shahnameh. He is very careful in doing such a thing and insists that it can be said that he does not say anything in the language of the characters in his workEven if Ferdowsi has not shown us the psychological-psychological background for telling

it. Sometimes we know the characters of epic stories even better than the people around us. This is because in the stories of Hamaziria, especially the Shahnameh, the characters are usually depicted in their lifetime, which ultimately leads to the revelation of their inner characteristics; The author can tell us what the character of the story thinks and feels, and this is how we become aware of the characters in the epic story. While in real life we cannot find people's inner thoughts based on their external actions, because sometimes there is a deliberate feeling or thought; In other words, one can recognize the different dimensions of fictional characters, while in the outside world the story of such a thing is not possible) Ahmadian, 1714: 188.)

One of the people who established the theory of nature more than anyone else is Ernest Kretschmer (who introduced his theory in 1914).

Kretschmer was a German psychologist who, over the years, came to the conclusion that the relationship between people's physical characteristics and their behavior, especially those with schizophrenia and depression, was close.<sup>7</sup> There is) Karimi, 1731: 128 (Kretschmer pursued goals in his classification: one was to invent methods based on which to divide people into a limited number of physical categories. Second, to combine these physical types with Connect schizophrenia, manic, and depressive illness, and third, to determine the link between physical activity and the behavior of healthy people.

According to Kretschmer, human personality types are divided into three main categories and a fourth type; Kretschmer was very meticulous in measuring physical construction, using objective methods to achieve three main types or types of human body over a long period of time. The first type of thin, thin-bodied and bony person whose body fat is low is called the "asthenic" type. The second type is the athlete's type, which has a muscular and active body and is called "athletic" and the third type is the fat type, the main indicator of which is having a lot of fat in the body's organs, which is called "pycnic". Kretschmer also mentions the fourth type, which is called the "rugged build" and includes people who are physically abnormal and abnormal. Same: 130 (the most important result that natural psychologists, including Kretschmer, from Research has shown that the physical structure of a human being should be considered in the evaluation of his whole being, and that physical characteristics may be very important signs for recognizing a person's personality so that their importance is not less than environmental factors. Although closer to biological and behavioral scientists in recent years, psychologists have become more aware of the importance of biological and biological factors, and therefore have justified the theory of natural psychologists (ibid .: 117).

Along with Kretschmer's classification, William Sheldon is one of the most prolific and influential individuals in the field of natural psychology. Sheldon's theory is not only a statistical correlation between physical structure and human psychological or behavioral characteristics, but he also believes that the structure of human nature is the determining factor and, in fact, the most important reason for the creation and evolution of human behavior.

Jamal Far, 1337: 733 (William Sheldon, in his theory, attached great importance to biological-hereditary factors in the formation and evolution of personality and to know human behavior, he needed to know about those factors and to obtain the criteria that By doing so, it is possible to recognize the behavior and personality of individuals. He conducted his research in three stages:

A. Octomorphic aspect: which is associated with the dominance of the nervous system and skin. The members of this group are thin and tall; Which are known as asthenics in Kretschmer's theory.

OB- Mesomorphic aspect: which is determined by the growth and strength of muscles and bones; like athletes and strong people. This brigade is a character in the Kratchmer classification of the Atlantic.

C - Endomorphic aspect: which is associated with the growth and prominence of internal organs such as organs and viscera. People in this group are obese and have horizontal growth. This type is called the picnic type in the crackers category.

Sheldon's second attempt was to investigate the psychological characteristics and personality traits of people who classified them in terms of their physical appearance. To do this, he first collected hundreds of phrases used to describe the character. Among the collected traits, he selected sixty traits and gave them to the students of the universities (in terms of these sixty traits). Statistical study of the obtained scores showed that these sixty traits are classified into three groups. In each group, twenty attributes (the first group was called Wiserton, because all twenty attributes under this title were associated with kindness, well-being, hedonism, and happiness. The second group was called Somatotonic traits, because this Attributes were related to physical activity, movement, competition, aggression, expression of personality, and activity. Selfishness, resentment, and anxiety were associated. Sheldon also rated his subjects in this way. If an adjective in a subject reached its maximum, it would give him a score of 3, for example, if a person got a score of 311. The concept was that in terms of Visrotonia, good living (very good, and in terms of somatotonia) the interest in physical (and cerebrotonic) physical activities was thoughtful and sensitive (weak).

The third and last kaR Sheldon was to find out whether there is a relationship between body and mind, that is, between physical and mental characteristics. In other words, is it possible to predict people's behavior in terms of appearance? To investigate this issue, Sheldon, with the help of his colleagues, rated a group of students, both physically and mentally, as mentioned above, and calculated the correlations between the scores, and found that That:

There is a high correlation between endomorphism and visceronia, between mesomorphic and somatotonic, between ectomorphic and serotonin; Therefore, it can be concluded that endomorphic individuals, ie those in whom the abdomen and its internal organs are more developed, are people who follow well-being, well-being, pleasure-seeking and happiness. Mesomorphs, those who are muscular and large, are very interested in physical activity, mobility, competitive aggression, and leadership. Octomorphs, that is, those 8 Weight loss will be followed by fatigue and constant tiredness, which can lead to isolation, hypersensitivity, overeating and mood swings.

Table 2-2- List of personality traits from Sheldon's point of view Serbrotonia Somatotonia Visrotonia Self-complexity and resentment. Stress and stiffness of the body and movements. Weakness and softness in body posture and movements .Uncontrollable reactions. Lack of adventure and physical activity. Interest in physical comfort devices .Excessive anger and sharpness in reactions. Strength and power in movements. Slow reactions .Tendency to empathy and empathy. Need to exercise and enjoy it. Abdominal worship.

Excessive tension, worry and anxiety. Seeking excellence; Power-seeking. The desire to eat at the company of others .Confidentiality, hiding emotions. Love the dangerous things and the pleasures of digestion .Face and eye movements indicate anxiety. Fearless behavior. Attachment to ceremonial customs .Fear of society and avoiding that physical courage in struggle and

struggle. Interest in socializing and friendship .Refrain from associating. Defiance. Get everyone friends .Weakness resistance of spontaneous movements. Emotional numbness. Intense interest in the love and agreement of others .Dizziness when crossing open fields. Fear of loneliness. Pay attention to the other Unpredictable situation. Lack of compassion and decency. Emotional similarity and uniformity .Slow voice and fear of noise. Sound out of size. Tolerance) Tolerance . Excessive sensitivity to pain. Too much indifference to pain. Satisfaction with peace and quiet . Lack of sleep; Chronic fatigue. The tendency to make noise. deep sleep .Childish sharpness in movements and appearance is too much cooked and firm. Weak character .Introversion. Extroversion; Show off. Ease of expressing emotions and extraversion The need for loneliness) Isolation (during distress Requirement for action during distress. Need for another during distress) .Pay attention to the distant periods of life. Attention to youth activities. Attention to childhood

Now a question arises, is the classification of Sheldon and Krechmer's personality types different? With a little bit of precision, it turns out that the Kerchmer classification is fully consistent with the Sheldon classification. Endomorph with picnic, mesomorph with athletic and ectomorph with leptosome or stenic; Sheldon considered each feature as an attribute and gave it a score between 1 and 3, depending on the severity; So in 6 Sheldon's classification shows the appearance of each person using a three-digit number. The figure on the left shows his endomorphic status, the middle figure shows his mesomorphic status, and finally the right figure shows his nectar form in terms of ectomorphic; For example, if someone is given a score of 013, it will mean that he is mediocre in terms of endomorphism, weak in terms of mesomorphs, and (strong in terms of octomorphs).

Of course, many criticisms can be leveled at the methods of recognizing and classifying personality from Kerchmer's point of view

He also entered from Sheldon's point of view. The first is that; Basically, placing people in certain categories causes many other personality traits to be overlooked, which may be present in people of that type.

On the other hand, people in each brigade may not have many of the traits mentioned. The second is that; Among the different people, many common traits can be found, for example, emphasizing the thinness of thin people means that obese people and the type of heroism lack thinking. The third drawback of such classifications is that; If there are changes in the classification of people due to diet or other factors, will their personality traits also change? One of the major drawbacks of this theory is that Karchammer and Sheldon did not pay attention to the age of the patients (for example); for example, people get fatter and older when they are older. Physical obesity with manic-depressive mental illness may have been a function of age, not because of biological correlation, as Kerchmer believed.) Jamal Far, 1737: 31 (which, of course, points to and explains the conclusion of the discussion. M.

Now, to get into the main point of this article, which examines behaviors such as anger, resentment, and jealousy in some of the heroes of Ferdowsi's Shahnameh stories, we need to take a closer look at the type of octomorphic or asthenic personality that such people sometimes encounter. Placed.

Kerchmer describes the asthenic type as having a long, slender body, and most of their growth is vertical. Prominent bones, prominent ribs, a sunken abdomen, a slender face, and long arms and

legs are common. According to the German psychologist, parasympathetic nerve activity is severe in lean people and they are more likely to have headaches. They are people of reason and logic, and they are prejudiced in their beliefs. They are strict and domineering and adhere to the principles. They are very sensitive and quick-tempered and complain of adversity and hardship. Stick to something late

## BIOLOGICAL

They can, but if they are attached to something, they will be very late. They are pessimistic and hold grudges in their hearts. According to Galen, the leaner type is part of the biliary part of the temperament and, according to Jung's classification, is part of the introverts.) Karimi, 1131: 301  
The book lists:

هستند They are often passionate; They are not participants and are difficult to understand.

.It doesn't seem to matter that they are praised or criticized by others.

.They often choose activities that are done alone.

☐ They usually do not have a close friend and do not communicate easily.

.Do not attend meetings spontaneously.

It's worth noting that schizoid characters are not schizophrenics; Even if both words have their roots in the Greek root of schizophrenia, schizophrenia is not a personality but a disease. Patients who suffer from schizophrenia have delusions and their mental abilities are impaired, but People with schizophrenia have little desire to communicate with others, which means they have a discrete personality and are introverted.

According to these explanations, now pay attention to the characteristics of the following characters from the heroes of Shahnameh:

- Health and Tour: Jealousy and behavioral inconsistency are characteristics of the asthenic type and the character of the ectomorph.

Ferdowsi, from the division of the property into three parts, by Fereydoun and giving Iran to his younger son, Iraj, and the jealousy of the Iraj brothers. The envy that reminds us of the story of Joseph (pbuh): "And Israel loved Joseph more than any of his other sons, because he was the son of his old age, and he made a great robe for him.

"Because his brothers saw that his father loved him more, they resented him and could not speak to him in good health." Toure - Travel of Genesis, quoted by Islami Nodoshan, 1701: 1881 (Salm and Tour were also jealous of Iraj and wrote to their father in protest:

No, we are less likely to be on the throne than our mothers and fathers Kazazi, 11414: 1/34)

In this regard, it can be said that this jealousy is due to the feeling of why this benefit is given to us

It hasn't happened, or what we wanted, someone else has enjoyed. In short, if we want something and someone else steals it, we are in a state of sadness called "jealousy," and this state 1,

It angers and nurtures the desire for revenge. In Shahnameh, the source of this jealousy is considered Az.



Rak: Eslami Nodooshan, 17701: 187

Why did you open such a crazy demon in Aztec ?Kazazi, 11414: 1/32 (332)

But they ride on a compound of breathlessness; A compound whose destination is the house of sorrow and regret! Sometimes hand

Oppression opens and sometimes greed; Today, language opens to pride, and tomorrow, the heart of jealousy. We cannot escape from it, except wearing a small belt to keep it safe. Thought and wisdom that did not grow in peace and tranquility and was captivated by the soul and created such an end; The jealousy that finally put its hand on Iraj's life with Salm's hands and broke his body with the dagger of Tor's anger. The elders have spoken out about the jealousy and have written down the erosions so that maybe there will be a way out so that we do not get caught up in this evil devil and the suffering does not overshadow us.

"They asked Hakimi what would help man to quit jealousy? He said: To know that jealousy is a suffering that he endures and to no avail, and that he will not be harmed by the loss of a blessing from its people, and that his jealousy will not lead to harm except to his own soul. He only harmed himself. They said, "How can a corrupt person suffer from the one who is jealous of him?" He said, "How can he suffer because he suffers from it with his heart, and Mehsud is unaware of it, and if Blessings from Mehsud, if he disappears, it will not benefit him. That is, in all circumstances, the corrupt will suffer" .

But Iraj is also unaware of the jealousy of the brothers, and because he was burned in the fire of jealousy that the brothers had kindled, he benefited nothing but suffering, resentment, enmity, and finally war and bloodshed.

- Farasiab: Octomorphic personality (psychotic and uncontrollable behavior).

Afrasiab, too, at the beginning of his presence in Ferdowsi's Shahnameh, after hearing the news of the defeat and killing of his commanders "Kalbad" and "Khazravan" by Zal, suddenly became very sad and cried loudly. However, he is still the winner of the war and it is not long before his successive victories and his eulogies.

Afterwards, because of its tremendous and uncontrollable reactionary movements, it is one of the characteristics of ectomorphs (suddenly angry and unable to concentrate and decide, while unable to control and control themselves with complete violence and without the ability to recognize the consequences of work, The Shah of Iran separates:

He reached out to the king of the Turks, and he became famous in the world. He became empty-hearted<sup>1</sup>. They put Shah Nozar on an army full of troubles and conversations He said Weber was confused and wanted a sword He said that whatever is bad is punishable To put the tension on the ground and eat Khosrow Tajdar's neck Ferdowsi, 1714: 1161)

Afrasiab has not calmed down even after killing Nozar, and in the end, he intends to slaughter the captive relatives of Nozar, who refuses to kill them with the mediation of his brother Aghirith :Forgive them, listen to Ovi Choo's words, tell them to fight with pain, take them to Sari, take them to Ghol, and take them to poison and humiliation (.Same: 162)

Another case in point is that Afrasiab's behavior is very similar to that of Actomorph's behavior, killing his brother Aghrirth in a state of anger and inability to control his behavior. Asthenic-type



people have unpredictable behaviors. Unnecessary ones are characteristic of them, and a childish and awkward sharpness is seen in their actions, behavior, and speech. He gives and starts blaming his brother.

He blames Afrasiab in a sharp tone. The release of Iranian prisoners of war and the harsh words of his brother are enough stimuli to show signs of illness in Afrasiab. Symptoms such as aggression, lack of concentration and the ability to make the right decisions, excessive anger, inability to recognize the consequences of actions, and ultimately loss of control and control in Afrasiab cause him to do something that lasts until the last moment of his life as Shame on his forehead and bring him a constant feeling of guilt. The use of the adjective "unconscious" by Ferdowsi is a good proof of this:

He split his brother in two so that the stone of the unconscious man's heart died (Same: 168)

Afrasiab's first encounter with Rostam took place during his war with the Qiqbad army. Afrasiab, due to his previous victories, has a great sense of self-worth and has an illusory belief in his abilities. For this reason, he sees the ability to confront Rostam and goes to war with him one by one. However, this fierce struggle leads to Afrasiab's severe humiliation in the face of the power and force of Rostam's arm, and in the end, he can happily escape from the clutches of Rostam Ghooi Panjeh.<sup>14</sup>

He blames his father for the Iranians and even for killing Aghirs. For Afrasiab, killing Aghriath is not an ordinary death that he can forget. The guilt he feels for killing his brother is always evident in his words. For example, since Afrasiab blames his father for all this (actomorphs), he usually does not accept the consequences of his actions (and begins to blame him:

His tongue was full of speech and shortness of breath. He went to the river Peshang from this river to seek guilt.

The old elders did not see the way ... one is to break the covenant with the king

He played Sepah for a long time ... He played you in the Iran Cho war

The defeat that never came to an end that Aghrirat was killed in a small way.

If I was dishonored Ibid .: 111-131 (Afrasiab's uncontrolled anger against Gersios indicates an ectomorphic trait:

In the case of Siavash, many of the personality actions attributed by Ferdowsi to Afrasiab are remarkably consistent with the behaviors of a sick person. The disease, now known as mania-depression, is a pathological type (referred to as the first encounter between the Turan Corps under the command of Gersius and the Iranian Corps under the command of Siavash. The Turanians were defeated and Siavash encamped in Balkh. Zand and wait for the command

His father remains Kikavus. Gersius came to Turan and told his brother about his defeat. Afrasiab is so angry to hear this news that he is about to kill Grecius like his other brother :Look at Gersios Ander in such a way that you said he wants to be in the middle of it( Same: 712)

Afrasiab is furious when he hears this news and, like an arrow drawn in a bow, is ready to be released to fight and unleash the extra force that has arisen in him. But suddenly, in a few hours, it turns around. Afrasiab has a terrible dream in which his whole being trembles and wakes up

with a terrible cry. With this dream, Afrasiab has a completely opposite state to his condition a few hours ago, and all his tireless energy for war becomes fear and restlessness.

Fear of community, fear and anxiety = Actomorphic character (Afrasiab wakes up and asks his brother Gersios to comfort him. This is Afrasiab, Afrasiab Parhibat, Afrasiabi from the wind and 11

It is fire and its nature is not from God, the same black demon of the battlefields, the Turk who is in the battle of races.

Afrasiab suddenly wakes up with a shout full of horror and trembles in his bed and needs brotherhood; A brother who may remind him of his legacy so that he can find peace in the warmth of his arms. ) Tendency to empathize with Vance = Octomorph character When it got dark, I came to Gersios' advertisement Vera saw on the sleeping ground on the way to come sharply near the king Tell this story to your brother Don't tell me this time, Hitch, talk to me and make it hard for me .He replied, "Don't ask me to stay until I regain my sanity ("Ferdowsi, 1714: 717)

In the case of Siavash's death, many signs can be seen in Afrasiab's behavior, all of which are based on his character Ectomorphic disease is indicated. For example, after Siavash's death, he does not take the blame for his decisions, and considers Siavash's death to be the work of the times and says:

The wise man of the people does not suspect anyone, the sky (same: 761)

But when Rostam marches to Turan at the request of Siavash and breaks the Turanian army, Afrasiab feels remorse and sadness for his previous behavior and decisions:

Listen, Afrasiab, this is a sad word for old deeds (same: 710) Suzogdaz Afrasiab, in the death of his son, portrays him as a two-faced person who does not match his previous face. Afrasiab cries loudly when Sorkheh is killed. It should be noted that it is Afrasiab who weeps, the same Afrasiab who brutally kills his brother. Someone who for

Saving himself and concluding the peace treaty with Siavash, he agrees to send 100 of his loved ones as hostages to the altar. Now Afrasiab mourns the death of one of his sons, Sorkheh :He slowly pulled his hair and spilled water on Afrasiab's head and crown Rada Namdar, Yala Bakhrda also said, "Rada, Sara, Mobda ".He put all his clothes on himself The same: 713 (roaring on the ground 12

At the end of the work, Ferdowsi shows another side of his character; Afrasiab has fallen and his tongue is daring and fearless against Afrasiab. It is noteworthy that in the whole Shahnameh, only Rostam has the ability to compete with Afrasiab, but now before his death, an anonymous ascetic who even belongs to the group of heroes and soldiers. No, he can arrest him and drag such a hero to the ground and humiliate him. Does this destiny reflect the nature and bipolar nature of life and its essence!?

He went inside the regiment, grabbed it, and approached Choo's hand. He grabbed his arm. He went away and attacked him .Same: 1.27 ) Grecius; Cruelty character: Actomorph type

From a behavioral point of view, Gersius can be an example of Octomorph's character. Such characters do not think about the end of their work, but their decisions are immediate. They are

indifferent to the sincerity of truthfulness and are not afraid to lie in order to achieve their goals. They are ruthless and ruthless towards everything and everyone) (Faraji, 1788: 14) (Reflecting on Gersius' behavior, an example of this feature can be seen throughout the story. The killing of Siavash at the end of the story is depicted in Garciose's vindictiveness. He is:

He started by saying that Garsiuzi Shahriar Siavash has other than that. The religion and the work of the association became a lot (.Ferdowsi, 1714: 786)

Grace's jealousy is evident throughout the story. The successes of Siavash and his popularity with Afrasiab and Piran made Garsiuzi's sword of jealousy sharper and :Siavash's religion and intelligence did not change anyone's mind All the treasure, both knowledge and the IRGC were twisted and turned yellow Garsiuzi's heart and brain boiled and he told her to spend a year like this It is all a kingdom, and it does not find its crown and sometimes its secret (Same: 787) 17

He did not give up until the last moment, until he finally ruined the youth of Siavash, but in the end, the ashes of the fire of his jealousy ignited the body of his life with the spark of Ah Del Kikhosrow and saw the result of his efforts and conspiracies. In The Foundations of the Pious Idea, we also read that man should not speak Chinese to others because Chinese speech is deadly to three people: himself and the person who spoke Chinese to him and the person who spoke Chinese before him. . Rak: Vahidy, 1711: 710 (From the point of view of the mythical world, Gersius is a devil, and Siavash Gerd is a paradise. He kills the tongue, and this fire must destroy one, Siavash or Gersius. Chapter 2 of Mohtashami's ethics states that "like the common people, houses

See the properties, envy them, and the like, and wish them well, and repent of that envy when they see the pests and effects of the houses. ) Khajeh Nasir, 1733: 211 (And we see in this story that Gersius, once regretted

It is possible that no one benefits anymore. Certainly, if Gersius had been aware of the plagues and calamities that befell Siavash in the land of Siavash, he would never have planted the seeds of jealousy in his heart, and he would not have created such a bitter end for Siavash by plotting.

- Jealousy's jealousy and fear sit in the Astenic brigade.

In another story, Hakim Toos tells of Tus Nozar, who has repeatedly referred to the hero's worthlessness in wisdom. It is the greed of Tus - you will recognize it, and when the seed of malice is born, it will bear a bitter and poisonous fruit, and it will lead people like Tus to do catastrophic deeds. Rak: Dostkhah, 1711: 22)

But in despicable terms, the root of Tus's rebellion and disobedience must be traced to his jealousy of the Kikhosro dynasty, because in his view Kikhosrow and Froud are not of Turanian descent and royal merit, and perhaps he wonders why. Now the eldest son of the Manouchehr dynasty, he should not now rely on the throne, and the thought and jealousy caused by it caused the sunset of Omar Froud to set very soon, and this is what the readers see from the point of view of the foolish Tus, who rules his intellect. Had been handed over to the air of the breath and had become obedient to him<sup>30</sup> .

Ferdowsi, on the other hand, finds fear and anxiety in Tus and turning his back on the enemy, which is one of the characteristics of the asthenic or ectomorphic type :He came from the heart of Turan Sepah to Tus. Heartbroken from Iran. He killed a lot of Sepah. He was sad.

Ferdowsi, 1714: 714)

- Gorgin and selfishness from seeing the abilities of others: the character of Octomorph

Gorgin's most important adventures in the story are Bijan and Manijeh. Kikhosrow sends him and Bijan to destroy the hogs that roamed around the city of Arman. There, Gorgin becomes jealous of Bijan's bravery and deceives him to go to the border of Turan. In Turan, Bijan goes to the feast of Afrasiab's daughter, Manijeh, and the two fall in love with each other. There, Afrasiab's soldiers recognized him and arrested him and imprisoned him in a well. After waiting for Bijan for a while and finding no sign of him, Gorgin returns to Iran and falsely tells Kaykhosrow that Bijan is missing while following Gori. Kaykhosrow, who is informed that Gorgin has lied, chains him. He was imprisoned, but after that, with Rostam's mediation, Gorgin was released and went to Turan with Rostam to free Bijan from Afrasiab's clutches.

Knowing that Gorgin Shurideh went to one side of the forest, she came to Choo Taft. All the woods came. I saw her. She turned blue. She created happiness. She turned to him .Wrap your heart, Ahrmana did a bad job with Bijna In spite of the increase and increase of the name, the young man went to the trap (Ferdowsi, 11414: 641 .1) Sheghad: Jealousy, resentment and malice = Ectomorphic personality type

Characteristics of jealousy, behavioral inconsistency, inferiority contract (we see in the character of Sheghad; that is, Ferdowsi in describing the important characters of Shahnameh has marked and illustrated in such a way that with psychological analysis one can hide the psychological layers and Their personality has been achieved. This indicates the poet's precise and insightful view of human nature and psyche. Among the complex psychological and influential but negative characters of Shahnameh is Sheghad, Rostam's half-brother, that Ferdowsi is so artistic and accurate in presenting signs<sup>18</sup> , .

Describes his behavior and motivating reasons for killing Rostam. By examining all these descriptions and signs and comparing them with the well-known psychological abnormalities in psychology, it can be concluded that Sheghad suffers from a mental disorder of inferiority, and this feature is more evident in the typology of Kerchmer and Sheldon in the octomorphic brigade. According to Ferdowsi's report, the reasons for the emergence of this feeling and its transformation into a contract of inferiority in Sheghad towards Rustam can be considered in these cases:

Mother, webmaster of Yasel and Nasab - Toldend Shom - deportation from the country and family at the age of adolescence and Jahangir Rostam's song.

Looking at Sheghad's character, we see that some of the behavioral characteristics of people with inferiority complex are based on Alfred Adler's theory. These include: anger, hatred, jealousy, arrogance, behavioral contradiction, fear, and instrumental use of values. RK: Adler, 1173: 117 (Ferdowsi reveals the contradictions of Sheghad in such a way that he does not consider himself guilty in the death of Rostam and on the one hand, considers the killing of Rostam as the result of the justice of existence:

That's what Knox Shaghad replied when he gave you the wheel

Ferdowsi, 1714: 1401 (On the other hand, in the same speech, addressing Rostam as the perpetrator of his murder, he considers them demons:

When it comes to you, you will be caught in the trap of the demons(.Same: Same)

According to Haghir, Rostam, who was considered one of the victims of jealousy, was captured by the Shahnameh, according to the conspiracy and trickery of his inequality, Shaghad. Shaghad, who was outraged by Rostam's taking a ransom from the Shah of Kabul, used this as an excuse to cover up his jealousy of Rostam. We do not see his presence in other stories of Shahnameh, and this is the first point of this jealousy, because surely, he thought to himself why he should have a base less than Rostam, and most likely, honor and respect and

The titles given to Rostam have angered him. A complex that did not calm down for a moment to find a place to be present in Kashan, the heart of a humble man whose name was Sheghad and what good they said:

"Al-Hassoud Laisud" drew the vengeance of the hearts of Sheghad, Rostam, Rakhsh and Zavareh inside him, and the spears of his jealousy fell on them one by one, and another black leaf added to the history.

..."Yes, now the lion of Iran / Kuhan Mountain / Men of men / Rostam Dastan...

In the well of this well, the poison of sword and sword was lost, the hero of Haft Khan, now / it was the greed of livestock and the mouth of Khan the eighth<sup>16</sup> «« ... And the conclusion is that:

Given that literary works can be examined and analyzed from different points of view, we also decided in this article to relate two periods of time with a new perspective and the old text based on theories. Let's examine contemporary psychology. In fact, in this study, the characters of Shahnameh have been introduced as Iranian models for "Karchammer" and "Sheldon" theories, and it seems that the theories have been mentioned. It does not belong only to the twentieth century, and even in the distant centuries it has been efficient and practical, and Ferdowsi in Shahnameh, in various types of characters in his stories, has believed in a kind of correspondence between behavior and physiological type.

The author has tried to look at the characters of Shahnameh with a different perspective, to examine them at the same time as the story is intended. At the same time, sometimes the characters have changed their faces over time; But in general, the design that Ferdowsi shows in the Shahnameh of the characters in his stories seems to have an ups and downs, in the sense that sometimes we encounter an exalted human being in terms of inner characteristics, such as Iraj and sometimes the characters in The Shahnameh, as can be traced to any other epic work, finds a moral decline; Like Salm and Tour. Ferdowsi's art is very clear in drawing the exact lines of the characters in the story, and especially in showing their inner aspects. He does not suffice to describe the generalities about his heroes, and sometimes he has drawn the exact lines of his personality and the expression of their details and moods.

But the summary of Ferdowsi's Shahnameh is on the one hand the position of Ferdowsi's narration of civilization, culture, myths and history of Iran and on the other hand the scope of his analytical insight and poetic view of various events and characters. Meanwhile, Ferdowsi's detailed and in-depth look at the characters of his work is such that the genius of this poet can be created by creating a balance between thought and speech and work.

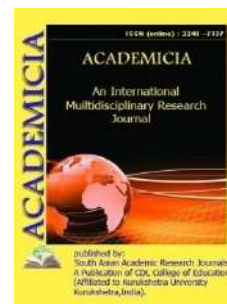
Characters Especially when it comes to describing and explaining the inner layers of their behavior and psyche.

Ferdowsi's descriptions and illustrations of Shahnameh characters are such that by comparing them with personality theories in the field of psychology, one can understand the type of their personality. As this article has been a handful of examples<sup>13</sup>.

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DOI: **10.5958/2249-7137.2020.00725.9**

## BALL CATCHING ROBOTS: A REVIEW OF SELECTED TECHNIQUES

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### ABSTRACT

*Robots have been used in diverse areas and for the purpose of ball catching. This paper takes a review on selected techniques on research of ball catching robotic arm. Our priority basis upon some factor including speed of ball, initial distance of ball from the robotic arm, vision algorithm complexity to calculate results and their final accuracy in catching the ball. The given papers are selected according to the vision and control capabilities of the current research in the given field. To begin with we explore the control, planning and visual sensing aspects, and then a brief survey of the selected techniques on research of ball catching robots both from the hardware and software perspective is presented.*

**KEYWORDS:** Ball Catching, Computer Vision, Robotic Arm, Trajectory Perception

### INTRODUCTION

Catching a moving object with a hand is one of the most difficult tasks for humans as well as for robot systems. In order to perform this task, several capabilities are required to a robot system, such as smart sensing, object tracking, motion prediction, trajectory planning, and fine sensory-motor coordination. [1] Visual guidance of robot manipulators has found limited use outside of

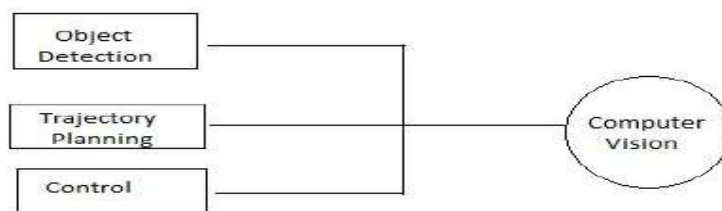
laboratory and industrial settings, in part because it typically requires complete information about the robot's state and the work space geometry. [2] Segmentation itself has already been a challenging task over decades. Those vision methods were very time consuming and produces the results which are not accepted in the out-of-lab environment. In this paper, we analyze human arm movement for catching a moving object. This kind of task is frequently performed by humans in daily life; therefore there will be many cases where robots are required to do it in the future. To make robots accomplish this task as human does, it is necessary for us to know how human plans his motion and controls his arm movement [3]. So far many studies concerning with human arm movements are reported. Flash and Hogan [4] presented the minimum jerk theory, which reproduce human arm movement between two fixed points. For the same movement For the same movement, Uno et al. [5] also reproduce a human-like arm motion by resolving the objective function, which minimizes the rate of change of motor torque. These models deal with voluntary arm movement between two fixed points and do not discuss dynamic motion planning for adjusting arm movement to the changes of the environment. [3]

In robotics, dynamic motion planning for catching or tracking a moving target is frequently reported as one of visual feedback problems. In this field, presented methods are designed in terms of smoothing the trajectory, reducing the motion time and decreasing tracking error. However, we do not know whether any of them can apply to the characteristics of human arm movement or not. In addition, rather than only one method, human seems to select suitable strategy according to the kind of the object and its motion [3]

Ball catching has been used for almost 20 years now as a challenging benchmark system to develop and robotics key technologies, In all the works the general setup is in principle the same: a stereo vision system tracks the ball and predicts the balls trajectory, then the point and time, where and in which orientation the robot should intercept the ball on its trajectory, is determined. Next, the robot configuration to reach the catch point is computed and finally a path is generated, which brings the robot from its start configuration to the desired catch configuration. [5]

### COMPUTER VISION ROLE

Figure 1 gives an overview of the vision framework, emphasizing the role played by vision in each of the various subtasks of a hand/eye coordination problem.



**Figure 1**

In the initial stage of a manipulation task, visual cues or vision are used for target recognition, here this all is done in the real time mode i.e. the object or target is flying out in the air and accordingly that the given is recognized.

At the next level, vision is used to estimate the target trajectory. This, in turn, is used in generating a trajectory plan for the robot that would achieve the goal specified.

The last stage involves the generation of the sequence of controls to the robot for following the planned trajectory. Here, vision plays the role of providing continuous feedback for tracking the hand position.

### **FACTORS INFLUENCING THE DESIGN OF THE BALL CATCHING ROBOTS**

**MINIMUM TIME:** The primary difference between catching a stationary object and a moving object is that the stationary can be grasped at any desired time, whereas the moving object must be grasped while it is passing through the given area. The moving object must also be grasped soon as it enters in its catching area. Furthermore, for grasping the object when it just enters the given catching area some operations are also needs to be executed. For these three reasons, the main goal in our approach is to generate a minimum-time trajectory from the initial manipulator status to the grasping point. By ‘minimum’, we do not mean an absolute minimum, but rather the minimum within a family of trajectories.

**GRASPING CONDITIONS:** In the static case, successful grasping depends on the type of gripper, the grasping algorithm, and the positioning of the gripper with respect to the object. In the case of a moving object, however, the dynamics of both object and manipulator must also be considered. A difference in velocity at the grasping instant may result in slippage, damage to the object, or even damage to the manipulator. A large difference in acceleration can cause similar problems depending on the mass of the object.

**ACTUATOR CONSTRAINTS:** In general, time taken by the actuator to reach to the destination to catch the given object may also be bound by some given constraints like maximum output torques of the actuators, there is a resulting lower bound on the traveling time.

**COLLISION AVOIDANCE:** Collisions can be separated into two broad classes: (1) between the object and the end-effector, and (2) between the end-effector and the links. The first type of collision is avoided by ensuring that the gripper is in the correct position while catching the object or ball. The second type of collision is more difficult to avoid. Since it depends not only on the trajectory of the moving object but also on the configuration of the manipulator.

### **LITERATURE REVIEW**

Catching a thrown ball with a hand is not easy. It demands for a tight interplay of skills in mechanics, control, planning and visual sensing to reach the necessary precision in space and time.

In this section the proposed work in this field is presented

**A. Barbara Hove et al** [6] present an approach for the Real-time coordination of visual information with high speed manipulator control in the context of three-dimensional robotic catching. The research planned a path for the catch occurs in real-time during the half second that the targeted object is airborne. Here barbra presents a trajectory-matching algorithm that have an initial motion algorithm. The results are demonstrated experimentally using a real-time vision system and a four degree- of-freedom, cable-driven arm with a workspace of 42 cubic meters and speed capabilities of up to 2.0 m/s. The catching method described here allows the

robot arm to consistently track balls in space. The distance between the end effector and the ball during the tracking period typically ranges from 0-5 m.

*Performance* for the system is about 75-80% of the balls thrown within the ball's workspace. Failure was most often attributed to inaccurate visual data from noise, the distance is up to 5 m and the speed is 2m/s

**B. U. Frese et al** [7] presents system for catching a flying ball with a robot arm using off the shelf components for visual tracking. The ball is observed by a large baseline stereo camera, comparing each image to a slowly adapting reference image. They track and predict the target position using an Extended Kalman Filter. The calibration is achieved by simply performing a few throws and observing their trajectories, as well as moving the robot to some predefined positions.

*Performance* of the system is about 2/3 of 100 throws the majority of faults was due to the camera's limited horizontal field of view resulting in the system seeing the ball too late.

**C. Akio Namiki et al** [8] introduce high-speed multi-fingered robotic hand with dual vision with a massive parallel vision system called CPV (column-parallel high speed vision system) photo detectors with an all pixel parallel processing. The CPV is performed in order to achieve segmentation of the image, extraction of the target area, and computation of the image moments.

*Performance* of the given system is about 90% with a rubber ball with radius of 4cm as a target, and dropped from about 1m in height. The speed of the falling ball is about 4 d s just before it hits the ground.

**D. Chyi-Yeu Lin et al** [9] presents a DSP Based system that separates the thrown-in target (uses stereo based camera) from the paired images and then calculate the centroid coordinates of each target image, thereby determining the space location of the object. The Lagrange interpolation formula and the linear function is used to simulate the ball trajectory and predict the catch position, after that the control data is sent by the serial port to the robot for desired action.

*Performance* of the given system is about 65% as the fixed mechanical hand throw balls at a fixed distance of 4 meters. The laboratory has stable light source and no air flows. We have thrown 500 times of balls not faster than 16m/s and all of them are within the catching range.

**E. Tasuku Yamawaki et al** [10] discusses the grasp configuration after the catching, this paper presents a three finger robotic hand strategy that enables the robotic hand to catch the object with a high manipulability grasp configuration. Overall the paper proposes the strategy for a robotic hand to catch a free-flying object with a high manipulability grasp configuration.

They proposes a three phase strategy for ball catching 1) Standby phase 2) Pre-processing phase 3) Catching phase, On the standby phase, the robotic hand keeps the standby configuration, means it stays ideal on the next phase when the ball crosses the standby phase, they measure the height of the ball with a high-speed camera, At the same time, the robot hand starts the preshaping to form the high manipulability grasp configuration at the prospective catching point, at the last step the system prepares itself for the catching.

*Performance* of the robot hand accomplished the catch of the flying-ball with the high manipulability grasp configuration. The success rate for the experiments was about 30%. The

largest cause of the failure is that the trajectory of the rebound rubber-ball deviates from the vertical plane due to its elasticity and the friction between the rubber-ball and the ground

**F. Berthold Bauml et al [5]** presents a multipurpose four-fingered hand (DLR Hand- II) to grasp the ball. They propose Extended Kalman Filter based prediction of the ball trajectory are used providing a new prediction every 20ms. The visual tracking is quite robust with successfully tracking >80% of the thrown balls. Moreover they present quite good algorithms for the arm movements.

The system architecture here provides distributed computational resources while meeting hard real time constraints. In current system currently the visual ball tracking is the limiting factor for the catch rate, whereas the mechanics and control of the arm and especially of the hand work highly reliable in grasping the ball. The given system achieves a catch rate of > 80%.

**G. Oliver Birbach et al [11]** presents a real-time trajectory perception system for catching flying balls with DLR's humanoid Rollin Justin. They use the multiple hypothesis tracker (MHT), they first detect balls as circles and feed these measurements into a MHT, they use a circle detection scheme for detecting ball as circle, they place the camera on the humanoid's head for detection of the ball, the MHT (multiple hypothesis tracker) includes 1) pose detection, which detect the person which throwing the ball 2) circle detection, which detect the ball coming towards the humanoid.

The given work faces some computational complexities as they use the Hough transformation for the circle detection and the add one new parameter MHT(multiple hypothesis tracker), which adds pose detection algorithm which incur few more complex calculations and make system slow.

*Performance* of the system is > 80% but the system is slow as compare to the previous one, major contribution of this research work is it adds robotics in to the sport activities. Where the robots can easily track the objects and catch them

**H. Thomas Wimbock et al [12]** presents The visual tracking system, based on stereo cameras provides a new prediction of the ball trajectory. Over 80% of the thrown balls are tracked successfully. Another important tool that they used to determine the *Performance* was a off-the-shelf high speed camera running at 300 frames per second by that they were then able to see the dynamic ball motion within the hand

**G. Magnus Linderoth et al [13]** presents research which determine the position of a static object in 3D space by means of computer vision, it has to be seen by cameras from at least two different viewpoints. The same applies for measuring the position of a moving object based on images captured at one single time instant. They use series of images where no pair has to be captured simultaneously. It even allows tracking of a point object in 3D space using a single static camera. The tracker was implemented and tested on series of images of a flying dart, captured by two cameras. The images had a resolution of 656× 480 pixels and were captured every 20 ms. the darts were detected in real-time with a processing time of less than 4 ms per image on a desktop PC.

*Performance* of the ball catcher was limited by the accuracy of the image analysis and the speed and acceleration of the robot. The catch rate was approximately 50 %. performance was the lowest for trajectories that were far from normal to the box front or that forced the robot to move



far from its initial position.

### **Comparative Analysis**

### **CONCLUSION**

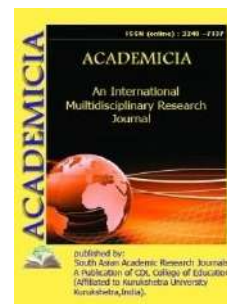
In last two decades, research in humanoid robots has made rapid progress. Even so, this domain is still at its infancy stage. Tracking of the targeted object by the robot and trajectory perception is one of the main domains that received a lot of attention from the authors. A lot of new heuristics and algorithms were introduced to solve the problems in this domain. Our main goal is to develop a efficient vision algorithm which provides better results than the previous work which ultimately increases the accuracy rate for catching the ball with the robotic arm

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DOI: **10.5958/2249-7137.2020.00636.9**

## READING SEQUENCES AND PRINCIPLES IN TEACHING ENGLISH

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### ABSTRACT

*This article is devoted to teaching reading by using its principles and sequences. There are expressed reading principles and sequences in teaching English in the given article. The ability to sequence events in a text is a key comprehension strategy, especially for narrative texts. Finding meaning in a text depends on the ability to understand and place the details, the sequence of events, within some larger context—the beginning, middle, and end of a story. Learners choose what they what to read. The principle of freedom of choice means that learners can select text as they do in their own language, that is, they can choose texts they expect to understand, to enjoy or to learn from.*

**KEYWORDS:** *SLL, Foreign Language Teaching, Reading Skill, Effective Reading, Principles And Sequences.*

### INTRODUCTION

Reading is the skill of understanding written words and using in teaching foreign languages. Reading is a part of the way we use language in daily life to gather information, communicate with others and also for enjoyment. Reading always occurs in context, that is, what we read is part of a broader situation or an extended text .

### Main part

Reading is connected with sequencing. Sequencing is one of many skills that contributes to students' ability to understand what they read. Sequencing refers to the identification of the components of a story or a topic such as the beginning, middle, end to the ability to retell the events within a given text in the order in which they occurred. The ability to sequence events in a text is a key comprehension strategy, especially for narrative texts. Finding meaning in a text

depends on the ability to understand and place the details, the sequence of events, within some larger context—the beginning, middle, and end of a story. The ordering of events in a story, along with connecting words such as once upon a time, then, later, afterwards, and in the end, are good examples of textual features, an understanding of which gives the reader a way of integrating the story's individual parts into its larger framework—and thereby understanding the author's purpose.

**Why Is It Important?** As students listen to or read text, they are best served if they can understand the information as it is presented and then recall it at a later point. One of the easiest ways to recognise the order of events is to look out for the sequencing words or transitions that are used to connect the various parts of the text. Some of these words and phrases also act as signals to provide an indication of whether the event will be located in the beginning, in the middle, or toward the end of the text's chronology. There are a wide variety of 'signal words' and the following represent just a few of the most common, as well as where they are most likely to occur. For example, in stories we can use such kind of words.

#### Beginning

- Once upon a time / Once there was
- In the beginning
- First of all

#### Middle

- Meanwhile
- After that
- Suddenly

#### End

- in the end
- Finally
- After all.

When we cannot remember the names of people, places, things we can use reading sequences in order to teach such kind of words for instance, so as to remember the sequences of names of Smith, Martin, Igor, Lucy, Emily, we can use the first letter of these names such as "SMILE" for above mentioned names.

It is important reading principles for teaching foreign languages as reading sequences. There are a lot of reading principles in teaching foreign languages, for instance, the reading material should be easy for learners also suitable for learners' level and age. In helping beginning readers select texts that are well within their reading comfort zone, more than one or two unknown words per page might make the text too difficult for overall understanding. Intermediate learners might use the rule of hand—no more than five difficult words per page. Hu and Nation suggest that learners must know at least 98% of the words in a fiction text for unassisted understanding 1.

It follows that, for extensive reading, all but advanced learners probably require texts written or adapted with the linguistic and knowledge constraints of language learners in mind. A variety of reading material on a wide range of topics must be available. The success of extensive reading depends largely on enticing students to read. To awaken or encourage a desire to read, the texts made available should ideally be as varied as the learners who read them and the purposes for which they want to read. Books, magazines, newspapers, fiction, non-fiction texts that inform, texts that entertain, general specialized, light, serious. For an inside track on finding what your students are interested in reading, follow William's advice: "Ask them what they like reading in their own language, peer over their shoulders in the library, ask the school librarian". Varied reading material not only encourages reading, it also encourages a flexible approach to reading. Learners are led to read for different reasons. Learners choose what they want to read. The principle of freedom of choice means that learners can select text as they do in their own language, that is, they can choose texts they expect to understand, to enjoy or to learn from. Correlative to this principle, learners are also free, indeed encouraged, to stop reading anything they find to too difficult, or that turns out not to be of interest [3;51] Certain instructional methods are more effective than others. Many of the more effective methods are ready for implementation in the classroom.

To teach reading well, teachers must use a combination of strategies, incorporated in a coherent plan with specific goals. A teacher who addresses only one area of reading or uses one instructional approach will probably not be successful.

Reading comprehension – understanding what is read – is best supported when teachers use a variety of techniques and systematic strategies to assist in recall of information, question generation, and summarizing of information. Teachers must be provided with appropriate and intensive training to ensure that they know when and how to teach specific strategies. Teachers must know how children learn to read, why some children have difficulty reading, and how to identify and implement instructional strategies for different children.

## CONCLUSION

Reading sequences and principles are very important for teaching reading because they include effective methods and ways of teaching reading skills. According to reading principles reading skill needs to be practiced every day. Learners read further reading materials such as newspapers, journals, fiction books two hours a day in order to improve reading speed and widen their outlook. The purpose of reading is usually related to pleasure, information and general understanding. According to reading sequences, we need reading sequences in order to read instructions, stories, activities such as a picture story. Reading sequences also help us to understand the meaning of topics, activities, games .

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DOI: **10.5958/2249-7137.2020.00637.0**

## CONCERNING THE STUDY OF HEMERONYMS IN THE UZBEK LANGUAGE

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### ABSTRACT

*This article highlights the concept of hemeronym in the Uzbek language and the scope of their study. According to the results of linguistic research on hemeronyms, specific proposals and recommendations will be developed for editing media names, naming new ones with scientifically based names that reflect the mentality of our people. Newspaper and magazine titles were rid of ideological views, personal attitudes and inclinations, as well as various other negative attitudes. The issue of linguistic study of hemeronyms in Uzbek linguistics is very relevant. One of the most important issues in modern Uzbek linguistics is the study of the types of hemeronyms of the Uzbek language according to their motives, methods of formation.*

**KEYWORDS:** *Proper Noun, Hemeronym, Newspaper, Magazine, Means Of Mass Media.*

### INTRODUCTION

In the society, it is impossible to distinguish one nameless thing from another. In most cases, because of the fact that everything has its own name, so they must be called by those names. In the same sense, the name (s) serves as a compass to guide people. While experts use a compass, a special device, to find out which side is south and which is east so they don't get lost, people use names to know exactly who their interlocutors are, where they are, what they stand for, and what they are called. In order to call people and to appeal them by name, it is possible to distinguish their names, surnames, nicknames, pseudonyms and proportions, names of tribes and peoples, places, hydronyms, names of celestial bodies, plants, animals, horoscope names and so on. In order to find out them, it is possible to know what words they are pronounced and called with. To do this, people need to be introduced to the problems of naming, onomastics, giving a name, changing names at the request of a person or a population, saying and writing them correctly and clearly.

Proper nouns, in addition to linguistic features, also contain valuable historical, cultural, ethnographic, aesthetic and geographical information. Therefore, in recent years, there has been an intensification of efforts to study names related to the past and present. So, proper nouns are a great cultural, linguistic heritage. The historical memory of our people is reflected in this heritage.

In recent years, it is no coincidence that the state pays special attention to the media, freedom of speech and press, and most of the republican, regional, district and city newspapers and magazines are serving active. Newspaper and magazine titles were rid of ideological views, personal attitudes and inclinations, as well as various other negative attitudes.

The resolution of the President of the Republic of Uzbekistan "On additional measures to ensure the independence of the media and the development of information services of state bodies and organizations" shows that according to the analysis of the current situation in the media, the challenges in the media space are not being responded to quickly and appropriately. Moreover, it demonstrates, the needs of society in the timely provision of comprehensive information on large-scale reforms in the country require a significant increase in the work in the field of information, as well, bringing the activity of mass media information services of state bodies and organizations to a qualitatively new level. The scope of this issue also includes the problem of linguistic study of mass media names. Because the names indicate the subject matter of a particular publication, what type of readership it is intended for, and also serve an aesthetic function.

In Uzbek onomastics, toponyms, anthroponyms, partial ethnonyms are satisfactorily researched. However, the issue of linguistic study of many other types of proper nouns, including hemeronyms, has not been studied in detail as the object of special research. Periodicals are newspapers, magazines, appendices to them, information and reference publications, digests, posters, collections of normative and legislative acts, brochures published in two or more periods a year. Also, the study of the names of television and radio, Internet sites will contribute to the development of the state language, raising the image of Uzbekistan. According to the results of linguistic research on hemeronyms, specific proposals and recommendations will be developed for editing media names, naming new ones with scientifically based names that reflect the mentality of our people. This is in line with our goals, such as supporting research on the development of the state language, the implementation of international cooperation in this area.

Great number of decrees and resolutions adopted by the state to further develop our spiritual life, including the organization of educational work in accordance with modern requirements, the improvement of culture, art and literature, the culture of reading, directly contribute to the development of the Uzbek language. Speaking about this, it should be noted that in recent years, hundreds of kindergartens, schools, universities, **new newspapers and magazines, TV and radio channels**, publishing houses, cultural and educational institutions, libraries operating in our native language are being established.

In the dictionary of N.V.Podolskaya, it is mentioned that the term hemeronym derives from the words hemero "day", onym (onuma) - "name", and means the concept of the names of periodicals. In Kryukova's research, it is determined that periodicals are a type of media, as well, radio, television, video, and newsreels are also studied under the term hemeronyms. It should also be noted that the names of Internet sites were also analyzed in the studies on



Russian hemeronyms. In her research, O. Fedosova was able to determine the linguistic status of hemeronyms.

Uzbek hemeronyms, like other proper nouns, are an integral part of the richness of our language. The Uzbek language is very rich in various hemeronyms that have emerged over the last century and a half, and these names are one of the great masterpieces of the long cultural and spiritual values of the Uzbek people. The development of publishing and printing led to the emergence of hemeronyms. Because these names reflect the conflicting historical path of our people, the various aspirations, philosophical, religious, spiritual, moral, educational and aesthetic views of the general public, the beliefs that testify to different political periods, the attitude to people. From this point of view, it would not be a mistake to say that history is hidden in some hemeronyms as well. The issue of linguistic study of hemeronyms in Uzbek linguistics is very relevant. One of the most important issues in modern Uzbek linguistics is the study of the types of hemeronyms of the Uzbek language according to their motives, methods of formation.

The Uzbek dictionary is rich in proper nouns, but not all of them are fully summarized, and although they are mentioned in scientific sources in one way or another, they have not been specifically studied. One of the less well-known proper nouns is the hemeronyms.

Some opinions are expressed about the names of periodicals in the works of H. Bektemirov, N. Ahunov, I. Toshaliyev, but there is given no special research. The bibliographic index compiled by E. Begmatov contains two articles on the subject.

Journalists themselves have commented on the reasons for choosing names for periodicals, in particular the names of the publications they publish.

There are no monographic researches on hemeronyms in Uzbek linguistics. In Russian linguistics, certain work has been done in this area.

The lexical bases of hemeronyms, the motives of their selection should be studied by grouping as follows:

- 1. Abstract words that correspond to the direction of the media are the basis of hemeronyms.
- 2. Hemeronym refers to the nature of the media.
- 3. Hemeronym refers to the type of media.
- 4. Hemeronym refers to the place of publication of the media.

The nominative function of hemeronyms requires their study as a proper noun.

Because proper nouns also serve as naming conventions. Hemeronym also refers to the subject matter of newspapers and magazines, as well as to whom they are intended. As people begin to read a newspaper or magazine, they become interested in its content. So the name of a newspaper or magazine also means something other than always being a name. For example, the names of magazines and newspapers “Sihat-salomatlik” (Health and Wellbeing), “Soglom avlod” (Healthy Generation), “Khorezm tibbiyoti” (Medicine of Khorezm) show that they are related to medicine.

The research of the types, formation, classification, genetic description, functional properties of hemeronyms according to the motive of naming on the basis of certain theoretical principles and methods allows to elucidate in detail the linguistic features of onomastic units.

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DOI: **10.5958/2249-7137.2020.00638.2**

## TEACHING STUDENTS TO STUDY READING IN TERMS OF THE REQUIREMENTS OF THE INTERNATIONAL PIRLS SYSTEM

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### ABSTRACT

*The article outlines the basic principles of the international program for assessing the level of knowledge of PIRLS students, considers techniques and methods for effective teaching of reading skills. This will lead to a lack of the necessary result and a senseless loss of time in the lesson. For reading to become productive, students must take an active position, performing various mental operations. It should be remembered that learning to read is an important task facing the school. The attention paid to improving the culture of reading is an important factor in the education of young people with deep knowledge, independent thinking and high spirituality.*

**KEYWORDS:** *International Study, Principle, Knowledge Level, Skills, Reading Literacy, Learning Reading, Pretext And Post – Text Stages.*

### INTRODUCTION

Decree of the President of the Republic of Uzbekistan Shavkat Mirziyoyev, "On approval of the concept of development of the public education system of the Republic of Uzbekistan till 2030", dated 29 April 2019 the main directions of development of the public education system in the long term, particularly the entry of the Republic by 2030, the number of the first 30 leading countries in the rating of the program student assessment of the International level PIRLS is an assessment of the level and quality of reading and text comprehension students elementary schools, PISA — assessment of mathematical literacy, reading and science literacy of 15-16-year-old students, TIMSS-assessment of mathematical and science literacy of students in grades 4 and 8.

As early as 2021, Uzbekistan plans to participate in international programs to assess the level of knowledge of students in PISA and PIRLS.

So what is PIRLS? What are the principles of PIRLS? What contributes to improving the quality of reading and understanding of the text by students and achieving high results?

The PIRLS international study of reading and comprehension compares the level and quality of reading and comprehension of primary school students in different countries of the world, as well as identifying differences in national education systems. The study has been conducted in five-year cycles since 2001, with participation from 35 to 50 countries.

The study examines two types of reading:

- Reading for the purpose of acquiring a reader's literary experience;
- Reading for the purpose of mastering and using information.

PIRLS tasks are aimed at testing four skills: the ability to find information, formulate conclusions, interpret and generalize what is read, as well as analyze and evaluate the content, language features and structure of the text.

Students need to read the text and give answers to questions. At the same time, some tasks involve choosing an answer from the proposed options, while others require freely constructed responses.

In order to improve the level of reading literacy and the ability to work with text, it is necessary to develop a culture of reading, in particular, such a type of reading as learning reading.

Reading, which was previously given little importance in the system of teaching Russian as a non-native language, has gradually become one of the important aspects of learning, and today it is not only one of the means of learning, which serves for entering new words into the student's vocabulary, but also a starting point for a variety of statements of a dialogical and monological nature. Reading has become a source of new intellectual and aesthetic information, a real form of using the acquired language competence.

As a type of speech activity, reading has its own specific communicative tasks that must be solved first of all when the object of work is learning to read. Such a communicative task in reading is to understand what is being read. It is not enough to simply ask students to open a book on the right page, read the material, and answer the question. This will lead to a lack of the necessary result and a senseless loss of time in the lesson. For reading to become productive, students must take an active position, performing various mental operations.

Learning reading is the most detailed type of reading. The purpose of this type is not just a thorough study, but also insight into the meaning of the text, a detailed analysis of the text. The final result is aimed at understanding all levels of the text, as well as the perception of various information contained in the text (factual, conceptual and subtext).

Let's look at the techniques of working with text that are used for learning reading. Preliminary oral work should not affect the content of the text, students should get acquainted with it during reading. At the end of reading the text, the object of control should be its understanding. At the same time, the comprehension test should be organized so that it does not destroy the necessary

skills in the process of reading. Students must learn to understand the text themselves, so the first reading of the text should be done by the students themselves.

It is not advisable to repeatedly read the same text, since if the content of the text is clear, then reading is deprived of its communicative value and becomes an exercise. Repeated reading of the text is justified if it is aimed at clarifying the understanding, i.e. if the communicative task is modified.

Preliminary questions are saved until the end of the work on the text. The understanding test should not be limited to just answering these questions. Questions can be asked by one of the stronger students, which other students answer. You should especially encourage the response with your own words.

Teaching a learner to read in a non-native language consists of three stages: pre-text, text, and post-text.

The pre-text stage involves familiarizing yourself with lexical units that may cause difficulties, as well as predicting the content of the text. Exercises for the pre-text stage:

- correlating the meaning of a word with the subject: filling in gaps in a sentence from a number of suggested words;
- • expansion of potential vocabulary of students: preview the text and find words of common root;
- • recognition of the meaning of grammatical phenomena: highlighting certain parts of speech and their selective translation;
- \* predicting language tools and text content: reading aloud only those parts of sentences that answer the teacher's question.
- The text stage involves reading the text and working on its lexical and grammatical material. Exercises for the text-mode portion:
  - \* reading text and highlighting key sentences and words in it;
  - \* text comprehension control: identifying correct and incorrect statements; answering questions;
  - \* highlight the main parts of the text;
  - \* correlating individual parts of the text: reading certain paragraphs to confirm the facts;
  - • reduction or paraphrase of the text: the replacement of the proposals is synonymous with speed;
  - • Selective translation of the text.
- The post-text stage is necessary for improving the skills of monologue and Dialogic speech. Exercises for the post-text stage:
  - \* determining the cognitive value of reading: comments on certain parts of the text;
  - \* development of skills of monological and dialogical speech based on the text: create a dialogue or situation on the topic of the text, logical and semantic maps of the problem;
  - • writing an abstract, summary of the text;
  - \* drawing up a plan or graphic diagram that will help you identify the structure of the text, as well as the relationship of its individual parts;

- \* text processing, creating a new text based on what you read;
- \* making comments.

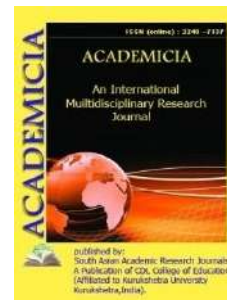
These methods of working with text are the main ones, but they are not the only ones. Their use is largely determined by the experience of the teacher, his desire to work creatively and look for new effective ways to solve problems in the classroom. The choice of certain techniques also depends on the level of preparation of students and their educational motivation.

It should be remembered that learning to read is an important task facing the school. The attention paid to improving the culture of reading is an important factor in the education of young people with deep knowledge, independent thinking and high spirituality. "It is necessary to introduce our children to reading from kindergarten age, primary classes, to educate them to love the book. Only then will the reader's culture be established in our society and people will return to the book," President of Uzbekistan Sh.M.Mirziyoyev repeatedly emphasizes.

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DOI: **10.5958/2249-7137.2020.00639.4**

## AR AND VR TECHNOLOGIES AS THE FUTURE OF COMMERCIALS

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### ABSTRACT

*The research paper discusses the prospects for the application of AR and VR technologies in trade. The methods of using auxiliary and virtual reality technologies have been studied and analyzed on the basis of world experience. The use of auxiliary and virtual reality technologies has been studied and analyzed on the basis of world experience*

**KEYWORDS:** *Gemification, AR, VR, Advertisement, Distance Shopping.*

### INTRODUCTION

Digitalization is one of the most far-reaching transformation processes in the recent past. Famous as “New age technologies” AR and VR is being utilized throughout numerous industries, marketing is not only one of them but also the one promising prosperous future. Currently, many marketer are encountering problems concerning the issue of making attention grabbing and captivating commercials which will work as an effective driving force for making new purchase. Especially, in the world where people always strive to more convenience the attitude to advertisements are required to be changed, the distort of their function has badly affected and eventually created a wrong conception that advertisements are deceptive and convey misleading information in order to sell a certain product. Today, Ar and Vr digital appliances can be utilized as a powerful solution to existing matters. As the technology will undergo further development, without any hesitation it can be stated that the demand for these appliances will increase drastically over the years and use cases will widen continuously and have a great contribution to business development. It is predicted that, to the end of 2020 total Ar/Vr worldwide spending will comprise 18.8 billion U.S dollars[1]

## Methods

Scientific analysis, analysis and synthesis, induction and deduction, systematic approach, logical methods of analysis and methods of scientific organization of the result were used based on the sum of specific methods of cognition.

New technologies continue to contribute to the rapid transformation of the way we do business. AR-augmented reality and VR-virtual reality, the technologies of the digital economy, are expected to lead to major changes in the field of commerce. Although, the first attempts to create a non-existent reality began in the early 1960s, this term came into use in the late 1980s. These digital technologies, which are now widely known through video games, have a number of useful features that we need to study in depth and use effectively. A unique feature of VR is its comprehensiveness. Via a short travel to a virtual reality the things or situations complex to describe in words and cannot be shown in a real life will be experienced, seen, felt by mankind. This feature allows to deepen education, reduce unnecessary cost risks in production, will be the elimination of endanger human life in research purposes, and in trade- to attract customers purchase goods in a more attractive/modern way, to produce goods by making decisions according to consumer perspective.

The role of VR and AR technologies in streamlining the sales process and meeting customer needs is invaluable. They create a number of conveniences. Including:

- ❖ Opportunity to shop regardless of time and place
- ❖ Availability of the result which demonstrates result of entire list of demand-meeting goods, when comparing the quality and price of the product with other products
- ❖ Automatic analysis of the composition of the product and, as a result, avoid purchases of goods that are harmful to our health
- ❖ Plain and understandable appearance of customer feedbacks about the product (represented by symbols, asterisks)
- ❖ Shelf life of the product, the accuracy of information about its composition
- ❖ When you say a certain type of food when shopping, the list of necessary products will be instantly presented to us in a hologram version
- ❖ The purchase process does not take much time (going to the point of sale, queuing, searching for the desired product, reading the market information about the product, searching for consumer feedback on the product on the Internet)
- ❖ The buyer can get acquainted with the products that he thinks are not enough Maximum satisfaction of needs, minimize the likelihood of losing customers by buying the goods that are acceptable to them.

It is natural that the digitalization of product advertising will definitely move producer's focus on improving its quality rather than working on products' outer look. By means of digital technology, we can understand the composition of the product, the level of its affordability, the opinion of consumers about this product. So, it can be argued that AR and VR are one of the tools we use to achieve our targets. It should be emphasized that, in our fast-paced society, the demand for automation of all activities is growing over time. Long queues when we go to the

may have a direct effect on delaying their activities in either personal or social life by taking time. Obtaining new, modern home appliances can be a daunting task in our daily lives. We need to have a strong imagination to realize that the color and style of our chosen furniture does match and is suitable for the interior of the room. AR technology has taken to the world stage as a solution to this problem. Now, when choosing any home appliance, we have the opportunity to assess whether any furniture in front of us is suitable or not for our interior by using AR.

IKEA has secured the future of its business in an innovative way by presenting this form of offer to the public. Another example, when we analyze the process of buying a dress, it takes a little time for a person to choose a dress model in the style one wants that suits him. Digital AR technology not only accelerates the process, but also significantly simplifies it. Moreover, one doesn't need a lot of expensive equipment to use AR technology, just a mobile device like tablets and touch screen phones is enough. Timberland is using this low-cost technology to promote its new season clothing.

Experts from the Bureau of Economic Analysis and Euro monitor estimated the home appliance market at \$ 180 billion and the clothing market at \$ 260 billion. [2]

As a modern technology AR is earning interest of many, it serves to create new customers and increase the level of purchases by making the shopping process more interesting. Because AR has a gamification attribute, one perceives the purchasing process as an inclusive game, and the process does not evoke aggression in person as it used to do, but leaves a positive impression and motivates the purchase of the product. Bill Bernbach, who has studied advertising sphere in depth and gained the peak of his fame by working in this field, said, "Nobody counts the number of ads you run; they just remember the impression you make". VR and AR technologies, on the other hand, give the result that experts expected. This is because now the potential buyer not only observes but also participates in the advertising process. Another widely used advertising tool is social media. Suppose an entrepreneur has won the attention of a client using AR, a client who has witnessed a miracle of new technology will definitely be eager to share their impressions with their friends through social networks, who are aware of the possibilities of AR people will want to know it in their own experiences. This means that the entrepreneur will get the desired result. Beavers Brothers uses AR to please its customers as a New Year's gift. It is estimated that the number of people who have downloaded augmented reality applications will reach half a billion by 2022, and currently the number of users of AR is 900 million. [3] Under the Toms shoes brand, the shoe company has accelerated the sale of its products with its new approach. It uses virtual reality to show customers who will benefit from each their purchase.

Virtual reality is a bit different from augmented reality. Because of its inclusiveness and interactivity, technology devices are also more expensive. According to statistics, 7 out of 10 advertising professionals want to use AR to attract consumers, and 71% of buyers want to know by experiencing how AR is used in sales. [4] Gigi Capital estimates that the size of the AR market could reach \$ 90 billion by 2020, up from \$ 1 billion in 2016. Goldman Sachs predicts that sales of virtual reality software will reach \$ 9 billion by 2025. [5] In short, digital technologies, which have completely changed our outlook for the future, are important in the reform and development of trade, one of the most important sectors of the economy. is an important factor in the production of competitive, high-quality and world-class goods.

**CONCLUSION**

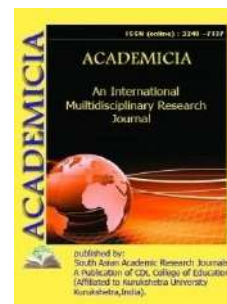
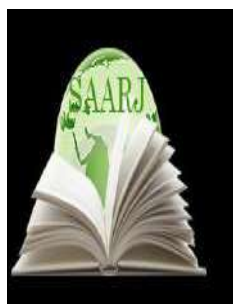
To sum up, to business and policy markets, the engaging questions about how to appeal consumers attention or getting rid of banal and conservative adds, how to make permanent clients by creating for them an appropriate atmosphere, produce customer friendly products which in fact assures making revenue have found resolution named Digital AR and VR technologies.

**ACKNOWLEDGEMENT**

I am profoundly indebted to the chair of my research committee, doctor of science Berdiyorov.B and Pedagogue Ibragimova. G, for their guidance in bringing focus to my scientific article and their painstaking efforts in going through my several drafts.

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DOI: **10.5958/2249-7137.2020.00640.0**

## RELATIONSHIP BETWEEN PENALTY AND GUILT IN CIVIL-LEGAL LIABILITY (EXPERIENCE OF UZBEKISTAN)

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### ABSTRACT

*This article highlights the role of penalty in the civil legislation of the Republic of Uzbekistan as a method of enforcement and a form of civil liability on a scientific basis. It also examines the views of lawyers from national and foreign countries, analyzes the composition of civil offenses, the relationship between penalty and guilt, guilt and its forms. Particular emphasis was placed on improving the institution of civil liability, including ensuring a fair procedure for compensation. In addition, proposals were made to improve the application of penalties for non-performance or inadequate performance of contractual obligations by business entities, as well as to ensure the fulfillment of obligations.*

**KEYWORDS:** *Contract, Obligation, Creditor, Debtor, Liability, Guilt, Damage, Liquidated Damages, Fine, Money, Property, Payment For Breaking The Promise*

### INTRODUCTION

The civil legislation of the Republic of Uzbekistan stipulates penalty as the amount of money established by the legislation or the contract, which the debtor is obliged to pay to the creditor in case of non-performance or improper performance of the obligation.

Penalty is a way to ensure the fulfillment of obligations and a form of civil liability.

Civil liability has the features of prevention and compensation, in contrast to the types of liability that are only of preventive nature (prevention, warning).

In order to increase the effectiveness of the application of measures related to the property interests of the offender, the liability must be inevitable and assigned to specific individuals who have affected the condition of the objects.

The basis of liability consists of such components as illegal action, damage caused, the causal link between them and the subjective factor - the guilt. [1]

Civil liability arises when the conditions specified in the law exist. These conditions constitute the content of the offense and serve as a basis for prosecution. These are: 1) the presence of damage; 2) unlawful conduct; 3) the causal link between unlawful behavior and harm; 4) the presence of guilt.

Entrepreneurs (citizens, legal entities) are interested in the conscious and voluntary fulfillment of their obligations. This is because entrepreneurs seek to make a profit under the risk they take and their property liability[2].

However, some business entities do not fulfill the terms of the contract, allowing the breach of obligations without due diligence.

This means that civil liability is the main tool in ensuring the fulfillment of contractual obligations[3].

The Civil Code of the Republic of Uzbekistan (Part 1 of Article 333)(hereinafter - the RFRC) states that "The debtor is shall be liable (if s/he is guilty) for non-performance or improper performance of the obligation, unless otherwise provided by the legislation or the contract"[4].

The presence of guilt is one of the grounds for the application of civil liability.

In civil law, the principle of guilt is cited as the basis for liability for unlawful acts. This principle is the basis of contractual and civil-legal liability (under guilt).

Measures of civil liability are aimed at preventing civil offenses, while ensuring the realization of the property interests of the parties.

Liability sanctions can intimidate, endanger, and impede the initiative required for entrepreneurial activity by individuals who are not fully aware of the regulations.

To do this, there must be a firm belief that it is not possible to impose liability on those who carry out business activities, even in unavoidable circumstances. In this regard, Article 333, Part 2 of the Code of Criminal Procedure of the Republic of Uzbekistan stipulates that "if the debtor proves that he has taken all necessary measures to properly perform the obligation, he shall be found not guilty"[5].

The principle of guilt determines the basis of civil liability arising from contractual and non-contractual relations. After all, guilt is the mental attitude of the perpetrator of a civil offense in the form of a malicious intent or negligence towards his illegal actions and their harmful consequences[6].

Regarding the concept of guilt, some scholars argue that "the malicious intent or negligence of a person who has committed an unlawful act and harmed another by his actions cannot be called a guilt in civil law, ... guilt is a certain attitude of a person towards his own illegal morality" [7].

There is also the existence of innocent liability in cases provided for by law or contract [8].

If the party who caused damage to a person or property outside the contract can prove that the damage was not caused by his own fault, then he is released from the obligation to pay damages.



Historically, many states, based on the traditions of Roman law, have recognized the possibility of recovering the difference between the actual damage and the prescribed penalty, if the amount of the penalty is less than the amount of damage[9].

In case of non-performance or improper performance of contractual obligations, the creditor requires the debtor to pay the penalties provided for in the contract or the law, or to compensate for the damage caused by non-performance of the contract.

If the debtor fails to prove his guilt in the breach of obligations, he shall be liable in the manner and to the extent provided for in the contract or law.

The scientific literature has shown that if the breach of contract by the debtor is caused by gross negligence, the damage can be fully compensated[10].

This means that the debtor is given the right to deny guilt and the debtor is liable only if there is guilt for his actions.

Regardless of the form of guilt (intentional or negligent), there is liability: the prescribed penalty is recovered, the damage is compensated.

But in some cases, the law exempts the debtor from liability if there is a non-serious negligence in his actions.

For example, Article 889 of the RFRC, which deals with the liability of the depositor, states that “If the stored thing is not taken back by the depositor after the expiration of the storage period provided for by the contract, or the period during which the depositor was obliged to take the thing back at the request of the custodian, then the custodian will only be liable for the loss, shortage or damage of this thing if s/he did it with intent or gross negligence”[11].

This means that the depositor is released from liability if s/he proves that s/he did not act intentionally or did not commit gross negligence due to the fact that the item was missing or damaged, that is, he was not guilty of causing the item to fall into such a state.

It is important for the practice that the task of proving innocence is assigned to the debtor. However, according to Article 414 of the Civil Code of Uzbekistan of 1963, the creditor was obliged to prove the guilt of the debtor[12].

The transport charters provide for the consignee or consignor to prove the guilt of the carrier for the loss, shortage and damage of the cargo. According to Article 721 of the RFCC, the burden of proving innocence rests with the carrier (the debtor). This rule is aimed at increasing the responsibility of the transport organization for the carriage of goods, to ensure the strict implementation of its obligations.

As a general rule, if the obligation is not performed due to the event of force majeure, the debtor is not required to prove his innocence, but there are exceptions to the general rule of liability under the law and the contract, taking into account the characteristics of certain types of obligations.

For example, Article 333, paragraph 3, of the RFRC stipulates that “unless otherwise provided by law or contract, a person who fails to perform or improperly performs an obligation in the course of entrepreneurial activity fails to prove that it was not possible due to emergency (unavoidable circumstances, force majeure), s/he shall be subject to liability.

In accordance with Article 241 of the RFRC, the performance of the obligation may be entrusted to a third party. The party to the contract shall be liable for the non-performance of the obligation, unless the legislation or the contract provides for the liability of a third party. Article 334 of the RFRC also provides for the liability of a contract party (debtor) for the actions of a third party, ie the fault for non-performance of an obligation. In accordance with the principles of general civil liability established by Articles 333, 334 of this Code, in order to release the debtor from liability, the debtor must prove his innocence, as well as the third party who imposed the obligation.

The guilt of the creditor in the non-performance of the obligation shall definitely be taken into account. According to Article 335 of the RFRC, the debtor may be released from some part of the liability if the creditor is also at fault for non-performance of the obligation. To do this, the court must compare the guilt of the debtor and the creditor in accordance with Article 326 of the RFCC and may reduce the amount or penalty required to compensate the damage caused by the debtor. It does not matter what form the creditor's guilt takes to minimize the debtor's liability.

If damage may be caused to the creditor due to non-performance of the obligation, the creditor shall take all measures aimed at preventing this damage and taking all necessary measures to reduce it. If the creditor does not take such measures or does not try to reduce it, neglects the matter and as a result of the damage, it is considered his fault in the occurrence of such consequences and the debtor may be released from the appropriate amount of fees paid to the creditor. If the creditor has intentionally allowed an increase in damages, he will also be deprived of the right to claim damages from the debtor.

The concept of guilt has the same meaning for individuals and legal entities. The guilt of a legal entity is manifested through the attitude of employees towards the performance of their duties and the criminal actions committed by them. This is because the actions of the employees of the enterprise are considered to be the actions of the legal entity. For example, the production of substandard goods through the fault of the employees of a legal entity is the fault of that legal entity. The fault of a commercial organization that did not deliver the goods on time due to lack of manpower or equipment is considered to be the fault of the manager who failed to prevent the timely elimination of these defects.

In the past, the state was interested in compensating for the damage caused, whether or not the parties to the obligation were at fault, and was compelled to do so by law. Because the enterprises that were the parties to the obligation belonged to the state. For this reason, the following idea (said in the literature) was expedient in the interests of the state, "it was recognized as an obligation to pay damages regardless of the presence or absence of guilt. Business entities face the same consequences (in terms of quantity) for non-fulfillment of obligations, as well as in the absence of fault, compensation was recognized as an obligation, whether or not there was a fault" [13].

In a market economy and with the formation of private property rights, such ideas have lost their relevance. Now, guilt has found its place in the legislation as an important principle of civil liability.

As noted in the Decree of the President of the Republic of Uzbekistan No F-5464 "On measures to improve the civil legislation of the Republic of Uzbekistan" (dated April 5, 2019), "the Civil Code of the Republic of Uzbekistan adopted in 1995-1996 has played an important role in

regulation of ‘wide range of changes in related social relations’ and created a solid legal basis for the development of a market economy in the country” [14].

But today, when the quality is constantly changing, the primary task is to fully ensure the rights and legitimate interests of entrepreneurs and private owners, potential foreign investors. In this sense, this Decree was a serious step towards the modernization of civil legislation in accordance with the principles of a market economy and international standards, further deepening economic reforms in the country and creating a modern civil law framework for the development of a market economy: development and adoption of a new edition of the Civil Code.

The new code should serve to reduce the state’s participation in the economy, define what property is, who owns it, its title rights, methods and means of protecting private property, improve the business environment and investment climate in the country, and ultimately increase the country’s position in international rankings. Importantly, emphasis is placed on improving the institution of civil liability, including ensuring a fair procedure for damages.

This can also be seen from the fact that the penalty approach in English law was first formed within the framework of the law of justice[15].

Over the years, the RFCA was adopted on December 21, 1995 (first part), August 29, 1996 (second part), aimed at the formation of market relations based on different forms of ownership, and both parts entered into force simultaneously - from March 1, 1997.

The Code consisted of 2 parts, 6 sections, 71 chapters, the number of articles was originally 1199 articles. At present it has 1191 articles.

To date (as of June 1, 2020), a total of about 200 amendments and additions have been made to the Civil Code, which has been in force for more than 23 years.

Based on the abovementioned, we will focus on some aspects that need to be improved in the code and in the field of concerned relations.

In the application of civil liability for an offense, it serves as the basis for the offender’s guilt, regardless of whether it arises from a contractual relationship or a tort relationship. However, civil law, unlike criminal law, does not define the concept of guilt. Although the scientific literature states that guilt exists in civil law in the form of intent, negligence, and gross negligence[16], they have not been thoroughly substantiated. In this case, it would be appropriate to define guilt and its forms in the first part of the RFCC, in the subsection “Basic provisions”.

This requires a special approach to negligence, even if the form of “intent” is determined by the Criminal Code of the Republic of Uzbekistan. Negligence can be defined as an act (action or omission) that results in socially dangerous consequences due to negligence, negligence or unreasonable attitude of the subjects of civil law to their obligations, observance of the legitimate rights and interests of others. If we take into account that environmental offenses are usually committed by negligence, then strengthening the concept of negligence in law will serve to properly assess such offenses and apply fair liability measures.

**Based on scientific research and international experience, the following suggestions for improving civil legislation can be made. In particular,**

The penalty is a monetary obligation; besides it also can be unclaimed items (property). For example, in English law, a pre-assessed loss can be expressed both as money and property [17]; it is not the duty of the court to reduce the amount of the penalty, it is necessary to clearly define the proportionality and the minimum limit of losses on commercial obligations and the penalty; in accordance with the technique of national legislation and the spirit of contracts concluded in today's market economy, it is expedient to replace the word "penalty" in Articles 260, 261, 262 and 326 of the RFCC with the word "payment for breaking the promise" and the word "fine" with "payment for guilt";

- the accountable, alternative and absolute penalty, by its very nature, serves to cover damages and can not be considered as a separate measure of property liability;
- since it is not always possible to accurately determine the extent of property liability of participants in commercial contracts, the ratio of penalties and losses should be clearly defined by law;
- It should be specified in the RFCC that the limitation of action (suit, claim) on the recovery of penalty begins from the moment of non-performance or improper performance or damage of the contract, the limitation of action (suit, claim) on the recovery of penalty can not be suspended or extended, except in cases of force majeure;
- Article 262 (related to the form of the agreement on penalty) of the RFCC should be supplemented with parts 2 and part 3, as follows:

"The origin of the penalty liability, the form of the penalty recovery and the procedure for calculating it can be determined in the Penalty Agreement itself or by reference to a specific normative document.

Failure to comply with the written form of the Penalty Agreement will invalidate the agreement". In addition, the spread of coronavirus infection around the world, the collapse of the dam "Sardoba Reservoir" in Sardoba district show that there are many gaps in our legislation to compensate for the damage caused by mentioned disasters for the farmers and cooperatives.

Therefore, it is necessary to include a separate article in paragraph 5 of the Civil Code entitled "liability for the grower of agricultural products", which states that "the producer of agricultural products is liable in case of non-performance or improper performance of economic obligations".

As a general rule, civil liability arises for contractual and non-contractual obligations, but in some cases provided by law, liability for damages to a citizen or legal entity occurs throughout the entire system of civil law. These include: general disaster, requisition, damage caused by the seizure of land for the needs of the state and society, compensation for damage in case of absolute necessity. They must be distinguished from illegal behavior.

The conclusion is that in the renewed Uzbekistan, civil legislation continues to develop, taking into account the norms of international law and national features.

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DOI: **10.5958/2249-7137.2020.00641.2**

## STUDY OF THE LEXICON OF UZBEK FOLK EPICS

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### ABSTRACT

*The article describes the scientific study of the artistic language in Turkology, in particular, Uzbek linguistics, as well as the lexicon of the Uzbek folk epos and ideas about what aspects of the language they are aimed at. In the section on statistics, the evidence shows which groups more than 470 names belong to according to the nature of their meaning, how many names correspond to each epic contribution and in which epics each name is repeated. The author conducted his scientific observations on the basis of six epics of Jumanbulbul's son. It provides interesting information about some of the compound words used in these epics, mainly double and repeated words, and some grammatical forms that are not currently used.*

**KEYWORDS:** *Composition, Art, Oral, Written, Speech, Style, Vocabulary, Feature, Form, Content, Language, Dialect, Literary, Epic, Research, Analysis, Genesis.*

### INTRODUCTION

The issue of learning the language of fiction has long been controversial. Some researchers note the need to study the artistic language as a methodological field of literature and linguistics [1].

The essence of studying the language tools used in a fiction depends on the nature of the purpose for which this study is intended. The researcher can conduct his research in different directions in accordance with his purpose and desire. For instance, a linguist can focus linguistic facts on the historical aspect of language, a stylist can use them to determine the stylistic features of the artistic discourse of that period, and it is quite natural for someone to subordinate linguistic means in a specific work to clarify which dialect of a literary language. From this it should be concluded that the language tools used in a fiction may serve a different purpose.



## MATERIALS AND METHODS

In Uzbek linguistics, there are a number of scientific studies on the lexicon of Uzbek folk epics, which can be divided into certain groups in terms of what aspects of the language they are aimed at:

### **The study of the relationship of lexical material with a dialect and a literary language**

One of the linguists, H. Doniyorov, in his large monograph "Dictionary of Kypchak dialects", not claiming superiority, took the region of Kypchak dialects, the city of Samarkand, as a focal point and divided it into five groups: eastern, western Ferghana, southern and northern Khorezm. According to H. Doniyorov, the fifth group of people is characterized by the presence of Oguz elements in their speech[2]. In this paper, the question was developed about the relation of the language of epics to the Kypchak dialects. The bakhshis from Khorezm, as H. Doniyorov points out, "... continue to create in the common or inter-dialectal oral form of the language, they create oral literary works[3]." Khorezm bakhshi sings an epic for a certain period of time at night. This requires great skills and abilities from a bakhshi.

Khorezm epics reflected not only inter-ethnic literary relations, but also inter-linguistic relations. Accordingly, the epics in their lexical structure also to some extent reflect the peculiarities of the local languages of the region.

In Uzbek linguistics there are observations directly devoted to the lexicon of epics, including A. Ishaev's short article entitled "Some Features of the Lexics of Epics". In it, the author urges to pay special attention to an important point in the study of the language of epics: "... when studying the language of epics, indeed, it is necessary to take into account where and by whom they were written, the literary skill and linguistic talent of the bakhshi, and how the work was prepared for publication[4]." The author conducted his scientific observations on the basis of six epics of Jumanbulbul's son. It provides interesting information about some of the compound words used in these epics, mainly double and repeated words, and some grammatical forms that are not currently used.

### **Research with a complex approach to lexical material analysis**

Among the scientific observations on the lexicon of epics, D. Abdurahmanov and H. Bektemirov's article "Onomastics of Uzbek folk epics" is noteworthy in that it covers a wide range of issues related to the onomastics of epics[5]. The authors did this on the example of twelve epics. A certain part of the work is devoted to the statistics of the proper names used in the epics, and to the repeated names in them. In the section on statistics, the evidence shows which groups more than 470 names belong to according to the nature of their meaning, how many names correspond to each epic contribution and in which epics each name is repeated. Part of the work is devoted to aspects related to parallel names, nicknames, ethnonyms, proper names, naming rituals. In the last part of the work, the authors discuss the lexical-semantic features of the onomastics of epics. They noted that it is not enough to interpret the language of epics on the basis of a single dialect material: "Uzbek folk epics contain not only very old information on history, ethnography and geography, but also ancient traditional linguistic facts, which cannot be interpreted on the basis of modern Uzbek dialects and Uzbek language [6]."

Among the works that have taken place in recent years, it is worth noting the observations of S. Tursunov. The author has published a number of articles, such as "On the study of the lexicon of

the epic Alpomish"[7], "Anthroponyms in the language of Alpomish"[8], "On the study of lexical and phraseological features of the epic" Alpomish"[9], "Synonyms in the epic "Alpomish"[10]. As a generalization of these observations, S. Tursunov defended his dissertation on the topic "Lexical Features of the Alpomish Epic", in the third chapter, which describes the functional and methodological features of the vocabulary of the Alpomish epic, there are three parts and each of them has its own name: a) literary-poetic lexicon, b) folk-poetic lexicon, c) folk poetic aphorisms[11].

Although the examples in this chapter emphasize that the events in the epic are related to the past of individuals, such connections have not been thoroughly analyzed with clear evidence. The examples included in the thematic groups consisted only of registration of facts. Another work related to our topic belongs to Z.T. Kholmanova[12]. In the first chapter of the work, as well as in works devoted to the language of folklore, words are genetically described that are divided into groups according to the number of uses, high, medium and low lexemes. The second chapter is devoted to thematic groups of epic lexicons that describe anthroponyms, toponyms, ethnonyms, astronomy, military terms, words related to everyday life, words related to the profession.

The third chapter of the dissertation is devoted to the analysis of the relationship between the form and content of epic vocabulary. It examines the ambiguous, synonymous, antonymic, homonymous words found in the text of the epic. In addition, the study makes extensive use of statistics. This dissertation is valuable in terms of showing the connection of the vocabulary of the epic with the language of the literary language, dialects, written historical memoirs.

In our opinion, since the author of the study did not set the goal of functional analysis of the lexicon of epics, it does not cover the nominative-descriptive and artistic-methodological function of lexical units.

### **Research on the poetics of epics**

Most of the research on the language of epics belongs to Sh. Shoabdurahmanov[13], of which are mainly of an article nature. They are distinguished by their originality, richness in the analysis of factual materials. In this regard, the author's observations on the language of the epic "Ravshan" are particularly noteworthy. The research begins with observations on the structure of the syllables of the epic and provides extensive information the system of rhymes, the peculiarities of the use of figurative words, adjectives, analogies, metaphors, metonymy, irony, rhetoric, syntactic imagery, phonetic imagery. At the end of the work, both the lexical and some grammatical features of the epic are briefly discussed[14]. This work is one of the perfect studies of the poetics of folk epics done to date.

### **RESULT AND DISCUSSION**

In this regard, it is worth mentioning the work on the language of epics in the linguistics of fraternal peoples. In Kazakh linguistics, J. Bayzakov's work can be mentioned among the works devoted to the linguistic features of the epic [15]. In the introductory part of this work, the author dwells on the issue of magic. The genesis of the concept of the "seven perfect saint" gives an idea of the need to go through the "chilla" "period seven times - forty days - in order to master the art of magic. Then it is reported that the epic "Alpomish" is widespread among the population of South Kazakhstan, and the Uzbek language has influence on its language, but the question of the

influence of the Uzbek language is not supported by evidence. The study consists of three chapters, the first of which focuses on the artistic features of the epic "Alpomish" on the example of lexical units, which focuses on the use of epithets, analogies, metaphors, metonymy, phrases, repetitions, pairs of words, syntactic parallels, and synonyms.

The second chapter of the work discusses the analysis of historical words and dialectisms found in the lexicon of the epic. Here a broader understanding of the shortening properties of words is given. The third chapter analyzes the borrowed words from Arabic, Persian, Mongolian, in part, Uzbek, Uyghur, Karakalpak languages in the epic. One of the works in Turkmen linguistics devoted to the linguistic features of the epic is E. Chorieva's work on "Language features of the epic" Gul Sanobar "[16]. The author has a complex approach to revealing the linguistic features of the epic. It analyzes the lexical, phonetic, morphological and syntactic features of this epic. The first chapter of the work is devoted to the lexical features of the epic. This section describes the spiritual differences of lexical units used in the epic from the units of modern Turkmen, synonymous, homonymous relations of lexical units, as well as the artistic means of the epic, such as analogy, metaphor. Indeed, a comprehensive approach to the linguistic features of the epic did not allow for a full and perfect coverage of the lexical features.

In addition, there are studies on the language of folklore of a small genre, in which the work of F. Khayitova is one of the first researches[17]. First chapter of the study, which studies the role of words in the language of wedding songs, the role of dialectal lexicon, the use of artistic means in the realization of certain semantic motives, the methodological features of repetitive words in the language of songs are directly related to our work.

Another work on the lexicon of folk songs belongs to M. Djumaniyazova, the first chapter analyzes the lexical layers of songs[18]. The second chapter of the dissertation discusses the specific lexical and spiritual features of the language of songs. In this work, mainly the regional-stylistic peculiarities of the songs created in the South Khorezm region, their relation to the past and the local dialect, the literary language are identified.

Thus, some research has been conducted in Turkology, including Uzbek linguistics, on the study of the lexicon of epics, which is an independent genre of folklore. Some of the works only mention the lexical means of epics, and some of them were completely devoted to the vocabulary of epics. Based on the above analysis, it can be said that a certain amount of experience has been accumulated in the study of the lexicon of epics. However, the main part of the work done in them is not devoted to the whole problem, but to some aspects of the lexicon of epics.

Much of this work is in the nature of articles, and there has not yet been a fundamental study of the complex approach to the language of folklore. Even if the work on a single epic lexicon is carried out, there is still no reason to say that it fully reflects all aspects, stylistic and poetic features of the lexicon of many Uzbek folk epics. This is because if the features identified on the basis of observations made on the scale of one epic are not compared with the same issues in other epics, the specific style and general aspects of the epic performer with other performers will not be revealed. According to this, it is still necessary to continue the study of the lexical features of the epics belonging to the repertoire of epic performers belonging to different schools of epic poetry.

We hope that our scientific research on the lexicon of the epics "Khirmondali" and "Forty Thousands", which are included in the repertoire of the poets of North Khorezm, also made a

modest contribution to the development of large monographs on the lexicon of many other Uzbek folk epics.

There are certain shortcomings in the lexical-semantic, and functional-methodological aspects of epic lexicon: when words are analyzed in thematic, genetic groups, often these analyzes are not related to the subject of the epic, their image-making service, the past of the epic heroes, events in the epic. Such analyzes are no different from pure linguistic research, as if they had nothing to do with epic events, with the behavior of individuals. However, the epic is an oral form of artistic discourse. The lexical means used in it are directly and indirectly related to its imagery, art.

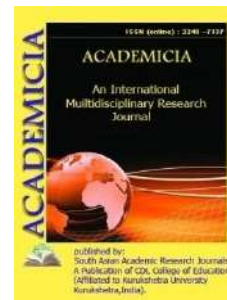
## CONCLUSION

From the above notes, it can be seen that the research on the lexicon of epics in Uzbek linguistics has been devoted to describing the stable state of the lexical structure of epics, with the exception of the work of Sh. Shoabdurahmanov. According to this, in our research we aimed to show the lexicon in action - dynamics, and accordingly tried to show them in the nominative-descriptive and artistic-methodological function.

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DOI: **10.5958/2249-7137.2020.00642.4**

## THE IMPACT OF THE CYTOKINE IMBALANCE ON ANGINA DESTABILIZATION IN WOMEN OF DIFFERENT AGE CATEGORIES

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### ABSTRACT

*The latest data from the World Health Organization show that cardiovascular diseases have increased dramatically among female patients and in recent years have increased by 0.1-1% at the age of 45-54 years and by 10-15% at the age of 65-74 years. It is believed that depressive manifestations are detected more often in women than in men. The study included 307 patients diagnosed with unstable angina. The average age of patients was  $69.4 \pm 8.9$  years. The women were conditionally divided into 2 groups: The 1st group was made up of women younger than 60 years old (187), the 2nd group was made up of women older than 60 years old (120). Thus, women with anxiety disorders are susceptible to frequent angion attacks, which are not always covered by nitrates and the duration of treatment of these patients requires longer correction.*

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*Patients with anxiety disorder have frequent cases of cytokine balance disorder and cases of IL-10 819 C/T polymorphism.*

**KEYWORDS:** *Cytokine Imbalance, Women, Destabilization, Angina Pectoris, IL-10 C/T Gene.*

## INTRODUCTION

Recent data from the World Health Organization shows that cardiovascular diseases have increased dramatically among female patients and have increased by 0.1-1% in recent years at ages 45-54 and 10-15% at ages 65-74.

It is believed that depressive manifestations are detected more frequently in women than in men against the background of stress. It is believed that women are more likely to be depressed. The authors attribute it to neuroendocrine features in women.

Data from various studies show that the incidence of depression in older age groups is between 9 and 30% (1, P.21-23; 3, P.61-68; 4, P.41-43). In particular, depression is more prevalent among patients with coronary heart disease (CHD) than in the population, with different data showing 18-65% depression [5, P.278; 6, P.209; 10, P. 192-203]. Different studies highlight several important risk factors for mood disorders in somatic diseases. One of the important risk factors for anxiety-depressive disorder is immune inflammation, as recent studies have shown, does not rule out the role of immune inflammation in the emergence and progression of affective disorders of the anxiety-depressive spectrum in CHD. The association of ILI with anxiety disorders has been increasing in recent years and increases the mortality rate of such patients by a factor of 2-4. This phenomenon is clearly illustrated by the development of the so-called "cytokine" hypothesis of depression [2, P. 19; 8; 9, P.136-138], which states the effect of pro-inflammatory cytokines on the formation of depressive disorders. According to this model, immune action in the periphery causes the synthesis or appearance of cytokines and their receptors in brain parenchyma, which may lead to chronic, localized inflammatory processes in brain regions responsible for depressive symptoms.

In the framework of the above, it can be assumed that the prognosis of cardiovascular diseases in comorbidity with anxiety-depressive syndrome and on molecular-genetic level is also unfavorable. It is assumed that in such cases, carriers of variations in inflammatory marker gene structure associated with changes in secretion or expression of corresponding protein products may have a higher risk of depression. But to date, the association between genes that participate in the inflammatory process in CHD in comorbidity with anxiety-depressive disorder (ADD) has been poorly studied.

**Objective of the study:** to study the association of polymorphism of the IL-10 C/T 819 gene in women with anxiety disorders in the destabilization of angina.

## MATERIALS AND METHODS

The study was carried out in the Samarkand branch of the Republican Scientific Center for Emergency Medical Care, in emergency therapy departments 1 and 2. The study included 307 patients diagnosed with unstable angina. The average age of patients was  $69.4 \pm 8.9$  years. The women were conditionally divided into 2 groups: The 1st group was made up of women under 60 (187), the 2nd group was made up of women over 60 (120) (Fig.1).

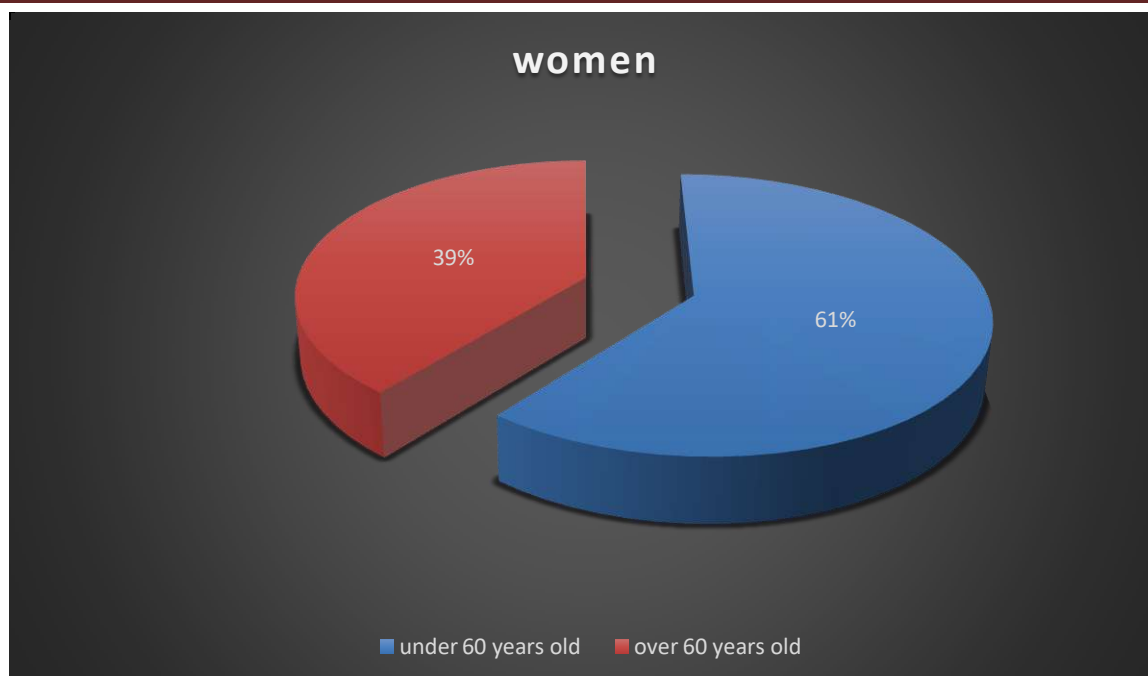


Figure 1. Distribution of women by age.

All patients during the study were carried out the following laboratory and instrumental methods: ECG, EchoCG, X-ray, determination of lipid spectrum (OX, HDL, LDL), determination of the level of uric acid (UA) in the blood, biochemical blood tests (ALT, AST, creatinine, urea, residual nitrogen). The concentration of the following molecules was assessed: IL-1 $\beta$ , IL-4, IL-10, TNF- $\alpha$ . The DNA gene was studied by isolation of peripheral blood lymphocytes by perchlorate extraction with ethanol deposition. The variants of the gene carrying point replacements of nucleotides - IL-10 C/T 819, and also determined the level of anxiety thanks to the Spielberger-Hanina scale and the hospital scale HADS, which passed a full cycle of language adaptation and was modified when calculating the components. Statistical data processing was performed using the STATISTICA software package (version 6.0). The reliability of the indicators was assessed using the Student-Fisher criterion, the significance level was 0.05 ( $p < 0.05$ ).

## RESULTS

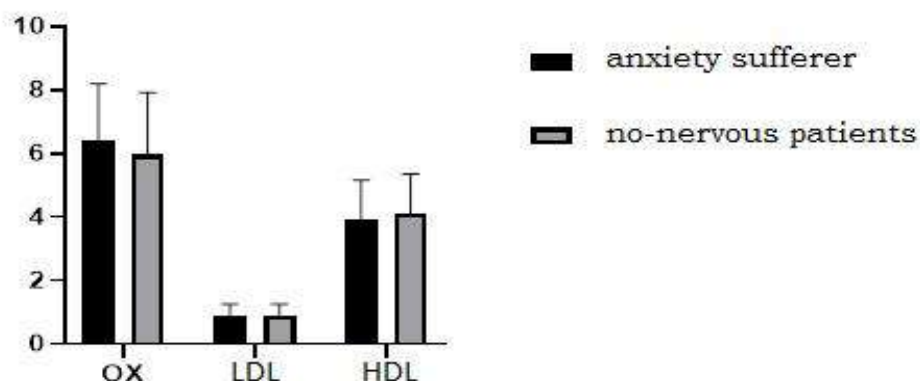
211 cases of psychosomatic disorders were identified during the study using the HADS scale, of which 146 patients had clinically significant anxiety and 65 patients had subclinical anxiety. In addition, 97 cases of clinically significant anxiety and 38 cases of subclinically significant anxiety were above the age of 60. Blood levels of MK, LDL, OX and LDL were then determined by a unified method for all patients including those with anxiety disorders. The results of the study showed that among patients with anxiety disorder the level of MC is high and averaged 483.2  $\mu\text{mol/l}$ . In the course of the study it was found that cytokine balance is more frequently disturbed among patients with increased MC level in blood (Table 1).

**TABLE 1. INDICATORS OF CYTOKINE STATUS AND URIC ACID IN PATIENTS WITH NS (IN PG/ML) DEPENDING ON GROUPS**

Indicator	NA + anxiety disorders (n = 211)	NS without anxiety disorder (n = 96)
IL-1 $\beta$ , pg/ml	103,5 $\pm$ 0,12	92,37 $\pm$ 0,03
IL-4, pg/ml	20,36 $\pm$ 0,14	24,3 $\pm$ 0,09
IL-10, pg/ml	10,2 $\pm$ 0,62	14,51 $\pm$ 0,10
TNF $\alpha$ , pg/ml	79,97 $\pm$ 0,23	68,29 $\pm$ 0,54
MK, $\mu$ mol/l	458,5	360,0

And the lipid spectrum indicators were statistically indistinguishable in both groups (Fig. 2).

### Indexes of lipid metabolism in patients with NS



**Figure 2: Lipid metabolic rate in women with NS.**

Further our interest was aroused by the results of the study of polymorphism of the IL-10 C/T 819 gene. Thus, women with anxiety disorders were mostly older than 60 years, and those without anxiety disorders were mostly women under 60 years. Cases of IL-10 C/T 819 polymorphism were more common among women over 60 years of age, perhaps our study confirms the results of a study by the Japanese scientist Bing-Jian Wang and his co-authors, who linked the presence of polymorphism in the gene.

gene IL-10 C/T 819 with old age and atherosclerotic lesions [7, P. 17842-17855]. Thus, among patients with unstable angina and anxiety disorder cases with 135 C/T alleles and homozygous alleles of TT 106, patients with clinically expressed anxiety disorders of TT polymorphic allele in 43 patients and homozygous polymorphic allele in 97 patients, among patients without comorbid pathology 39 cases with unchanged SS alleles, 57 cases with heterozygous ST alleles of IL-10 C/T 819 gene, more than one case with homozygous TT alleles (Fig. 2).3 ).



**Figure 3. Frequency of occurrence of polymorphism of gene IL-10 819 C/T.**

In this figure we can see that among patients with homozygous variant of T/T there is quite often, clinically and subclinically expressed anxiety, which can explain the severe clinical course of unstable angina with comorbid condition.

Further, we decided to study the mean value of pro- and anti-inflammatory cytokines depending on the polymorphism of the IL-10 819 T/C gene (rs1800871) in two early study groups.

**TABLE 2. CYTOKINE CONCENTRATION LEVEL AS A FUNCTION OF C/T POLYMORPHISM OF THE GENE IL - 10 819 (RS1800871) IN PATIENTS WITH UNSTABLE ANGINA ABOVE 60 YEARS OF AGE**

Indicators cytokineconcentrations	GenotypeIL – 10 C/T 819		
	C/C	C/T	T/T
IL-1 $\beta$ , pg/ml	98,2 $\pm$ 0,11	98,4 $\pm$ 0,13	101,5 $\pm$ 0,56
IL-4, pg/ml	21,4 $\pm$ 0,07	23,2 $\pm$ 0,23	22,03 $\pm$ 0,09
IL-10, pg/ml	13,4 $\pm$ 0,09	13,1 $\pm$ 0,11	12,7 $\pm$ 0,33
TNF $\alpha$ , pg/ml	66,48 $\pm$ 0,56	66,56 $\pm$ 0,03	68,95 $\pm$ 0,12

**TABLE 3 CYTOKINE CONCENTRATION LEVEL AS A FUNCTION OF C/T POLYMORPHISM OF THE GENE IL - 10 819 (RS1800871) IN PATIENTS WITH UNSTABLE ANGINA UNDER 60 YEARS OF AGE**

Indicators cytokineconcentrations	GenotypeIL - 10 819 C/T		
	C/C	C/T	T/T
IL-1 $\beta$ , pg/ml	84,9 $\pm$ 0,45	85,3 $\pm$ 0,52	92,7 $\pm$ 0,22

IL-4, pg/ml	29,1±0,11	30,0±0,11	26,56±0,34
IL-10, pg/ml	22,0± 0,21	23,9± 0,15	23,7± 0,76
TNFα, pg/ml	54,03±0,06	55,22±0,76	57,57±0,78

So, in the taboo. 2 and 3 shows the difference between pro- and anti-inflammatory cytokines in two groups of women. Women over 60 years of age are more adept at exacerbating the inflammatory process and endothelial dysfunction in cases of destabilization of angina due to cytokine balance disorder and clinically pronounced anxiety disorder, which may be associated with age-related cognitive disorders.

## CONCLUSION

Thus, women with anxiety disorders are susceptible to frequent angionistic attacks, which are not always bought by nitrates, and the duration of treatment of these patients requires a longer correction. Patients with anxiety disorder have frequent cases of cytokine balance disorder and cases of IL-10 819 C/T polymorphism. This may be due to age-related metabolic changes, which require an individual approach to treatment for each patient and further study, which will help to reduce the mortality of this group of patients and improve the prognosis of cardiovascular disease.

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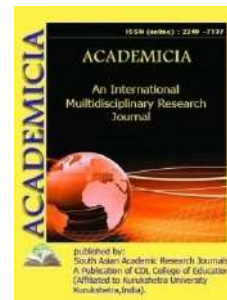
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DOI: **10.5958/2249-7137.2020.00715.6**

## TO STUDY THE EFFECT OF STRUCTURAL EQUATION MODELING OF CONCEALED VARIABLES UPSETTING STOCK PRICES IN NEPAL.

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### ABSTRACT

*This study uses the structural equation model in Nepali stock market, chooses investor sentiment, monetary and macroeconomic factors as latent variables, and selects a few observed variables which can explain the latent variables to study the influence on stock prices. Based on existing empirical research conclusion, influence path diagram is designed and gets its path coefficient and causal path diagram using maximum likelihood estimation. The statistical significance of the results indicated that the causal relationships of Nepal's stock market as follows can be accepted; firstly, investor sentiment, macroeconomic indicators, and monetary factors have certain influence on stock prices, the investor sentiment has a positive correlation. Secondly, the investor sentiment has the biggest impact on stock prices; when investor sentiment is more stable and optimistic, stock prices will relatively be better. This research also provides a certain reference for investors to make rational investment decisions.*

**KEYWORDS:** *Structural Equation, Stock Prices, Investor Sentiment*

### INTRODUCTION

The pricing implication of common stocks has drawn considerable attention since the publication of seminal work of Markowitz (1952) - the mean-variance portfolio theory. Since then there is an ongoing debate on whether the market risk factors explain better or there are some other anomalies influencing common stock prices. There are many studies about the affecting factors on the stock prices. Some studies showed that there is in fact a relationship between stock prices and certain macroeconomic indicators, those studies were mostly conducted in developed economies.

The price volatility of the stock is the foundation of the stock market. Officer (1973) correlated the changes in stock prices to the volatility of macroeconomic variables. Fama and Schwert (1977), Fama (1981), and many others, documented a strong positive correlation between common stock returns and real economic variables like capital expenditures, industrial production, real GNP, money supply, lagged inflation and interest rates and found a negative relationship between stock prices and inflation in the US Market. But, what about less developed economies? Some studies showed no relationship between the economies and the financial markets of less developed countries like Asian markets. Fung and Lie (1990) explained that macroeconomic factors can't be reliable indicators for price movements in the Asian markets because of the inability of stock markets to fully capture information about the change in macroeconomic fundamentals. Similarly, many others attempted to relate changes in stock prices and economic variables, including Fama (1981), Thorbecke (1997), Maghayreh (2003), Kandir (2008), and Alagidede and Panagiotidis (2010).

The studies on the effects of investor sentiment reveal that many general investors are puzzled about the stock prices in the market. The investor's main dilemma is whether or not to invest in the particular asset/assets, so that they can get better sustainable and fair return of their investment with bearing minimum/zero risk. Mackay (1841) assembled a book of readings about Tulip-mania and some equally famous market "bubbles" which had a self-explanatory title: Extraordinary Popular Delusions and the Madness of Crowds. In contrast to Mackey's astonishing stories, Bachelier (1900) set a forth formal model in which security prices were random outcomes that had probabilities attached to them. Baker(2006) analyzed the impact of investor's sentiment on stock price mechanism in theory. He used the measure indexes of investor sentiment by selecting six principal components including; turnover rate, closed-end fund discount rate, IPO quantity, the yield of the first day, bonuses premium rate, and equity distribution ratio and built composite investor sentiment indexes to measure the mood. The study found the statistical significance of the construct variable mood and its strong influence on individual stocks. Zhang and Wang (2013) applied EGARCH model for the empirical analysis on their study and found that investor sentiment index could explain better on stock returns.

The relevance of the studies conducted in developed and big capital markets is yet to be seen in the context of smaller, developing and under-developed capital markets. Nepal has guided towards a change in the financial architecture of the economy since the adoption of economic liberalization policy in the beginning of 1980s. In the contemporary scenario, the activities in the financial markets and their relationships with the real sector have assumed significant importance. Correspondingly, researches are also being conducted to understand the current working of the economic and the financial system in the new scenario of Nepal. A study of the effect of dividends on common stock prices in Nepalese context (Pradhan, 2003) showed the strong dividend effect, and a very weak retained earning effect, indicating attractiveness of dividend among Nepalese investors. Basnet (2007) reported that market price per share (MPS) is well explained by dividend and returns in Nepalese stock market. Baskota (2007) found that there is no persistence of volatility in Nepalese stock market and the stock price movements are not explained by the macroeconomic variables. Bhattarai and Joshi (2009) documented both short-run and long-run interdependence among stock index and some macroeconomic variables.

The review of early research papers reveal that there are several factors in determining stock prices. Based on the literature, this study constructs three latent variables namely; investor sentiment, monetary factors and macroeconomic indexes that affect stock prices. The important observed variables which can measure the latent variables, as suggested by the literature, are included in the model to make the structural equation model. The explained variable is the Nepse/Market index (MI) which is the proxy of stock prices. Then, it uses structural equation model to analyze the affecting factors on stock prices. This study on Nepali stock market from the perspective of macroeconomic and investors' sentiment has very important theoretical and practical significance. From theoretical perspective it has importance on deepening our understanding of the field and from practical perspective it can improve the performance of our investment with the rational allocation of resources.

### **Theoretical Analyses and the Variables Selection**

#### **THEORY ANALYSIS**

The economists Wright first put forward the concept of "path analysis" in 1921. Karl Joreskog, the Swedish statistician and psychologist, put forward the Structural Equation Model (SEM for short) in 1973 (Hendry, 1986). Since then, path analysis was gradually shifted to LISREL, AMOS and SEM software, which is called the path analysis oriented in the SEM.

Structural equation modeling (SEM) is a statistical methodology that takes a confirmatory (i.e., hypothesis-testing) approach for simultaneous estimation of a structural theory bearing on some phenomenon. Typically, this theory represents causal processes that generate observations on multiple variables (Bentler, 1988). It's aim is mostly to confirm a research study design and is expressed by the casual model or path graph. In this model, the estimators are biased and inconsistent and estimated coefficients become meaningless if feedback is not considered. Formulation of SEM requires specification of equations in the model based on theory and it doesn't guarantee rightly estimated coefficients.

The analysis on the SEM begins with model identification first. The model is said to be identified if it meets the conditions for identification: Order and Rank conditions. For, order condition, if  $g$  = no. of endogenous variables in system &  $m$  = no. of variables (endogenous & exogenous) missing from equation under review then,  $m = g - 1$  (exactly identified);  $m > g - 1$  (overidentified);  $m < g - 1$  (not identified). For rank condition, If rank of the coefficient matrix of all variables excluded from a particular equation (excluding coefficients of concerned equation) is  $g-1$ , then identified. Order condition is necessary but not sufficient, whereas rank is sufficient. If model is identified or over identified then model is identified.

Simultaneous estimation method i.e. maximum likelihood estimation is used for the analysis of this recursive structural regression (SR) model. The impact levels of affecting factors, as well as correlations among latent factors and stock prices are presented and analyzed by using structural equation modeling.

#### **DESIGN VARIABLES**

The influence of selected factors on stock prices is analyzed using structural equation model where stock prices represented by market index (MI) is the endogenous variable, and investor sentiment, monetary factors and macroeconomic indexes are the exogenous variables. Market/NEPSE Index (MI) is a market value weighted index composed of the shares of listed

companies from different sectors in the Nepalese stock exchange. It gives the investor a general idea about the direction and performance of the market. While measuring the impact of macroeconomic and other affecting variables on stock prices, Market Index was used as the proxy of stock prices in several prior studies like; Mukherjee and Naka (1995), Osamwoyi and Osagie (2012), among others.

The selected observed variables that can explain the latent variables are; Market capitalization (MC), Volume (V), Narrow money supply (M1), Broad money supply (M2), Gross domestic product (GDP), Inflation (INF) and Interest rate (IR). Market capitalization (MC) reflects the changes of total price of the listed securities in a time, if MC rises stable then investor sentiment is optimistic. Volume (V) is the sum amount of transactions happens in a particular period. It represents the market liquidity, it reflects the investor's participation, if investor sentiment is optimistic, volume will be large.

GDP is used as a proxy of real aggregate economic activity in an economy. In this study nominal GDP has been considered for analysis. Higher GDP represents economic prosperity of the country and stock returns are expected to influence positively. Inflation (INF) has puzzle relationship with stock returns. As the worth of rupees gets reduced due to high inflation, it is expected that the stock prices would be high in the time of Inflation ( Ibrahim & Aziz, 2003). But, higher inflation reflects higher discount rate leading to the lower value of equities. The interest rate (IR) is another important economic factor affecting the value of common stocks. The reduction in interest rates reduces the cost of borrowing and thus serves as an incentive for expansion. This will have a positive effect on future expected returns for the firm, so as stock prices. The IR used in this study is the weighted average 91 days T-bills rate, annualized % as of yearend. Narrow money supply (M1) consists of currency held by public (C) and demand deposits (DD) held at the banking sectors. Symbolically,  $M1 = C + DD$ . Broad money supply (M2) consists of narrow money supply and time deposit (TD) held at commercial banks. Symbolically,  $M2 = M1 + TD$ . Both the monetary factors reflect the liquidity status in the market and hence expected to have positive relationship with stock prices as well as investor sentiment. To smoothen the data natural logarithms has been taken for the variables; MC, V, GDP, M1, and M2. The specific variable design is as given in the table 1.

**TABLE 1. VARIABLE DESIGNING**

<b>Variables</b>		<b>Observed Variables</b>
<b><i>Latent Variables</i></b>		
Investor Sentiment (Inv.Senti.)		Market Capitalization (MC), Volume (V)
Monetary Factors (MF)		Narrow Money Supply (M1), Broad Money Supply (M2)
Macroeconomic Indicators (MEI)		GDP, Inflation (INF), Interest Rate (IR)
<b><i>Endogenous variables</i></b>		
Stock Market Prices		Market Index (MI)

Upon completion of indicator design based on the theory and former research conclusion, this study uses AMOS17.0 software to construct the initial structural equation that shows a path model as given in fig. 1

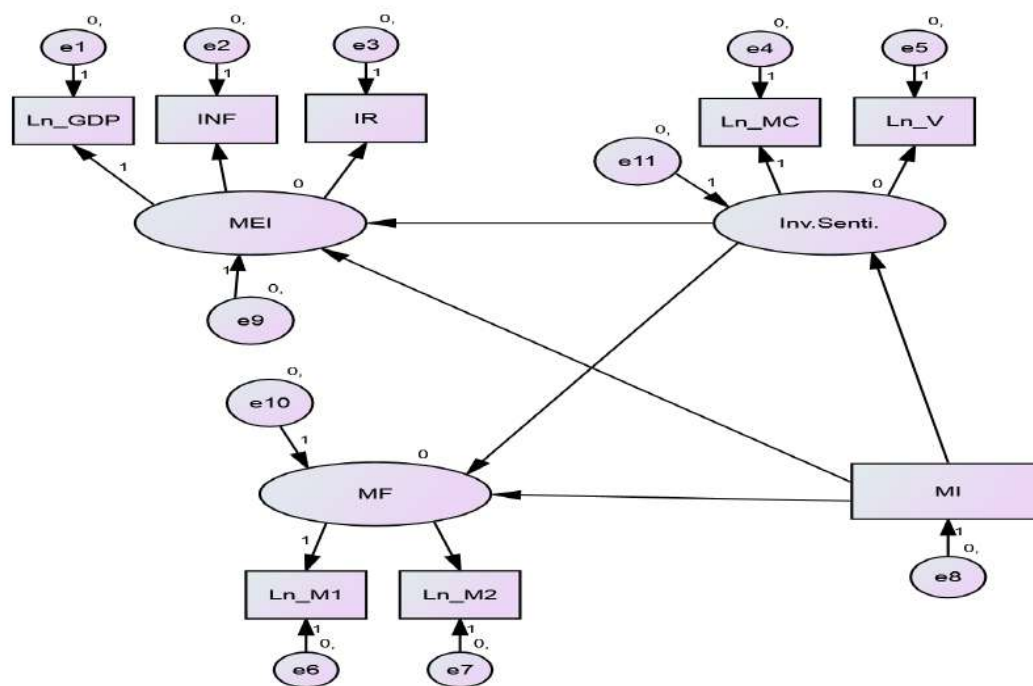


Fig. 1 Preliminary Design of SEM Path Diagram

Where,  $e_i$  are residuals of all observed and unobserved variables.

### Parameter Estimation and Analyses

#### MODEL CONSTRUCT

This study uses macroeconomic, monetary and stock data for the period of 1994 to 2016 covering 23 years to study the influence factors of stock prices. The secondary data were retrieved from various sources like; Government of Nepal-Ministry of finance (MoF), Nepal Rastra Bank (NRB) and Nepal Stock Exchange Ltd. (NEPSE), then uses Amos17.0 software to carry on the fitting test.

Latent variables are scaled and errors, like latent variables, are also scaled for identification. For this, we assign loading for direct effect on any one of its indicators to 1 that is known as reference variable as GDP for factor MEI. Disturbances ( $e$ ) in structural regression (SR) are assigned a scale equal to 1. Total no of parameters that can be estimated is limited by number of observations. With 'P' observed variables, no. of observations equal  $P(P+1)/2$ , for our model that has 7 observed variables, have 28  $[7(7+1)/2]$  no. of observations.  $Dfm = p - q$  is termed as the model's degree of freedom. Our model contains 56 parameters, 28 free parameters, 44 sample moments leading to 16 degrees of freedom (Dfm). When the model box is (OK: Default model), it means that it can display parameter estimates, and that there is no problem in theory model defining. With that standard, the model is fitted and the result is as follows:



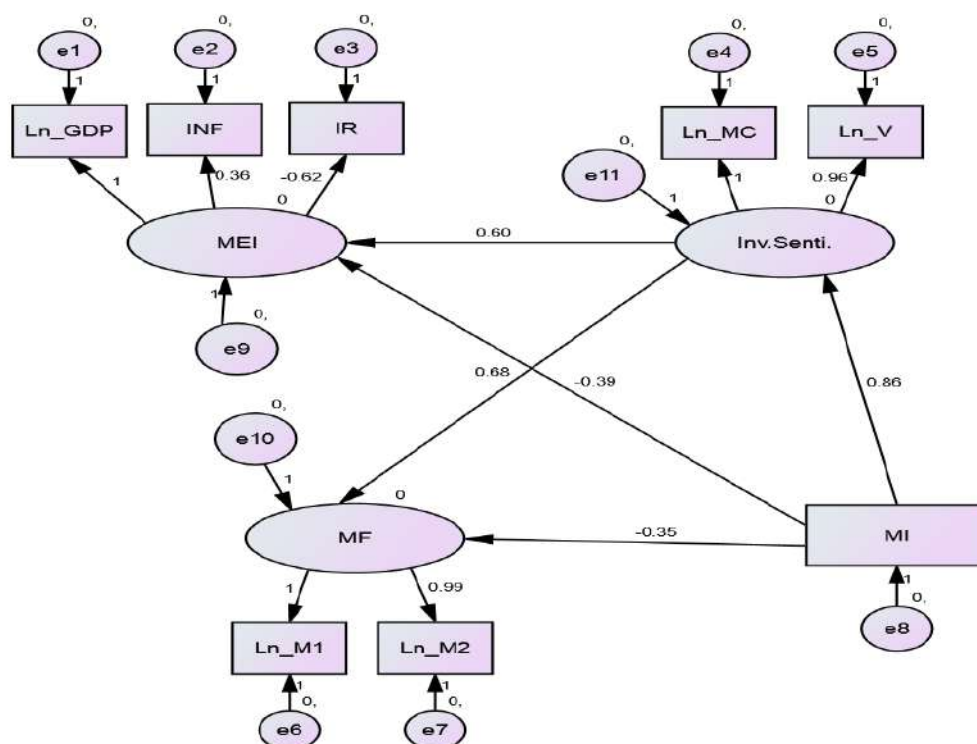


Fig. 2 Standardized Path Diagram and Path Coefficients (ML Estimation)

## MODEL FIT

The aim here is to determine the degree to which sample variance data fit the SEM; commonly used criteria are: Chi-square ( $\chi^2$ ), the goodness-of-fit index (GFI), comparative fit index (CFI) and the root-mean-square residual (RMR). Asberg, Bowers, Renk and McKinney (2008, p. 491) suggest that the model is satisfactory with comparative fit index (CFI) greater than or equal to .90, the parsimonious fit index (PFI) greater than or equal to .60, and the squared error of approximation (RMSEA) less than or equal to .10. Schreiber et al. (2006, p.330) indicate a full set of criteria for an accepted SEM, which is mentioned in the following table:

TABLE 2. CRITERIA FOR AN ACCEPTED SEM

Indexes	Shorthand	General rule for acceptable fit
<b>Absolute/predictive fit</b>		
Chi-Square	$\chi^2$	Ratio of $\chi^2$ to df $\leq 2$ or 3
Akaike information criterion	AIC	Smaller the better
Browne-Cudeck criterion	BCC	Smaller the better
Bayes information criterion	BIC	Smaller the better
Consistent AIC	CAIC	Smaller the better
Expected cross-validation index	ECVI	Smaller the better
<b>Comparative fit</b>		
Normed fit index	NFI	$\geq 0.95$ for acceptance
Incremental fit index	IFI	$\geq 0.95$ for acceptance



Tucker-Lewis index	TLI	$\geq 0.95$ for acceptance
Comparative fit index	CFI	$\geq 0.95$ for acceptance
Relative noncentrality fit index	RNI	$\geq 0.95$ similar to CFI
<b>Parsimonious fit</b>		
Parsimony-adjusted NFI	PNFI	Very sensitive to model size
Parsimony-adjusted CFI	PCFI	Sensitive to model size
Parsimony-adjusted GFI	PGFI	Closer to 1 the better
<b>Other</b>		
Goodness-of-fit index Adjusted GFI	GFI/AGFI	$\geq 0.95$
Root mean square residual	RMR	Smaller, the better
Standardized residual	SRMR	$\leq 0.08$
Weighted root mean residual	WRMR	$< 0.90$
Root mean square error of approximation	RMSEA	$< 0.06$ to $0.08$ or below ( $0.1$ )

The criteria for an accepted SEM, presented in the Table 2, are used to assess the model fit for used data.

Table 3 illustrates the test statistics estimated for whole model to identify the fit measures.

TABLE 3. MODEL FIT SUMMARY

CMIN					
Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	28	27.157	16	.040	1.697
Saturated model	44	.000	0		
Independence model	8	427.609	36	.000	11.878
Baseline Comparisons					
Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.936	.857	.973	.936	.972
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000
NCP					
Model	NCP	LO 90	HI 90		
Default model	11.157	.527	29.628		
Saturated model	.000	.000	.000		
Independence model	391.609	328.710	461.957		
RMSEA					
Model	RMSEA	LO 90	HI 90	PCLOSE	
Default model	.174	.038	.284	.058	
Independence model	.688	.630	.747	.000	
AIC					
Model	AIC	BCC	BIC	CAIC	
Default model	83.157	119.157			
Saturated model	88.000	144.571			

Independence model	443.609	453.894		
ECVI				
<b>Model</b>	<b>ECVI</b>	<b>LO 90</b>	<b>HI 90</b>	<b>MECVI</b>
Default model	3.616	3.153	4.419	5.181
Saturated model	3.826	3.826	3.826	6.286
Independence model	19.287	16.553	22.346	19.735

Among many fit measures, it is worth pointing out that the interpretation of many (but not all) fit measures depends on CMIN having a chi square ( $\chi^2$ ) distribution for correctly specified models. Many fit measures depend on the ratio CMIN/DF, which should be close to 1 ( $\leq 2$ ) for a correct model. In maximum likelihood estimation, calculating the likelihood ratio  $\chi^2$  statistic requires fitting the saturated model. Whether or not Amos fits the saturated model is the evidence for the correct specification of the model.

The structural model fit is very good with chi square ( $\chi^2$ ) distribution; CMIN/df = 1.697, and p-value = 0.04; IFI (Incremental Index of Fit) = 0.973; CFI (Comparative Fit Index) = 0.972; Noncentrality parameter (NCP) estimate is framed within the bounds of confidence interval as suggested by Steiger (1990). Our hypothesized model yielded a noncentrality parameter of 11.157. This value represents the  $\chi^2$  value minus its Dfm (27.157-16). The confidence interval indicates that we can be 90% confident that the population value of noncentrality parameter ( $\lambda$ ) lies between 0.527 to 29.628. However,

RMSEA (Root Mean Square Error of Approximation) = 0.174 PCLOSE(0.058) indicate the model doesn't fit very well as the value below 0.10 is preferred. This may be due to the reason of small sample size and large number of estimated parameters in the model. When sample size is small the RMSEA tends to overreject true population model (Bentler, 1999). Thus, the cutpoints for RMSEA should be interpreted with caution in this model. GFI is not reported as means are explicit model parameters. Because the published GFI/AGFI formulae ignore the residuals of the mean vector, using these GFI fit indices with means-level models is not logically appropriate.

Akaike's (1987) Information Criterion (AIC) and Bozdogan's (1987) consistent version of AIC (CAIC) both criterion address the issue of parsimony in the assessment of model fit. The Browne-Cudeck Criterion (BCC; Browne & Cudeck, 1989) and the Bayes Information Criterion (BIC) operate in the same manner as AIC and CAIC but they impose grater penalties than either AIC or CAIC for model complexity. Our results for all four of these fit indices pass the test and showed that the fit statistics for the hypothesized model are substantially smaller than they are for either the independence or the saturated models.

The Expected Cross-Validation Index (ECVI) is estimated as a means of assessing the likelihood that the model cross-validates across similar-sized samples from the same population (Browne & Cudeck, 1989). It assumes a comparison of models; the model having the smallest ECVI value exhibits the greatest potential for replication. In assessing our fit statistics, the lower ECVI value (3.616) for the hypothesized model, compared with both the independence and saturated models, represents the best fit to the data.

These indexes indicate a strong predictive validity of the model for the used data.

## MODEL TEST

The study uses the recursive model. According to the model study, we estimated the path coefficients using the method of ML and got the path diagram Fig.2. In general, the parameter estimates should exhibit the correct sign and size, and be consistent with the underlying theory. Table 4 is the test result of parameter hypothesis.

**TABLE 4. STANDARDIZED REGRESSION COEFFICIENTS AND THE STATISTICAL TEST (ML ESTIMATION)**

			Standardized Estimate	Non-Standardized Estimate	S.E.	C.R.	P
Inv. Sentiment	<---	Market Index	.857	.004	.000	7.447	***
Macroeconomy.	<---	Market Index	-.390	-.001	.000	-4.878	***
Monetary Factor	<---	Market Index	-.345	.001	.000	-4.168	***
Macroeconomy	<---	Inv.Sentiment	1.319	.600	.038	15.842	***
Monetary Factor	<---	Inv.Sentiment	1.278	.677	.047	14.452	***
Ln_GDP	<---	Macroeconomy	.995	1.000			
INF	<---	Macroeconomy	.361	1.408	.767	1.836	.066
IR	<---	Macroeconomy	-.619	-2.454	.662	-3.710	***
Ln_MC	<---	Inv.Sentiment	.986	1.000			
Ln_V	<---	Inv.Sentiment	.956	1.124	.084	13.358	***
Ln_M1	<---	Monetary Factor	.996	1.000			
Ln_M2	<---	Monetary Factor	.999	1.233	.025	49.525	***

Note. ← means the influence path of variables.

Among them, Estimate represents the estimated value of the influence coefficient, S.E. the standard error and C.R. is the Critical Ratio test statistic which represents the parameter estimate divided by its standard error, as such, it operates as a z-statistic in testing that the estimate is statistically different from zero. Based on the probability level of 0.5, the test statistic needs to be  $>\pm 1.96$  before the hypothesis can be rejected. Obviously, three latent variables; Investor sentiment, Macroeconomic indicator, Monetary factors, along with seven observed variables are all passed the test and reach the significance level. It also means that C.R.  $> 1.96$ . However, the estimate of INF to Macroeconomic indicator has passed the test at 10% level of significance.

## RESULTS AND DISCUSSION

After analysis, the causal relationships as followed can be accepted:

- 1) Investor sentiment, Macroeconomic indicator and Monetary factor have a certain influence on stock prices, and the biggest impact on stock prices is investor sentiment, it reaches 0.857, and then followed by macroeconomic indicator and monetary factors.

- 2) Investor sentiment has positive correlation with stock returns. It indicates that increase in investor confidence leads to the increase in stock prices. The result is consistent with the findings of Hua, Shiting, and Qiubai (2013). The relationships of macroeconomic indicators and the monetary factors to market index are negative. In the case of macroeconomic indicators, the literature review on observed variables Interest rate (IR) and Inflation (INF) documented the evidence of negative relationship with stock prices. The negative relation of interest rate implies that investors tend to invest less in stocks when interest rates go up causing stock price to fall (Kandir, 2008). The negative effects of inflation on stock prices is explained by three dominant hypotheses, namely, tax effect, proxy effect, and the reverse causality hypotheses, explaining the negative effects of inflation on stock returns (Fama, 1981). The justification for the negative relation of monetary factors on stock prices could be made as the increase in money supply M1 & M2 rises the level of inflation which brings higher discount rates and hence the lower value of equities. The above causes are justifiable to have the negative effects of latent variables; macroeconomic indicators and monetary factors and positive effect of investor sentiment with stock prices.
- 3) In the investor sentiment factors, the trading volume (V) has estimated coefficient 0.96 that shows a significant influence on stock prices, the higher is the volume, higher the stock prices.
- 4) The impact of macroeconomic indicators on stock prices is only after investor sentiment, it reaches -0.39. Assigning loadings 1 to GDP, the market interest has the better explaining capacity (-0.62) to stock prices. The higher the interest rate, lower is the stock prices. The monetary factor also has a certain influence on stock prices.
- 5) There also have a certain relationship between the investor sentiment, Macroeconomy and Monetary factors. While looking in un-standardized estimate, the monetary factor has positive effects on investor sentiment; the influence coefficient is 0.68. This shows that higher the money supply in the market, the higher will be the investor confident on rising stock prices. The macroeconomic indicators also have positive effects on investor sentiment; the influence coefficient is 0.60, the better the macroeconomic indices, the investor sentiment will be more optimistic.

## CONCLUSIONS

Now stock investment activity has become a new hot spot of human financial activities, and an empirical analysis of the influence factors on stock prices can provide certain reference for investors and stakeholders. This paper uses the structural equation model, chooses stock prices as explained variable, and investor sentiment, macroeconomic indicators and monetary factors as latent variables, then selects observed variables which can explain latent variables to do empirical analysis, finally finds that investor sentiment has the biggest influence on stock prices followed by macroeconomic indicators and monetary factors. Knowing the positive relationship of investor sentiment and negative relations of macro-economy and monetary factors to the stock prices, investors can make scientific decisions and invest rationally. In addition, it provides some suggestions for improving the efficiency of investment from three angles that is the investors, listed companies and securities institutions to ensure the healthy and stable development of the Nepali capital market.

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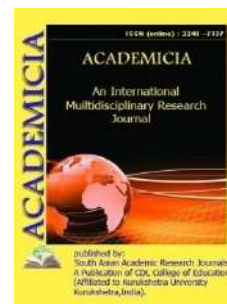
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DOI: **10.5958/2249-7137.2020.00539.X**

## COMPARATIVE ANALYSIS OF PHRASEOLOGY IN ENGLISH AND UZBEK LANGUAGES

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### ABSTRACT

*This article describes the research of using phrases in sentences, the method of translating them, the phrases with mythos components, the phrases with original and figurative meaning and others. Investigating phrases has been always important section in linguistics and the learners and students who wants to adopt the language accurately should be informed with them. Phrases are also the main part of the language, that's why most scientists always put interests in investigating them. There are no any language in the world which doesn't own the phrases. Using phrases in the sentences make the speech meaningful and colorful. And they are always interesting for the speaker and the listener.*

**KEYWORDS:** *Phraseologism, Comparative Study, Research Work, Mythos Components, Theomorphism.*

### INTRODUCTION

Today there are lots of research works connected with phraseologisms and these investigations done by the several scientist living different sides of the world. And with this we can see learning phraseologism is one of the important stages of linguistics. Most people say that the first investigator of the theory of phrases was Charles Bally, the French scientist. After deeply learning the phrases he placed a paragraph named "French stylistics". He could differ the unbelievable, figurative and original features of phrases. (1)

Ferdinand de Saussure said following words in his work "General Linguistics course": "There are some kind of ready made word units which we can use them without preparation"

## LITERATURE REVIEW

In Russian literature A.B.Kunin, L. Kuliyeva, K. Musaev, I.S. Stepanova, E.P. Artsenteva and in Uzbek linguistics Sh. Rakhmatullaev, Sh. Makhmaraimova, A. E. Mamatov made some researches which revealed the aspects of phrases which are unknown to everybody.

No matter there are plenty of research works connecting with phrases still we come across the problems which exposes the unexplored sides of them. One thing which I want to say that phraseologisms attract the learners with including the word units expressing all fields of life. And while translating them from one language into another the translator should use his poetic ability. And phrases do not always own their first original meaning and second, portable meaning.

### Main part

For example: the Uzbek phrases- Boshiga ko`tarmoq, tarvuzi qo`ltig`idan tushmoq, kosasi oqarmoq, do`ppisini osmonga otmoq, yuzi qora bo`lmoq, boshi egilmoq, o`z yog`iga qovurilmoq and etc.

1. Boshiga ko`tarmoq- raise somebody on the shoulders (especially it is used for the little children in a happy situation).

O`sha kuni u o`zini baxtli his qildi va o`g`lini boshiga ko`tardi.

That day he felt himself so happy and raised his son on his shoulder.

2. Boshiga ko`tarmoq- pamper, cosher somebody/ to do all wishes of any person, appreciate smb.

Karim turmush o`rtog`ini boshida ko`tarar edi.

Karim always did all the wishes of his wife.

The phrase “Yuzi qora bo`lmoq” has also 2 meanings.

Blackened face during painting.

U uy poydevorini bo`yayotganda yuzi qora bo`ldi.

His face got black while he was painting the foundation of the house.

Get ashamed with unpleasant situation.

Noto`g`ri xatti harakatlari tufayli uning yuzi qora bo`ldi.

He got ashamed due to the wrong line movements.

We can see some phrases owning the same meanings. They are followings: Boshi egilmoq- yuzi qora bo`lmoq

Do`ppisini osmonga otmoq- og`zi qulog`id abo`lmoq and etc.

To my mind there is even a little connection between the original and portable meaning of the phrases. This phrase can be a good example to this idea.

A black sheep- is considered both a word unit and a phrase. If we understand it as a simple word unit it means the sheep in black color, but if it comes as a phrase it means – a shame/ something which went wrong. The little connection is can be seen with the word black.

Because we know that the black color is always understood as a sadness, bad sides of the thing and also the uncomfortable situation of the person.

Ann: What is the party like?

Bill: A black sheep.

If we apply for other phrases in English and in Uzbek languages there are plenty of phrases with the word evil /devil and hell.

1. Shayton yo`ldan urmasdan.

2. Shaytonga hay bermoq.

3. Shaytonga dars beradigan.

In English linguistics:

1. The devil`s advocate- Iblis malayi

2. Lead apes in hell- Qari qiz bo`lib qolmoq. If we translate it word by word it is translated like–do`xaz maymunlarini boshqarmoq.

But sometimes the word evil-shayton is also used for pampering a little child. Such as: Ha, sen shoshmay tur, shayton qizcha.(2)

In this sentence the word shayton is used for the naughty child.

Phraseologism is also used in the works of poets and writers to intensify the meaning of the sentences and for being pleasant to the readers. And while reading their works you are always eager to know the next parts of the events. In phrases they use some literacy devices called: mubolog`a, tashbih, tazod and others.

The famous writer A.Navoiy many phrases which is here presented some of them.

1. Jahon ganjiga shoh erur ajdaho

2. Yaxshilik qilib suvga tashla; Xalq bilar, xalq bilmasa baliq bilar,  
Baliq bilmasa Holiq bilar.(3)

Geoffrey Choser also used several mythos componentated phrases in his literacy works like that:

1. He must have a long spoon that soups with the devil- Shayton bilan bog`langan bo`lsang o`zingdan o`pkala.

2. Murder will out- Kasalini yashirsang isitmasi oshkor qiladi.

The mythos componentated phrases consists of the words belonging religion: God, angel, evil, devil, hell and heaven.

In Modern Uzbek linguistics Sh. Rakhmatullaev, Berdiyev Kh , Rasulov R and Sh. Makhmaraimova investigated mythos words in their research works.

Sh. Makhmaraimova prove the different usage of the words: anqo and ka`ba and she conderes that it is not true using them in every place as we are the Moslim. To her mind the famous people who possess a religious philosophical benevolent appeareances-Omar Hayyom, Ibn Arabiy, F.Attar also used these words carefully.

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## CONCLUSION

It can be concluded that today there are lots of types phrases which have never been applied and which have used little. And we are faced with a number of tasks, such as related to phraseology.

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DOI: **10.5958/2249-7137.2020.00540.6**

## LEXICO – STYLISTIC MEANS IN THE FORMATION OF PROVERBS.

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### ABSTRACT

*One of the essential properties of a truly individual style is its permanence. It has great powers of endurance. It is easily recognized and never loses its aesthetic value. The form into which the ideas are wrought assumes a greater significance and therefore arrests our attention. The language of a truly individual style becomes de-automated. It may be said that the form, i.e. the language means themselves, generates meaning. This will be shown later when we come to analyzed the nature and functions of stylistic devices.*

**KEYWORDS:** Repetitions, Juxtaposition, Rhymed Assonance, Alliteration, Assonance.

### INTRODUCTION

*The main lexical depictive means as repetitions and comparisons.*

#### Repetitions

Repetitions fulfill the function intensification repeating. Lexemes don't usually stand side by side. There are different kinds of repetitions.

1) Repetition of the lexeme, standing at the first place. There can be repeated both principle and subordinate lexemes.

*First come, first served.*

(Kim oldin kelsa, hizmat birinchi.)

*Handsome is as handsome does.*

(Kim yahshi ishlasa, o'sha yahshi hisoblanadi.)

*Love me, love my dog.*

(Meni sevsang, meni narsalarimni ham sev.)

*Such carpenters, such chips.*

(Ko'z qo'rqq, qo'l botir.)

**Proverbs with circular repetition are to be found rarely.**

To obready reminded by us proverbs like begins like you like cures diamond.

(Hattoki toshdan ayb topar.)

2) Recurrence of the lexeme standing at the second place:

He laughs best, who laughs last.

*Let bygones, be bygones.*

(Nima bo'lgan bo'lsa kechiriladi.)

One mans meat is another mans poison.

3) Repetition of the lexeme standing at the third place. In this sort of repetition also subordinate lexemes recur.

**It is rarely to be met he that serve god, for money, will serve the devil for better wages.**

(Kim ko'p to'lasa o'shanga hizmat qilishar.)

*What is sauce for the goose is sauce for the gender.*

(Banda bor joyda hammasi teng..)

It is possible, then repetition of analytical form.

He that will steal an egg, will steal an ox.

4. Repetition of the lexeme, standing at the 4<sup>th</sup> place. This kind of repetitions is very rare:

*If two man ride on a horse, one must ride behind.*

(Ikkitadan bittasi orqada qolar.)

5. Repetition of two lexemes. Besides repetitions of lexemes in the midst of proverbs, the repetition of 2 and 3 lexemes are also to be found. This sort of recurrence is also very rare:

*So many men, so many minds .*

(Har bir kallada har hil fikr.)

The repetition of two first subordinate lexemes: Out of sight, out of the mind. In the proverb in a penny, in for a pound. There subordinate lexemes are repeated.

6. Iterative repetition. This kind of repetition is very rare and has a joking character. Such kind of repetition is to be found, e.g. in the proverb

Don't trouble until trouble troubles you.

(Aytmasang qimiydi.)

Joking character of the proverb is intensified by an unusual kind of repetition, by the recurrence of lexemes standing side by side.



**Juxtaposition**

**Juxtaposition may be divided into two group.**

1) Antonymous comparison i.e. comparison of lexemes which are antonymous out of this proverb.

*A black hen lays a white egg.*

Oqni qora deb bo'lmas, qorani oq deb bo'lmas.

*God sends meat and the devil sends cooks.*

*A good horse cannot be of a bad colour.*

Yahshi otga bir qamchi, yomon otga ming qamchi.

*He that spares the bad injures the good.*

Yomonlikni unitib, yahshilikni bil.

*Antonymous juxtaposition is widely applicable in comparative proverbs.*

A living dog is better than a dead lion.

Uzoqdagi quyruqdan, yaqindagi yog' yahshi.

*Better reign in hell than serve in heaven.*

In the last proverb antonymous combination of lexemes are used reign in hell and serve in heaven. The combination of recurrence with antonymous juxtaposition is possible in proverbs.

*He that never climbed never fell.*

Yiqilgan kurashga to'ymas.

2) Confrontation of combinations of lexemes that are not antonymous out of this proverb.

A bird in the hand worth two in the bush.

What is got, over the devils back is spent under his belly a man others.

**Euphonious means**

Euphonious means, to which ascribed rhymed consonance, alliteration and assonance are the most significant expressive means promoting stability and sassiness to be memorized and crampedly in interacting with their meanings. Rhyme, assonance of ending, shows paramount magnitude of musical sensitivity of people, its instinctive aspiration for completeness and beautifulness of the sound. The rhyme gives the final form to the proverb, completes the building, makes the proverb (certainly, relatively) immobile and alongside with this easy to remember.

**Rhymed assonance**

Rhymed assonances are widespread in English proverbs. Different types of rhymes are met in proverbs.

**Complete male rhyme**

In complete male rhyme the repetition is created by lexeme in coincidence of the vowel of rhyming lexeme with all the going after it sound. This type of rhyme prevails in English rhymes proverbs. The following proverbs can serve as examples:

A little pot is soon hot.

A straw shows which way the wind blows as you sow, you shall now.

Velvet paws hide sharp claws.

O'zi yuvosh bo'lsa ham, o'ziga puhta.

When the cat's away, the mice will play.

Exact a identical male rhyme. This type of rhyme differs from the one by that consonants, vowel all the other sounds coincide. In English rhymed proverbs repeating sounds are the parts of the complex of another lexeme, e.g.

There's many a slip twixt the cup and the lip words cut more than swords.

**Mixed rhyme**

Such rhymes in proverbs are very rare. When Adam delved a Eve span who was then a gentleman? Sound repetition is composed by lexeme.

**Complete female lexeme**

Female rhyme in proverbs is to be found less seldom than male one, but some examples may be met. In complete female rhyme one stressed syllable and one unstressed syllable recur in coincidence of vowel of the stressed syllable and all the going after this sounds. e.g.

Birds of a feather flock together he that mischief hatches, mischief hatches, mischief catches – Burovga chog' qazisang o'zing tushasan.

**In complete female rhyme**

This kind of rhyme is to be found very seldom. As an example may serve the proverb still waters have deep bottoms. Besides stated rhymes are to be met in proverbs compound rhyme, i.e. rhyming of one lexemes.

Too much of one thing is good for nothing.

Har sohadan bir shingil.

Tall to logical rhyme – the proof of the pudding is in eating .

**Alliteration.**

One can come across different types of alliteration in English proverbs.

Repetition of two sounds. This type of alliteration is the most widespread. In compositional approach it is possible to distinguish the following subtypes:

1) The repetition of a consonant in first and the last words.

Look before you leap barking dogs seldom bite let sleeping dogs lie stolen kisses are sweet.

2) Repetition of the consonant in the second and the last words.

A beggar's purse is bottomless.

Ochni to'ydirib bo'lmas.

A cat may look at a king. Every bullet has its billet.

Пуля виновного найдёт.

Every dog has his day.

Har narsaning vaqti soati bor.

One swallow doesn't make a summer.

3) Alongside with the two distinguished subtypes there exist some alliterated proverbs in which 2 or 3 consonants in different lexemes recur:

A creaking door hangs long in its hinges dumb dogs are dangerous –

Бойся молчащей собаки.

Saint heart never won fair lady.

Mag'urning biri ikki bo'lmas.

It is a long lane that has no turning.

Repetition of two sounds.

The repetition of two sounds is very rare in proverbs, e.g. plenty is no plague.

Combination of alliteration with rhyme.

Beauty lies in lovers eyes.

Не по – хорошему мил, а по – милу хорош.

A stitch in time saves nine.

Один стежок, сделанный вовремя, стоит девяти.

Many a little makes a mickle.

Toma-toma ko'l bo'lur.

### Assonance

Assonance, i.e. the recurrence of vowels is very rare in English proverbs.

Little pitchers have long ears.

Small rain lays great dust.

The nearer the bone the sweeter the flesh.

Supra qoqdi shirin bo'lur.

Combination of alliteration with assonance.

All roads lead to Rome.

Все дороги ведут в Рим.

Death pays all debts.

O'lganda hamma sedan kechar.

Time and tide wait for no man.

Vaqt kutib turmaydi.

### **Lexical – Euphonious means of formation of proverbs.**

In formation of proverbs lexical a euphonious expressive means may interact. To them attributed repetition with alliteration, repetition with rhyme and juxtaposition of antonymous, and rhyme.

Repetitions with alliterations is typical of extremely laconic elliptical proverbs like: in a for penny, in for a pound.

Other examples are – like prist, like people: no Gross, crown; no song, no supper.

Ishlamagan tishlamaydi.

In long proverbs the repetition with alliteration are to met less. e.g. take care of pence and the pounds will take care of themselves.

As to combination of repetitions with rhyme, they are met both in extremely laconic proverbs like:

Fast bind, fast find; no pains, no gains;

A penny saved is a penny gained, a in long proverbs, e.g. in time of adversity not one among twenty – Qatoringda noring bo'lsa yoking erda qolmaydi.

Money spent on the brain is never spent.

Kerakli narsaga sarflangan pul zoe ketmas.

In some proverbs we can see the combination of juxtaposition of antonymous with rhymes, e.g.:

A light purse is a heavy curse.

Do'sti yoqni puli yoq.

Little strokes fell great oaks-

Kichkina.demang bizni ko'tarib uramiz sizni

Proverbs with comparison of not antonymous a combination of lexemes may also be rhymes:

East or west, home is best.

O'z uying,o'lan to'y.

Better the food slip than the tongue trip.

Лучше оступится, чем оговориться.

Although among widespread English proverbs there are some long proverbs like; a bird in the hand is worth two in the bush , he should have a long spoon that sups with the devil.

And others, but majority of proverbs are short, laconic utterances. As above stated examples have shown ellipse prevail among proverbs more than in other types of idiomatic expressions. Long proverbs, i.e. proverbs consisting more than ten lexemes, tend to become obsolete. The majority of long proverbs registered in Oxford dictionary of proverbs are obsolete. Long proverbs are often ousted by shorter proverbs both close in image and possessing totally another imagery. So, the long proverb measure thy cloth ten times, thou canst cut it but once is ousted by the close in image measure twice a cut once -

Семь раз отмерь, один раз отрежь.

The proverb – he that hath had to one of his family hanged may not say to his neighbor “Hang up this fish – is ousted by the proverb twice as short a totally another by image: people who live in glass houses should not throw stones”

The long proverb can not save even the rhyme. It is quite fair in attitude to long proverbs with archaic elements. e.g.

He that winketh with one eye, a looketh with the other. I will not trust him though he were my brother –

Observed by us expressive means promote more brightness of English proverbs (these clots of peoples wisdom) which are organic part of phraseological structure of the English language. Types of phraseological meaning integral communicative meaning. It is typical of entirely reconsidered proverbs with constant dependence of components. Comparative meaning of completely reconsidered proverbs with consonant dependence of components (like blood is thicker than water) are the varieties of integral communicative importance.

2) Separating- integral communicative meaning. It is characteristic for proverbs with consonant –variant dependence of components. Varieties of this importance are:

1. Comparative meaning of proverbs with consonant variant dependence of components words cut or hurt more than swords.

2. Partially figurative meaning of proverbs. This meaning is composed by the combination of literal meaning of components with metaphorical meaning of one or two of them like faults are thick when love is thin and other.

As a conclusion, Stylistics, sometimes called lingo-stylistics, is a branch of general linguistics, it has been more or less definitely outlined. It deals mainly with two independent tasks:

a) The investigation of the inventory of special language media which by their ontological features secure the desirable effect of the utterance.

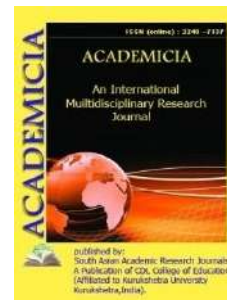
b) Certain types of text (discourse) which due to the choice branch and arrangement of language means are distinguished by the pragmatic aspect of the communication. The two objective of stylistics are clearly discernable as separate fields of investigation.

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DOI: **10.5958/2249-7137.2020.00541.8**

## WAYS TO ORGANIZE EXTRACURRICULAR ACTIVITIES IN THE FORMATION OF ECOLOGICAL CULTURE IN STUDENTS

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### ABSTRACT

*This article shows how to form an ecological culture in the minds of students studying in higher education in extracurricular activities in biology. The teacher explains in detail about the flora and fauna, which are currently in danger of extinction. We must not forget that students should be informed about the "Red Book" of Uzbekistan, about the state protection of plants and animals included in it. It is important to explain to students how harmful environmental pollution is to humans. The most important thing for professors and teachers of higher education is to understand the education system as an educator, to learn the basics of biology, its specific forms, methods and techniques to guide the educational activities of students. Some vertebrates live in secret. Most of them live at night. Field inspections from zoology require the practitioner to be observant, alert, unfamiliar with sound and agility in movement.*

**KEYWORDS:** *Discuss The Information, Methodological, Popular Science, Literature, and Research.*

### INTRODUCTION

Orientation of students to the formation of ecological culture through the transfer of theoretical knowledge, independent thinking in biology classes requires great skill from the professor. In the

process of extracurricular activities, it is important for students to independently strengthen their environmental knowledge and apply it in practice. To do this, the teacher should properly organize the work of students with environmental literature, the collection of various Internet data, recommend and collect scientific and artistic literature on ecology in order to encourage them to read outside the classroom. It is advisable to study and discuss the information together with the group.

To do this, it is important to pay attention to the basic concepts and principles of environmental education, to determine the level of formation of their environmental culture, to develop thinking skills, talent development mechanisms, a set of scientific and methodological, popular science literature, to conduct research.

### **Main part**

Field practice in biology in the formation of ecological culture in students is a key component of the training of highly qualified teachers. The main purpose of the field practice is to strengthen and apply in practice the theoretical knowledge acquired by students in lectures and laboratory classes on biology. During the internship, students learn about different species of flora and fauna in the wild and make observations on them. Under the guidance of a teacher, practitioners will gain skills in collecting animals and plants, the rules of their storage, identification of species, collection.

Field practice in zoology and botany is a key component of training highly qualified biology teachers. During the internship, students learn about different species of animals and plants in the wild and make observations on them. Students will be able to collect and store animals and plants under the guidance of a professor attached to them, to identify their species, to prepare collections, to know the habitat of the collected plants and animals, their impact on the environment and qualify.

In addition, students learned how to conduct research on plants and animals in the field practice, working with scientific literature. During the internship, students are given independent work by teachers, and students prepare abstracts and reports on independent work. At the end of the internship, students prepare a collection of plants and animals and submit a written report on them. Final conferences on field practice will be organized and reports will be discussed. The collected materials are used in course and diploma works.

Field practice is carried out on the habitat of plants and animals, ie biotopes. During the operation, attention is paid to the topography, soil, flora and fauna of the study area. Areas of collected plants and animals, as well as pests and damage to nature are recorded in the diary. Rare species in nature are studied only on the basis of existing collections. Useful species are collected in limited quantities.

The formation of students' teaching skills in practical work requires regular independent work with them, experiments, observation in nature and on the land of the institute. This practical work helps to form ecological education and culture in students. This largely depends on which method the teacher uses in the practical training.

Biology field-practices are the main school in the requirements of Mother Nature, its flora and fauna, water and air, Mother Earth. During the field trip, the teacher must explain to the students the current problems of nature protection: protection of the environment, air and drinking water

from pollution, conservation of endangered flora and fauna are the current problems of our time. These problems are related to the fact that the young generation brought up by the teacher consists of the Motherland, its love for nature, love for it and care for it like the apple of an eye. The teacher explains in detail about the flora and fauna, which are currently in danger of extinction. We must not forget that students should be informed about the "Red Book" of Uzbekistan, about the state protection of plants and animals included in it. It is important to explain to students how harmful environmental pollution is to humans. If the pollution of air, water and soil causes various diseases in humans, the future teacher will not be indifferent to the protection of Mother Nature and will follow this in his future teaching activities. She instills love for her future students, Mother Earth, and educates her as a true conservationist.

Students of the second stage of Navoi State Pedagogical Institute will complete 4 semesters and carry out field practice in the process of studying the local flora and fauna in the Sarmishsay gorge. The practice includes the following steps.

1. *Introductory conversation;*
2. *Excursion to nature;*
3. *Laboratory classes;*
4. *Independent work with collected materials.*

In the introductory conversation, the specifics of the Sarmishsay fauna are analyzed, and in the laboratory, attention is paid to independent work with materials collected by students.

On the basis of the course of invertebrate zoology, students get acquainted with planaria from the class of ciliated worms, rain worm from the class of low-haired worms, neris from the class of multi-haired worms, medical zulu from the class of leeches. Representatives of the mollusk species are studied using the earthworm, which lives in the upper part of the earth. The class of crustaceans is studied with the help of shrimp, shrimp, and the class of arachnids is studied with the help of pastures, scorpions. Insect class materials are collected, collections are prepared, first to the category, and in the laboratory to the family and species. Students conduct phenological observations on some of the representatives of the insect class.

In the first days of the practice of vertebrate zoology, they get acquainted with the work of identifying species of vertebrates, which are specific to different mountainous regions, different landscapes. Species and numbers of vertebrates are relatively small, the nervous system is much improved, they are very sensitive to human approach, movement, noise, clothing color and even tobacco smoke. Usually the animals hide before the appearance of the tourist students. Some vertebrates live in secret. Most of them live at night. Field inspections from zoology require the practitioner to be observant, alert, unfamiliar with sound and agility in movement.

During the practical training, students get acquainted with the abiotic and biotic factors of each biocenosis, the composition of the plant world, methods for determining their quantity and density. The materials collected during the field practice are used as exhibits in the museum of the department, in practical classes and laboratory classes.

During the field practice, it is advisable to hold excursions in nature, evenings dedicated to the diversity of fauna and flora, their importance in nature. On the eve of the completion of the field practice, students complete the independent work under their supervision, collect the necessary

materials, write a report and pass a colloquium or test.

Field practice is one of the main factors not only in improving the knowledge of students, but also in their ecological education, that is, the formation of ecological culture in them. As a result of field practice, students develop sustainable development, environmental awareness, knowledge of global and local environmental problems, the ability to compare objects and phenomena in nature, intelligence in dealing with changes in the environment, the ability to think deeply about the environment. , patriotism, love for Mother Nature, personal responsibility, care for nature, knowledge of ecological values, aspiration to preserve ecological values, initiative in environmental protection, diligence, care for the environment, self-reliance The qualities of consciousness, responsibility and will, which define the ecological culture, such as protection, perseverance in nature protection, economy in the use of natural resources, cleanliness and cleanliness, are being developed.

Biological sciences play an important role in the formation of ecological culture of students of pedagogical higher educational institutions. The study of this subject enriches the personal experience of students, helps to gain knowledge about the events and processes occurring in animate and inanimate nature around us. Therefore, the teacher should be well acquainted with the scientific, theoretical and practical achievements of biological sciences. Good knowledge of biological sciences allows higher education teachers to properly organize the teaching of students. The most important thing for professors and teachers of higher education is to understand the education system as an educator, to learn the basics of biology, its specific forms, methods and techniques to guide the educational activities of students. At the same time, teachers should be familiar with the nature and agricultural features of their country and use them in working with students.

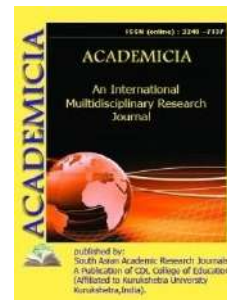
In biology classes, students receive theoretical knowledge, practical, teaching and skills under the guidance of a professor in accordance with the program. Explaining the topic to students in a clear way, using a variety of tools, the teacher gives the necessary insights, learns how to work with the book, to apply their knowledge in practice.

## CONCLUSION

The purpose and content of your lessons are different. However, the common goal of all of them is the general education of the student and the articulation of knowledge that is understandable to them. The teacher should organize the work of students in such a way that they understand that the ecological knowledge acquired in the classroom is connected with the previous topics, and consciously master the new topic. During the lesson, the teacher should try to create conditions for active work of students, to arouse their interest, and as a result to achieve the goal.

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DOI: **10.5958/2249-7137.2020.00542.X**

## PSYCHOLOGICAL FACTORS OF SOCIAL AND PERSONAL IDENTIFICATION IN ADOLESCENTS SELF-CONSCIOUSNESS

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### ABSTRACT

*The article compares the theoretical views of European scholars on self-awareness, social and personal identification. Identification and self-awareness have been interpreted as psychological phenomena and have been argued to be related to several social psychological factors. The essence of the psychological interaction and influence of the phenomenon of identification and self-awareness is revealed. Scientific comments on the study of psychological and psychophysiological processes in adolescents. Suggestions and comments were made as a partial solution to the problem.*

**KEYWORDS:** Social Personality, Identification, Self-Awareness, Social Phenomenon, Psychological Factor, Experiment.

### INTRODUCTION

Nature, which is built on the interests of more human beings, created the world in which only human beings understand the world through self-awareness, thoroughly acquire secular, religious, social and political knowledge. Creates a comfortable environment for himself and has the experience of building a solid foundation for the future. However, no one denies that there are still psychological, socio-psychological negative events around the world, and there are no concrete proposals for the optimal solution to such problems. The fact that the science of psychology today has managed to cover all areas of life is certainly not new to all of us. So has the need for psychology increased in every field? This indicates that the scale of social and psychological problems in society is becoming more widespread. Including; increasing divorce rates among many young families; suicides are reported; Problems that need to be addressed, such as the emergence of conflict between organized groups and the unusual behavior that often occurs in the lives of young people, pose a huge challenge to the science of modern psychology.



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**Main part**

The origin of the above-mentioned social psychological problems is in fact a holistic concept related to self-awareness, and self-awareness is often considered by researchers as an invisible phenomenon of a specific nature. will be left out. The phenomenon of self-awareness in the individual first developed on the basis of social identification in the early 50-60s, under the tremendous influence of an approach based on psychological knowledge. Self-awareness is often defined by the perfection of the ability to know oneself transparently. According to many theorists, this is an axiom that requires certain knowledge and skills. American psychologist George Herbert Mead says that in a child this ability is not only innate, but appears from 12 to 18 months. This ability implies a separate form of consciousness: "man develops as a coordinating system, on the basis of the history of social development, in order to realize that he is different from others."

Self-awareness, in addition to the ability to express oneself, is related to the execution processes necessary for self-management. In Western countries, in social psychology, self-awareness is often explained by theoretical psychologists Shelley Duval and Robert Wicklund, in connection with the theory of objective self-awareness.

The most important component of consciousness, one of its components, is self-awareness. Animals are incapable of comprehending the psyche built into them. By understanding the program of their lives, they do not analyze their actions and make a comparative assessment of them. Self-awareness is only the specific center of the human mind - it is the separation of a person from the outside world, the assessment of his abilities and capabilities, thoughts and feelings, actions, place in society, etc. in other words, to know oneself as a unique and united person. In Europe, however, social and personal identification is interpreted as the most important psychological factor or structure, especially in cognitive psychology. The basic view is that social knowledge in the world is formed on the basis of stereotypes, on the basis of identities, on the basis of identification, on the basis of consistent concepts, relationships that regulate social behavior. This process had long attracted the attention of European scientists.

In the works of L. Festinger and J. Turner, the process of social and personal identification is explained in a different way, in the framework of the theory of social comparison. This approach focuses on the fact that social identification is a system of knowledge and understanding that plays a regulatory role in appropriate situations. [2]

Psychologists conducting psychological, socio-psychological research in Uzbekistan M.G.Davletshin,, E.G.Goziev, N.A.Soginov, V.M.Karimova, G.B.Shoumarov, B.M.Umarov, O.B.Shamsiyev. Although a number of research papers and scientific articles by Muhammedova and others focus on socio-psychological problems in family relationships, they are the ones who bypassed the problem of identification, self-awareness or considered it as a partially objective phenomenon. [1] In fact, the problem of self-awareness in the individual is both an objective and subjective psychological, psychophysiological phenomenon, which has the property of combining the constantly evolving, improving mechanism of mind and cognition of ontogenetic nature. It is a psychological process that is constantly changing and replenishing itself under the influence of the macro and macro environment, which depends not only on the individual. When



we say a self-aware person, we can imagine many images. Including; Not all students in the school have a thorough knowledge of the subject, some are excellent, some have an intermediate or lower level of knowledge, which means that they are well-versed. It is impossible to say that the students understood themselves, and those who could not master did not understand themselves. Or we can't admit that young families living in peace are self-aware, and vice versa, not all students studying in higher education institutions have high intellectual potential, some are lazy, some are active. If we consider an inquisitive student as a self-aware student, others will remain as self-aware students, because in the eyes of others, a student who successfully passes the university tests will also be considered as a self-aware student. We accept both a Nobel Prize-winning student and a regular student as a self-aware student, so we do not pay attention to the problem of self-awareness from an analytical point of view, so we still have a clear example of a fully developed personality. In fact, each age has its own level of self-awareness, which is specific to each ontogenetic period. The basis of our ideological ideas is that the phenomenon of self-awareness in a person, the phenomenon of social and personal identification, is likely to be in a state of continuous interaction and interaction with each other. Through this phase of influence, it is possible to apply measures of psychological, socio-psychological influence on the macro environment Z. Fred's book "Fundamentals of Psychoanalysis" states that a qualified psychologist can achieve a positive result through self-expression to the patient.

There are 4 psychological factors for the coordination of self-awareness. When a person is born, first of all, the mechanism of reflection of the surrounding shapes, colors and sounds is activated. At the same time, the mechanism is a leading factor in the formation of psychological functions in the understanding of the environment, being, the content of actions and the world of people in it, from the moment of birth of the individual. The peculiarity of the self-conscious person is that he reflects himself on the map of the whole world. Of course, it is natural that such a reflection event does not occur in the short term, which is the initial process of private reflection and is not large enough to cover the general reflection phase. Muddao is that it is possible to increase the activity of the dynamics of this stage on the school social platform. The difference is that through the general reflection, the individual classifies the skills that are formed in him, that is, filters, retains the relevant for himself. This creates a psychological basis for the child to develop the most optimal, subjective psychological reaction to any natural biological, psychological influences from the environment.

In the special reflection, a narrow range of psychological features of the individual is formed, which are associated only with the elimination of biological needs. The broad differences between general and specific reflection play an important role in determining the degree of alternativeness of the self-conscious person. There are several factors that direct the process of private reflection to general reflection.

1. The factor of understanding natural knowledge
2. The factor of understanding secular knowledge
3. The factor of understanding religious knowledge
4. The factor of understanding the being, the environment, the laws of the universe and all the organisms, details, objects, actions, laws, rules and norms in it.

Only when all of the above factors are met in a person can a person find an akmiological point at his level. There may be questions; What factors affect the completeness of these factors? Of course, the primary educational environment for a person begins with the family. Family relationships, close kinship, etc. Thus, the next stage in the sequence of education begins at school, when the person paints his psychological diversity. It is noteworthy that the process of self-awareness in a child before school age can take place in an undifferentiated way. In the school environment, skills are slowly developed, that is, a psychological environment is created for this, that is, a distracted, playful student before going to school, now has time to repeat the lessons done at school. Thus, the skills of repetitive approach to their work, themselves and tasks are improved. Thus, given that the initial reticular pharmacy of self-awareness is more active in the school environment, it is at this stage that the effectiveness of practical specific approaches to personality development can be recognized. It is true that there are enough textbooks, subjects, clubs for schools for the formation of the above factors for the student. To some extent, the child can fully master the textbooks and practical exercises in school, but there is no clear platform for a specific, psychological, pedagogical approach that encourages the harmonization of knowledge and impressions and regular adjustment. In order to clarify the above considerations, the results of experimental psychological research have shown that; The role of close kinship in the child's self-awareness was marked by significant differences from the special educational processes. This means that for children of any level of education who have mastered school textbooks, there must be a programmatic project as a differentiated textbook that further regulates their general knowledge experiences.

To further clarify the problem, it is useful to dwell on each of the four main factors listed above.

- The factor of understanding natural knowledge; Natural knowledge refers to organic, inorganic chemicals, ranging from liquefied gaseous substances in solid form to solid crystalline substances, which exist in natural conditions, in the state, under the influence of natural phenomena in motion. Perhaps the student can absorb the intended knowledge in the form, but the inability to reveal the essence of the character background can directly lead to a deviation from the real understanding of the nature of these details, ie the student's creation, creation, climate and nature, adaptation, shallow knowledge of self-adaptation, structural structure, natural phenomena of inevitable nature. In order to stabilize its dynamics, or more precisely its psychodynamics, it is necessary to form an autonomous psychomosa in a separate complex.

It is known that all countries, as a result of the historical evolution of living conditions, nature, have their own religion, customs, national values. It is important to note that when it comes to religion, the student is immersed in the abyss of knowledge acquired in any other natural or concrete sciences, unless he has a realistic idea of religious concepts. More precisely, it is natural for any object to lose the other side of the event as a rope tied to real details, which may negatively affect the progressiveness of the identification mechanism in self-awareness.

The factor of understanding the being, the environment, the laws of the universe and all the organisms, details, objects, actions, laws, norms in it.

As a set of knowledge listed above, the process of perceiving not only detailed knowledge but also the movement of the universe in a limited time frame, reflecting the real background of a distant galaxy, is for the reader, even some categories of adults. In order to activate the mechanism of self-awareness in a child who has to correctly assemble each part or element of a

device in order to activate it, a complex information system has been formed, which combines the above factors should be.

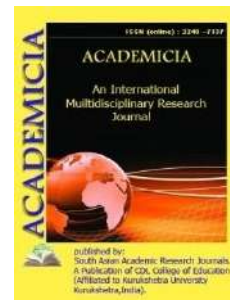
From birth, the child grows up under the influence of the external social and psychological environment, begins the first steps of verbal communication with others with questions. As you grow older, the questions become more complex and larger. The problem is whether the child will find the right and adequate answer to each question in time? Naturally, no expert or bureaucrat can give a definitive answer to this question. The article focuses on the development of self-awareness skills of school-age children, as the mental instability of children of this age can be compared to a "wild animal wandering in the woods." When a wild animal is in a sanctuary, it consumes what it is given for food, is forced to do so and adapts to this environment, while in the open forest, on the contrary, it lives instinctively and aggressively. If we do not have time to answer their questions in a timely manner, if we do not use the pedagogical, psychological means of spiritual nourishment in accordance with the requirements of the modern world, and if we do not use the appropriate psychological, socio-psychological environment for them.

## CONCLUSION

Surprisingly, not all children of different categories of children are fully formed as expected by society, if we do not form and promote the means provided. Therefore, no one can guarantee that we will not be able to achieve, at least in part, the conflict between some families in the society, the violence committed by a narrow group of organized groups, and the serious problems in maintaining the moral values built into society. The conclusion is that at the present time, when the flow of information around the world is sharp, it is necessary to properly educate and direct future successors in the era of negative material, which is contrary to human perfection, because the situation requires it. It is advisable to introduce a textbook project on the subject of "self-awareness" in the next list of school textbooks.

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DOI: **10.5958/2249-7137.2020.00543.1**

## METHODS OF ACCLIMATIZATION OF IMPORTED CARP BREEDS IN THE ZARAFSHAN OASIS

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### ABSTRACT

*The article describes the methods of acclimatization of Hungarian carp breeds imported on the basis of imports in the hot and dry ecological climate of the Zarafshan oasis. There are in the article analyzed the breeds, age, delivery time and stocking of fish of natural ponds of new aquaculture objects and the indicator of fish resistance to oxygen deficiency hypoxia.*

**KEYWORDS:** *Acclimatization, Climate, Carp, Breed, Two-Year-Old, Aquaculture, Hypoxia, Stenophage, Benthos, Pond, Hybrid, Oxygen.*

### INTRODUCTION:

One of the main tasks of the fishing industry of our country today is to fully provide the population with quality, cheap, protein rich dietary fish meat, to significantly increase the volume of commercial fish products and maximizing fish productivity per hectare of water basin. One of the important ways to solve these problems is to meet the requirements of international

and European standards in terms of productivity and exterior in these reservoirs, low productivity, unknown origin of the local breed or mixed species (hybrids) of fish species and reduction of breeds, application of intensive aquaculture technologies, as well as acclimatization in hot and dry ecological climates of the Republic by importing new, productive, new commercial carp breeds. In the last five years, the fishing industry of Uzbekistan has been based mainly on its own resources, with special emphasis on the acclimatization of new aquaculture facilities. Farmers and entrepreneurs engaged in fisheries are importing high-yielding, fast-adapting fish species and breeds from abroad, which are being specially cared for and conditioned on farms.

Acclimatization of new imported fish species and breeds is an important biotechnological process in the fishing industry. The success of acclimatization largely depends on the biotechnology of the work done. Biotechnology of acclimatization processes is developed not only on the basis of advanced technical means, but also on the basis of in-depth knowledge of the biology, ecology of imported new fish species and biological laws of water bodies inhabited by aquaculture objects. In the acclimatization of fish, we focus on the study of the ability of new carp species imported from abroad to survive in the hot and dry ecological climate of the Zarafshan oasis, to maintain their morphological and productivity characteristics, as well as to pass these traits from generation to generation.

#### **MATERIAL AND METHODS:**

The research was conducted in 2019 at the fish farms of “Golden Lake Fish” Ltd, located in the Tudakul Reservoir in Kiziltepa district, Navoiy region, and “Oq Amur” Ltd in Samarkand district, Samarkand region. During the experiment, in the hot and dry climate of the Zarafshan oasis, in the climate of imported Hungarian carp fish, the timing of their import and pond fishing, the effective use of local natural nutrients (benthos, phytoplankton, zooplankton), oxygen deficiency in pond water (hypoxia) and its ability to withstand high and low temperatures was studied. The data collected were based on statistical analysis, ichthyology, and generally accepted methods in aquaculture.

#### **RESULTS AND DISCUSSION:**

Research on the acclimatization of newly introduced fish breeds in natural ponds was carried out in two parts. It was done in 2 different ways. In the first part of the experiment, the timing of the import of new carp species was studied.

For the normalization of the process of acclimatization of imported carp to natural water bodies, it is important to know such information as the timing of their import to the country, the timing of pond fishing, feeding of new species, as well as the age of new aquaculture facilities.

In 2019, the Golden Lake Fish fishery, located in the Tudakul reservoir in Kiziltepa district, Navoiy region, received a four-year-old (4) from Hungary with an average live weight of 4-6 kg. 399 adult fish of the Hungarian carp breeds (340 females and 59 males) were brought. In the experiment, the ability of imported pedigree fish to survive and adapt to the hot and dry ecological conditions of the farm was studied. The success of the acclimatization process depends on the seasonality of the year when the ponds are fished, and this relationship has been studied experimentally. The timing of fish imports and their survival rates are given in Table 1.



**TABLE 1. TIME OF ACCLIMATIZATION OF HUNGARIAN CARP BREEDS AND SURVIVAL RATE, %**

Pond №	Time of delivery, month	Number of fish piece	Survival rate, %	Survival fish	Fish loss	At the beginning of the experiment	At the end of the experiment
№ 1	March	224	97,3	218	6	10.03	26.09
№ 2	April	175	94,2	165	11	15.04	26.09

The first batch of fish was brought in early March, 224, the second batch in early April, 175 adult male and female fish were brought and placed in natural ponds with an area of 0.7 ha and 0.5 ha. The adaptive and physiological conditions of fish were studied in the same natural, nutritional and storage conditions of aquaculture objects brought in two different periods. Fish imported in March quickly adapted to the natural pool water, with a conservation rate of 97.3% and a survival rate of 3.1% higher than that of fish imported in April. The main reason for this is that in March in the Zarafshan oasis the air and pool water temperatures are not high, which allows European carp fish breeds to adapt more quickly to our hot and dry climate. From April, the air and pool water temperatures begin to rise sharply, making it difficult for fish to adapt to natural conditions.

In order for well-adapted new species and breeds of imported fish to the natural climatic conditions of the commercial water basin, it is advisable to use adult fish, as young fish (especially fish larvae) are stenophagous, ie in the natural pond. Many do not absorb well from natural (benthos, phytoplankton, zooplankton) and artificial foods. It is advisable to pay special attention to the fact that the fish themselves adapt as a result of natural selection, because in this case the balance between the ichthyofauna in the pond is not disturbed. From the above data it is clear that in order to maintain the high viability of fish, it is necessary to take into account the seasonal conditions of the year when fishing in ponds for a successful acclimatization process.

In the second part of the experiment, a two-year-old (1+) fish with an average live weight of 850-900 gram was used to increase the level of resistance to oxygen deficiency in the pool water. Oxygen deficiency is a way to increase resistance to hypoxia. Oxygen is considered a substance necessary for the life activities of fish. It is very difficult and economically expensive to keep enough oxygen in the water when growing fish in a pond, so it is important to choose fish that are resistant to hypoxia. The hypoxia resistance of fish is based on both scientific and practical divisions, the reaction of fish to external behaviors in the presence of oxygen deficiency.

30 piece Hungarian carp breeds were placed in a plastic pool with a water content of 8-10 mg / l and a water temperature of +20 C<sup>0</sup> Celsius degrees, a volume of 600 liters. Over a period of 2-3 hours, the amount of oxygen ( 1 mg/l and below ) decreases to a critical level, so that the fish begin to float to the surface of oxygen-rich water. To scare the fish out of the water, a blow to the top of the fish basin or a weak electric field was used. As a result, after some time, weakened fish flocks lose their fear reaction and remain on the surface. The most firm fish, on the other hand, stayed at the bottom of the water for a long time. Experiments have shown that carp, which are resistant to hypoxia, have a higher respiration rate than non-stable ones. These resistant fish were



selected and left for future breeding. During the study, the amount of oxygen was measured using an oxygen measuring device K-215 with an accuracy of  $\pm 0.1$ , which has a storage memory.

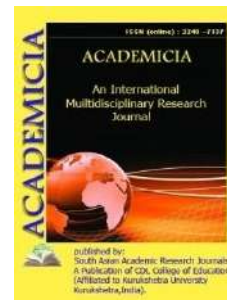
Sometimes there are several difficulties in the process of acclimatization. In summer, the water temperature rises sharply and the amount of oxygen in it exceeds the norm. This complicates the process of adaptation of new fish species to the hot and dry climate of the farm and has a negative impact on the physiological and productivity of fish. In this case, the pools are artificially saturated with oxygen. To increase the amount of oxygen in the pool water, air compressors, water pumps, as well as blades are used, the water is enriched with oxygen, the water flow is accelerated. When grown separately in ponds, hypoxia-resistant fish had an average advantage of 4-16% in terms of commercial fish productivity and 4-34% in terms of feed premium.

### CONCLUSION:

From the above we can draw the following conclusions. In the hot and dry ecological climate of the Zarafshan oasis, import of physiologically and sexually mature fish to our country for better acclimatization of import new fish species, preservation of their morphological and high fish productivity, preservation of valuable selection traits and their transmission from generation to generation will be appropriate. In order to successfully complete the process of acclimatization, if the ponds are fished in March of this year, the fish will be more resistant to environmental factors and will adapt quickly. In hypoxia-resistant fish, respiration is intensive and can survive in critical amounts of dissolved oxygen in water.

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DOI: **10.5958/2249-7137.2020.00544.3**

## THE BLENDING OF FACT AND FICTION IN MODERN AMERICAN DOCUMENTARY NOVELS

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### ABSTRACT

*The article deals with the modern American documentary novels which are recognized as the significant worldwide. Main problematic notions are opened through vivid real life facts and fiction also added so as to develop the literary importance of novels. Truman Capote's well-known work In Cold Blood (1965), Norman Mailer's The Executioner's Song (1979) are exemplary documentary novels in modern American literature.*

**KEYWORDS:** *Documentary Novels, Fact, Fiction, Reality, Documents.*

### INTRODUCTION

To begin with, it should be presumed that the documentary novel is rather informative and omniscient genre of literature which makes the readers intangibly dive into the reality of life, reveal the factualness in certain fields. By exact definition, documentary novel genre is subtly different from other literary genres in regard to several options. More precisely, the documentary novel is inclusive and non-selective, henceforth in the documentary novel an unpredictable harshness of reality and difficulties of life, which sometimes keep unanswered, may be illustrated with the vital essentialities. Furthermore, the documentary novel is one of the pivotal literary genres in the modern American literature, in which both ubiquitous and unrevealed mysteries or the reality of circumstances are depicted through vivid portrayals. Remarkably social alterations and problematic issues, contradictory reformations were ascribed as the utmost discussions throughout the USA in the last decades. Real facts and succinct documents appeared in the novels, accordingly, the characteristics of documentary novel gained a significant importance in many writers' literary masterpieces. One of the remarkability of documentary novels is its origin, as several notable writers contributed exponentially to the swift development of the documentary novel genre, namely Norman Mailer, Truman Capote and others.

By analyzing the widespread dispersion of documentary novels and their irreplaceable contributions in literature, as such novels were considered as the mirror of society, the dimension of notions fact and fiction may be inclined thoughtfully. One recent study which examines the documentary form has been made by William Scott, who deals specifically with the United States in the 1930s. according to Scott, documentary is the presentation of consistent fact in a way that makes it credible and vivid to people all the time. Consequently, while reading the documentary genre a reader must remember that the factualness or concreteness of what is told is not always guaranteed. Blending of fact and fiction in the documentary novels empirically demonstrate the voracious phenomena of the American dream turning into American nightmare through reliable examples.

Admittedly, writing documentary novels is a really tough challenge for the writers, due to the many facts and much information so as they are so messy that they do not yield to the demands of the story. Therefore, documentary as a part of the literary genre, from the academic point of interpretations, its main intention is to illuminate the American life in more widely approaches, also to centralize global daily issues, which overwhelm other formalities of life. Undeniably, a documentary novel is not superior to other modes of fictional discourse in the capacity of assertion since all fictions assert the propositional content with equal force and sincerity; it should be believed that it does raise the problem of reference for explicit consideration. In order to investigate the truth-telling claims of a documentary novel, it is important to illuminate the assertive capacities of fiction and non-fiction in general.

The most distinguished author in this field is Leonora Flis, Adjunct Associate Professor – University of Nova Gorica, assumes that a similar set of complications inflect our sense of what is “fiction”. The factual content of a story seems to have insufficient to do with the narrative strategies employed by writers. It should be claimed that many literary techniques accomplish their own sense of reality as they do not pay attention to the kinds of stories in which they appear. All stories, whether they are “true” or “untrue”, or based on “facts”, are constructed objects. In regard to the facts, a documentary novel is the source of response to the ambiguities and pressures of the present-day reality. [Leonora Flis.

The documentary novel and its many theories. 2010] Taking above into consideration, the factual and fictive discourses take more insurmountable connection in searching for a documentary novel’s accomplished elements through the reality. Hence, factual and fictive discourses are not unchangeable truth essences, but, meanwhile are historically different types of writing, signaled by, besides, incorporated with the help of alteration of literary conventions and generated by the changeable structures of historically specific bounds of production and intercourse.

M. M. Bakhtin, a Russian philosopher, literary critic and scholar who worked deeply on literary theory, as well as the philosophy of language has remarked in his views that, the boundaries between fiction and non-fiction, between literature and non-literature and so forth, are not laid up in heaven. The positive findings suggest that every specific situation is historical and the growth of literature is not merely development and change within the fixed boundaries of any definitions, the boundaries themselves are constantly changing. [Bakhtin M.M. The Dialogic Imagination: Four Essays, 1981].

Moreover, the mixture of fact and fiction in the documentary novels is considered as natural phenomena inasmuch it is impossible to create a full novel on the basis of real events. Even if it is understood documentary novels are the part of happened situations, authors imply some imaginations, fiction in order to make the novel more attention-drawing and conceivable, emotional. Thus, it is a commonplace acceptance that the blending of fiction in documentary novels is a striving for truth, as well as remarking the facts altogether omniscience. By way of asserting real documents and reliable facts, including names of people, cities, hotels, houses, shops, Truman Capote substantiates his narrative style.

Nevertheless, Capote truly modifies the obviousness through factual and fictional tension. While Norman Mailer admits that he used the fictional assumptions in his novel, Capote fully advocates that he wrote his novel on behalf of factuality which he read himself in papers. Therefore, he constantly emphasizes the unjustified system of Kansas, it is vividly depicted through dialogues, letters and testimonies, medical and other legal documents, which Capote willingly is eager to reveal the judgments of truth and morality. Additionally, by way of appearing the author response in the novel, it is straightforward that feeling his attitude towards the society tragedy in certain fields. Capote empirically encounters the main character Perry Smith and as a result he pays attention Perry's emotional and physical tortures, moreover the difficulties he came across in the life.

In the memorials of writer Harper Lee, Capote's lifelong friend, the relationship between Capote and Perry Smith has similarities in comparison to their childhood events, she explains it as following "every time Truman looked at Perry he saw his own childhood of disaffection and rejection" (De Bellis 1979: 534). Henceforth, the probability of events appeared more sentimentally in the novel *In Cold Blood*, also the characters are rather sensitive and non-ambiguous for the readers. Simultaneously their fate sometimes makes the readers miserable, sometimes dependent to pitiful concerns about the crime and its correlation.

Norman Mailer admits himself that he decorated the novel *The Executioner's Song* with literary colors to hook the unfathomable whys and wherefores of the crime related to Gary Gilmore's life. Strikingly, Mailer does not believe that the novel reveals the outcomes of the events, he just uses third-person narrative and thus he usually confronts from the view of inconsiderable omniscience in the novel. He recognizes the peculiarities around the characters which are moving at times, by way of regarding its originality, *The Executioner's Song* is a tacitly expended and mistakable life and disgraceful death of murderer Gary Gilmore. Mailer thoughtfully structured the text, in regard to *In Cold Blood*, *The Executioner's Song* does not fully pay attention to the comprehensive conclusion about Gary's admissions behind his destructive aptitude. Mailer decides to approach differently so as not to make the readers console with determinable ending, as the conclusion of events he uses Gary's mother as the closing remark, similarly, he offers it to the readers "If they want to shoot me, I have the same kind of guts Gary has. Let them come."

## CONCLUSION

In a nutshell, the factuality and fictionality are the specific characteristics of the documentary novel. Pointing out the omniscience and obviousness in the novels it is crucial to consider the

both reality and imagination. The eminent writers, such as Truman Capote and Norman Mailer reached the pinpoint of the documentary novel genre in modern American literature.

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DOI: **10.5958/2249-7137.2020.00545.5**

## IMPROVING THE METHODS OF FORMING AN ECOLOGICAL CULTURE IN YOUNG PEOPLE

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### ABSTRACT

*The main features of ecological knowledge and culture, national continuous education in the formation of ecological knowledge and culture, the role of the media in educating young people as highly ecologically spiritual people through educational sciences and ecological education among the population twg The data are given in It also describes the formation of knowledge and environmental culture of young people in the national continuing education.*

**KEYWORDS:** *Ecological Education, Ecological Knowledge, Ecological Culture, Personal, Responsibility, Diligence, Self-Control.*

### INTRODUCTION

Ecological education is a permanent unity between nature and society study and application of natural and social laws maintaining environmental sustainability through Ecological knowledge is the level of knowledge that people create about the protection of the natural environment, the rational use of natural resources, the restoration of degraded natural complexes, that is, the reflection of this phenomenon in human thinking.

Ecological culture is the activity of knowledge, consciousness, understanding, literacy, intellectual potential and ability to apply it in nature, a high level of activity in relation to the environment, a conscious and responsible approach.

### Main part

The purpose of environmental education is to form feelings of sincere pride, as well as grief about the nature of our country.

Principles of environmental education include:



-environmental protection is inextricably linked with the consciousness and culture of the local population;

- The need to harmonize the laws of nature and society;

- The connection of ecological knowledge and culture of young people through education;

- compulsory environmental education and upbringing;

-high ecological spirituality is an integral part of a person's spirituality, etc.

<b>Indicators of ecological values</b>	<b>Criteria for determining environmental values</b>
Knowledge of global, regional and local environmental issues	Environmental issues that threaten sustainable development, namely the rational use of land, water, energy and other natural resources, conservation of biodiversity, soil degradation, to be aware of environmental problems, especially the process of desertification, air pollution, climate change, industrial and domestic waste management, their causes and consequences, in particular, the impact on the gene pool and ways to adapt.
To be able to compare objects and phenomena in nature	Creating conscious concepts by comparing nature, thinking, planning in advance the activities in nature, the attitude to it.
Awareness of changes in the environment	To be interested in nature, to feel the beauty of nature, to understand that this beauty is created by nature and man, to correctly observe and understand the role of man in nature.
Perseverance in nature conservation	To be able to refrain from negative actions towards nature, to overcome difficulties, to achieve the set goal, to be able to confidently finish the work started and to have one's own point of view.
Initiative in environmental protection	Involvement of friends in nature conservation, formation of new groups, promotion of new ideas, ecological knowledge and introduction to the process of sustainable development.
Hard work	To form a desire for socially useful work, to acquire labor skills, to achieve clarity and consistency of actions, to strive for physical maturity in the process of work, to be satisfied with one's work, to evaluate the work of oneself and one's friends objectively . Follow consistency in this regard.
Self-control	Entering into a relationship with nature and setting a standard level of activity in it.

#### **The main qualities that determine environmental knowledge and culture**

<b>Indicators of ecological values</b>	<b>Criteria for determining environmental values</b>
Patriotism, love for mother nature	To love the nature of the house, the neighborhood, the city in which he lives, to be proud of it, to respect it, to be interested in its future.

Sustainable use of natural resources	Sustainable use of natural resources, taking into account the needs of present and future generations.
Cleanliness, tidiness and cleanliness	Striving to beautify the environment, keeping it tidy and tidy, clean, tidy and pleasant scenery. Prevention of pollution of natural phenomena. The character of initiative in keeping them in their original state.
Personal responsibility	To be able to show diligence in conservation of nature, increase of natural resources, to manage the practical activity on the basis of the laws of nature.
Striving to preserve environmental values and apply them in daily life	Positive-emotional attitude to the land, water, flora and fauna, nature conservation. Effective use of national values inherited from ancestors for sustainable development.
Activity in environmental protection	Be careful with the environment, objects and events. Influence on their sustainable development, effective use of environmental innovations.
Honesty, devotion to duty	Suffering from the pangs of conscience when knowingly causing damage to natural phenomena, not to repeat one's guilt, to be fair in dealing with nature.
Caution in dealing with nature	To develop the qualities of caution, sensitivity through a scientific, innovative approach to the implementation of all the existing diversity of objects in the universe and the stable relationship between them.

#### National continuing education in the formation of environmental knowledge and culture

Stages of education	Ecological culture	Environmental education
Preschool education	-Water conservation experiments -Fresh air coin treatment exercises - Ways to use the sun -The treasure underfoot	-That's nature -Life and the sun -First step...
General secondary (school) education	Primary education General secondary education Extracurricular education	"Me and the environment" "Environment in the tone of nature" "Living conditions on earth" "Man is changing nature" (Textbooks and workbooks), etc.

Stages of education	Ecological culture	Environmental education
Secondary special, vocational education	Academic lyceum education	Vocational education General ecology
Higher education	Bachelor's degree in Ecology and Environmental Protection:	Theory and history of ecology Scientific bases of environmental protection Fundamentals of

		bioecology
	On non-ecological directions:	Nanotechnologies and nature protection Environmental protection in the biosphere
Postgraduate education	Master's	Methods of modern ecological research New ideas on the rules of ecological consciousness and culture
Professional development and retraining	The rules of ecological culture that must be followed in the education, training, production, service or management of a senior researcher in research	Sustainable development education

### Educating young people as highly ecologically spiritual people through educational sciences

- ✓ **Indicators of spirituality**
- ✓ Respect for spiritual heritage
- ✓ Staying true to customs and traditions
- ✓ Respect for religious values
- **Factors of cultural and material wealth**
- ✓ Respect for the state and mother tongue
- ✓ Love for one's people
- ✓ Living with a sense of patriotism and pride in one's country
- ✓ Love for the motherland and the environment
- ✓ Preservation of created material, including historical treasures
- **Historical factors**
- ✓ Know the history of the homeland
- ✓ To follow the example of great scholars
- ✓ To have an idea about historical monuments
- ✓ Positive of the ancient national education
- ✓ Save properties
- **Factors of confidence in the future**
- ✓ Gives a positive assessment of the periodic changes taking place in our country
- ✓ get
- ✓ Has a comparative image with other countries through a sense of pride
- ✓ to be
- ✓ Ability to see the economic, social potential
- ✓ Formation of a harmoniously developed generation

**The role of the media in conducting environmental education among the population.** At the end of the twentieth century, the impact of humanity on the processes in the biosphere reached its peak. The current generation is experiencing local and spiritual ecological crises. In such a complex period, the scientific-theoretical, practical, educational, cultural and informational significance of ecology is growing. Accurate assessment of the state of the environment,

ensuring the timely conduct of necessary activities is directly related to the level of development of environmental knowledge.

Environmental monitoring, control and management system-monitoring provides an opportunity to study and assess the environmental situation. Monitoring is carried out in mobile laboratories, stationary posts and specially equipped observatories.

However, the monitoring system does not always have sufficient capacity to accurately assess the environmental situation in the biosphere and its individual areas. As a result, there will inevitably be differences between the environmental situation and the available data. Therefore, today it is difficult to accurately and reliably assess changes in the environment. This situation also applies to the Republic of Uzbekistan, and the monitoring system needs to be improved to provide a reliable assessment of the state of the environment. Accurate and reliable assessment of the state of the environment allows us to predict possible future environmental changes. There are various predictions about future changes in the social and ecological situation in the current era of increasing human impact on the environment.

Improving the economic mechanism in the use of nature is important. Currently, there are fines and fees for excessive pollution of the environment, use of natural resources. As a result, the collected funds can be spent on various environmental activities. In the process of transition to new economic relations in Uzbekistan, a unique economic mechanism for the use of nature is being formed. The implementation of the economy of nature plays an important role in balancing the relationship between "Man and Nature".

Ecological education plays an important role in nature protection, rational use of nature and improvement of ecological conditions. The ecological situation in different countries, the nature of the use of nature largely depends on the level of environmental literacy of the population, ecological culture. Environmental education begins with the family. Ecological education and upbringing should continue uninterrupted from kindergarten to higher education. Love for nature is a consequence of human beings.

Environmental education is the focus of the United Nations, UNESCO and UNEP. Various events are being held around the world and in individual countries for the development of environmental education. Every specialist in the field should be ecologically literate and in his work not to harm the environment, to contribute to the development of environmental education.

Certain measures are being taken in the Republic of Uzbekistan in the field of development of ecological education and upbringing. The concept of continuous implementation of environmental education has been developed in our country. But there are still many shortcomings in this regard. In particular, the Law of the Republic of Uzbekistan "On Nature Protection" pays little attention to this issue. The environmental information system is not well formed. These problems need to be addressed positively in the coming years.

There is no doubt that the XXI century will be the century of ecology. Everyone must make a worthy contribution to the sacred work of changing the nature of our planet without harming it, the rational use of natural resources and the preservation of the environment.

The ecological consciousness of the population is a key factor in the regular implementation of nature protection, it is necessary to ensure that it is always high, constantly improving. All segments of the population should be united in a positive attitude to the environment and

educated in the spirit of not working for it. Everyone should have the idea that "nature is the place where you and I live, nature is the only place where the people of the whole world live."

The idea that the ecological awareness and culture of the population should be continuous is well known. As a person learns from birth to the last day of his life, a certain part of this upbringing is the upbringing of caring, selfless, loving nature. As the child is brought up in kindergarten at the age of 3-6, this period plays a key role in the formation of relationships with the environment. At this age, children become curious about everything. Kindergarten nurses should try to explain to each child in a simple way the basic, as well as more scientific, knowledge about the natural phenomena that are visible around them, fruit and non-fruit trees, flowers. Kindergarten children use wildlife through albums and coloring books, they need to have a basic knowledge of pets and know their differences. It is advisable to explain to them the meaning of the word "sin", because from this age it is possible to start explaining to children that what they do is sinful and what they do is rewarding.

Environmental education includes the following main sections:

1. Educate students in the spirit of love for the beauty of nature, aesthetic pleasure from them.
2. To provide knowledge about the laws of development of animate and inanimate nature, the complex relationship between nature and society, as well as the consequences of human activities on nature.
3. Fostering ecological culture in students and pupils. Love of nature, the formation of the ability to use it correctly and consciously, is the basis of environmental education and culture, develops in people the ability to understand responsibility to nature. Loving the homeland, patriotism begins with loving nature. Consequently, it is impossible to educate students in the spirit of patriotism without instilling in them a true sense of love for nature. It refreshes a person spiritually to be in the embrace of nature, increases his ability to work and creative activity.

Environmental education includes the following issues:

- a) Giving people special environmental knowledge and education, that is, in them to develop certain skills in the field;
- b) Fostering anticipation of environmental change;
- c) Assimilation and education of ecological culture;
- d) Educating people in the spirit of the correct use of "beliefs" of nature.

Environmental education is an integral part of moral education. The formation of ecological consciousness and thinking, ecological worldview in people helps to understand the dialectical nature. In order to carry out environmental education at all levels at the required level, it is necessary to train young people who are well aware of the importance and responsibility of this task.

## CONCLUSION

The national training program provides for "Acceleration of teaching students using new pedagogical technologies." Taking into account the urgency of the problem of using modern pedagogical technologies in the teaching of special subjects in professional colleges, the following conclusions can be drawn from the theoretical and practical study of this problem,

analysis of the results, as well as the latest pedagogical experiments. : I came to the following conclusion in improving the methods of content formation of ecological culture in youth.

In the formation of knowledge and culture of young people in national continuing education should be approached in a differentiated manner, depending on their age, worldview, psychological, local characteristics, specialization of the reactionary aspects.

Studies show that ecological knowledge is the degree to which people reflect on the protection of the natural environment, the rational use of natural resources, the restoration of degraded natural complexes. Ecological culture is a knowledge of nature, consciousness, understanding, literacy, intellectual potential and the ability to apply it in practice, a high level of activity in relation to the environment, a conscious and responsible approach. The main goal of environmental education is to form feelings of pride, pride, as well as grief about the nature of our country.

Ecological values play a special role in shaping the ecological knowledge and culture of young people. It can include the desire to preserve nature, initiative, consistency, diligence and conscious activism in conserving the environment. The defining qualities of ecological knowledge and culture are the focus on the development of ecological culture of young people, and the main emphasis is on the love of young people for their home, neighborhood, city, ie the spirit of patriotism, moral values of nature, nature. for the formation of a sense of personal responsibility, curiosity and care for it, deep knowledge.

Like other forms of education, ecological culture is the highest criterion of personal quality. Regardless of the type of upbringing, the level of culture can be achieved only if a person has a number of positive qualities.

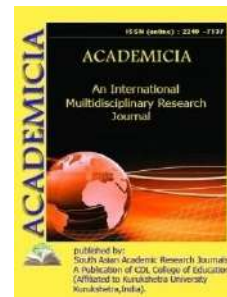
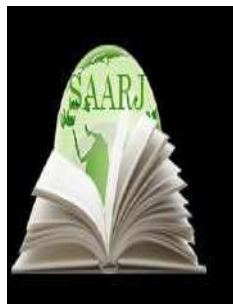
Such a process is carried out taking into account the age, individual, pedagogical, psychological characteristics in the formation of personality. The formation of ecological consciousness and culture of young people is a step-by-step process. Only continuous and integral improvement of this process can give high efficiency in practice. The levels of environmental awareness and culture of young people are also uninterrupted and interconnected. This requires special training and retraining of teachers by dividing them into different categories. The role of the national education system in the upbringing of a person with a high ecological morale is great, and to ensure it it is necessary to rationally use all the ways and means of social life.

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DOI: **10.5958/2249-7137.2020.00716.8**

**TO EVALUATE THE SELF AND ITS RELATIONSHIP AMID FEMALE-HEADED HOUSEHOLDS SUPPORTED BY IMAM KHOMEINI RELIEF COMMITTEE (RA) IN RESPECT TO SOCIAL ANXIETY, ENTREPRENEURSHIP IN THE CITY OF URMIA, WEST AZERBAIJAN, IRAN**

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**ABSTRACT**

*The main objective of this research is the self and its relationship with social anxiety and entrepreneurship among female-headed households supported by Imam Khomeini Relief Committee (RA), West Azarbaijan Province, is a city of Urmia in 1392. The research is applied research, and due to the nature and purpose of this cross - correlation. The research population consisted of all female-headed households supported by Imam Khomeini Relief Committee (RA), West Azarbaijan Province, under the management of the city of Urmia in 2013, which is the size of over 10,637 households, and of these, 374 households using stratified random sampling to estimate Morgan were selected and placed. Social Anxiety Social Anxiety Questionnaire to*

*assess the reliability of 0.72 was obtained using Watson and Friend. To measure self-esteem Scale Eden Chen and Gali and the reliability of 0.88 was obtained using. Entrepreneurship questionnaire Allen, R., Kan ion was used to measure the reliability of 0.95 was obtained entrepreneurship. The information obtained in this study consisted of inferential (Pearson correlation coefficient, and multiple regression) analysis. The findings indicated that a significant negative relationship between self-esteem and social anxiety Relief female-headed households supported by Imam Khomeini, West Azarbaijan, Urmia city. The positive relation between self-esteem and entrepreneurship among female-headed households supported by Imam Khomeini Relief Committee (RA), West Azarbaijan, Urmia city. According to this study, the relationship between social anxiety and entrepreneurship negative women headed households supported by Imam Khomeini Relief Committee (RA), West Azarbaijan, Urmia city. Self-esteem and social anxiety, entrepreneurship, women heads of households supported by Imam Khomeini Relief Committee (RA), West Azarbaijan, Urmia city predicts. Entrepreneurship questionnaire Allen, R., Kan ion was used to measure the reliability of 0.95 was obtained entrepreneurship.*

**KEYWORDS:** *Social Anxiety, Entrepreneurship, Self-Esteem, Women Heads Of Household, Imam Khomeini Relief Committee (RA), West Azarbaijan Province.*

## INTRODUCTION

Householder of Islamic laws is the responsibility of man. For whatever reason, if he is unable to fulfill its role, in many cases, to replace the role of his wife and mother in addition to the issue of economic governance, training, maintenance, etc. He served of our time.

In recent years we have witnessed a growing trend of women alone bear responsibility for their lives and as women are heads of households in the community. Female-headed households, households who for various reasons (divorce, separation, migration and death of a spouse) man as the head of the man because it does not exist or households (illness, addiction, etc.) does not contribute to the household income (UNICEF , 1991, 152).

Research shows that 60 percent of women in the world breadwinner and female-headed households are 5/37 percent.

The statistical indicators suggest that growth in our country women who are on the rise (Tatiana Boldaji, bright, tall, 2010) deal with the situation of women and improve their quality of life, not just a national necessity, it requires tools effective legislation is also why many centers have been established to address the needs of female-headed households.

After the Islamic Revolution, Imam Khomeini Relief Committee institutions like Khomeini's responsibility to protect the vulnerable groups in their efforts to empower them to have.

But the quality of life in a general sense and includes all aspects of life, such as the satisfaction of material needs of life, as well as strengthen and expand the knowledge and mental health.

In such circumstances, women heads of households, with special attention to the social and emotional status of entrepreneurship tend to be located in special circumstances.

The material on one side and weak conditions on the other hand society special attitude toward their being isolated and weakened supreme spirit in them and probably tendency toward Entrepreneurship to their minimum.

Therefore it seems necessary to have a look to the status of entrepreneurship and the causes and factors in the mothers we have.

### **Statement of Problem Research:**

Today, more thought-reliant communities that have been found to be successful in the long term and groundwater resources have been proud.

With regard to the law an irresistible renewed underground resources and reason to their lack of dependence to the needs of economic human communities including creating jobs, society and an organization can be in the development path movement to the front and have what that by creating the necessary bed human resources to knowledge and productive entrepreneurial skill to equip. entrepreneurship stimulating sustainable development for economic growth can also cause economic and sustainable development countries, the increase in productivity and job creation to be social welfare

The familiarity with the concepts and definitions and dimensions of entrepreneurship along with knowledge barriers and solutions obviate them can in institutionalizing entrepreneurship and the culture in any society be fruitful.

In Iran too with regard to the fact that entrepreneurship is very new phenomenon and research are especially the women entrepreneurship is very limited necessity such research over from necessity to be gracious is to hope the results research criticizing customary to reduce problems of this vulnerable group to provide and also helped the investors and policy planners areas of supportive and social program for Mojtaba Shirazi-Iran coherent and fruitful in the field provide the above and on the other hand researchers to realm of the vulnerable society especially mothers help by presenting practical viewpoints guiding hand improve the quality of life mothers.

### **The importance and necessity for research**

Phenomenon called Mothers a reality today is a social in all societies is seen and the different reasons. Women who are the head of the most vulnerable people are emancipation after study and investigation of the problems they are needed.

By sociologists and other scholars to study Management Science entrepreneurship, social theories-culture (influence of environment and culture on individuals and social networks theory took the form, in the meanwhile by using behavioral approach, entrepreneurship as a process that finally raised to create new companies leads.

Among the most important of the factors examined in the approach behavior can be the environmental and cultural impacts of the individual including social base pointing(Ahmadpour” Dariani, 2005) .In the expression of important research study with studies carried out in this field has been done and the favor of the sensitivity and vulnerability society no study in connection with the subject research in statistical society studied been taken and we can also claim that variable in this study and their relationship with each other can be found in fields of vulnerability and FDI barriers information get a proper and in the establishment of positive mental health in

their life guide action. Series model in mental health positive 6 determining factor of that that follows

- 1- his acceptance 2- positive relationship with others 3- self 4- purposeful life
- 5-personal growth 6-control of the environment

### **Research goals**

The main aim

Determining the amount of their fecundity and its relation with stress and social entrepreneurship among mothers under the protection Relief Committee of Imam Khomeini Western Azerbaijan province, the town of Orumieh

### **The hypothesis of the research**

- 1- Between self-esteem and social anxiety among female-headed households supported by Imam Khomeini Relief Committee (RA), West Azarbaijan, Urmia city, there is a significant relationship.
- 2- Between self - esteem and entrepreneurship among female-headed households supported by Imam Khomeini Relief Committee (RA), West Azarbaijan, Urmia city, there is a significant relationship.
- 3- Between social anxiety and entrepreneurship among female-headed households supported by Imam Khomeini Relief Committee (RA), West Azarbaijan, Urmia city, there is a significant relationship.

### **Terminology definitions research**

**Entrepreneurship:** entrepreneurship is the process that led to the creation and satisfaction or new demand. Entrepreneurship is the process of creation of value form a unique collection of resources in order to make use of the opportunities ("Ahmad Ahmadpour" Dariani, 2005).

**Social anxiety:** a fear of a specific and chronic social status or a few that the individual exposed to scrutiny by others and sees he is afraid lest he should do that should be ashamed or humiliating to be (Miller, 2007)

To avoid social chaos and that is the FSLN and resign from people and having negative feeling in proper connections social.

- **The supervisor of the women from the view category theory of different** Theories of psychology

Psychologists believe that one of the major sources for stress Women especially women of the head of family play a role in many of the time.

Adams soul disorders knowledge mothers study absolute and that he is his mother after the divorce to a series of problems such as providing care for the child to find suitable shelter and livelihood and family difficulties caused by this that he was the only adult is the family and should play the Father and the mother and time. For this reason it must be to play a role that is multiple that in some cases this role in contradiction with are women in the result in physical and psychological-emotional problems and stress and anxiety to more experience. (Tatina Baladach & colleagues, 2010).

**Theories of sociology****Theory of feminine poverty or vulnerability women heads of household**

Supporters of this theory are that families have the supervisor of the women who are not only in all the countries of the world are but such families which are a little income had been increased. On the other hand children in this family are a small welfare facilities and emotional. That is firstly due to being poor, the presence of less in the schools and have the amount of their educational more than children starve of the two parents secondly due to low level mothers less than in the house to do their duty. Also the rate of crime among teenagers in the family but I have most of the other young adults from other specifications family women but the women the supervisor of the, the lack of access to jobs with dignity. Conditions governing the family life that woman care will be managed mind:

1. Lack of access to job opportunities equal to men
2. Lower levels Literacy in both the women and the children in
3. Wages less than
4. The high educational and crime Children and Young Adults
5. The problem poverty time for professional women all the time

**Effective factors on entrepreneurial women:**

Analysis factors influential in strengthening entrepreneurial behavior many important. Entrepreneurship based on let, forbidden, and danger and vulnerability continues (Yaqubi Najaf Abadi, steel, Jahangiri, 2007). Researchers are factors in the diagnosis of an influential country of opportunity Entrepreneurship to identify and pay attention to it that have generally are:

1. Personality characteristics
2. The structure of the individuals' knowledge
3. The difference in knowledge and experience of the previous
4. Sober enterpreneurly
5. The social network
6. Type of opportunity
7. He process atmosphere
8. Lack of symmetry information (Elyasi, democracy\_, 2011).

**Elements of entrepreneurship**

Mac Kolandi of view (1963), the most important characteristics that can be attributed to entrepreneurs include:

- 1- Achievement. 2- The internal locus of control. 3-The willingness to risk. 4- Independence. 5. Tendency to creativity. 6. Tolerance of ambiguity.

**Types of Entrepreneurship**

Organizational Entrepreneurship

- 1- Entrepreneurship
- 2- Individual Entrepreneurship
- 3-Philanthropy Entrepreneurship
- 4- Social entrepreneurship

**Entrepreneurial approaches**

- 1- Behavioral Approach
- 2- Approach to social networks
- 3- Contingency approach

### **Social Anxiety:**

#### **Treatments for social anxiety**

- Behavior Therapy
- Cognitive Therapy
- The cognitive behavioral therapy

### **Type and Methods of research**

#### **The statistical community**

In fact contains all the elements that define a research topic which is true. The study sample included all female-headed households supported by Imam Khomeini Relief Committee (RA), West Azarbaijan, Urmia city are female-headed households among the vulnerable groups in society are numerous reasons such as death, divorce, disability, imprisonment or householder's spouse are being irresponsible.

#### **Sample under investigation**

The study included all female-headed households supported by Imam Khomeini Relief Committee (RA), West Azarbaijan Province, under the management of Urmia city, including the 1, 2 and 3 and the sections of 1391 Bashd.k-h volume NOUSHIN and ANZALI in adult over 10,637 households. Of these households 374 are estimated using stratified random sampling and Morgan were selected and placed.

### **Data collection method**

The data collection methods in this research are as follows

- Library Studies
- Field method

### **Research variables**

Independent variables

The Variables which explain or predict the dependent variables included the following variables in this research.

Dependent variables: Entrepreneurship Independent variables: self-esteem and social anxiety

### **Control variables**

Some of the variables that influence the relationship between the dependent and independent variables should be kept neutral or prove that they are called control variable.

While the effect of neutralizing or eliminating the impact mediator variable control is studied. Control variables included the following variables.



Age, education, support the cause, supporting area

### **Data Collection**

One of the most important steps in conducting research is measurement tools that can help researchers in collecting data best.

Questionar is a common tool for data research and direct method of research

The reliability and validity of the questionnaire used must be necessary in order to strengthen the scientific validity and reliability is confirmed in this study. (Avmaskaran, 2001)

On the other hand, measures must be some basic features, most notably the validity and reliability education or training. The purpose of the validity: that one has when the test is to measure what it is intended to measure correctly. The validity of judgments is about the appropriateness of using the measurements or is that the instruments used to measure a concept or process, that notion can not really measure. The reliability: (reliability, stability, accuracy and reliability), the validity of the question that the measuring instrument measures the extent to which the desired characteristic. (Moghimi, 1998).

### **Measuring Tools:**

#### **- Social Anxiety questionnaire**

To measure social anxiety, social anxiety questionnaire sad and Fne Watson and Friend 1969 (Watson & Friend) is used.

#### **Self assessment questionnaire**

To measure self-esteem, Chen and gully scale of Eden (2001) is used. Which are 8 items.

#### **Entrepreneurship questionnaire**

Questionnaire to measure entrepreneurship entrepreneurship Allen, R., Kan Na (1992) is used.

### **Inferential analysis**

#### **The first hypothesis**

Between self-esteem and social anxiety among female-headed households supported by Imam Khomeini Relief Committee (RA), West Azarbaijan, Urmia city, there is a significant relationship.

The first hypothesis

Table 1. The correlation between the variables of self-esteem and social anxiety Self test - Social Anxiety

\*\* Correlation coefficient 0.26- The value  $p = 0.000$  Number 374

\*\* Significance level of less than 0.01

To test this hypothesis and to calculate the correlation between two variables with respect to a variable of the Pearson correlation coefficient was used. The Pearson correlation coefficient equal to table:1  $r = - 26/0$  and is  $P = 000/0$ . Therefore, one can say with 99% confidence that the null hypothesis is rejected and a significant negative correlation between self-esteem and social anxiety there ( $P < 0/05$ ).

**The second hypothesis**

Between self - esteem and entrepreneurship among female-headed households supported by Imam Khomeini Relief Committee (RA), West Azarbaijan, Urmia city, there is a significant relationship.

Table 2. The correlation between the variables of self and Entrepreneurship Self test – Entrepreneurship Pearson correlation coefficient 0.53 \*\*

The value  $p = 0.000$  Number = 374

\*\* Significance level of less than 0.01

To test this hypothesis and to calculate the correlation between two variables with respect to a variable of the Pearson correlation coefficient was used. Table:2 according to Pearson's correlation coefficient is equal to  $r = 53/0$  and  $P = 000/0$ . Therefore, one can say with 99% confidence that the null hypothesis is rejected, and so there is a significant positive relationship between self-esteem and entrepreneurship ( $p < 0/05$ ).

**The third hypothesis**

Between social anxiety and entrepreneurship among female-headed households supported by Imam Khomeini Relief Committee (RA), West Azarbaijan, Urmia city, there is a significant relationship.

Table 3. The correlation between the variables of social anxiety and Entrepreneurship

Test Anxiety - Entrepreneurship

\*\* Correlation coefficient = 0.32

The value  $p = 0.000$

Number = 374

To test this hypothesis and to calculate the correlation between two variables with respect to a variable of the Pearson correlation coefficient was used. The Pearson correlation coefficient equal to  $r = - 0.32$  and is  $P = 0.000$  Therefore, one can say with 99% confidence that the null hypothesis is rejected and the result is a significant negative relationship between social anxiety and there Entrepreneurship ( $p < 0/05$ )

**DISCUSSION AND CONCLUSION**

As the findings show that there is a reciprocal relationship between self-esteem and social anxiety. In other words, it can be stated more clearly expresses confidence that a person is thinking about his capacity to do different things, if a poor person who believed in his ability and believes that nothing can succeed. It makes that person gradually from active and passive toward isolation and being given. In a way that Bandura that plots to influence on the environment, the most important psychological mechanism and without belief in creation and production common side effects with an ideal and to prevent undesirable effects little incentive for people to have to believe that action is the most important action and believe in the power of common side effects with an ideal foundation any change in man. Therefore such a person as an fate has been written will be considered as an attempt to change it will be useless now if a person with this thought in life also in lower conditions have in fact susceptible of different kinds of mental diseases will be social anxiety disorder can be one of these diseases. In confirmation of this matter can be found

in the contacts of Lenz and his colleagues (2002) pointed out that showed that individuals with high efficiency in the performance of their own less than a stress and anxiety and people with lower efficiency of more infected with depression and psychological welfare have lower. Also with regard to the findings of this research show that relation between meaning these two variable and also on the other hand the analysis also showed that the amount of these two variable in almost equal status to, we proposed that the organization of the Protection will be implemented should be holding training courses such as necessary life skills and education for more presence of aid users in within society and the relations between their social with other people of the society in order to strengthen their communication skills, creating their prospect for them and identify positive points in and believe in them that no one is not complete, saga of positive for them In order to strengthen their positive image in aid users, holding period of consultation for a free mind-seekers of the stereotypical negative and wrong beliefs social, handing over responsibility for some to feel them in order to strengthen himself responsible for vulnerability and vulnerability and. . . second sermon to strengthen and prevent the occurrence of anxiety in social aid users. This led to the formation and positive second sermon decrease stress in the individual will be social that can source many changes. You know that a person who believes and believes that that can control the conditions conditions to such an effective change to the benefit of his, can be as a person prone to entrepreneurship that required having to trust their capabilities, it is considered. In fact such people that are external control center of a belief in this are responsible for their life and they are they can whatever they want to reach. The fact that psychological beliefs people as a strong stimulus for entrepreneurship play a role in other Research as well as the study and approved.

For example Dr. Alvani and his colleagues (2009) of characteristics of personality alone 64.69 percent changes entrepreneurship can foresee. Also about the effect on the second sermon entrepreneurship studies have been done in this regard (Marison, 1998) and (Saber, 2003) and (Samad Aqaei, 1999) indicate that plots have an important entrepreneurial in the process and this is part of the entrepreneurial process is considered as an individual. Our analysis also showed that the components of entrepreneurship except two creativity and the tolerance ambiguity other components are in the same condition and are more favorably since this two variable among the most important components of the catalyst for employment. Our proposal is that through the implementation of its powerful programs we can bear at first the amount of ambiguity in and through the handing over of responsibility for a series of simple and involved in making them real issues with a series and giving to them for solutions and solve cases that can be thought to come to power and creativity to be step by step in strengthening them and simultaneously use the desire to success and risk vulnerability and other components of the field producing the appearance and growth more and more promotion.

Now with regard to present research findings and other research findings, we can claim that with concentration on the other hand variable plots we can complete mental health mothers to elevated them from the different disorders including social anxiety disorder, but on the other hand around them toward psychological welfare movements, and dynamism and entrepreneurship strategic. Of course it is worth mentioning that in the mothers with regard to their economic weakness should be along with the support of financial and social support organizations should be.

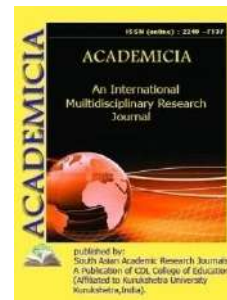
### **Applicable proposals**

- 1- With regard to the stress that social entrepreneurship and second sermon in mothers meaningful influence is suggested workers respected in the process strengthening them aid users in these specifications scale according to value and investment trend has been through.
- 2- Educational classes and workshops in proportion decreased in the field plots and the increase in social anxiety mothers will be held.
- 3- Mothers proper in the the results of such discoveries and by holding classes and various courses, orientation and information necessary to enhance their skills of social anxiety and second sermon to receive output by the such research have been useful and paved the way for promoting entrepreneurship in stable between the generator.
- 4- Try through counseling psychology and also preparing cultural programs mind from the stereotype of the traditional free society and field activity and activity in more us.
- 5- Identify individuals with special talent in order to entrepreneurship can be utilized them and group them into a group and holding meetings in order to take out the isolation and exchange views with each other and organize them in the form of entrepreneurial small groups.
6. It is offered through ground work for independent individual and group activities for women in the supervisor of the step with the support of the initial relief committee will be to gradually increase the amount of the second sermon in them and the amount of stress the social supervisor of women will be reduced and then to interrupt the shamefaced independently under the care they will be done in the end and directed toward them toward entrepreneurship increase.

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DOI: **10.5958/2249-7137.2020.00663.1**

## MEMORIAL COMPLEX OF THE SULTAN UVAYS BOBO – ONE OF CULT HISTORICAL CENTERS IN CENTRAL ASIA

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### ABSTRACT

*Based on the sources, the history of the “Sultan Uvays Bobo” complex has been studied. Judging by the significant number of pilgrims, it is one of the most revered places in the lower reaches of the Amu Darya. The modest lifestyle of the Sultan of Uvays Bobo is analyzed as an example to follow and their role in spreading the qualities of devotion, mercy and kindness. In addition, information is offered on the history of the mausoleum and other cultural structures of the memorial complex “Sultan Uvays Bobo” and their role in the Islamic culture of Central Asia.*

**KEYWORDS:** Prophet, Tabiin, Sultan Uvays Bobo, Al-Karani, Chinor Bobo, Yemen, Murad, Beruni District, Republic Of Karakalpakstan, Mausoleum, Pond (House), Mercy, Kindness.

### INTRODUCTION

Over the millennia of their development, each nation has accumulated its own unique religious experience, its invaluable spiritual heritage, which ensure the continuity of generations, the socialization of the growing shift, and the crystallization of national values. Uzbekistan is not an exception, on the earth of which various religions and faiths peacefully coexisted since ancient times, lived in a good neighborhood paying tribute to faith and beliefs, customs and traditions of Zoroastrians and Buddhists, Hindus and Jews, Muslims and Christians.



Since ancient times, other religions and cultures have developed on the land of Uzbekistan along with the Islamic religion, which have made and still are making a certain contribution to spiritual exaltation [6.33].

The geographical location of Uzbekistan at the crossroads of important trade routes, economic and cultural cooperation with many countries have had a great impact on the religious and cultural life of local peoples. Feelings such as reverence and respect for others, respect for elders, regardless of nationality of religious beliefs, have become the highest qualities of the peoples of Central Asia. It is these factors that form not only spiritual enlightenment, but also the spiritual foundations of the tolerance of our people.

Historical monuments reflect the history and customs, religious tolerance, national mentality, spiritual values of our people. At the same time, these monuments are an important source in the study of the socio-economic, cultural and political processes of the peoples of our country.

According to the beliefs of believers, the mausoleums of prominent personalities are a place of honor and respect, spiritual purification and perfection. The people have many legends about visiting the mausoleums and burial places of saints, which describes the pilgrimage order of such places. In the local written tradition, the following tradition from the Prophet (hadith) is often cited: "Visit the graves, verily, they will remind you of the afterlife."

## THE MAIN FINDINGS AND RESULTS

The historical complex of the Sultan Uvays Bobo is one of the cult centers in Central Asia. Memorial monument of the XVII - XIX centuries. The Sultan Uvays Bobo is located on the territory of the present Beruni district of the Republic of Karakalpakstan. The name of the complex, according to local tradition, is associated with the name of Uways al-Qarani who, according to legend, was one of the followers of the Prophet and lived during the reign of the fourth caliph (successor) Ali ibn Abu Talib (d. 651). His full name is Uways ibn 'Amir ibn Juz ibn Malik ibn Amr al-Muradi al-Qarani [1, 156-157; 10, 20].

The Uvays from the Qaran clan of the Murad tribe (Uways al-Qarani) belonged to the number of *tabi'un* - those who followed Muhammad. [12]. Uways al-Qarani is a Yemen righteous man, a simple man, a hermit, intentionally living far from people, caring for an elderly mother, herding camels for a modest livelihood and never seeing the Prophet. At the same time, Uways al-Qarani was very close to Muhammad at the Spiritual level. He had such a pure heart and sincere faith that Muhammad called him his friend and the best in the generation of followers [11].

Several prophetic hadiths are dedicated to Uways al-Qarani, in Muhtasar "Sahih" Muslim: Book 51 "On the merits of the Companions of the Prophet" includes a separate chapter 68 "Mention of the dignity of Uways al-Qarani from among the followers":

*1766. It is reported that 'Umar ibn al-Khattab, may Allah be pleased with him, said: "Verily, I heard the Messenger of Allah, peace and blessings of Allah be upon him, said: "Verily, the best of the followers (tabi'una) will be a man named Uvais, who will have a mother and [skin] who was previously covered with whiteness, tell him to ask Allah to forgive you"*

(Translation from Arabic: Vladimir (Abdullah) Mikhailovich Nirsh)[11].

According to legend, he lived in the village of Qaran and Yemen. Hence his second nickname is Uways al-Qarani. He was born in 625, died in a battle in Siff, fighting in the ranks of the troops of Khalifa Ali against the troops of Mu'awiyah ibn Yazid. He was buried in the village of Siffa in Syria. His burial in the complex described here is obviously symbolic.

According to the traditions set forth mainly in Sufi sources, al-Qarani did not see the Prophet, however, he once appeared to him in a dream and set on the path of Truth. Since then, in fact, the tradition of "the instruction of the Prophet" or another authoritative person in a dream is called by the name of al-Qarani: Uways. That is, receiving spiritual instruction directly from the Prophet or the authorities of Islam without direct contact with the primary teachers. For example, the famous eponym of the brotherhood of Naqshbandiyah Bahauddin Naqshband (d. In 1389) was also considered uwaysi, since he received edifications in visions from the founder of the fraternity Abd al-Khalik al-Gidzhdvani (d. In 1220). There was a Sufi brotherhood of Uwaysiya. Apparently, this complex is associated with the name of one of the leaders of this fraternity and later began to be identified with the name of Uways al-Qarani [1,157; 7].

Regarding the Sultan Uways al-Qarani, there is enough information in hagiographic writings. In particular, Uways al-Qarani, may Allah have mercy on him and be pleased with him, was born in Yemen, in a place called Murad al-Qarani. He converted to Islam during the life of the Prophet, but he could not go to the sacred Medina, as he had to look after his sick mother. He cared for her all the time of her illness. The Prophet often mentioned him, especially emphasizing him, and said to his companions: "The one of you who sees him, let him ask to make a dua." [13]

The companions were amazed: "How did this person reach such a high level that he was worthy of the mention of the Prophet (peace and blessings be upon him)?" He achieved this through the service of his mother with full dedication, sabir in adversity and trials, patience in response to the evil of people and distance from all worldly things in the best and most beautiful way.

The Prophet (peace and blessings be upon him) bequeathed to Umar ibn Khattab, Ali ibn Abu Talib and other associates, if Uways al-Qarani arrives, to ask him to make a duet istigfar. And indeed, when Uways arrived, they began to demand from him to pray to Allah for the forgiveness of their sins.

Despite the fact that Uways converted to Islam during the life of the Prophet, he never managed to see him. Therefore, he is considered not a companion, but one of the great Tabiins (*followers of the Prophet Muhammad (peace and blessings of Allaah be upon him)* who did not communicate directly with him).

Uways al-Qarani occupies a special place among the Sufis, for Ali (may Allah be pleased with him) handed him the Sufi hirk (the old cloth wrap of the ascetic wanderer - one of the symbolic attributes of Sufis - Muslim mystics, philosophers and ascetics), which he himself received from the Messenger Allah.

It should be noted that Uways al-Qarani is the guiding star for the ascetics of the community of Muhammad and for the spiritual people of his ummah. There is a lot of wisdom in the history of this tabiin, Uways al-Qarani. He is a model of a true ascetic and a vivid example for everyone who loves the Prophet, having believed in him, although he could not see him in this life [11].

It is hard to say at what time his present symbolic grave appeared. This large religious complex, parts of which are located among the vast old cemetery and its surroundings, includes:

Mazar (mausoleum, tomb) Sultan Uvays Bobo (Sultan Vays Bobo, Wise al-Qarani); A sacred spring, located next to the mazar Sultan Uvays Bobo, according to legend, flowing from the feet of a buried saint. Sacred House (artificial reservoir), fed by a source, with sacred fish living there;

A dry riverbed, once emanating from a source and a house; Grave (mausoleum) Chinor Bobo (ustaz, muezzin or sartaras Sultan of Uvays);

A mountain with a (ritual cone-shaped stone structure), on which, according to local tradition, Sultan Uvays Bobo knelt for 40 days, begging forgiveness from the Almighty to all Muslims, and on which he knocked out all his teeth in solidarity with the Prophet Muhammad who lost his tooth ( according to another version - two teeth) in the battle of Uhud (Ohud); As well as premises intended for the reception of a large number of pilgrims, in particular, a kitchen for the preparation of sacrificial animals[11].

According to the ethnologist G. Snesev, the history of this cult complex began long before Islam came to these parts, and the linking of this place in the folk tradition with the name of such an outstanding Muslim saint as Uways al-Qarani probably speaks of the special veneration of the following objects in pre-Islamic times:

The only source in the desert mountains of drinking water coming from the ground and cutting through the rock of a small stream that is lost somewhere downstream underground. This spring was an object of a cult of fertility in this area, where water is the main source of life and prosperity for both farmers and herders. Fishes living in a house (pond, pool) fed by a spring, as inhabitants of the water element, in pre-Islamic folk representations were probably considered representatives of the deities of water and fertility (Anahita, Ambar-ona). The veneration of fish living in the waters of the springs Buluq(Uzbek), chashma (Taj.) Is practiced in many similar places in southern Uzbekistan and northern Tajikistan (Chor Chinor, Chiluchor Chashma). However, streams flow into Chor Chinor and Chiluchor Chashma to full rivers.

Therefore, these sources live fish - the natural inhabitants of the Central Asian mountain rivers (in the case of the mentioned places - marinka), who got there on their own, attracted by constant feeding from the pilgrims. The stream formed by the source of the Sultan Uvays Bobo does not reach the only permanent river of the Amu Darya in these parts, although it is directed in its direction. There are no natural representatives of the ichthyofauna in this stream. Therefore, fish (carps, grass carp) living in a pool were brought there by fishermen from the Amu Darya. If a fish dies, it is buried in a special rite described below, and after a while they bring it a replacement from the Amu Darya. It is difficult to say whether the practice of keeping sacred fish in the pool was adopted from the southern regions of Uzbekistan - the northern regions of Tajikistan or the stream was once more full-flowing and had a more or less permanent connection with the Amu Darya, from where the fish went there. However, the tradition of burial of dead fish in other places known to us is not practiced. Obviously, such a careful attitude to fish in the tract Sultan Uvays Bobo is due to the fact that they were always there "for recounting".

The master spirit of this area, whose habitat was probably considered a mountain, and to which, according to ancient tradition, cone-shaped structures made of stones were dedicated - both.

Some large tree (or trees, an oasis), probably grown (or grown as an oasis) in ancient times near the source, from where, apparently, the veneration of a saint without any biographical data by the name of Chinar Bobo (Chinar - a plane tree; plane trees have a long life expectancy (more than 1000 years) and are revered in many similar places in southern Uzbekistan and northern Tajikistan (Chor Chinar, Chiluchor Chashma). There is no direct indication of their veneration in the form of a cult of longevity, but such a version is likely [11].

There is an opinion that the first building was built here during the time of Sultan Muhammad Khorezmshah (943–953), however it was destroyed during the invasions of the troops of Genghis Khan. In 1806, the Khiva Khan Iltuzar built a new building on the complex. The last construction (grave mausoleum) dates back to the reign of the Khiva khan Allakuli (1820-1846).

## CONCLUSION

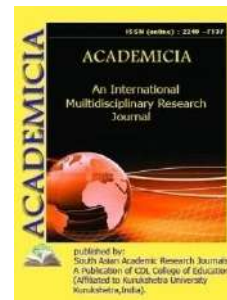
Research Results 1985, 1989, 1990 showed that the first construction really dates back to the 12th – 13th centuries, as evidenced by traces of construction, as well as ceramics on the northeast side of the mausoleum, some of which are stored in a museum in the city of Khiva. Of great interest from them is a teapot made of Karatau talcum powder, on the wall of which a galloping gazelle is depicted [1, 157; 8, 15-17]. During the reign of Allakuli Khan, small hujras appear around the complex, an external wall is being built. The reconstruction work begun in the 1980s was completed in 1991 [1, 157; 9, 26-28].

Today, the Sultan Uvays Bobo cemetery is a whole complex with a fairly developed infrastructure: it includes a mosque, the "holy pond", shopping centers, food outlets, a hotel, etc. Judging by the significant number of pilgrims, it is one of the most revered places in the lower reaches of the Amu Darya. In conclusion, that each of the pilgrimage sites of Central Asia was important in the spiritual life of the region's population. It is no accident that the holy places of pilgrimage were located on the banks of rivers, near arys, near springs, mines, in areas of handicraft, farming, animal husbandry, gardening, on lands where medicinal herbs grew. Certainly, history shows that the Sultan Uvays Bobo complex was and remains one of the holy revered places in the Central Asian region.

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10. Murad is a tribe of Arabs in eastern Yemen.
11. Dua – prayer, appeal to Allah for the remission of sins



DOI: **10.5958/2249-7137.2020.00664.3**

## MODERN REQUIREMENTS OF THE IMAGE OF THE LEADER

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### ABSTRACT

*This article highlights the role of political leadership in ensuring the sustainable development of a society that has not been sufficiently studied to date, the modern requirements for the image of the leader and the technologies of their formation. In the experience of developed countries and the East, the effectiveness of political leadership, its importance is analyzed. From the policy point of view, the requirements for the leader, the leader, his personality, the criteria of his activity are specified.*

**KEYWORDS:** *Political Leadership, Political Elite, Elitology, Political Management, Political Market, Recruitment, Leader Image, Trust, Leadership, Social Indicator.*

### INTRODUCTION

The role and place of political leadership and political elite in the sustainable development of society is significant. It is known from ancient history that in different periods of social development the great personalities of their time not only called this or that society to greatness, but also brought it to the heights.

The political elite in modern political science, a special field that studies the role and influence of political leaders in social development - elitology was formed for this reason. This is due to the unprecedented social crises, conflicts and various threats to humanity that occurred in the world in the twentieth century and the first quarter of the XXI century.

It is no secret that in a totalitarian and authoritarian system, the leader is appointed from above, democracy means that the role of the people in state building and political decision-making is not taken into account, the opinion and choice of the "genius" becomes decisive policy. PR technology, and political management, on the contrary - stems from the requirements of leadership, leadership, social dialogue for career, social thought, political market, its requirements.



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## THE MAIN FINDINGS AND RESULTS

In the political market, not only alternative ideas and ideologies, but also opposition political forces participate on an equal footing, leading on the basis of open and transparent elections. Unfortunately, the dissertations defended in the field of "leadership" during the years of independence also allow political demagoguery, nonsense, emphasizing that "politics" and "leader" become a category of elitology, which is formed separately and eventually merges under the influence of certain needs and reasons [1, 2019]. In fact, a political leader, that is, a political leader, grows not artificially, but at the heart of certain political processes, and is able to follow the masses. To do this, he will have to be able to detect the "pain" of the society and the people earlier than his opponents, to emphasize it, to take an informal, unusual action out of the official protocol. This was the case in Germany in the 1930s during the "Great Depression". Instead of anarchy, Hitler introduced the idea of strict discipline, military dictatorship, and national chauvinism while capturing the mood of the people. The German people, who gave great personalities such as Bach, Strauss, Chopin, Hegel, Kant, Schiller, Goethe, who made an invaluable contribution to the cultural development of mankind, followed a mentally handicapped, inhuman political leader. There are enough grounds to say that a political leader will come to the head of the state and society only if he expresses the aspirations, goals and needs of the majority, the people.

The political analysis of the local scientific literature on "leadership" shows that the abstractions "leader", "leader's spirituality", "leader's responsibility" do not reflect the concrete, clear "image" of the political leader. The problem of political leadership, "leadership" in our language, was raised by American sociologists such as J. Shannon and L. Seligman in the 1960s. Prior to that, there was no theoretical or conceptual basis, and any official or bureaucrat was sometimes understood as a "leader" because there was a perception that one person was "influencing" another person, or influencing political decision-making (lobbying).

The democratization of historical society and the abolition of centralization of governance have shaped the notion that in addition to the official leader, there may be alternative, informal individuals who can influence the political life of the society. The weakness of Uzbek "leadership" was that "leaders" did not take into account the achievements of political science and sociology, the recruitment, typology and image of political leadership, and so on. However, it is not the political leader and the political leader itself, but the typology of political leaders that emerged from the German sociologist M. Weber. According to M. Weber's concept, there are 3 types of leadership: traditional, legal and charismatic types. These types, in turn, manifest themselves in different forms in political processes, such as flag leader, servant leader, merchant leader, fire leader, and so on [2, 1991].

A leader is not yet a leader. A leader is a person who has the ability to make independent political decisions, to follow the masses, to organize various political events.

Promising research has also been conducted in Uzbek "leadership". One of them is a dissertation research on "The process of modernization of management and management personnel in Uzbekistan" conducted by M. Atamuratov [3, 2018]. The dissertation deals with the problems of radically improving the system of training and retraining of management personnel on the basis of conceptual ideas put forward in the work of President Sh. Mirziyoev "Critical analysis, strict discipline and personal responsibility - should be a daily rule of every leader".

A decision made by a leading official without taking public opinion into account will tarnish the image of public administration. From the point of view of political science, imagiology, conflictology and elitology, personnel are not selected, but educated and trained. For the system of public administration, personnel should be educated and trained in special universities, as well as in conservatories, sports or art institute's. This will require the creation of a specific selection system.

In the history of Eastern PR, there have been more paternalistic traditions in society, in public administration. This is especially true in Chinese society, where the emperor Heaven's earthly representative, who has historically had the status of a tradition, was formed in the members of the society as the "father" of the society, and this tradition created a kind of subordination and hierarchy. In the East, materialism is mixed with the image of charismatic leaders, sometimes creating a tendency to worship the individual. In the former Soviet Union, the cult of personality, the artificial formation of the image of a "genius" and a wise man, has reached the level of state policy and ideology. Attempts to glorify the leader, to praise him, to exalt him, lead to the growth of corruption in society, and the uncritical leader gradually becomes convinced that he is "wise", even if he did not believe in drugs at first.

The historical criteria of the image of the leader are formed in the teachings of Abu Nasr Farobi, Amir Temur on public administration, which are based on justice, discipline and devotion. Historians say that Amir Temur applied these criteria to all leaders, even his own children. For example, Mironshah, the son of Amir Temur, and his grandson Amirzoda Pirmuhammad were expelled from the administration for abusing their positions and making decisions contrary to the interests of citizens. It should be noted that in today's United States, if a judge commits abuse, he or she will not only be expelled from the field, but will also lose his or her old-age pension in the future. Because a judge is the conscience of society, the guardian of justice. The same is true of Islamic jurisprudence, which reflects the requirements of Muslim Sharia law.

The image of a leader is the image of the state, the policy he pursues. Therefore, for a rule of law in which the principle of justice prevails, the spirituality of the leader, his health, devotion to the priority of human interests are always a criterion, a social indicator that determines the level of trust (doverie - N.D.) in society. This is the content of the demands made by President Sh. Mirziyoev today on the personality of leaders. From the point of view of classical politics, the requirements for a leader, a political leader, his personality or the criteria of his activity are as follows:

1. In order to have a decisive influence on the society, the state and the social group, he must constantly try to justify the trust of his constituents, to try to fulfill the tasks set out in the election programs;
2. To fulfill the powers and duties established by the Constitution;
3. Must follow the traditions established in the society.

These requirements may also be more specific. For example, a leader can resolve disputes fairly, be fair in contentious, conflicting situations, and so on. The most important requirement is that the leader must guarantee that the laws "work".

In this regard, the political leader of Uzbekistan has introduced an unprecedented democratic institution - the People's Reception. An important aspect of this institution is not only to solve the

confusing problems that have accumulated in the field, but also to know the mood of the family, the citizen, leading to an increase in the amount of trust capital in the leader.

As for the technologies of modern leadership image formation, such technologies are mainly closely linked with the spirituality of the leader, the leader. Selfish, only his opinion is the basic and supreme truth - around the leader there are various substances, flatterers, who somehow try to "hunt" the leader's heart, to please him. As a result, the image of a wise "genius" who knows all the problems of life as an "expert" is formed, the image of the Uzbek "father", his accidental "word" becomes a symbol of wisdom, and even recommended to the whole system of education and upbringing ideas reach the status of legitimacy. The saddest thing is that a unique technology is being formed to shape the image of a leader - art, cinema, theater, and the media are working day and night to polish the image of a leader, led by journalists and poets. The image of today's leader does not accept the tradition of worshiping the person of the past. This image is focused on the fact that the "leader" is "ourselves", and the average citizen has the opportunity to communicate horizontally with the leader, that is, to act as a real democracy.

Mirziyoyev's political leadership has opened a new page in this regard. The political leader called not only himself, but also senior and junior leaders, deputies and senators to leave the life of the "cabinet" and enter the people, to listen to the pain of a particular person, not to promise various well-written reports, to help him with concrete actions. The image of today's leader is the image of a relentless, selfless, yet extremely humble man. A clear example of this is the leader of Russia Vladimir Putin, the leader of Uzbekistan Sh. Mirziyoyev, the leader of Belarus A. Lukashenko and others.

The modern political leader must have his own "image" in foreign policy, thereby contributing to the formation of the image of the whole state, the country and the people living in it.

Because the world community looks at this or that nation, its representative through the image of the country's leader, gives a political assessment. In this regard, the speeches of the Uzbek leader at the UN General Assembly, SCO summits, international conferences at various levels in September 2017 had a significant impact on the growth of not only the flow of tourists to Uzbekistan, but also the flow of foreign investors. For various reasons, our compatriots living abroad also support the image of the new leader, his patriotic policy, express their fulfillment of their historical dreams, and sincerely care about the development of the Motherland [5, 2020].

The image of a modern leader is functionally related to the effectiveness of the public administration system today [6, 2019]. In our view, we need a political indicator of the effectiveness of public administration. Today, the objective assessments of many foreign observers and experts on the modernization of political governance in Uzbekistan, as well as the current annual reports of the UN on human development, serve as such an indicator. In fact, the effectiveness of public administration depends on the implementation of decrees, instructions and orders issued by the state, the executive branch, and its effectiveness. In this regard, the Institute for Monitoring the Current Legislation serves as an indicator, albeit partially. Political analysts of our country are carrying out some analytical work in this direction. For example, the researcher A.K.Yusupov says that the assessment of public administration effectiveness is "a systematic analytical activity aimed at measuring the results of decisions, programs and plans and targeted actions on their implementation on the basis of specific criteria" [7, 2019].

The researcher tries to theoretically substantiate that in evaluating the effectiveness of public administration, it is a wrong approach to contrast economic and social utility indicators and expect the same result in the same period. In our opinion, the effectiveness of public administration is the main criterion for the level of well-being of a particular person, a citizen. The main question is whether the statistics transmitted by government agencies to the management system always correspond to the real situation, the consumer's "consumer basket". Today, the level of poverty remains high, and employment is poor - labor migration is still high, and able-bodied Uzbek youth contribute to the growth of foreign countries. The rational use of labor resources, in the language of sociology, "social capital" depends on the nature of public administration, its modernity, its scientific basis. The management of human resources, which contributes to the development of the country, also depends on the leadership capacity, training and entrepreneurship. The image of the leader is associated with the "consent" of citizens living, studying, working and retiring under his leadership, in the words of President Sh. Mirziyoev. When does a person "agree"? He agrees to be happy when he is satisfied with his standard of living, his ability to achieve his goals and dreams in his own country, and his ability to live in this world.

This fact is due to the fact that today's leader has been aware of the life and aspirations of the people for many years, "the more prosperous the people, the stronger the state!" reflected in the scientific paradigm, laid the foundation for the modern image of the leader. However, this innovation is still not reflected in the lower echelons of government. This is reflected in the authority, volume and content of applications and complaints received by the President at the local People's Receptions. Corruption, bureaucracy, violence, that is, the encroachment on the property of citizens without the use of the institution of social protection, also provokes an adequate response to some leaders, tarnishes the image of public administration.

Repression is a companion of totalitarian, command-and-control and authoritarian political regimes. In a democracy, that is, in a time of popular rule, the methods and techniques of violence are ineffective. Because in such circumstances, modern legislation guaranteeing human rights and freedoms does not allow it. Therefore, some of the differences between the leader and the citizen in public administration can be explained by the fact that in the worldview of the leader the methods and means of inherited policies (forced labor, disregard for civil rights, unjustified punishment, humiliation, etc.) have survived.

In today's Uzbek political science, it is clear that the formation of the political image of future leaders - the youth - is one of the most important issues. According to N. Kalkanov, "despite the recent changes in the education system of the country, most young people do not have enough political culture, are unable to form their political image in the process of civic activity and behavior" [8, 2019]. There is life in this thought. Because the political enlightenment of the future youth of the country is reflected in the image and activity of the future leader.

First of all, politics is shaped by a specific person, a person. Surprisingly, in the electoral process, the public is more interested in his or her "personality" than in how he or she can conduct politics in the future. U.S. sociologists conclude that the voter pays more attention to the candidate's personality. The second is how an individual can perform a social function. Political issues come third in the eyes of the electorate. Which party the candidate belongs to comes last [9, 1983]. As for "PR technologies", which are considered to be the most important in this field,

this issue has been analyzed more extensively and in depth in Russia and Ukraine among the CIS countries [10, 2005].

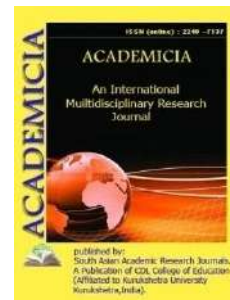
## CONCLUSION

The conclusion is that the modern leader and his image is not formed by his career, but by the process of teaching and learning in society, on the basis of life experience. This is called "recruitment" in political science. The image of the managerial staff is decided on the basis of recruitment. To do this, it is necessary to develop a modern elitology - a branch of science that forms a layer of leaders. Elitology has an important practical significance not only in politics, but also in economics, law, culture, sports and other fields.

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DOI: **10.5958/2249-7137.2020.00665.5**

## **FORMATION OF PROFESSIONAL COMPETENCY OF FUTURE TEACHERS-PSYCHOLOGISTS AND SPECIALISTS ON MENTAL DEFECTS AND PHYSICAL HANDICAPS OF THE 12-YEAR SCHOOL UNDER THE CONDITIONS OF INCLUSIVE EDUCATION**

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### **ABSTRACT**

*The general idea of the project is in the formation of professional competency of future teachers-psychologists and specialists on mental defects and physical handicaps of the 12-year school under the conditions of inclusive education. It is one of the actual tasks of modern education in Republic of Kazakhstan. Reforms in the modern education favour mobilization of the possibilities of the future teachers-psychologists and specialists on mental defects and physical handicaps*



*(defectologists) of the 12-year school under the conditions of inclusive education. They also help to form their professional competencies. Modern school has a high demand for the creative teachers possessing new methods in the field of education.*

**KEYWORDS:** *The Professional Competency, the Teachers-Psychologists And Specialists, The Mental Defects And Physical Handicaps, The Conditions Of Inclusive Education.*

## INTRODUCTION

Social economical, political and cultural world shifts happening in the world posed new problems before the system of Kazakhstan education. One of which became the problem of transition of school education to the 12-year curriculum and development of inclusive education. In connection with which there appeared a necessity to work out and substantiate theoretical and methodological bases of forming professional competencies, also to reconsider the specific character of professional competencies of teachers-psychologists and defectologists capable of carrying out a psychological help to the children with particular demands and gifted children, and also possessing knowledge of psychological peculiarities of such children [1].

### Methods (methodology) of an experiment

A radical reconstruction of the state system, ideology, social organization which began in the beginning of the XXth century in Kazakhstan has touched all the spheres of our life, state institutions and, in particular, the structure of the system of national education [2].

Social economical, political and cultural world shifts happening in the world posed new problems before the system of Kazakhstan education. One of which became the problem of transition of school education to the 12-year curriculum and development of inclusive education. New demands put forward the problem of teachers' professional preparation, who are able to be competitive in the market labour and possess a high level of proficiency in the conditions of inclusive education [3].

According to the Message of the State Leader N. Nazarbayev to the people of Kazakhstan "Kazakhstan way-2050: united goal, interests, future" (Jan. 17, 2014) there were defined the following priorities in the field of education:

- Creation of new possibilities to reveal the potential of people in Kazakhstan. All the developed countries have unique qualified educational programs, methods of teaching and professional staff.
- School leavers should know Kazakh, Russian and English languages.
- In the result of education school children should possess the skills of critical thinking, independent search and deep analysis of information.
- Creation of modern urban centers of Kazakhstan in the biggest cities, such as Astana, Almaty, Shymkent, Aktobe which should become scientific centers and realize qualified educational services.
- Creation of scientifically sustained economy, that is, increasing the potential of Kazakhstan science [4].

A developing practice of general education makes high demands to teachers-psychologists and defectologists who should be prepared today.

Readiness of a psychologist and defectologist to introduce innovations into educational process is defined by the basis which he receives during education in higher institution. Thus, to be efficient, the system of preparation of the future teachers-psychologists and defectologists should be changed according to the tendencies of inclusive education which are determined by the practice of general education [5].

The contents of education in 12-year school together with inclusive education is aimed to form an objective picture of the world, to provide integration of a personality in the system of world and national cultures and his growth as a citizen [6].

Integration of Kazakhstan into the world system of higher education, modernization of different fields in education and social economical changes of the society present new demands to the system of higher education, the quality of specialists training which presuppose reconsideration of main directions of teachers' professional preparation. In the conditions of renovation of the modern society, reconsideration of values there has arisen the necessity in the teacher who is capable of gradual and complete realizing a social and professional educational efficiency under the conditions of inclusive education; able to teach the generation ready for a free choice, creativity and self-realization [7].

## RESULTS AND DISCUSSION

Studying in higher institution is one of the major stages in the professional personal growth, in the frames of which there is formed an adequate representation about a future profession and relation to it. Changes taking place in our society determine tensions sensibly felt in the traditional categories and notions, which can be compared with valuable motivational sphere of a modern student personality. In this connection the proposed scientific project devoted to the research of students' professional competencies and criteria of readiness for 12-year education under the conditions of inclusive education, innovative educational technologies, interactive methods of education will make a valuable contribution in the development of psychological pedagogical science [8].

Inclusive education arises out of the notion that any person is a unique Personality possessing his own interests, abilities and desires, requiring individual approach in educational process and flexibility in working out curricula, which take into account these peculiarities. Such individual approach demands from a teacher high professionalism including ethics, resourcefulness, delicacy, the ability to understand and listen. More, inclusive education forms its own scale of values (axiology) where the key principle is the person who, independently of his abilities and achievements, has the right for education, knowledge, self-expression, personal growth, communication, friendship and support. It is necessary to underline that inclusive type of education should be introduced in the common secondary schools, professional schools and higher institutions, it will favour the formation of the atmosphere of humanity, tolerance, kindness and charity, ability to understand and receive the Other/different; it increases the efficiency of educational process, promotes a successful socialization and self-realization, works as an effective means of communication and the struggle with discrimination [9].

Significance of the project in national and international scale is determined by the following circumstances. For example, in Russia and in some European countries there has been created

the forms of work with the children with peculiar demands. In Russia there was approved and accepted “United concept of special federal state standard for the children with limited health possibilities”, there are also being worked out educational programs with the use of inclusive pedagogical technologies.

In Kazakhstan such a problem has not been fully considered, there are not considered the problems connected with the peculiarities of the system of inclusive education, not organized the efficient cooperation between state and social organizations in this sphere, there are being worked out normative and lawful aspects of introducing inclusive education, not provided the conditions of accessible education to the children with peculiar demands (children with disabilities, gifted children) in organizations of education.

For Kazakhstan international experience in questions of inclusive education can be taken to create the united system of inclusive education on all levels. A financial support is necessary to generalize international experience, to conduct scientific research in introducing the project in the country. Such scientific project is new, it has not been described or published before which defines its importance on national and international level.

Due to inclusive type of education there decreases isolation of a student/schoolboy, he becomes more active, stops feeling his own “peculiarity”. Introduction of inclusive education favours cultural restructuring of educational institution/school touching all around it: teachers, students/school children and parents. Variety, the difference of one student from another plays as a means of powerful potential resource which improves development and creativity. On the whole, inclusive education is a unique process of accessible education for everyone, it erases the limits connected with each personality’s uniqueness and favours the creation of self-expression and inner potentials [10].

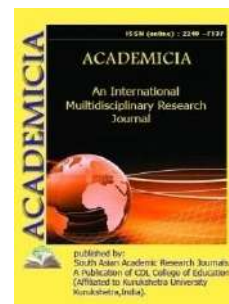
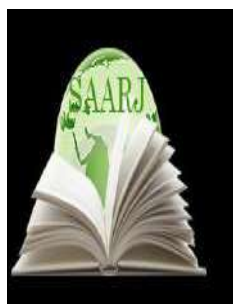
## 5. Conclusion

In South Kazakhstan State Univ. named after M. Auezov was founded Psychological Center, Center of inclusive education, which members are the teaching staff of the chair “Psychology and defectology”. There has been worked out and introduced in the educational process the educational direction “Tutor of inclusive education” in the Modularized educational program by the specialty 5B010500-“Defectology”, also educational direction “Psychologist in organizations of education” in the Modularized educational program by the specialty 5B010300-“Pedagogy and psychology”. There is being conducted a systematic work in psychological help to the participants of educational process not only in higher institution but also in organizations of education where students attend their internship. Undergraduate students are taken as volunteers to give help to people with peculiar demands. A scientific project is planned to be executed on the database of these Centers. The worked out materials of project participants and our following research on the problem of formation of future teachers’ professional competencies let us come to the conclusion about the possible achievement of the set tasks [11].

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DOI: **10.5958/2249-7137.2020.00666.7**

## THE CORRECTIVE IMPORTANCE OF INCLUSIVE EDUCATION FOR CHILDREN WITH DISABILITIES

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### ABSTRACT

*This article identifies the special needs of children with disabilities in the inclusive education system and focuses on the conditions created in the inclusive education process for their integration into social life and their free development as individuals. Also, the use of methods of teaching children with disabilities in the educational process in inclusive classrooms, adapting students to study among normal peers, issues of independent thinking and skills development on the basis of corrective methods in the learning process.*

**KEYWORDS:** *Inclusive, Education, Disability, Inclusive Class, Teaching, Method, Correction Method, Ability, Integration, Personality, Special Education, Speech Therapist, Ophthalmologist Learning Strategy, Defectologist.*

### INTRODUCTION

After gaining independence, the Republic of Uzbekistan has undergone dramatic changes in the process of economic, social, spiritual and educational development. The priority policy of our state is to democratize the education system and its content.

In a short period of time, educational reforms in all spheres of our country have been carried out consistently and rapidly, with many positive results. In this regard, the state pays special attention to the creation of facilities for the education of children with disabilities, who are part of our society and need social protection.

According to Article 23 of the Law on Education, special educational institutions have been established to create favorable conditions for the education and protection of the health of children and adolescents with mental and physical problems. A policy of reviewing the development of special education has begun. In many countries, it has become necessary to introduce integrated education for children with disabilities, instead of separate education for children with disabilities in special education institutions.

### **THE MAIN FINDINGS AND RESULTS**

Over the past 10-15 years, Uzbekistan has been working to integrate children with disabilities into the general education system and to integrate and inclusive education. Integration and inclusive education The integration of non-scientific children into general education institutions into a full-fledged special or inclusive education system, a correctional educational institution consists of enrolling children in educational institutions in the areas where they live due to their distance from their place of residence.

It is important to note that in an inclusive education environment, the child is among healthy peers and is able to be educated without being separated from his or her family. The issue of inclusive education strategy, which is widely promoted around the world today, is one of the most pressing issues in Uzbekistan. The priority of educational reform in Uzbekistan is to bring up children with disabilities on the basis of a democratic approach to education, to create optimal conditions for the development of creative abilities, to develop professional skills, as well as to realize their potential. According to Vygotsky's theory of the harmony of environment and personality, the social environment is of paramount importance for children with disabilities. The United States and Southern European countries have created a legal framework for the development of integration and the management of this process. In recent years, Uzbekistan has taken a number of measures to introduce integrated and inclusive education.

For a very long time, it was considered more effective to educate children with special needs in special educational institutions than in general education institutions. Special education has developed as an education system for children with disabilities. This education was based on the assumption that the needs of children with disabilities could not be met in general education institutions. The fact that children with disabilities are educated in a special education system makes it difficult for them to adapt to society after graduation. It also forces them to stay away from their families. This category of children also becomes accustomed to dependency and faces many difficulties in self-care.

At present, the Republic pays great attention to the issues of education and upbringing of children with special needs in the special or general education system, as well as the global integration and promotion of integration. and inclusive education is gradually being implemented in Uzbekistan on the basis of cooperation projects of international organizations. Article 41 of the Constitution of the Republic of Uzbekistan specifically addresses the issue of education of



children with disabilities in general education institutions and the creation of favorable conditions for them.

Inclusive education is a public policy to overcome barriers between children with disabilities and healthy children, children with special educational needs (disabled for some reason) and adolescents with developmental disabilities or economic difficulties. is an education system that represents an addition to the general education process aimed at adapting to social life regardless! Inclusive education ensures that children with special needs receive education on an equal footing with children with normal development. That is why it is so important.

The activities of children with disabilities, other children with special needs, other children, teachers and educators have a special place in inclusive education. Thanks to this education, children with special needs:

- meet their physical and mental needs
- develop social behavior and self-service skills:
- Assimilate educational materials that take into account their capabilities:
- Develops by participating in various games with their peers:
- Chess games in physical education classes can be a time-keeping referee or goalkeeper in various sports competitions:
- Made friends in a friendly environment:
- Participate in various entertainment and festive events
- Participate in classroom activities
- Cleanliness ensures the observance of personal hygiene
- Develop a sense of responsibility to the class.
- Participate in the preparation of didactic and teaching aids in the classroom.

So, given the above considerations, inclusive education recognizes that children with special needs can be educated not only in special schools, but also in general education schools where healthy children are educated.

To do this, both the school level and the teachers must be ready for an inclusive education system, and the school level, physical conditions and learning opportunities must fully meet these educational requirements. There are a number of interrelated factors that contribute to the successful implementation of integration at the school level. The central factor is the opportunity to be included in the curriculum, as well as the physical location of the buildings, the opportunity to study and the funding opportunity are also key factors. The physical environment at school also plays an important role in inclusive education. Simply put, students enter the doors of all schools through stairs, but children with disabilities in wheelchairs cannot climb these stairs, and even children in crutches may have difficulty.

This means that healthy children, as well as children with disabilities, must be able to walk freely through both stairs and doors.

In addition, special seats and equipment in classrooms and laboratories should be suitable for children with disabilities. After creating the necessary conditions for the education of children with special needs in the system of inclusive education in secondary schools, what to pay attention to when involving this category of children in education, what should be the main focus in their education, it requires attention to a number of issues, such as how appropriate the training processes are to be organized.

Of course, children with special needs, depending on the characteristics of their physical, mental and mental development, have certain disabilities, need special care, given the limited ability to manage their own activities independently, a great deal of responsibility is required from teachers and educators in teaching and educating these children in the process of their involvement in education.

The main goal of inclusive education is to include all children who have the opportunity to start education, including children with special needs, in the general education process.

The process of inclusive education should have the following legal and social bases. Namely:

- Every child has the basic right to education and should have the opportunity to receive the necessary level of education.
- Every child has their own characteristics, interests and learning needs.
- They should have the opportunity to study in secondary schools with special educational needs, where it is necessary to create conditions based on targeted pedagogical methods to meet their needs.
- Children of all ages need to study and grow up in the same conditions as children who live and work around them.
- Inclusive classes should focus on helping students and educators become the best members of society by developing a new perspective on society and the school.
- Inclusive education requires teachers, principals, parents and special educators of secondary schools to work together in one group.

In many cases, parents of children in need do not require these children to receive a proper education because they do not have a clear understanding of their children's rights and other educational opportunities.

Parents need to be aware that they can overcome obstacles such as shame and loss of self because of their children's shortcomings. At this point, parents of children with disabilities should be given detailed information about the content of inclusive education and the important aspects of educating these children in an inclusive education system.

The establishment of general education schools imposes certain responsibilities on teachers and specialist teachers responsible for the effectiveness of the process of teaching children in need in inclusive classrooms.

#### **HERE ARE SOME SUGGESTIONS ON HOW TO LOOK OR GET AN APPOINTMENT FOR HAIR EXTENSIONS**

Teachers have the following tasks to help children with hearing impairments become literate.

- Children with hearing impairments should be aware of changes in speech and mood in a timely manner
- Collaborate with a specialist otolaryngologist if necessary to determine the level of hearing in children
- In inclusive classes, such children should be transferred to the first floor.
- Monitor the student's mastery of the topic as the teacher explains the topic to the class.
- The teacher explains to the student's parents the characteristics of the child's learning difficulties, gives the necessary advice

Teachers have the following tasks to help children with hearing impairments become literate.

- The child should work in a well-lit room so that he can see your face, hands or lips.
- If the child is instructed to use a hearing aid, make sure that the child is wearing it and that the batteries are in good condition.
- The teacher should speak clearly and loudly during the lesson, but without shouting.
- Spend time with a student who can hear well. His partner helps him find the page he needs, repeat assignments, and so on.
- During the lesson, direct the student with a hearing impairment to observe and listen to other students respond to the teacher.
- If they see other students and can't hear their answers, the teacher can turn to the student with a hearing impairment and repeat what he or she said.
- Make sure that the student understands the task correctly.
- If the child's speech is not clear, help him to use words correctly and follow the grammar, and encourage them to pay attention to their attempts to speak.

**When working with students with speech impediments, the teacher should pay attention to the following:**

- The teacher should pay special attention to students with speech defects, as well as work with speech therapists.
- It is important not to offend the child with underestimation for reading and writing mistakes, to encourage him, to instill in him the idea that relying on the positive aspects of his behavior can overcome difficulties.
- Students with speech defects should be familiar with the characteristics of the character. Students need to be able to not laugh at their classmates who have speech impediments, not to insult them, not to expose their shortcomings, and to be able to organize the kindness of the students in the class.

**The role of the teacher in working with visually impaired students**

- Ensure that visually impaired students sit in the first classroom in an inclusive classroom.
- To pay attention to the health of visually impaired students in effective teaching, to get the necessary advice from a specialist ophthalmologist.

- It is important to keep in mind that visually impaired students in inclusive classrooms can also damage a child's vision, such as bending over, jumping, or lifting weights in physical education classes.

- The teacher should pay special attention to the preparation of special exhibitions for such students, taking into account the presence of blind students in the classroom.

The role of the teacher in working with visually impaired students

When adapting a visually impaired student to a room:

- Ask the child for the best place to see the blackboard and make sure he or she sits there.

- If the eyes of a visually impaired child are sensitive to light, they should not be pushed out of the window. He should wear a cap to protect his eyes from glare and use a cardboard barrier when reading and writing.

- It is recommended to write the words in capital letters on the blackboard during the teaching process and to use colored pencils when writing.

- Children should be allowed to get closer to the blackboard or visual aids to look better.

- What is written on the board by the teacher should be read aloud.

- Use visual aids, such as capitalized materials, to help children read better.

- Visually impaired students may have difficulty seeing lines in notebooks. You can give them notebooks with thick lines.

- If a student sits with a student he or she can see, that student will help him or her organize the work, as well as help his or her classmate open the page he or she needs, repeat the instructions in class, and so on.

### **The role of the teacher in working with students with intellectual disabilities**

- A teacher working in inclusive classrooms is able to distinguish between students with normal development and students with intellectual disabilities.

- Do not apply the curriculum requirements for healthy students in the classroom to mentally retarded students

- In the course of the lesson should be given educational tasks that correspond to the ability of students with intellectual disabilities.

- The student should not be harassed by students for not mastering the lessons, but should be encouraged to take into account some of his achievements in the classroom.

- Minimize distractions and avoid clutter.

- Arrange for children with intellectual disabilities who have a tendency to run around to sit on the wall with older children and give them the necessary assignments during the lesson.

- "She needs to be shown what to do."

- Use simple words when giving assignments and check how well the child understands.

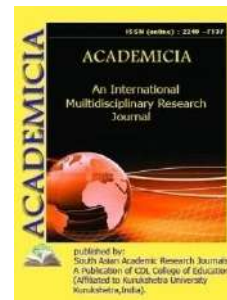
- When working with children with intellectual disabilities in the classroom, they must work on and complete one activity. Let the child understand that once one task is completed, he or she can start another.
- Divide the tasks into smaller parts, and let the child start with what he or she knows before moving on to the more complex part.
- When a child does well in school, he should be praised and rewarded for his work.
- When a child completes a task, he or she should be given additional or practical instructions, which will help to strengthen the child's skills and increase his self-confidence.
- The family member who does the "homework" with the child should be told about the topic and work with him on a regular basis.
- In class, the child should sit with a student who can help the child concentrate and participate in activities in the classroom.

## CONCLUSION

In general, to educate children with special needs in general education schools among their peers, as well as in the schools in the neighborhood where they live, to bring them up in the family after school, under the supervision of their parents, for their full development and adaptation to social life. , most importantly, the education of children with special needs among their healthy peers creates ample opportunities for them to look to the future with confidence, to strive for a certain goal, to grow into a certain developed adult in the future.

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DOI: **10.5958/2249-7137.2020.00667.9**

## IMPROVING THE EFFICIENCY OF GAS TURBINE PLANTS WITH COGENERATION BY USING THE HEAT OF THE EXHAUST GASES IN THE BOILERS OF THE HEATING SYSTEM

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### ABSTRACT

*This article discusses the possibilities and feasibility of utilizing the heat of high-temperature exhaust gases to a place of fossil fuels in a hot water boiler for the generation of heating water for heating and hot water supply to compressor station facilities for energy conservation. The first way involves combining the efforts of aviation and energy machine-building enterprises in creating new gas turbines that meet world standards, the second - with the conversion of aircraft models for the needs of the energy industry. An important role in achieving the high technical level of the latest gas turbines and gas turbine units was played by the broad technical and production cooperation of the main foreign gas turbine manufacturing companies.*

**KEYWORDS:** Turbine, Waste Heat Boiler, Flue Gas, Fuel, Pressure.



## INTRODUCTION

In modern gas turbines, the gas pressure in front of the turbine is at the level of 1.0-3.0 MPa, the task is to increase it to 5.0-7.0 MPa. At the same time, it is necessary to increase the initial temperature of the gas in front of the gas turbine, which in modern gas turbines is 1200-1400° C. Modern mathematical methods of calculation and design open up the possibility of further optimization of the dimensions and weight of the equipment [1,2,3].

Significant successes have been achieved in reducing the toxicity of combustion products by introducing preliminary mixing of fuel with air and suppressing NO<sub>2</sub> and CO oxides. [2,3,4,5].

By the end of 2017 - 2021, the main tasks set by the program, economical options are to use the place of primary energy resources due to the utilization of flue gases from gas of turbine plants, the boiler, utilizers of secondary energy resources gives great opportunities for generating electricity and hot water [2,4,5].

One of the areas of energy conservation is the combination of a gas turbine process with the process of generating steam or heating water in a condensing recovery boiler. The waste heat boiler located after the exhaust pipe of the turbine can significantly reduce heat loss with flue gases and at the gas temperature at the outlet of the boiler from 95–100 ° C bring the total fuel utilization to 70%.

## SIGNIFICANCE OF THE SYSTEM

In the process of considering these proposals, the experts recognized the appropriateness of using the State Unitary Enterprise “Issiklik Manbai Birlashmasi” in practice. In Uzbekistan, operating stations, industrial enterprises, and heat supply with coatings of heating networks show the possibility and profitability of such reconstruction, as well as significant savings in heat energy resources (HER) in the transition from primary energy to secondary utilization of primary fuel [3,4,6].

## LITERATURE SURVEY

An important role in achieving the high technical level of the latest gas turbines and gas turbine units was played by the broad technical and production cooperation of the main foreign gas turbine manufacturing companies. Currently, three multinational companies are setting the tone in the global market for combined cycle technologies, determining the technical level and cost indicators of the latest equipment: General Electric (USA), Siemens-Westinghouse (Germany, USA) and Also (France, Switzerland, Sweden). They have the closest technical, production, and financial ties with power engineering companies in Japan, Italy, England, and Belgium, as well as with leading manufacturers of aircraft gas turbine engines [1,4,6].

The vast majority of gas turbines operating independently or as part of a combined cycle gas turbine are designed to operate on natural gas. Liquid fuel is sometimes used in low-capacity gas turbines, as well as in a limited number of medium and large gas turbines designed for operation in oil-producing countries of the Middle East and Central America. But in recent years, work on the use of solid fuels in combined cycle technologies has significantly intensified in the global energy industry. Abroad, experience has been gained in operating demonstration CCGTs on solid fuel using various types of gas turbines. These trends are associated with the fact that gas is

a valuable technological raw material for the chemical industry, where its use is often more cost-effective than in the energy sector. [4,6]

Progress in the field of gas turbine construction in the mid-twentieth century, associated with successes in aviation, had an impact on the development of stationary gas turbine construction. Leading foreign companies are starting to produce energy gas turbines, the unit capacity of which will soon exceed 100 MW. While gas turbines are much inferior in terms of efficiency to steam turbine plants, they are therefore mainly used to cover peak loads. Since the late 60s. of the last century, gas turbine construction is developing dynamically, and the excellence of energy gas turbines is rapidly increasing, primarily due to the creation of effective cooling systems and increase on this basis the initial gas temperature.

In the course of the development of research on combined-cycle plants conducted at GT in 1962-1970. I. I. Kirillov, V. A. Zysin, and S. Ya. Osharov, a fundamentally new scheme was developed for a gas-steam installation with steam cooling of the gas-turbine part of the gas turbine, which made it possible in the future to expect an efficiency of 55-60%. Designs of installations with a capacity of 30 and 40 MW that implement this scheme were developed. Experimental work began on the creation of problematic units for this installation: a gas turbine at an initial temperature of 1200 ° C, a combustion chamber. But even these works were administratively interrupted at first unreasonably, and later undeservedly forgotten. A successful solution of this task will not only determine the possibility of achieving the world technical level of the power system of Uzbekistan, but, first of all, will determine the pace of elimination of our general technical and economic backlog from developed countries .

There are two ways in our country to solve this complex problem. The first way involves combining the efforts of aviation and energy machine-building enterprises in creating new gas turbines that meet world standards, the second - with the conversion of aircraft models for the needs of the energy industry. In modern gas turbines, the gas pressure in front of the turbine is at the level of 1.0-3.0 MPa, the task of increasing it to 5.0-7.0 MPa. At the same time, it is necessary to increase the initial temperature of the gas in front of the gas turbine, which in modern gas turbines is 1200-1400 ° C.

The possibility of a further increase in the initial gas temperature is associated with the replacement of air cooling with steam in combined-cycle plants, the use of new materials for gas turbine blades and disks, including ceramics and cermets, light composite boron-aluminum, borotitanium, carbon titanium materials, etc. [6 ]

Modern mathematical methods of calculation and design open up possibilities for further optimization of the geometry of the flowing part and profiles of turbine blades based on the consideration of the three-dimensional gas flow, reducing the size and weight of the equipment. Significant successes have been achieved in reducing the toxicity of combustion products by introducing preliminary mixing of fuel with air and suppressing NO<sub>2</sub> and CO oxides. In particular, a gas turbine unit has been created that works according to a simple scheme with regeneration at an initial gas temperature of 1435 ° C and an efficiency of more than 40% [1,4,5,6]

The installation of a waste heat boiler of the appropriate capacity in the flue gas path in the interval between the gas turbine outlet and the chimney will make it possible to use the utilized

heat for heating the heating system main water in the main production and auxiliary premises of the station and the heat of consumers in nearby working villages [1,4,6,7,8].

Based on the results of the study, the following recommendations and suggestions were made, the introduction of the proposed development will solve the problem of energy and resource conservation, makes it possible to use a steam boiler in heat supply, and solves the environmental problem. Due to flue gases temperature  $t_{\text{smoke}} = 550^\circ\text{C}$  of two gas turbine units GT-25-750, "Issiklik Manbay Birlashmasi" State Unitary Enterprise is provided to the city of Karshi with thermal and electric energy in the amount of 50 MW/hour. "Issiklik Manbai Birlashmasi" State Unitary Enterprise Directive Plans for Improving Management of the Main Production Processes of Energy and Resource Saving. Using the waste heat boiler for the purpose, saving approximately  $6000\text{ m}^3$  of fuel equivalent in one boiler. If one central heating boiler is installed per year  $B_{\text{fuel eq.}} = 6000 \times 365 = 129.50 \times 10^3\text{ m}^3 / \text{year}$  (Fig. 1,2).

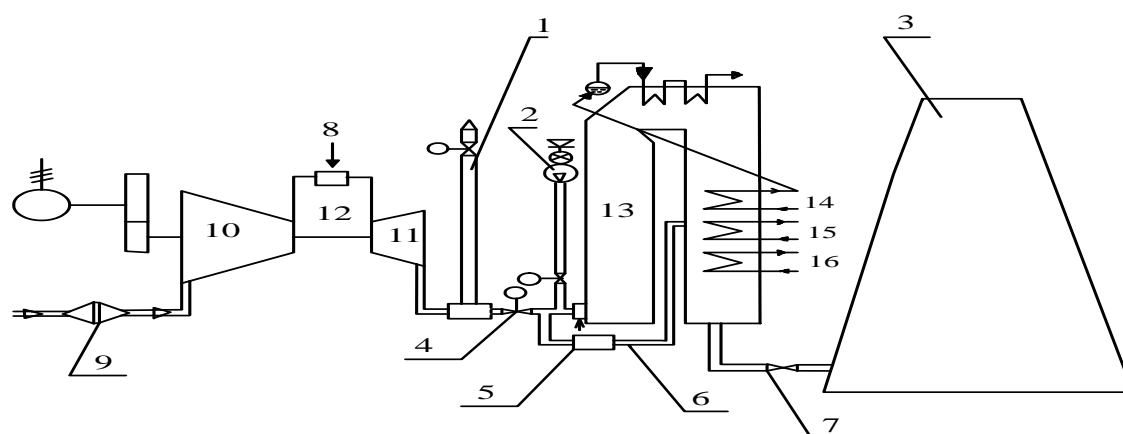


Fig. 1.

*The heat and power supply system through the use of the heat of the exhaust flue gases from the boilers of utilizers of gas turbine installations.*

*уқаруу 1-spare chimney; 2 - smoke exhaust; 3 - chimney; 4.7 - repair gate; 5 - regulating gate; 6 - spare boiler furnace; 8 - combustion chamber; 9 - air exhaust pipe of the compressor; 10 - compressor; 11 - gas turbine installation; 12 - additional fuel supply; 13 - steam boiler; 14 - water economy; 15.16 - Hydrogen gas high and low preheater installation.*



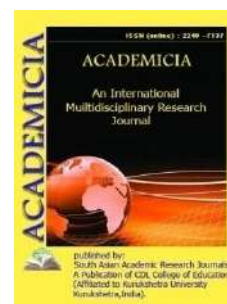
Fig.2. A general view of the layout of the heat and power supply system through the use of the heat of the exhaust flue gases from the waste heat boilers of gas turbine units.

## CONCLUSION

- *In order to improve the operational management system for the use of fixed assets, it is recommended that the “IssiklikManbaiBirlashmasi” State Unitary Enterprise allocate a special unit for monitoring the use of fixed assets - (controlling fixed assets) and save fuel energy resources;*
- *To improve control over the use of fixed assets, make operational decisions to eliminate deficiencies in this matter, calculate the coefficient of influence for each of the main and auxiliary equipment of the gas turbine unit and the waste heat boiler.; 9*

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DOI: **10.5958/2249-7137.2020.00668.0**

## THE ROLE OF ISLAM IN THE FORMATION OF THE ETHNIC CULTURAL IDENTITY OF THE DUNGAN PEOPLE

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### ABSTRACT

*This article focuses on the origin of the Dungan people, the concept of ethno cultural identity, the role of Islam in the formation of the Dungan people. At the same time, an attempt was made to shed light on the role of religion in the lives of Dungans and similar Diasporas on the basis of comparative analysis. The reasons why Islam, which once served as the most important marker of ethno cultural identity in the life of the Dungans, have given way to the Dungan language with the change of space have been revealed. The role of Islam in the ethno-cultural identity of the Dungans of modern Central Asia, especially Uzbekistan, its differences between different categories of the Dungans and the reasons for these differences were discussed.*

**KEYWORDS:** *Identity, Ethno Cultural Identity, Culture, Islam, Dungans, Chinese, Hui*

### I. INTRODUCTION

Ethno cultural identity is a complex socio-psychological phenomenon in which an individual expresses its identity with a particular ethnic community, which differs in different aspects of culture: language, customs, rituals, traditions, religion, etc., primarily as an individual and a collective.

Only a comprehensive analysis of the factors that make up ethnocultural identity as a whole can create a more complete and accurate understanding of it. Determining the place of Islam in the ethnocultural identity of the Dungan people serves for a correct and complete understanding of the culture of these people.



This article discusses the role of religion in the formation of ethnocultural identity and the role of Islam in Dungan ethnoculture. At the same time, an attempt was made to shed light on the role of religion in the lives of Dungans and similar diasporas on the basis of comparative analysis.

Besides them, research methods such as comparative analysis of relevant sources, observations, interviews as a result of field research were used.

Everyone can believe in religions or cannot believe in any religions at all. Regardless of these beliefs, of course, a person feels that he/she belongs to a certain group depending on the situation. Just as ethnocultural identity occurs in intercultural relations, religious identity is also manifested in the process of interreligious communication. Religious identity is more stable and bounded than ethnic or cultural identity, and its transformation is much more complex.

Prior to the emergence of theories and ideas about nation and ethnicity, religion was an important indicator of the identity of the individual. In this context, the influence of religion on the formation of ethnic identity should be emphasized.

## II. RESULTS AND DISCUSSION

### A. The origin of the Dungan people

The Dungans call themselves "Huihui." The name is also found in Chinese sources in the same form. However, scientists do not have a concrete idea when this name appeared in Chinese sources [5]. According to some scientists, the name appeared during the empire of the Northern Sun (960-1126). Li Shen-ju, a historian of the Qing Dynasty (1644-1911), wrote in his "Study of the Geographical Part of the History of the Liao Dynasty" ("Liao Shi di chjikao") that after the Five Dynasties (907-960) "This means that from the time of the Five Dynasties in China, the term "Huihui" has appeared in historical sources. From the time of the Northern Sun dynasty (960-1126), the name "Huihui" began to appear more and more in documents [3]. During this period, the term Huihui meant the Arab caliphate, not the Chinese Dungans, and the state was also called in Chinese sources as "Dashi go" [7].

Since the Yuan Dynasty, Muslims from the Arab Caliphate had been referred to as "semu," meaning "other people," and "non-Chinese people," but the term is now used to as "huihui" or "hui." The term is used in China to refer to the newly formed Dungan people only at the end of the Yuan Dynasty or from the time of the Ming Dynasty (1368-1644).

During the Qing Dynasty, the term "Hanhui" appeared and meant "Chinese Muslims". The term was first clarified in a 1647 report by Gansu Province Governor Zhang Shan: "On the west side of the Yellow River, Din Go-lyan Muslim rebel leaders and others illegally elected Tuluntuy as their leader. According to reports from Suzhou, they have united several thousand "Muslims with headscarves" - "Chanhui", "Muslims in red hats", "Muslim aunts", "Hanhui" - Chinese Muslims and others. they were given various positions "( "A Brief History of Gansu, Ningxia and Qinghai Provinces "- "Gan Ning Qing Shilue "). However, Zhang Shan did not comment on the term "Hanhui" - "Chinese Muslims". For this reason, it is not possible to say exactly what national name the term was used for. Any ethnos is a product of history[15].

After 1911th revolution, the term "Hanhui" became widespread, and today the name is used to refer to Chinese Muslims. However, such thinking may be opposed to confusing the Dungans



with the Chinese or the nation with religion, or with the Dungans' views of the nation. However, it is not correct to accept them as just a religious community.

Although Islam is actually a religion, it has also become the name of a separate group in China. This name was originally used to distinguish them from the natives of China, but later became the name of a separate people [11].

In addition, the term "dungan" (dunganhui) was used by the Xinjiang Uyghurs, who called the dungans "dunganhui". Today, generations of several thousand Dungans have migrated to various parts of Central Asia as a result of the defeated Dungan uprising of the late 19th century. They are also called Dungan people, but their Chinese descendants do not and do not want to call themselves Dungans. The main part of the Dungans has spread to Central Asia and some minorities to many other parts of the world and live as a diaspora [10].

Thus, summarizing the above ideas, the origin of the Dungans is directly related to Islam and its infiltration into China, and their ethnogenesis involved not one, but several people. These are: the Arabs, the Persians, the Turkish population of Central Asia, the Turkish population of north-western China, and the original Chinese population. The unification of these people led to the emergence of a separate religious community and, on its basis, a separate people - the Dungans (Huey).

### **B. The role of religion in ethno cultural identity.**

Researchers dealing with the history of diasporas have argued that the unity of religious views serves not only one diaspora but also the union or partial convergence of several such diasporas [13]. For example, the Greek Catholic Church played an important role in the unification of the various Ukrainian diasporas in Canada and Latin America. An important aspect of this example is that the religious factor is the reason for the rapprochement of the two separate diasporas. As noted above, religious identity is stronger than other types of identity.

It is worth mentioning the Armenians as another example in clearly showing the place of religion in the life of the diaspora and its duration. In the 5th century, the emergence of a new trend of Christianity among the Armenians called monophysitism and the consolidation of the ethnos around it became an important factor in the survival of the Armenian nation without being assimilated like the Jews in medieval conditions with very weak ethnic boundaries [14]. Of course, in doing so, boundaries were religiously held, and the aspect served as a key aspect in maintaining their identity.

In the Muslim diaspora, religion is an important aspect of the community's cohesion and longevity. This can also be seen in the example of the Dungans (Hui or Huizu) in China. Religion is the most important criterion for them to understand and maintain their identity. This is because Dungan and Chinese culture are separated by Islamic rules. It is very difficult to distinguish their culture from Chinese culture if the Dungans' belief in Islam is studied without regard.

There is no denying that local religious teachings also have an impact on Dungan culture. This can be seen in everything from examples of applied art to folklore. These include the immortal heroes of fairy tales, magical and supernatural beings, and various sacred animals.

Alternatively, religion has a strong position in some diasporas and a less powerful one in others. This view can be substantiated by the fact that in a diaspora living in a foreign religious environment, while religion is an important marker for self-preservation, the importance of non-religious markers in a religious environment is higher. For example, V. Titov, who studied the Muscovite Assyrians. Commenting on their self-awareness, Titov writes that "historical memory, culture (folklore, music, holidays, ceremonies) and religion were one of the main factors in the identity of the diaspora" [12]. This is almost the case. This is because the Dungans and the local Muslim population are almost indistinguishable from each other in terms of religious beliefs, and therefore Islam cannot be a marker in their identity. At this point, language emerges as the most important marker of ethnocultural identity.

Undoubtedly, the most important role in the emergence and formation of the Dungan people is the spread of Islam in China. In 1910, the commander of the French army, Viscount d'Ollone, who was among the Huey, wrote in a report on what he saw there that "because of religion, the Huey are distinguished from the Khan as a different nation" [1].

The formation of Dungan culture has two bases, the first of which is ancient Chinese culture and the second is Islamic culture. It is on these two foundations that the unique Dungan culture was built. F. Commenting on the role of Islam in the life of the Dungans, Poyarkov wrote, "... in a word, Islam gave birth to the Dungans" [9]. With the above two examples, it can be seen that the formation of the Dungan people is the primary basis of Islam.

Although Chinese culture dominated the Dungan culture, some features of other earlier peoples also survived. In this regard, a well-known Kyrgyz Dungan scholar A. In his research on Dungan culture, John mentions a similar Turkmen tradition of not sending a new bride to his father's house for a month, which is present in some Dungan communities, and that this closeness also plays a role in the formation of Dungan people and culture.

The main basis for the new community that was being formed was, of course, its own religion, Islam. The community, formed on the basis of Islam, has formed a strong faith in the faith of this people through adherence to its religious beliefs as much as possible, adherence to religious boundaries, and strict adherence to the Islamic creed.

Thus, if ethnocultural identity can be understood as a sense of cultural belonging to an ethnos, then Islam served as the basis for the formation of the Dungans (Huey) as a people and their formation. As a result of the infiltration and spread of Islam in China, a new nation emerged there.

The Dungans distinguished themselves from the Chinese by their religious affiliation - religious identity, and this religious identity served as the main marker in their formation as a nation. In a word, the religious identity of the Dungans is the main of their ethno cultural identity.

### **C. A change in the identity marker in a new cultural environment.**

Traditional Dungan society differs from neighboring Muslims in its religious beliefs by its somewhat firm adherence to the doctrinal issues of the religion. The reason for this is that they live in a non-religious environment, and as a rule, in a society where the vast majority of the community believes in another religion, the strong protection of their religion is important in maintaining the identity of this ethnic unit.

At the end of the 19th century, the Dungans revolted against the Qing Empire in China. The Dungan revolt of 1864–1877 ended in failure, and a section of the Dungans migrated to Central Asia. Changes in space and time have also changed the most basic marker of Dungan ethno cultural identity. This is because Islam, which played an important role in the formation of the Dungan (Huey) people, could no longer serve as an ethnic border with the peoples of Central Asia. As a result, in the new cultural environment, this task has been occupied first and foremost by various aspects of culture.

#### **D. The ethno cultural identity of the Dungans of Uzbekistan in new research.**

A diaspora may lose its language, customs and traditions, food and clothing, but losing its religion is a very rare occurrence.

The religious and sectarian unity of the Dungan diaspora with the local population led to their rapprochement and, in some cases, their assimilation. Given that the unity of religion is also the most important factor in marriage according to the rules of Islam, mixed marriages between the local Muslim population and the Dungans led to their intermingling. Mixed marriages are common in the predominantly Dungan city of Tashkent, and especially in Andijan.

There are three reasons why mixed marriages are prevalent in these two areas:

- First, Dungans live in these areas mixed with local Uzbeks;
- Second, as a result of long-term neighborliness, the borders with the Dungan and neighboring indigenous peoples have weakened their culture;
- Thirdly, as a result of the strong level of Uzbekization typical of the Dungans of Andijan, they feel closer to the local Uzbeks or Uyghurs than to the Dungans.

Identity is seen directly when a team or individual compares what they have with the same thing in another team or individual. The idea can be applied not only to religion, but also to culture and language. This idea was also reflected in field research. When asked, “Why preserve cultural identity and language?” Almost all respondents (93%) said that although they have no idea about identity, “you have to be “something “unique to Dungans”. [16]. In this question, what they say about "something" is mainly focused on language, and in the Chinese Dungans, religion plays the role of "something" instead of language.

Interviews with Dungans and non-Dungans in the field research revealed that both Dungan society today and religious beliefs are stronger than the beliefs of the local population. This opinion was also witnessed by non-Dungan locals [16]. Indigenous Muslims came to this conclusion, of course, as a result of many years of observation and comparison of its results with their own beliefs.

Even on the basis of direct observation, it can be seen that religious traditions are much stronger in the Dungan family and in society as a whole. As a basis for this view, it can be argued that during field research, after talking to men in the family, women were often not allowed to do so if they wanted to talk as well. Another idea is that when a stranger enters the house, of course, the landlord appoints his family to be a "shelter" from his family, which has been observed many times during field research [17].

It is well known that religion in turn is life. If this idea is explained more broadly, religion encompasses all parts of human life: birth, upbringing, growth, nutrition, marriage, childbearing, and death. Religious rules interact with the pre-religious culture of the community and adapt to each other, leading to the formation of a specific culture. That is, if a nation adopts a new religion, it will certainly adapt some aspects of its traditional religious culture to the new religion. For example, in some Central Asian nations, such rituals as **Bibiseshanbe** and **Bibichorshanbe** are not actually related to Islam, but some elements of Buddhism, Taoism, and Confucianism have survived in various forms of applied art and folklore. [6].

The influx of Islam into China in various ways has led to the emergence of almost a few sectarian representatives there. However, the Dungans who migrated to Central Asia adapted to the sects of the indigenous people.

### III. CONCLUSION

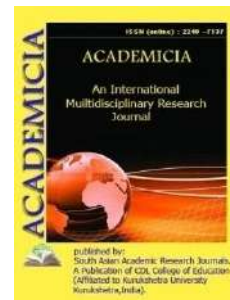
As a result of this study, the following conclusions were drawn:

- The most important factor in the formation of the Dungan (Hui) people was the Islamic factor and, in connection with this, the population that came to China from various Muslim countries. On this basis, new Dungan (Xui) people were formed in China;
- Before the emergence of the concept of national and ethnic identity, religion was the main marker of identity;
- While religious identity is the primary factor for an ethnos in a other religious society, other elements of culture serve as the primary factor in a religious society;
- The differences in the culture of the Dungans, who live compactly in the territory of Uzbekistan, and the Dungans, who live scattered, are due to the remoteness from the cultural core and the lack of contacts;
- With the migration of the Dungans to Central Asia, the peculiarities of their culture became the basis of identity;
- The declining role of religion in the ethnocultural identity of the Dungans and the gradual decline of their culture are likely to lead them to assimilate and assimilate into the Muslims of Central Asia as a minority ethnos. For this reason, in modern society, Central Asian Dungans, especially Uzbek, should strive to preserve their linguistic and cultural identity as much as possible.

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DOI: **10.5958/2249-7137.2020.00669.2**

## RESEARCH THE TOP AND ASATRICES MATERIALS FOR MEN SHOES

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### ABSTRACT

*A number of studies are being carried out in the research of the top and asatrical materials of men shoes. One of the major problems in shoe manufacturing enterprises is the satisfaction of exteriors to leather materials. Shoes material richness the whole world is studying the physical mechanical properties of leather material including the work that is becoming a problem.*

**KEYWORDS:** *Leather, Footwear, Chemical Materials, Tanning Enterprises, Animal Skins, Shoe Shape.*

### INTRODUCTION

Currently, in our republic, due to the requirements of the population for quality leather footwear products, special attention is paid to the production of import-substituting products in the network enterprises. In this direction, nearly 770 production enterprises have been engaged in the processing of leather raw materials, the activities of enterprises producing shoes and their soles, leather products [1]. Shular in addition, the production of competitive leather products requires the creation and improvement of energy-efficient technologies that have a useful technological feature, are low cost, are able to eliminate environmental problems and increase the quality of leather products, use of high-quality chemical materials and technologies, ensure the reduction of



material and energy costs [2]. In 2017-2021 in the strategy of action on further development of the Republic of Uzbekistan, in particular " ... the task of" rapid development of production of high value-added finished products on the basis of deep processing of local raw materials resources " is defined

Relevance of the topic and its importance- At present, importance is attached to small scale enterprises and private entrepreneurship. The topic I have chosen is one of the most relevant at the moment and is of great importance. Therefore, the purpose of my diploma project work is to research the top and lining materials of men's shoes, to develop technological processes that support the modern soles, which process the shoes at different stages on the top and lining details on the basis of the requirements for the materials. Because we need to produce a kind of comfortable, sober and cheap shoes that are stylish, meet the demand of consumers.

### **Scientific innovations in the work and expected results**

In the course of carrying out the study, the following findings will be made: - studied and analyzed the top and lining materials used in men's shoes The scientific significance of the work is that I believe that using modern and productive technologies, making natural leather shoes using our own local raw materials will give a good result if the men's shoes are used on the top and lining details. Of practical importance is the use of natural leather using local raw materials in our region for the details of the top and lining of men's shoes and on this basis should be introduced into mass production.

### **NEWSREEL**

The rapid development of the socio-economic spheres of our country, as well as the involvement of modern techniques and technologies in various sectors of the national economy in the process of implementation of the investment policy create wide opportunities for modernization of production, increasing the volume of gross products and taking a worthy place among highly developed countries.

In the implementation of the model of transition to the market economy of Uzbekistan, estimating the material basis, including the Republic among the developed countries and strengthening the international priority of our state, is the basis of democratic changes. Only taking into account the economic aspects of the lifestyle, it is possible to build an adequate state structure and a strong political structure.

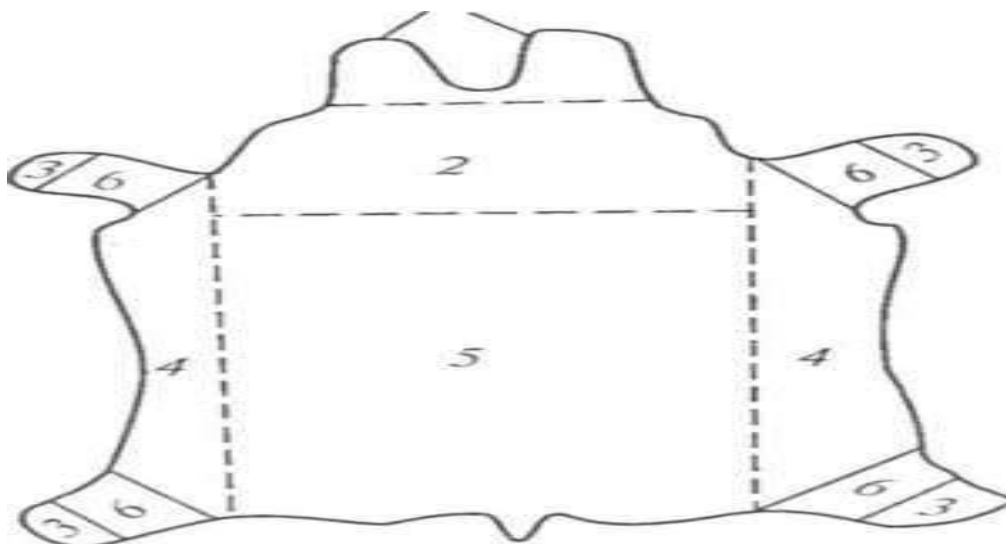
Uzbekistan has developed a model with a social orientation and has chosen a path of renewal and progress, taking into account national characteristics and traditions. And the purpose and direction of leather and footwear sectors in the decree on "improvement of the management system of leather and footwear sectors of the Republic":

- conducting a unified technical and investment policy for the production of a competitive leather-shoe product, attracting a wide range of foreign investment, the introduction of advanced technology to develop new forms of cooperation, modernization and Technical re-equipment of enterprises;
- carry out internal and external market marketing Research, expand competitive and export-oriented product line and assortment;
- development of economic and technological relations of Network Enterprises and organizations;

-integration and co-operation of agro-enterprises with raw materials and raw materials of leather production are specified specific tasks, such as deepening the form of new organizational development, deepening the processes associated with the delivery (sale) of the enterprise with the necessary materials, technical resources and finished products to the manufacturer.

The skin is the floor covering the animal organism, which protects the animal organism from the effects of the external environment and actively participates in the exchange of mod dalar. The skin consists mainly of four layers: a woolen cover, an epidermis, a derma and subcutaneous tissue. For leather, leather is used only in the manufacture of derma, fur and sheep-coat, as well as derma, epidermis, wool cover. Epidermis is a thin layer under the wool coat and above the dermis, mainly it consists of several epithelial cells. The fur is thicker in sparse animals (pig skins) the epidermis, while the fur is in well-developed animals (sheep), it becomes thinner. On the non-woolen parts of the skin (foot pads, nasal mirrors), the epidermis becomes thicker. The Epidermis accounts for an average of 0,5—5% of the total thickness of the skin. The Epidermis does not have the same plane as the derma, the epidermis around the hairpins is immersed in the derma, and in turn the derma is also immersed in the epidermis with its multistage buds, therefore, when the wool and epidermis are separated from the skin, on the surface of the dermis, a peculiar (flower, picture) Merey, that is, a pattern is formed. Looking at this Merey, it is possible to find out from which homashy the leather was taken. When examining the epidermis under a microscope, it is observed that it consists of only two layers on the quietly developed plots: the outer horn and the inner nymph layers, the well-developed ones consist of six layers. Derma is the main layer of the skin, it is located under the epidermis and accounts for 95-98% of the skin thickness. Derma is mainly amorphous, formed from cells and complex ores of fibers such as collagen, elastm, reticulin. When we see the dermis in a vertical position under a simple microscope, it is possible to distinguish between the elements of the collagen structure by cross-linking collagen fibers with a diameter of 200 microns. The thickness of the collagen fibers bond is thicker in the middle part of the derma layer, and the layer under the epidermis and derma is thinner, depending on the side. When we see the fasteners even larger, it is about 5 microns in diameter in cross-section. we can see that it is made of multi-finite (30/300) fibers consisting of denim. When we study the structure of collagen using an electronic microscope, we can see that the elementary fibers are made of 200-3000 fibrils, which in turn consist of 0,1  $\mu\text{m}$  in diameter. The diameter, number of fibrils in the elemental fiber are different in different skins. For example, the diameter of the fibrils in the pig skins will be greater than that of the skins of B. Elastin fibers, do not form ligaments, but with a band, form a thick web of ores in the upper layers of the dermis, especially along the hair bags and blood vessels, and around it. In the lower layers of the dermis, the amount of elastin fibers is less. Elastin fibers are different in thickness and elasticity than collagen fibers due to their small size, as well as their non - transition to colloidal state, although boiled in water. Elastin fibers account for 3,96—4,81% in cow skins, 2,19—2,95% in calves, 1,2—3,4% in goats, 1,0—0,3% in sheep. Reticulin fibers are completely immersed in the dermis, forming a particularly thick mesh in the layer adjacent to the epidermis. Relatively short-counted reticulin fibers form a non-dense fibrous tumor (feet) around the link of collagen fibers. Raydi three inter-fiber substances in the range of Derma fibers. They consist of protein and protein-like substances: albumin, globulin, mutsin, mucoid, mucopolysaccharides. Derma has a general structure, they are divided into nodular and fibrous layers. The ruddy layer of the derma of most animals contains in its composition, a small amount of which stores hair bags, sweat and sebaceous glands. The collagen fibers in this area become thinner, directed

without a parallel towards the hairpins and enveloped them. In places adjacent to the epidermis, the ligament of collagen fibers is very thin, densely twisted, which envelops the epidermis with their buds. On the site adjacent to the epidermis, the top of the nodular layer is located a thin layer with a not so large dense fibrous layer, this layer is referred to as a superficial layer or a superficial membrane. The lower limit of the ruddy layer usually passes near the hair bulb. Sweat glands have the appearance of twisted tubes. The way out of the glands is over the hair Bag End section. The number of sweat glands is different in different animals: sheep terila rida is very much, therefore these skins are soft. The sebaceous glands are located next to the hair follicles, consisting of specific forms similar to it. The output range of the glands is connected with the hair channel. Oil secretions, separated from the glands, lubricate the surfaces of the hair and epidermis.



### Structure of the skin

The state of studying the chemical composition of the skin Animal skin differs from each other in its complex chemical composition. Depending on the type of animal, age, conditions of its storage, the chemical composition of the skins can vary. But the main components that make up the skin are as follows: 64-68% water, 32-36% dry matter. In turn, the dry matter of the skin consists of various organic and inorganic substances. Organic substances include proteins, lipids and carbohydrates. The protein components are composed of globular (albumins, globulins) and fibrillar (collagen, reticulin, elastin and keratin) compounds, as well as enzymes. Of these, the protein is approximately 90-95% of the amount of dry matter on the skin from the account. Lipids are divided into two groups: monounsaturated with fat, wax and other substances of complex fats. Lipids on the skin are about 3-10%. Carbohydrates make up 1,5—2,5% of the skin. Mineral substances in the skin are sodium and potassium ions and ozroq in the case of calcium, iron, magnesium, aluminum, zinc and other substance ions, the amount of which is 0,8% of the dry substance mass of the skin. Proteins-these are made up of organic compounds, consisting mainly of the residue of amino acids. Amino acids are derivatives of acids, formed as a result of the exchange of one or more hydrogen atoms in the radical of acids into one or more amino acids. Amino acids can contain one amino and one carboxyl, one base monoaminocyclates, one Amine and two carboxyl, two bases monoaminocyclates, one carboxyl and two amine groups,

one base diaminocyclates. The importance of amino acids is great, because the giant molecules of proteins, which are very necessary for life, are formed from amino acids. As high-molecular polysaccharides (for example, starch) are decomposed into monosaccharides when golyolyzed, proteins decompose into amino acids when gidrolyzed. Many amino acids are called by an empirical name. Chunanchi, an amino acid with two uglerod atoms, has glycogol, sweet tastemga, for the first time it was isolated from animal glue (Greek "glosos" — sweet, and "kolla" — from the word glue came glyocol)

To identify the important characteristics that determine the suitability of homashio in leather production The characteristics that determine the quality of the skins, that is, their suitability for the production of ready-made leather and fur, and the peculiarities of the methods of their production, are as follows: thickness and smoothness throughout the area, Area, mass, density, thickness of the epidermis and subcutaneous tissue, the degree of development of the wool coating, the interaction of the layers of the To) enters. The thickness of the skin determines the purpose of the leather and the amount of homesickness that can be spent on 100 m2 leather. The limit of consistency in stretching and the duration of processing for manufacturing processes depend largely on the thickness of the skin. The more flat the skin, the more comfortable it will be to make leather. The disadvantage of thinning of the skin in the direction from the neck to the tail, from the collar to the neck, from the larynx to the skirt is a decrease in the thickness of the skin or, depending on the part of the abdomen from the cap, a loss of thickness. The area of the skin determines its tailoring properties. Skins smaller than 20 dm2 per area are not used in leather production. The area of fur domes is in the range from 100 to 20000 cm2. The mass of the skin plays an important role in the selection of the production batch from horse skins, taking into account in large horn moles. The mass of a single batch is drowned in the skins close to each other. Sheep, and goat skins are drowned depending on the wool. The density of the skin determines the duration of processing, mainly the rate of diffusion of various substances, especially on the skin. And when stretching the skin, it affects the border of its consistency. The thickness of the Epidermis affects the beneficial output of the dermis: the thinner the epidermis, the more useful output of the dermis. If the degree of development of the wool coat is well developed, the output of the derma will be low, since wool also enters the homashyo mass. The more hair on the skin, the less the porous layer of the dermis becomes durable. The thickness of the subcutaneous tissue is very different from each other, depending on the character of the abscess. The thicker it is, the more the output of the finished product and the less the output from it turns out.

Leather raw materials are divided into production batches depending on the purpose of the finished product.

According to the state standard, production batches include the same peeled skins in a certain amount, which determine the purpose of production, according to the type, mass (or area), thickness, area of origin (or generation), method of slaughter and conserving, density and grade, the data are formalized into the document. The quality of raw materials in this document will also be indicated. The size of the production batch is determined depending on the capacity of the Hoppers used in the processing and the size of the hopper or Hopper. Seeing the skins, they are divided into varieties on the table. The skins are divided into varieties with much more convenience if divided. In one shift, it is possible to smear the production batch, dividing the skin into varieties up to 3000 soles. Currently, the separation of khomashia into varieties and

production batches is carried out using mechanized a potted method (conveyor), which improves labor productivity and quality of grinding. Fur production lines are divided according to the purpose of production. Depending on the type of skins, the conserved method, the slaughtered method, the texture of the skin, the thickness of the skin tissue, the condition, the color of the wool coat, the variety and defects of the production batches are drowned. Defective skins are separated into separate batches. Precious wax is treated with a grain of fur raw materials or separated into small groups. When calculating the varieties of leather homashyos of different varieties, which are drowned in one batch, they are conditionally converted into a unit of the first variety. In this case, the coefficients given are used.

Determination of some indicators of the chemical composition of leather. In the chemical analysis, it is determined the composition of leather, the amount of moisture, alkali substance, the amount of fat and minerals, chromium oxide, water-washing substances, etc. There are links between the chemical composition of leather and its properties. It is known that the amount of moisture in the leather affects its mass, surface resistance and other physico-mechanical properties. Along with the characteristics of leather, it is possible to determine the alkali substance and evaluate the resistance of leather to ingestion. The amount of fat determines for what purpose the leather is used. With an increase in fat content, the water absorption property of leather decreases and glues well. Increases elasticity and elasticity. The amount of chromium oxide is due to the elastic and plastic properties of leather heat resistance. The increase in the amount of bends in the Water leads to a deterioration in the quality of the leather. For chemical analysis, residues from certain areas of several leather or from physico-mechanical inspection samples are used. The total mass of the sample should be 100 gr. If you need a sample for chemical analysis, it is dried and cut into pieces 0,5-5 mm li. Determination of moisture content Methods for determining the amount of moisture in the composition of leather homeshy are based on drying of crushed samples. These methods differ from each other in duration, drying ways and conduct at different temperatures. Drying the samples in the drying cabinet at a temperature of 135°C takes about 8 hours. When the temperature rises to 170-180°C, the duration of drying goes up to one hour.

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DOI: **10.5958/2249-7137.2020.00726.0**

## RELATIVE EFFECTIVENESS OF 'GENERAL LINE TEACHERS' AND 'REHBAR-E-TALIM TEACHERS' IN JAMMU AND KASHMIR

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### ABSTRACT

*Since the implementation of the Rehbar-e-Talim scheme (para teacher scheme) in the Jammu and Kashmir state in the year 2000, the main focus of the government has remained on the engagement of these ReT teachers at elementary level by cutting out costs. Although, the hiring conditions, tenure and remuneration of these teachers vary from General line teachers, the use of Rehbar-e-Talim teachers (para-teachers) has sparked debate about their impact on the quality of education. In this paper an attempt has been made to know the relative effectiveness of General line teachers and Rehbar-e-Talim teachers having different terms and conditions for engagement at elementary level. The study finds that the Rehbar-e-Talim teachers (para teachers) overall perform better than the General line teachers. This may be due to the higher qualification of these teachers, accountability pressure from locals like members of VEC or due to congenial relationship with students for being locals.*

**KEYWORDS:** *General Line Teachers, Rehbar-E-Talim Teachers And Relative Effectiveness.*

### INTRODUCTION

A central feature of reforms in primary schooling in India over past few decades has been the provision of low-cost 'para' teachers. Its origin may be traced to the 'Shiksha Karmi Project' in the state of Rajasthan, undertaken in the 1980s with support from the Swedish International Development Agency (SIDA). Use of para teachers in primary schools increased rapidly in India since the mid-1990s. Schemes like 'Shiksha Karmi Project' of Rajasthan, 'Guruji' of Madhya Pradesh, 'Vidhya Sahayak' of Gujarat, 'Shikshan Sevaks' of Maharashtra and 'Rehbar-e-Talim' of Jammu and Kashmir consider the appointment of para-teachers as an interim measure to meet the financial dearth of the state. Despite the fact that hiring conditions, tenure, remuneration, and qualifications vary considerably across states, the use of para-teachers has generated debate

about their impact on the quality of elementary education and suggests that despite poorer training, para-teachers may be more cost-effective than regular teachers (Kingdon, 2010).

The underlying belief behind the hiring of para-teachers in schools has been that a local person appointed as teacher is better able to establish a good rapport with the local community and assist directly students in classrooms (Monzo and Rueda, 2001). But in India, the rationale behind the appointment of para teachers is to meet constitutional obligation of free and compulsory education to each and every child of the country in the six to 14 years age group; expanding access to schooling in remote and unserved areas; eliminating single-teacher schools and relieving multi-grade teaching; and reducing high pupil teacher ratios in an affordable and economical ways.

Para-teachers are generally local youths and the minimum educational qualification is senior secondary, i.e. 12 years of school education. Pre-service training is not necessary for these teachers. These teachers are generally appointed by local committees like Village Education Committees, and hence, are accountable to them. They have to undergo a mandatory induction level training—the duration of which varies from 20 to 40 days and are given a fixed honorarium which is one fourth or even more of what a regular teacher is paid for the same work (in case of J&K, there is DIET induction programme of 15 days for newly appointed Rehbar-e-Talim teachers and a fixed honorarium of Rs 3000/- only for a period of five years and is one seventh of the general line teacher).

Although the para teacher schemes vary across states, against regular teachers' whom are having lifetime employment guarantees, para teachers usually have renewable contracts. Para teachers are not required to have pre-service teacher training and the educational qualification requirements are also lower than those for regular teachers. In J&K, rehbar-e-talim teachers are regularized after the completion of first five years and the minimum qualification for both 'General line' and 'Rehbar-e- Talim' teachers is senior secondary level, i-e, 10+2 and both the teachers at this level are not required to have professional trainings (JRM-TE, 2013).

Despite the belief that para-teachers are usually less qualified than regular teachers, in reality, the academic qualifications of para-teachers are overall higher than those of regular teachers. For instance, only 14.5% of para-teachers in primary schools have "secondary or less" qualifications but among the regular teacher group, the same proportion is 26.4%, and the percentage of para-teachers that have graduate and postgraduate qualifications is similar to the percentage of regular teachers with these qualifications (Kingdon. 2010).

Despite the fact that hiring conditions, tenure, remuneration, and qualifications vary considerably across states, the use of para-teachers has generated debate about their impact on the quality of elementary education and is one of the most worrying policy issues in Indian basic education. On the one hand, use of para teachers reduces pupil-teacher ratios (PTRs), eliminate single teacher schools, lower the cost of providing elementary education and increase teacher accountability to local (parents, VECs), and on the other hand, due to lower professional training and supposedly lower educational qualifications of para-teachers (compared to regular teachers), and also the dual salary structure whereby para-teachers are paid much lower salaries than regular teachers within the same schools raises the educational quality and equity concerns (Govinda and Josephine, 2004; Kumar, et al, 2001; Saroj Panday, 2006; Kingdon 2010).

The relative effectiveness of regular and para teachers is not clear and there is contradiction in research findings about para teachers and their affect on the quality of education. Studies carried out by authors like Pandey and Raj Rani (2003), and Govinda and Josephine (2004) highlighted the poor quality of these teachers, whereas, PROBE (1999) study reported that despite their lower qualifications and salaries Shiksha Karmis (sometimes) work distinctly harder than regular teachers because of the hope to get regularized in the future, accountability to local community, and their training and support. In sum, it cannot be presumed that there is lot of debate about the effectiveness of para teachers and regular government school teachers. Their relative effectiveness is empirical issue worthy of examination.

## **CLARIFICATION OF TERMS**

### **EFFECTIVENESS**

In this study, it wraps the meaning of the quality of education imparted by the teachers and is limited to academic achievements of the students.

### **GENERAL LINE TEACHERS (REGULAR TEACHERS)**

Teachers appointed in accordance with the norms of SSRB (Service Selection Recruiting Board).

### **REHBAR-E-TALIM TEACHERS (PARA TEACHERS)**

The appointment of teachers deviated from the past practices in the State referred as Para-teachers. Rehbar-e-Talim teachers (ReT) are locals and are appointed in their own locality. The hiring conditions, tenure and remunerations of these teachers vary from General line teachers.

## **METHODOLOGY**

The objective of this study is to compare the relative effectiveness of Rehbar-e- Taleem Teachers (Para-Teachers) and Regular Teachers in J&K state and to know the understanding of these teachers in their teaching subject and teaching method. The sample of the study comprised of randomly selected six government elementary schools, having both types of teachers. Out of these teachers three ReT teachers and three General line teachers, teaching similar kind of subjects at the same level were taken for the study. The schools were selected for the study at the district Ganderbal in J&K state. Besides, three classes of each teacher were observed in literacy (Urdu) and numeracy (Mathematics). Thus, total of 36 classes were observed and analyzed them as per the observation schedule.

As the study was both quantitative and qualitative in nature, the techniques used for the data collection includes: The academic achievement of the students in literacy (Urdu) and numeracy (Mathematics) of the last three years from the school records and Observation schedule for the classroom interaction. The observation schedule includes items like previous knowledge testing, introduction of the concept, use of activity by teacher, relevancy of activity to that of content, arrangement of aids and materials etc.

## **RESULTS AND FINDINGS**

### **QUANTITATIVE MODE OF ANALYSIS**

**TABLE 1A: GROUP STATISTICS BY USING SPSS**

Subject/ year	Teacher type	N	Mean	SD	t-value	Sig.	Remarks
Math (2011)	ReT	36	55.80	10.39	1.479	.144	Insignificant
	GT	39	52.48	9.03			
Urdu (2011)	ReT	36	55.47	8.61	1.719	.090	Insignificant
	GT	39	51.92	9.21			

**ReT – Rehbar-e-Talim teacher****GT – General Line teacher**

From table 1A, the data collected for the year 2011, shows that the mean scores of the achievement tests in Mathematics of the students who were taught by the General line teachers and Rehbar-e-Talim teachers is 52.48 and 55.80, and the mean scores in Urdu of the students taught by the General line teachers and Rehbar-e-Talim teachers is 51.92 and 55.47, which shows that the performance of students taught by Rehbar-e-Talim teachers is better than students taught by the General line teachers. The p value for the Rehbar-e-Talim teachers and General line teachers for the subject of Mathematics and Urdu is .144 and .090 respectively. For the difference of two means to be significant, the p-value should be equal or less than alpha 0.05, but p-value of .144 and .090 are greater than alpha 0.05, which is statistically insignificant and hence it can be deduced that the two groups, i-e, the students taught by the Rehbar-e-Talim teachers and the students taught by the General Line teachers, does not differ significantly in terms of the marks obtained by them.

**TABLE 2A: GROUP STATISTICS BY USING SPSS**

Subject/year	Teacher type	N	Mean	SD	t-value	Sig.	Remarks
Math (2012)	ReT	36	58.80	10.51	1.943	.056	Significant
	GT	39	54.48	8.71			
Urdu (2012)	ReT	36	57.97	7.89	1.900	.061	Insignificant
	GT	39	54.07	9.68			

**ReT – Rehbar-e-Talim teacher****GT – General Line teacher**

For the year 2012, the mean scores of the achievement tests in Mathematics of the students who were taught by the General line teachers and Rehbar-e-Talim teachers is 54.48 and 58.80, and the mean scores in Urdu of the students taught by the General line teachers and Rehbar-e-Talim teachers is 54.07 and 57.97, which shows that the performance of students taught by Rehbar-e-Talim teachers is better than students taught by the General line teachers. The p value for the Rehbar-e-Talim teachers and General line teachers for the subject of Mathematics and Urdu is .056 and .061 respectively. Here, the p-value of .056 for mathematics is equal to alpha 0.05, which is statistically significant and hence the students taught by the Rehbar-e-Talim teachers and General Line teachers, differ significantly in mathematics. But in case of Urdu, p value is .061 and is greater than alpha 0.05, which is statistically insignificant and hence the students taught by the Rehbar-e-Talim teachers and the General Line teachers, does not differ significantly in Urdu.

**TABLE 3A: GROUP STATISTICS BY USING SPSS**

Subject/ year	Teacher type	N	Mean	SD	t-value	Sig.	Remarks
Math (2013)	ReT	36	61.38	10.14	2.198	.031	Significant
	GT	39	56.76	7.99			
Urdu (2013)	ReT	36	59.36	7.93	1.751	.084	Insignifica nt
	GT	39	55.94	8.86			

**ReT – Rehbar-e-Talim teacher**

**GT – General Line teacher**

For the year 2013, the mean scores of the achievement tests in Mathematics of the students who were taught by the General line teachers and Rehbar-e-Talim teachers is 56.76 and 61.38, and the mean scores in Urdu is 55.94 and 59.36, which shows that the performance of students taught by Rehbar-e-Talim teachers is better than students taught by the General line teachers. The p value for the Rehbar-e-Talim teachers and General line teachers for the subject of Mathematics and Urdu is .031 and .084 respectively. Again, the p-value of .031 for mathematics is less than alpha 0.05, which is statistically significant and hence the students taught by the Rehbar-e-Talim teachers and General Line teachers, differ significantly in mathematics. But in case of Urdu, p value is .084 and is greater than alpha 0.05, which is statistically insignificant and hence the students taught by the Rehbar-e-Talim teachers and the General Line teachers, does not differ significantly in Urdu.

### **QUALITATIVE MODE OF ANALYSIS**

The data collected through the observation schedule were analyzed qualitatively and reflected that the methods used by both types of teachers for the teaching-learning process includes book reading and page writing. In both cases, the teaching-learning process was chorus based in which teachers read loudly and followed by the loud reading of the children. During the classroom observations, use of skills like introduction of the concept, use of activity by teacher, response of teacher towards student's queries, students individual differences looked after by teachers, feedback given by the teacher, Recapitulation done by the teacher, does not show any remarkable difference between Rehbar-e-Talim teachers and General Line teachers. However, Rehbar-e-Talim teachers were little better than General Line teachers in use of few pedagogical skills and skills like relating things with real life experience, teacher role as a guide were used effectively by the Rehbar-e-Talim teachers. Thus, it can be concluded on the basis of the classroom observation schedule that Rehbar-e-Talim teachers were better to some extent than the General Line teachers.

### **CONCLUSION**

The study reveals that the Rehbar-e-Talim teachers (para teachers) overall perform better than the General line teachers. Besides, the hiring conditions, tenure and remuneration of Rehbar-e-Talim teachers vary from General line teachers; they are performing better than their counter part (General line teachers). Following may be the reason behind their high motivation and good performance, as the researcher perceived during the classroom observation period.

- Rehbar-e-Talim teachers are young and are highly motivated towards their job. They also think that they are more accountable to locals like VECs and hence, remain more committed towards their job. It could be the reason of their high motivation towards their job.

- The educational qualification of para teachers (Rehbar-e-Talim teachers) is generally higher than the Regular teachers (DISE Report, 2005; Kingdon 2010). It might influence their understanding about the teaching learning process.
- Rehbar-e-Talim teachers come from local community, therefore, they understand well the children and children feel also comfortable with them and since they are locals and hence come regularly to the school. It also affects the learning outcomes.

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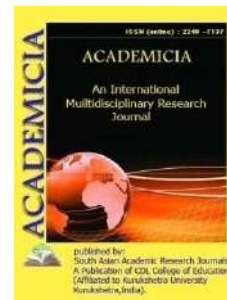
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DOI: **10.5958/2249-7137.2020.00670.9**

## LINGUVODACTICAL FUNDAMENTALS OF SPEECH COMPETENCE DEVELOPMENT

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### ABSTRACT

*This article analyzes the theoretical foundations of speech, the development of students' speaking competencies and the characteristics of oral and written speech, important aspects of speech development, linguistic, pedagogical features of improving speech competence in native language classes. Scientific views, methodical recommendations of linguists and pedagogues are explained.*

**KEYWORDS:** *Scientific-Theoretical Bases Of Speech, Literary Language Norms, Speech Forms, Speech Appearances, Speech Competence, Speech Styles, Speech Requirements, Correct Pronunciation, Vocabulary, Literacy, Speaking Skills, Working On Vocabulary, Working On Text*

### INTRODUCTION

The main task of the education system in the Republic of Uzbekistan is to educate the younger generation using innovative, advanced methods and techniques, based on world educational standards, creating opportunities for them. Law of the Republic of Uzbekistan "On State Youth Policy" dated September 14, 2016, President of the Republic of Uzbekistan dated February 7, 2017 "On Strategy for further development of the Republic of Uzbekistan" PF-4947, Cabinet of Ministers dated April 6, 2017 "General Secondary and Resolution No. 187 "On approval of state educational standards of secondary special, vocational education", Decree No. PF-5313 of January 25, 2018 "On measures to radically improve the system of general secondary, secondary special and vocational education" a number of defined tasks pave the way for the development of students' linguistic and speech competencies. The Strategy of Actions for the Further Development of the Republic of Uzbekistan provides for the education of young people who think independently, have a strong outlook on life, are loyal to the Motherland, to deepen

democratic reforms and increase their social activity in the development of civil society that is, the expansion of the independent thinking potential of students in grades 10-11 requires active and competitive in our developing country on the basis of radical reforms.

## MAIN PART

Modern thinking in the process of continuous education as an important aspect of free thinking in the process of language education, conscious attitude to the events and happenings around him, active approach to changes in society, growth and development of speech and variety, development of a highly cultured and highly spiritual person developing with the use of pedagogical technologies. This important aspect is related to the emphasis on the lingvodidactic foundations of speech. Observations show that a lot of significant research work has been done in the field of linguistics, literature and pedagogy on the growth and development of speech and its forms. In particular, R.Qayumov, Q.Abdullaeva, A. Nisanbaeva, X. Abdullaev, R.Qurbanov, M.Mamedov, R.Inog'omova, O.G'afforova, M.Mirzaev, N.Umarova, M. Hamdamova, U. Masharipova's research provides more detailed information and analytical conclusions in this regard. These scholars have conducted serious research on the growth and development of students' speech in school, developed important speech recommendations, and scientifically substantiated their views.

Development of speech and its forms in the system of continuing education in the CIS countries, issues and problems in the formation and improvement of speech culture in the education system L. F. Korenina, V. I. Kotelya, A. S. Egorova, G. Ramzaeva, T. P. Malyavina, L. V. Abakumova, N. F. Titova, G. N. Pristupa, I. D. Chuboronedze, and A.A. Pronina,, have been researched by scientists such as.

It is true that research on the growth and development of oral and written speech plays an important role in Uzbek linguistics. But today there are also issues that need to be studied in depth to develop the speech competencies of high school students, to improve written speech through innovative methods and techniques, pedagogical technologies.

Theoretical foundations of speech culture in the world's leading research centers and universities, including the United States, Canada, British Columbia, the People's Republic of China, the Russian Federation, the importance of speech competence in human communication, communicative approaches to the use of speech forms in language learning, speech development using innovative pedagogical technologies special attention is paid to the issues.

N.F.Titova notes that it is necessary to cultivate students' thinking and reasoning skills in order to develop speech, G.N.Pristupa emphasizes that it is difficult to develop their speaking and expressive ability without working on the spiritual aspect of words in language. A. A. Pronina says a linguistic analysis of the text will be the material for speech development. Scientific analysis means that developing students' speech encompasses many aspects and leads them to work on themselves, to explore.

A.Nisanbaeva touched upon the issue of developing students' speech through writing, M.Khamdamova gave methodical recommendations on the methods of developing students' speech through the system of writing and writing. Masharipova emphasizes the need to use innovative methods and techniques, advanced technologies in the formation of students' speech and speech culture. After reviewing the research work done by scientists and their scientific

views, the following methodological recommendation is an important factor in the development of students' speaking competencies:

- developing students' speaking competencies based on a specific system;
- check the knowledge and skills acquired on the topic and work together on errors and omissions;
- determine the level of mastery of theoretical information through independent work on the topic;
- Aiming for high results by performing exercises and tasks given in the textbooks "Mother tongue";
- expanding students' vocabulary, increasing vocabulary.

Speech development is expressed not only in research conducted by the scientist, but also in manuals developed in collaboration with linguists. The ideas expressed in the manual of B.Tukhliev, M.Shamsieva, T.Ziyodova "Methods of teaching the Uzbek language" are important. One of the urgent tasks facing language teaching methodology is to develop a culture of speech. Skills to ensure expressiveness and expressiveness of speech (accent and logical accent, pause and tone of voice, speed of speech, sound, syllable, word, fluency of speech, comprehension, questioning, command, tone of voice) is formed in native language classes. One of the main means of ensuring the expressiveness and effectiveness of speech is to convey the words to the listener fluently.

A. G'ulomov, M. Kadirov's textbook "Methods of teaching the native language" explains the importance of speech development, giving methodological recommendations for the implementation of exercises and tasks for the development of speech in the classroom. Indeed, Grade 10-11 "Mother Tongue" textbooks, exercises and assignments in textbooks are an important tool to help grow and develop speech.

It is also the process of using phonetic, morphological, lexical, grammatical units and material in speech to express an idea. It is known that the stage of formation of written and oral speech is different, differing in the use of lexical units specific to these forms in accordance with the speech situation. Therefore, the process of correctly constructing speech forms involves the correct selection of phonetic, lexical, morphological, phraseological, and syntactic tools available in the language to suit different speech situations. It should be explained that oral speech differs from written speech in some respects.

## RESULTS AND DISCUSSIONS

Selected texts in the newly formed textbook "Mother tongue" for grades 10-11, according to the form and content, excerpts from the works of famous artists, description of words from the "Explanatory dictionary of the Uzbek language", phrases from Sh. Rakhmatullaev's "Explanatory phraseological dictionary of the Uzbek language" Description of words from A. Khojiev's "Explanatory dictionary of synonyms of the Uzbek language" subtleties of meaning, opinions and observations of well-known linguists, teaching excerpts from M. Yuldashev's "Linguopoetics of the literary text" and E. Begmatov's "Lexical layers of the modern Uzbek literary language" is an important source of growth and enrichment of students' speech, significantly develops students' speaking competencies, plays a key role in the process of

communication, in the correct application of the communicative qualities of speech in the creation of text.

Speech is the expression of thought using language tools as a type of human activity. Language, thinking, and speech are interrelated concepts, and human beings have the ability to express in their speech through words, phrases, and sentences the conclusions they have reached as a result of thinking.

Improving speech in 10th-11th grade students' native language education means developing their ability to listen to certain information, comprehend it based on their knowledge, express themselves independently, think freely, and compose written speech correctly based on grammatical rules. At the heart of this development is the expansion of the potential for independent thinking, which is reflected in the set of educational ethical features.

The development of students' speech, the formation of speech skills requires knowledge of all branches of linguistics, adherence to grammatical rules. Along with the words that make up a speech-enhancing sentence, the grammatical tools used in the subordinate clause in a phrase, the unintelligible meaning of the word in the text becomes clear when working on a dictionary. Working on a dictionary expands students' vocabulary and increases vocabulary richness. In the 10th grade textbook "Mother tongue" the comments on the meanings of the words taken from the "Explanatory dictionary of the Uzbek language" are appropriate.

*GANJ 1 Gold, silver; jewel; treasure 2 movable Wealth, property, state; something of value.*

*GANCH A type of alabaster; plaster, a building material used for patterns.*

Such comments draw the readers' attention to the meaning of the words, the curiosity that arises in them determines the meaning and semantics of the words, understand the different aspects of each word in its own sense in a connected compound and use it correctly in the written text, as well as a paronym word in which these words are pronounced differently, with a single sound. The lexical meanings of words, lexical units, enter into a syntactic relationship with other independent words, the main features of which reflect the original meaning. Working with the dictionary is effective in communication, verbal communication, clear expression of ideas, eliminates hesitations.

Improving speech in 10th-11th grade students' native language education means developing their ability to listen to certain information, comprehend it based on their knowledge, express themselves independently, think freely, and compose written speech correctly based on grammatical rules. At the heart of this development is the expansion of the potential for independent thinking, which is reflected in the set of educational ethical features.

## CONCLUSION

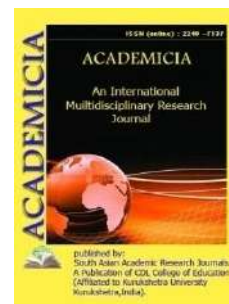
Under the influence of the student's thinking ability, speech ability develops. Because he expresses his thoughts through speech, expresses attitude. In order to express the name of an object in life and to express an opinion about it, that object-object is understood and treated. The teacher works on the students' thinking while working on the speech, cultivating in them clear, concise, consistent and grounded thinking.

Speech is the expression of thought using language tools as a type of human activity. Language, thinking, and speech are interrelated concepts, and human beings have the ability to express in

their speech through words, phrases, and sentences the conclusions they have reached as a result of thinking. Appropriate use of grammatical and orthographic rules of spelling in the native language lessons, the occurrence of certain expressive activities in the process of communication is synchronized with the education of logical thinking.

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DOI: **10.5958/2249-7137.2020.00671.0**

## SUBSTANTIAL NATURE OF FUNCTIONAL WORDS AND THEIR PRAGMATIC-STYLISTIC VALUE

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### ABSTRACT

*Identify the role of function words in Uzbek language system, relation to content words, sources of enrichment and methods, historical and evolutionary development and determination of functional-stylistic and substantial-pragmatic features in speech. The aim of the papers is to define the status of the Uzbek language function words in the linguistic system, and to reveal their source and methods of enrichment, historical and evolutionary development, as well as functional-stylistic and substantial-pragmatic features.*

**KEYWORDS:** *Function Words, Word, Morpheme, Auxiliary, Conjunction, Particles, Grammatical, Functional Parts, Uzbek Language, Pragmatic-Stylistic Analysis, Functional-Semantic Features, Discursive Analysis.*

### INTRODUCTION

Therefore, the main focus in this devoted to functional words' ability to substitute each other in certain tasks and to description of its informative value (certain essence and methodical colorfulness, in particular, ability to express different relations). according to the objective of the chapter and characteristics of its material, it consists of pragmatic-stylistic study of functional words, introduction on these direction tasks, and three analytical items dedicated to each category of functional words[1,2]. The item devoted to auxiliary words, it is provided in brief



and compact form, because this issue was described in detail in the author's special work. Items are devoted to linking words and particles, they are in more detail, and linking words are subdivided into 10 items, and particles are subdivided into 8 internal items, and pragmatic originality of synonym and common units are classified in them, and the chapter ends with the following conclusion:

I. The substantial essence of functional words and their pragmatic characteristics confirm the relevance and trueness of made theoretical conclusions about substantial essence and pragmatic opportunities of units of functional words categories in Uzbek language related to modern Uzbek speech communication. In particular:

1) The substantial feature of pure and functional units within the category of auxiliary words, linking words and particles is multifaceted and contradictory. Each unit relates with adequate and contradictory units to various paradigmatic links, based on synonymity, and enters into additional distributive relations, being able to substitute each other. According to contrastive distribution, under such synonymity the units have their unique distinctions. The multifaceted and contradictory substantial nature of units in this process are expressed in each unit's various relational signs. In particular, each unit of functional words category will have the following aspect's (relation) signs:

2) Semantic aspect – based on each unit's information description, it enters into opposition relation with other units, and on the basis of this it creates semantic opposition orders (in particular, functional word “*билан*” (*with*) mainly meaning together meaning tool) or mutual contradiction in expressing common meanings of particles (claim, question, surprise, expecting, unexpected, naturalness, extraordinariness and so on):

As, almost all functional words are considered multivalent words (multisememe, multigrammeme), each unit based on its sememe (grammeme, meaning edge) enters into semantic relations with the other units, the same happens with functional words. In particular, *билан* (*with*) auxiliary word based on the meaning of movement over certain place (sememes, grammemes) *бўйлаб*, *ёқалаб* (along), if it has common relations with functional auxiliary words, based on the tool as a means for performing movement (sememes, grammemes), the locative case enters into such relations with functional auxiliary words *ёрдамидан* (*by means of*), *воситасидан* (*through*), *оққали* (*owing to*). Therefore, based on semantic aspect, the mutual opposition characters of functional words are different and full of various units – the volume of such contradictions' varieties is equal to the volume of meaning edges of functional words (sememes, grammemes).

3) Syntactic (pure grammatic) aspect – specialization of each unit to perform a certain grammatical task in speech. In this case, auxiliary words, mainly, serve to express dependent relations between words (for linking dependent word with content word, hypotactic relation), to link linking words and sentences in equal dependent relations, and particles serve for creating texts and animate speech. Based on this task, the categories of functional words organize special private opposition orders. according to “*linking*” sign, particles and linking words are considered strong (with a sign), and particles are considered as neutral members without a sign. In its turn, based on ‘linking words’ auxiliary and linking words organize opposition, where auxiliary comes with a sign, and linking word stands for a member without sign. Based on this

a) auxiliary words have the primary task of linking dependent word with content word, and expressing additional meaning is the second task;

б) particles have the primary task of expressing additional meaning, and linking task is their second role;

в) linking words have primary task of linking sentences, and secondary is their role they play.

4) Pragmatic (discursive, stylistic) aspect provides additional information on speech features, types which always accompany each unit's semantic and grammatic meaning, as well as information on its conditions, personal psychological situation of speaker and listener, clear and hidden objectives and attitude (personalization, special meaning, positivity, negativity, doubt, belief, emphasis, simplicity and extraordinariness).

II. Semantic, grammatic and pragmatic aspects form grading orders of categories of functional words in accordance of their leadership within dialectic unit. In particular: a) according to leadership of pragmatic aspect: *particle* → *linking word* → *auxiliary*; б) according to leadership of grammatic aspect: *auxiliary* → *linking word* → *particle*; в) according to leadership of semantic aspect: *auxiliary* → *linking word* → *particle*.

The primary and secondary tasks of functional words are determined by the position they take in these grading orders. The researcher's attention in this is attracted by the fact that, linking word is placed between three opposite orders, it doesn't take a leading place in any systems. This is explained by the historical position of linking words in our language – linking words in Turkic languages (in Uzbek language as well) mainly were borrowed from other languages. In Turkic languages linking name with a name (genitive case and possessive forms), linking verb with a verb (verbal adverb forms), linking verb with a name (participle and action noun forms), linking non-independent predicate with independent predicate (dependent clause with super ordinate clause), and because of existing secondary task of linking ontologically in Turkic particles, there is no systematic need in linking words in these languages and all linking words in Turkic languages are borrowings[3]. Therefore, in the above grading, linking words cannot take the remote place – they cannot take the place of linguistic unit specialized for description of opposition sign. They always stay between contradictions of auxiliary words and particles. The active application of linking words in our speech is closely connected with expanding framework of usage of Uzbek language and its sectors.

III. Also, in certain speech events these points occur in dialectic units – in these cases, they are all never on the same level, but strengthening of some points occur in account of weakening of other points (in particular, in functional words, or when functional words are used for the secondary task). The full neutralization of some point leads to unit's transposition – its switching from one category into another, and its disappearance makes the word shift from one category into another (in particular, switching of a series of words with independent meaning into functional words, shifting dependent linking words into particles).

IV. Based on similarity of syntactic part and semantic aspect, which is common for each part of speech (sememe, grammeme of functional words, in the edge of meaning), in various synonyms created during speech communication, between mutual exchange events (units) there is a very strong desire to specialization based on **pragmatic** meaning. Under the proportionality of form and content in dialectic, such strong desire closely connected with the linguistic system reality is

considered one of the general development laws for the language. In particular, there were effective results after Uzbek language was given the status of the state language, specifically, the scope of its application rapidly expanded, and formation and development of various methods and types of speech were noticeable. Therefore, nowadays we see more specialization of functional words (especially, auxiliary words and linking words) and functional word formations in state, legal spheres' pragmatics formed after national independence, and located between formal and scientific methods, that is to say, from day to day the sphere is increasing its new and suitable tools. Based on that, according to pragmatic value (including methodical identity) between forms words which have synonymic relations, distinguishing is clearly the event which is noticeable and which serves as foundation for the development.

V. In the past years there were increasing efforts in Uzbek fiction for realistic description of life in close connection with approximating written texts to real speech process. And this in its turn, requires usage of various particles in written text content as animation tools for speech. Therefore, currently the application of particles in Uzbek written speech has been increasing rapidly, even one of special particles type – *discursive particles* are developing fast.

VI. The substantial nature and pragmatic value of functional words and their direct realistic analysis in written texts, and within the last two decades of our national independence, the formation and development of new functional words and considerable improvements in the sphere of their pragmatic value specialization, all these indicate that within short period of time tens of new forms words were formed and this process is going on. In addition, many functional word acquired unique pragmatic value.

As each chapter of our work has appropriate conclusions based on factual materials, we decided not to repeat them again in our final conclusion, and we would like to make the following remarks:

At different times, based on this period's science development level, the functional words categories in our language were studied using leading analysis methods existed at those times, and they were applied in scientific works and education literatures. The unprecedented expansion of utilization framework of our language in the new socio-economic conditions, its being the main communicative relation criteria within one state, and because of its obtaining a position of communication tool in formal state, legal and international relations, the need to study and make comprehensively substantial and pragmatic analysis of considerable changes in the system of functional words served as the basis for this research work. These are analysis and research of functional words which show the following:

- in fact, in language system's vocabulary and grammar relations the space takes the third position;
- accepted as a word by linguistic mind owners, mainly directed to solve grammatic tasks;
- based on continual grammaticalization the list of functional words are being enriched with pure Turkic, Arabic and Iranian<sup>19</sup> origin new independent words;
- in linguistic mind like independent words, within the category uniting into lexical-semantic groups, existing in mutual paradigm relations, on the basis of similarity of each new unit taking the place from this paradigm, from other units in the paradigm, to have different direction;

- their paradigmatic relations and paradigms show that they can be formed not only on the basis of generality ↔ personality (hyper-hyponymic), but also on gradonomic (grading) basis.

Based on grammaticalization, in units entering the paradigms of functional words, in this process, in particular, ёрдамчиси монлик, ёрдамчила шайтганлик, ёрдамчилашганлик (helpfulness), the phases of transferring functional words into pure functional word category should be differentiated. One of the substantial nature signs of functional words is their grammaticalization level. As a result of grammaticalization, the units joining functional words' paradigm, as a paradigmatic difference, on the basis of methodological-pragmatic features or semantic grading, they become specific.

The substantial nature of functional words in our language are multifaceted and contradictory, and in each unit primary and secondary tasks<sup>23</sup>, as well as semantic and syntactic points should be differentiated. Based on syntactic point, functional words are united into one category, and on semantic basis they are divided into big and small paradigms within the category. The new units joining paradigms they do it on the syntactic basis, and on the basis of semantic and pragmatic originality, they differ from paradigm's units they joined.

The substantial nature of functional words in our language, as mentioned earlier, as a constituent, includes also methodological-pragmatic mark. Thanks to National independence, because of fast development of state, legal, international relations sphere in scientific-formal method of our language, we can see that many functional words' specialization in these sectors and obtaining unique pragmatic-stylistic value. In pragmatic value content there is also an inherent presupposition sign embodied in functional words. This kind of developing tasks can be seen in functional words linked to their dictionary meanings. The nature of functional words are filled with pragmatic-presupposition sign and methodological-sectorial originality, basis for which is the integrity of **synthetic form ↔ analytical form**, functional word formations (**pure functional word formation ↔ functional functional word formation, functional functional word formation ↔ functional word formation**). Two units in mutual integrity, they should have something in common and difference at the same time. If linguistic community mainly refers to their syntactic similarity, the difference can be in a form, meaning and pragmatic side. The similarity in meaning leads to increasing pragmatic difference and pragmatic similarity leads to increasing difference in meaning.

Substantial and pragmatic-stylistic study of functional words system in our language shows that this system is very sensitive to life and task changes. Its responsiveness shows that in harmony with forming and developing new spheres and directions it creates new assistant tools from resources of independent words, and thus specializing existing tools and making these processes continuous. As a bright example for this, primordial *independent words* → *level of grammaticalization* → *functional words* besides increasing the effect of the law of development significantly in recent times, in particular, we can also refer to the following facts:

- because of new development of literary style of prose in Uzbek written literature based on modern times requirements, and wide distribution of various types of compound sentences, complex unithoods result in appearing various linking words in Uzbek language taken from other languages;

- Because of high level development of morphological tools for connecting words and sentences in Uzbek language, the most part of assimilated linking words are transferring into particles in our language;
- such tasks as speech animation, providing natural moving elements to a written text are formed in particles;
- The discursive particles' resources are being created, which enrich the pure text with the spirit of live speech communication, and on the basis of this, the new type of linguistic particles ↔ *contradiction of discursive particles is developed*.

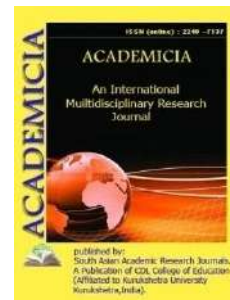
Developing from different forms of content words, word combinations, sentence building formations discursive particles can show their syntactic-structural divisibility (complexness) only in a certain text and speech conditions, and they create semantic-functional and pragmatic integrity. But discursive particles have not been yet formed as linguistic units (or special type of linguistic units), therefore they should be accepted as performing such speech tasks as word forms, word combinations, and sentence like syntactic-pragmatic (animation of text, speech discourse) formations. However, here also we can see some kind of linguistic beginning shoots (in particular, usage of *-zyp/ -zyp* in damnation and applause word combination and forms).

All these show, that functional wordssystem in our language, on the basis of general laws of development specific to our language, and in accordance with set objectives for the language, it is in line with the continuous and steady development. For this purpose our language finds new means and opportunities, makes them work, and it serves for the task of keeping up to date, to ensure its proper and beautiful expression in psychological communication task. As long as the society puts forward big objectives for the language, using its inner capabilities, the language works out tools in order to implement these objectives in high level. Therefore, the more tasks the language is entitled with, the more actively it develops. The big tasks put forward for our language by National independence gave opportunity within a short period of time, using effectively existing laws, our research did its best to develop our language through detailed learning of functional words.

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DOI: **10.5958/2249-7137.2020.00672.2**

## DEVELOPMENT OF KESH CITY IN THE EARLY MIDDLE AGES

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### ABSTRACT

*In the medieval written sources, the region of the Kesh region started from the southern slopes of the Zarafshan Ridge, covering the present book, Shakhrisabz, Yakkabag, Guzar and Oradarya oasis. Its center was developed in Shahrisabz-Kitab valley. Then, the administrative center of the Kesh region concludes with the ruler's headquarters, al-Musallo [7]. There are no sources in the source regarding Al-Musallo's location. This word in the salient texts in the coins is always given in the form of Kesh. The scientific literature has a name for Cache, which can be either Kish or Kiss, and Yakut agrees that with the same reference to Ibn Mukul. The initial name of the city appears to be Kishan or Keshan.*

**KEYWORDS:** *Kesh, Shahrisabz, Oqsaroy, Blue Dome, Barknon, Samarkand, Central Asia, Amir Temur, Middle Ages, Archeological Research, Defensive Walls, Urban Planning, Written Sources*

### INTRODUCTION

In the V-VI centuries, Kashkadarya was a land of nomadic tribes, which belonged to the Eftalite state, and later to the Turkish Khanate. In the 6th-7th centuries, the center of the city has links with the ancient city of Kesh. According to the Arab author Yakhubi, Kesh will be the capital of Sughd for a while. The city of Kesh is highly developed in the VII century and intensifies political, economic and cultural relations with China. Through the Great Silk Road, Cache traders reached the Far East. The cache has broken his coin. Nakhshab, located in the lower reaches of Kashkadarya, is also dependent on it. In 672, after the fall of the Turkic Khanate, the rise of Samarkand took place, and the Kesh ruled over Samarkand rulers over the syphilis itself.



### Main part

In the early medieval times, Kesh fought for a leading position among the local administrators of the Sogd confederation. Until the mid-7th century, he was even the administrative and political center of Sugd. The Sword of Solidarity is a vivid example of this. Only in the time of Varkhuman's salience, the central government was established in Samarkand [1].

In the Arabic sources of the Persian name, the name Kesh was originally used in the late 7th and early 8th centuries, in which the name of the city was written in three forms: Kash, Kish and Kesh. This word in the salient texts in the coins is always given in the form of Kesh. The scientific literature has a name for Cache, which can be either Kish or Kiss, and Yakut agrees that with the same reference to Ibn Mukul. The initial name of the city appears to be Kishan or Keshan. The salient texts in the coins are written as KSnK. In Chinese, shorter Tszyuyshany-Kyusha, as well as the full text of Tsyuyshuan, is also noteworthy [3]. These two forms may have been present at the same time, but later in the eighteenth century, short form Kesh-Kish was quite exacting Kashan-Kishan. It has been discovered that the ancient name of Tashkent was exactly the same with Chach, also known as Chochon [4].

Ibn Khawqal said: "The cache is a town with a stronghold, a fortress and a rabid. There is also another madrassa connected to Ravda. Houses in it are made of clay and wood "[5]. Al-Maqdisi also wrote that Kesh was a city with madane and rabid. His description corresponds to the present Cache in Shakhrisabz as it is mentioned in the source that the internal madina is exterior of the book (the first cache of the cache), while the population is densely populated. However, the mosque is a ruined minaret, and the markets are located in rabid. "Its buildings," writes al-Maqdisi, "made of clay and wood like Bukhara".

Arab authors focus primarily on the topography and history of the city as well as on the number and location of the main gates, the sources of irrigation - the rivers, the canals, the productivity of the land, and the distances between large populations. Details of caravan routes, such as Kesh-Nasaf, Kesh-Guzar-Termiz, Nasaf-Bukhara and others.

The Kesh region is surrounded by medieval lands from the Zarafshon Mountains to Guzarariyah and unites 16 surrounding areas. The description of the cache, which is provided by Ibn Khawqal and al-Maqdisi, corresponds to the Old Cache (Book) and New Cache (Shahrisabz). The inner cave and the old cave of the Old Cache were abandoned during this period, 7 km south of the outer Madina (New Cache), and its two gates and the central street passing through them. In the Old Cache area there are mosques, jails and many markets. Arab tourists wrote about the productivity of the Kesh land and its inhabitants engaged in farming and livestock production.

The Asrud River (Kashkadarya) flows through the Kashqud rust, passing north through Kesh, and the Mountains of the Mountains River (Oksuv), passed by the south of the city. The name of the river is about textile, which is one of the traditional classes of the Cache community. In addition, the city has developed clay, iron, building materials and paints, glass fiber, baking, confectionery. Also, Cache was also famous for its red salt.

The prosperity of the city coincided with the first half of the 7th century and during this period Kesh became the capital of Sogd (Kashkadarya and Zarafshan valleys). Written sources and numismatic sources refer to the three rulers who ruled Cache during this period Dichje, Shishpir and Axurpat [6].

Arab authors do not give rise to the Kesh's deep depression at the end of the eighth century, but this can be attributed primarily to the failure of Muqanna's rebellion. In 751, the ruler of Kesh, al-Ihlikid (Ikhrîd), was executed by the order of the Khurasan governor Abu Muslim, and at-Tabari testified that the Arabs had gained a great fortune in Kesh. The success of the Khilafah descendants in Soghd and aimed at specific goals was aimed at undermining the socio-economic significance of Kesh once strong, destroying the rebel city and its solid defense. For this reason, the city of Shakhrisabz, where Ibn Khawqal has been described as an "outer city," has survived without long-term defense. Ibn Khawqal speaks of the ruin of the Kesh Dam and its interior, as well as the extermination of the inhabitants of the outer region. "The ruler of the Kesh ruler is located outside the madina and rabîd, which is known as al-Musallâ." Thus, in the 10th century, the Kesh ruler's headquarters are located outside the Book Town Hall (the inner city of Kesh) and Shakhrisabz (External City). Then, the administrative center of the Kesh region concludes with the ruler's headquarters, al-Musallâ [7]. There are no sources in the source regarding al-Musallâ's location.

A number of works on the history of Shakhrisabz contain various informations. These works provide some valuable information about the natural geographical location, nature, population, cities of Kesh region.

In Ibn Hawqal's book "Roads and Lands" contains the following information about Kesh: There are four gates in Kesh Shahrîstan: the Iron Gate, next to it is the Ubaydullah Gate, and the fourth is the outer city gate. The outer city has two gates: the inner city gate and the Barkanon Gate. The river, which begins in the mountains of Siam, flows south of the city, and another river, the Asrud; It starts in Kashkrud and flows to the north of the city. "[8]

The work of Abu Ja'far Muhammad ibn Jarir at-Tabari (839-923) "Tarikh ar-rusul wa-l-muluk" (History of Tabari). It contains a description of historical events from antiquity to 915, including the history of Central Asia in the VII-IX centuries. [9]

According to the source, Kesh (Shahrîsabz) resolutely resisted the two-year siege of the Arab armies (669-702 AD) and the Arabs returned satisfied. The account of the events of 704 states that the rulers of Kesh and Samarkand fought and won against the Arabs, and then the armies of Kesh, Nasaf and Bukhara united against the Arabs. The Arabs conquered Kesh in 709-710. But Kesh was one of the main cities in Transoxiana in the following years in the struggle for freedom against the Arabs. For example, during the years of the movement of Abu Muslim (ca. 727-755) (747-750) Kesh played an important role. The ruler of the Kesh farmer, al-Ikhshid (Ikhrîd), fought against Abu Muslim in 746-747 and was killed. It is also mentioned in this source that Kesh was the center of the revolt during the Muqanna uprising in 777-778.

Kitab al-Masalik wa-l-Mamalik is a geographical work by Abu Zayd Balkhi, Istahri and Ibn Hawqal. It is written that in the IX-X centuries Kesh consisted of a fortress (kohandiz), a city fortress (hîsn) and a suburb (rabod). The castle had not yet been rebuilt, as it had been destroyed during the Arab conquest. The city occupied an area of more than 2 km in width and length and had 4 gates (2 gates on the outer wall). The river flows near the city, the climate is warm, and there is an abundance of fruits. [10]

The author of Hudud-ul-Alam is unknown, a geographical work written in Persian in the 10th century. [11] The Movarounnahr description section of this work also contains information about Kesh. It states that the city had a shahrîstan, a kohandiz, and a rabodi, that the river water

flowing through it was used for agriculture, and that salt and other minerals were extracted from the nearby mountains.

Abu Bakr Muhammad ibn Ja'far Narshahi's (899-959) History of Bukhara (written in 943-944) focuses on the medieval history of Bukhara, but also on the historical events in Movarounnahr. In this regard, the city and province of Kesh are also mentioned several times. For example, 120,000 troops from Sogd, Kesh and Nakhshab were mobilized to fight the Arabs, a large army was mobilized from Kesh and Nakhshab to oppose Qutayba, the Muqanna uprising and its support in Kesh province, and fierce fighting. [12]

In the section of the table of cities in Abu Rayhan Beruni's (973-1048) "Law of Mas'udi" "Qanuni Mas'udi", Kesh is given as a city in the fifth climate, and its coordinates are shown as the longitude and the latitude of 39 ° 501. [13]

In the early Middle Ages (VIII-VIII centuries), the city moved to a new location and became the capital of a separate property, and the Cache, which existed from the seventh to the eighth century and ended by the Arabs. Shi, in other words, was the residence of Kyushha or Gieshuan, a powerful ruler of the Kesh or Keshan estate, around Dichje, which extends to 2 km (1 km). He builds Tsishy, which is one of the forms of the Cache [8].

Although this is a question that remains uncertain, although M. M. Masson firmly denied that in the early Middle Ages, the city of Kitab was relatively densely populated by the Kesh Kitab. However, according to E. Mason, there is almost no finding in Shahrisabz, except for traces of population density, multiple ceramics and a few Shakhrisabz coins at that time [9].

Archeological excavations conducted in the shakhrisabz region in the 80's of the 20th century have marked the early medieval layers in many parts of Shahrisabz. These places are located in the south-western part of the big hill, with a cultural layer of 2.5 meters, despite the ruins of Shakhrisabz, 200 meters in length, in the vicinity of Chorsu, namely the city center, north of Oqsaroy, km length [10]. In addition, there are several hills of Shahrisabz, including Balandtepa (Zindontepa), Kalkentepa and others. All of this provides a very large map of the city, similar to the complex city that corresponds to the square of the Cache in Beys. During the excavations in Shahrisabz, Many coins of VI-VII centuries, including five coins of the king of Kesh, Ahurpath. These coins have not been found in the book at all, and this shows that Shahrisabz was the largest city in terms of money. At the time, the book contained a palace of dekhkans (with the exit fortress) surrounded by settlements.

According to archeologist Z.I.Usmanova, the first place in Shakhrisabz-Barnon was in the V-VI centuries, where the base was located in the Balandtepa or Zindontepa ruins, 300 m north of Shakhrisabz [11]. At that time, there was a stronghold of the local ruler, including the Zoroastrian temple. Even in the nineteenth century, some members of the local community worshiped and worshiped the gods of the former Zoroastrian faith; every year at the feast of the sacred holiday of Navruz, the people's census took place here. Initially, the fortress was surrounded by a wall, and its area expanded in the VII-VIII centuries, and in the 9th-10th centuries this town became a major commercial center of craftsmanship.

The capital of Sughd's capital, Kashash, was located in Shakhrisabz in VI-VII centuries, and in later centuries it also developed here. In the Shahrisabz region. Balandtepa (Zindontepa) is one

of the oldest monuments located in the Shahrisabz region. According to legend, in the XIV-XV centuries there was a city dungeon on the site of the hill, hence it was called Zindontepa.

As a result of research by archaeologists, the ruins of large buildings in the central part of Zindonteppe were discovered and investigated. However, in rooms found during archaeological excavations there were no kitchen utensils and ash layers, labor tools, large ceramic dishes (cloths, crockery) and household appliances used for grain storage. Instead of Balandtepa, the development of an ordinary home-fortified farm was not proved. At the same time, according to some estimates, a large building constructed on a high and solid foundation, assumed that the rooms could not have houses, kitchens or farms (farming livestock), and Balandtepa was probably probably a first-century synagogue [13].

In the 7th century, a special temple valued by the locals was built around Kesh. Before the military campaigns, the Keshliks sacrificed 10,000 sheep to this temple and asked their gods for help in defeating the enemy. These events date back to the period when Kesh was the capital of Sogdiana (the reign of Shishpir). In the VIII century the famous temple of Kesh was destroyed.

Among the Kesh rulers, Dichje, who ruled during the years 600-620, notes from other sources that Ticho was the most powerful. Chinese Chronicles Ten-bu and Suy-sha say that Kesh sent his ambassadors to foreign countries during his reign and accepted his ambassadors. It is also said that the Tooth (Dichje, Ticho) founded the city of Ki-sheche [14].

Although medieval historians and geographers do not know much about Cache, they say that the region is rich in fertile and natural resources, and that there are many urban and rural centers. Written sources, along with the results of archaeological research, provide an opportunity to evaluate the historical and cultural processes of this period.

The traditions of ancient urban culture continued in Shakhrisabz and developed on new foundations. Arab-Persian historians of the IX-X centuries described Kesh-Shahrisabz precisely, during which time the inner city of Kesh could not be located in place of the Kitob, as some scholars have speculated, because there is no trace of the city in the Kitob either in the IX-X centuries or later. The whole area of Shakhrisabz, as well as around and outside the surrounding wall, is marked by a layer of IX-X centuries. All the structural units mentioned in the description of Kesh in Arabic-Persian sources: chateau (kohandiz), inner and outer medina, inner and outer rabat-suburb (rabod) can be fully located in this area. The traditions of ancient urban culture continued in Shakhrisabz and developed on new bases. Arab-Persian historians of the IX-X centuries described Kesh-Shahrisabz precisely, during which time the inner city of Kesh could not be located in place of the Kitob, as some scholars have speculated, because there is no trace of the city in the Kitob either in the IX-X centuries or later. The whole area of Shakhrisabz, as well as around and outside the surrounding wall, is marked by a layer of IX-X centuries. All the structural units mentioned in the Kesh description in the Arabic-Persian sources: chateau (kohandiz), inner and outer medina, inner and outer rabat-suburb (rabod) can be fully located in this area.

## CONCLUSION

The archaeological and written sources learned from the studies conducted in the region serve as a basis for concluding that the region and its city center in the eastern part of Kashkadarya at different times are different. Written sources say bIn the 9th-8th centuries the name of the region

was Gava Sogd, mil.avv. In the VII-IV centuries Nautaka, cache in VI-XV centuries. The Teacher of history faculty of National University of Uzbekistan of the province is before Formed in the VIII century as the place of Uzunkir, it developed until the III century. The later history of the city was connected with the book Shakhrisabz. You need to pay attention to some other important information. The oldest city center of the Shahrisabz-book oasis is the oldest in the legends of Central Asia, including Samarkand, Bukhara, Khiva, Termez and Marv. Available legends are compatible with archaeological finds. Accordingly, Nautaka, Kesh, Shakhrisabz's evolutionary period prove to be not less than 2700 years.

The twenty-seven-century-old city of Shakhrisabz, known as “ Qubbatul ilm wa-l-adab” (The city of knowledge and decency), has always aroused great interest and is still so. Its rich history of strange legends is reflected in the cities discovered by archaeologists, as well as in the architectural monuments that have survived to this day.

Shakhrisabz was named after the ancient city of Kashkadarya in the early medieval era, and its name was the first capital of the nearest city of Kashkadarya. Finding solid wall ruins, ceramics, terracotta, and local authorities' archaeologists from the multi-meter layers of the book's quarters suggests that cache townships also developed in the early middle ages.

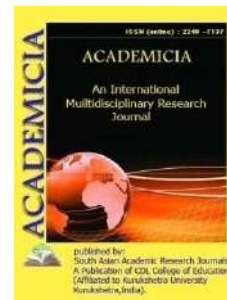
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DOI: **10.5958/2249-7137.2020.00673.4**

## CORRELATION OF ALIENATION AND CONSUMERISM

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### ABSTRACT

*The article discusses the relevance of the problem of exclusion and consumerism. In the modern world, loneliness is becoming one of the priority topics not only in philosophy, but, first of all, in psychology and sociology. They must have this "identity" if they want to sell their goods or services; this person must be attractive, and, in addition, its owner must meet a number of other requirements: for example, he must be energetic. A person feels himself as a commodity, his value not as "use value", but as "exchange value". A living being becomes a commodity in the "market of personalities." Since people with a market character do not feel deep attachment to either themselves or others, they are absolutely indifferent to everything, but not because they are so selfish, but because their attitude towards themselves and others is so fragile.*

**KEYWORDS:** Alienation, Consumerism, Market Character, Manipulation, Selfishness.

### I. INTRODUCTION

The world enters the second industrial revolution, when not only the physical energy of a person in his hand, but also his brain and nervous reactions replace machines. In the most developed industrial countries, there is growing concern about the increase in a new type of unemployment. A person feels even more insignificant when confronted not only by a system of giant enterprises, but also by a whole almost self-governing world of computers that think much faster, and often more correctly.

### II. DISCUSSION

The other danger of the population explosion has also increased. And here we see the fruits of progress: the achievements of medicine have led to such an increase in the population, especially in underdeveloped countries, that production growth cannot keep up with it. "The power of

human intelligence has been embodied in the latest technology and technology that has turned a person into a slave of the techno sphere and its hostage" .[1]

The most important thing for understanding the nature and secret religion of modern human society is the change in social character that has occurred from the beginning of the era of capitalism to the second half of the 20th century. An authoritarian, obsessed, accumulative character, the development of which began in the 16th century and which continued to prevail in the structure of character, at least of the middle classes of society, until the end of the 19th century, slowly gave way to a market nature. A person feels himself as a commodity, his value not as "use value", but as "exchange value". A living being becomes a commodity in the "market of personalities." One and the same principle of determining value is valid in the personal market and in the commodity market: in the first, personalities are sold, in the second, goods. In both cases, value is determined by their exchange value, for which use value is a necessary but not sufficient condition. And although the correlation of skill and human qualities, on the one hand, and personality on the other, as the prerequisites for success, is different, the "personal factor" always plays a decisive role in achieving success. When alienation is understood as a person's mental state, a feeling of his own lack of freedom and manipulation by external forces [2]. Success depends mainly on how profitably people manage to present themselves as a "person", how beautiful their "packaging" is, how "cheerful, healthy", "aggressive", "reliable", "ambitious", moreover, it depends on their origin, membership in a particular club and on meeting with the "right" people. The type of person depends to some extent on the special field in which a person can choose. A stockbroker, seller, secretary, railway employee, college professor or hotel manager, each of them must offer a special type of personality, which, regardless of their differences, must satisfy one condition of being in demand. Identity becomes a prism through which many important features of modern life are considered, evaluated and studied [3].

A person's attitude to himself is determined by the fact that skills and the availability of relevant abilities are not enough to carry out this or that work; for success it is still necessary to win in fierce competition. And if in order to earn a living it would be enough to rely on your knowledge and skills, then self-esteem would be proportional to the abilities of a person, that is, his use value. But since success depends mainly on how a person sells his personality, he feels himself to be a commodity, or rather, both a seller and a commodity. Alienation is a special case of the interaction of the parties to the contradiction when one has the opposite, deforming effect on the other [4]. A man does not care about his life or his happiness, but only how much he is suitable for sale.

The goal of a market nature is complete adaptation to be necessary, to maintain demand for themselves under all conditions prevailing in the market of personalities. Compared to, say, people of the 19th century, personalities with a market character do not even have their own "I" on which they could rely, because their "I" is constantly changing in accordance with the principle "I am the way I need you." People with a market character have no other goals than to constantly move, to do all things with maximum efficiency, and if you ask them why they should move at such a speed, why they strive for maximum efficiency, then they have no real answer to this question, they only offer rationalizations such as "to have more jobs" or "in order to constantly expand the company". Alienation is understood as a property of human nature and is represented by a number of schools of Western philosophy of the twentieth century —

existentialism, the Frankfurt school, Freudianism and neo-Freudianism, and some movements of religious philosophy. For all these schools, the problem of alienation appears to be significant [5].

People with a market character can neither love nor hate. These "old-fashioned" emotions do not correspond to the structure of a character that functions almost entirely on a rational level and avoids any feelings, both positive and negative, because they interfere with the main goal of the market nature of the sale and exchange, and more precisely, for functioning in accordance with the logic of the "mega machine" of which they are a part. "People turned into buying tools. The brains of the vast majority are controlled. We live for the market when we work and when we rest "[6]. Since people with a market character do not feel deep attachment to either themselves or others, they are absolutely indifferent to everything, but not because they are so selfish, but because their attitude towards themselves and others is so fragile.

This, perhaps, also explains why they are not worried about the danger of a nuclear and environmental disaster, despite the fact that they know all the evidence of such a threat. The fact that these people are not bothered by the threat of their own lives could perhaps be explained by the fact that they are extremely brave and not at all selfish; however, we cannot accept this explanation because of their lack of concern for our children and grandchildren. This lack of anxiety at all levels is the result of the loss of any emotional connections, even with the "closest" [7]. The fact is that people with a market character do not have "closest" ones, they do not even value themselves. It is amazing why modern people are so fond of buying and consuming, but they do not value what they get at all. The most correct answer to this question lies in the very phenomenon of a market nature. "More fun", to soar above oneself, to vibrate with the whole body to music, to experience immediate sensations, to feel involved in the general movement of time covering the entire human body [8]. An individual who is able to recognize the absurdity of a particular situation is often unable to maintain order in it. The lack of attachment in people with this character makes them indifferent to things. And perhaps the only thing that matters to them is the prestige or comfort that these things give, and not the things themselves. Ultimately, they are simply consumed, just like friends and lovers are consumed, since there are no deep affections for them. Everyone works for himself, on his own, at his own risk and - initially, outside of cooperation with the others.

He must buy and sell, give and take. The fate of man is to contribute to the growth of the economic system, to increase capital, and not for the purposes of his own happiness, but for the sake of capital itself. Man has become a part of a gigantic economic machine. If he has a lot of capital, then he is a big gear; if he has nothing, he is a screw; but in any case it is only a part of the machine and serves purposes external to itself, but although man has achieved remarkable success in dominating nature, society has not been able to control the forces that it itself has generated.

The rationality of the production system in the technological aspect coexists with the irrationality of the same system in the social aspect. People are driven by economic crises, unemployment, wars. Man built his world; he built houses and factories, makes cars and clothes, grows bread and fruits. But he is alienated from the products of his labor, he is no longer the master of the world he has built, on the contrary, this world created by man has turned into the master, before which the man inclines, trying to appease him or, if possible, outwit him. The immersion of

social actors in the world of robotic computers “turns them into part of a giant machine that can feel good, pain. [9]

With his own hands, man made himself a god. It seems as if a person is acting in accordance with his interests; in fact, his whole personality, with all its capabilities, turned into a tool that serves the purposes of the machine that he built with his own hands. Man is amused by the illusion that he is the center of the world, but at the same time he is imbued with the same oppressive sense of worthlessness and powerlessness that his ancestors experienced before God, realizing this feeling. Feelings of isolation and helplessness are further enhanced by the new nature of human relationships.

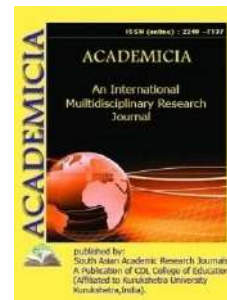
The specific connections of one individual with another have lost their clear human meaning, have acquired the character of manipulation, where a person is used as a means. In an information and network society, the source of alienation is, partially or completely, “dehumanized” [10]. In all social and personal relations, the law of the market prevails. A person sells not only goods, he sells himself and feels himself a commodity. Worker sells his physical energy; an entrepreneur, a doctor, an employee, sell their “identity”.

### III. CONCLUSION

They must have this “identity” if they want to sell their goods or services; this person must be attractive, and, in addition, its owner must meet a number of other requirements: for example, he must be energetic. And as with any other product, the market decides how much these or other human qualities cost, and even determines their very existence. If the qualities that a person can offer are not in demand, then he has no qualities at all; in the same way, a product that cannot be sold does not cost anything, although it has a use value.

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DOI: **10.5958/2249-7137.2020.00674.6**

## SPECIAL SET OF PROBLEMS ON SOLUTIONS OF LINEAR EQUATIONS IN PRIME NUMBERS

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### ABSTRACT

In this study (1) for the systems  $= 2$ ,  $m = 4$

$$b_i = a_{i1}p_1 + a_{i2}p_2 + a_{i3}p_3 + a_{i4}p_4, \quad (i = 1, 2)$$

The problem of system coherence has been studied and which is large enough  $X$ , small enough  $\delta$  ( $0 < \delta < 1$ ) all when there is a positive number  $b \in W(X)$  system solutions for vectors  $p_1, p_2, p_3, p_4$  for the number of prime numbers  $(b_1, b_2) = b$  of  $E_1(X) < X^2 Q^{-\frac{2}{9}-\varepsilon}$  for all values different  $I_2(b) < NQ^{-\frac{1}{2}-\delta}$ ,  $(b_1, b_2) = b$  of  $X^2 Q^{-1}$  for all values except value

$$I_1(b) = \sum_{q \leq Q} \varphi(q)^{-4} \sum_h e_q(-\bar{h}_q) \iint_{R^2} e(-\bar{\eta}_b) \prod_{j=1}^4 H_j(\bar{h}, q, \bar{\eta}) d\eta_1 d\eta_2 + O(N^2 Q^{-5})$$

the assessment proved to be reasonable.

**KEYWORDS:** Equation, Primes, Integer Coefficients, Natural Numbers, Determinant, Decidability Criterion, Set.

## INTRODUCTION

The theory of linear Diophantine equations has an important place in the theory of numbers. A number of mathematicians have dealt with the number of solutions of such equations in whole or prime numbers and their coexistence..

Including Vu Fang [1]

$$b_i = a_{i1}p_1 + a_{i2}p_2 + \dots + a_{im}p_m, \quad i = 1, 2, \dots, s \quad (1)$$

the problem of solutions of a system of equations in prime numbers ( $b_1, b_2, \dots, b_s$ —natural numbers,  $a_{i1}, a_{i2}, \dots, a_{im}$ —whole coefficients,  $p_1, p_2, \dots, p_m$ —prime numbers) with  $m \geq 2s + 1$  received an asymptotic formula for the number of its solutions under certain additional conditions.

M.C.LiuK.M.Tsang [2] s (1) were a special case of the system

$$b_i = a_{i1}p_1 + a_{i2}p_2 + a_{i3}p_3 \quad (i = 1, 2)$$

by studying the problem of solutions of a system of equations in prime numbers, this system has no solution

$(b_1, b_2)$ ,  $1 \leq b_1, b_2 \leq X$  's estimate the number, for sufficiently large  $X$  s, their number  $X^{2-\varepsilon}$  proved not to be much.

But  $s = n, m = 2n$  (1) the question of whether the system has a solution and the number of its solutions have not been studied.

In this study (1) for the systems  $s = 2, m = 4$  бѣлган

$$b_i = a_{i1}p_1 + a_{i2}p_2 + a_{i3}p_3 + a_{i4}p_4, \quad (i = 1, 2)$$

in which case the problem of the coherence of the system is studied, and it is precisely a large enough  $X$ , small enough  $\delta$  ( $0 < \delta < 1$ ) all when there is a positive number  $b \in W(X)$  system solutions for vectors  $p_1, p_2, p_3, p_4$  тѣб lemmas have been proven to be important in estimating the number of digits.

## A SPECIAL SET OF ISSUES

We introduce the following definitions, similar to the definitions in [3]: Small enough  $0 < \delta < 1$  and large enough For  $X$  s

$$X \geq B^{\exp(\delta^{-2})}, \quad N = 18B^3X, \quad Q = N^\delta, \quad L = NQ^{\frac{1}{90}}, \quad T = Q^{\frac{1}{4\sqrt{\delta}}}, \quad B \leq Q^\delta \quad (6) \text{ optional for } y \in \mathcal{Y} \\ y(y) = e^{2\pi i y}, \quad e_q(y) = e^{\frac{2\pi i y}{q}} \text{ and } q \leq T, \quad \chi(mod q) \text{ for the desired Dirixle character}$$



$$\left\{ \begin{array}{l} S(y) = \sum_{L \leq n \leq N} \wedge(n) e(ny), \quad S_{\chi}(y) = \sum_{L \leq n \leq N} \wedge(n) \chi(n) e(ny), \\ I(y) = \int_L^N e(xy) dx, \quad \bar{I}(y) = \int_L^N x^{\beta-1} e(xy) dx, \\ I_{\chi}(y) = \int_L^N e(xy) \sum_{|\gamma| \leq T} x^{\beta-1} dx, \end{array} \right. \quad (7)$$

we enter the definitions here

$\sum'_{|\gamma| \leq T} L(s, \chi) \text{function } |\gamma| \leq T, \quad \frac{1}{2} \leq \beta \leq 1 - c_2(\log T)^{-1}$  all lying in the field  $\rho = \beta + i\gamma$  represents the sum obtained at zeros, however

$$\tau = T^{\frac{1}{4}} N^{-1} \quad (8)$$

we can say. All you want

$$1 \leq h_1, h_2 \leq q \leq Q \quad \text{Ba}(h_1, h_2, q) = 1 \quad (9)$$

satisfying the condition  $h_1, h_2, q$ -s for

$$\bar{m}(h_1, h_2, q) = \{(x_1, x_2) \in R^2: |x_i - h_i q_i^{-1}| \leq \tau q_i^{-1}, \quad i = 1, 2\} \quad (10)$$

$$M_1 = \cup m(h_1, h_2, q) \quad \text{Ba} \quad M_2 = [\tau, 1 + \tau]^2 \setminus M_1 \quad (11)$$

where the compounds (9) are obtained for all  $h_1, h_2, q_1, q_2$  that satisfy the condition.

$\bar{m}(h_1, h_2, q_1, q_2)$  the squares do not intersect and are all located within  $[t, 1 + t] \wedge 2. [\tau, 1 + \tau]^2$

The desired is real  $x_1, x_2$  Ba  $\bar{b} = (b_1, b_2) \in W(X)$  for

$$\bar{x}_b = b_1 x_1 + b_2 x_2 \text{ Ba } \bar{x}_j = a_{1j} x_1 + a_{2j} x_2 \quad (12)$$

$$I(\bar{b}) = \sum \wedge(n_1) \wedge(n_2) \wedge(n_3) \wedge(n_4) \quad (13)$$

through the sum  $L < n_1, n_2, n_3, n_4 \leq N$  and

$a_{i1} n_1 + a_{i2} n_2 + a_{i3} n_3 + a_{i4} n_4 = b_i \quad (i = 1, 2)$  all that meet the conditions  $n_j (j = 1, 2, 3, 4)$  s' determine the sum obtained. (7) and (11) are expressions

$$\begin{aligned} I(\bar{b}) &= \int_{\tau}^{1+\tau} \int_{\tau}^{1+\tau} e(-\bar{x}_b) \prod_{j=1}^4 S(x_j) dx_1 dx_2 = \left( \iint_{M_1} + \iint_{M_2} \right) e(-\bar{x}_b) \prod_{j=1}^4 S(x_j) dx_1 dx_2 = \\ &= I_1(\bar{b}) + I_2(\bar{b}) \quad (14) \end{aligned}$$

we find

Here the weight of  $I(\bar{b})$  is usually  $I_1(\bar{b})$ , which represents  $I_2(\bar{b})$  the residual limit. We evaluate the integrals  $I_1(\bar{b})$  and  $I_2(\bar{b})$  separately, for this purpose we first prove this lemma similar to that of Liu Tsang.

### Auxiliary lemma and its proof.

If  $x_1, x_2 \in M_1$  then

$$\min\{|S(\bar{x}_1)|, |S(\bar{x}_2)|, |S(\bar{x}_3)|, |S(\bar{x}_4)|\} \ll NB^{\frac{1}{2}} Q^{-\frac{1}{8}} \ln^4 N$$

the attitude will be reasonable.

Proof.  $R = 4\tau^{-1} Q^{\frac{1}{8}}$  We use the following:

According to Dirichlet's theorem on approximation  $1 \leq q_i \leq R$ ,  $(l_j, q_i) = 1$  ea  $|\bar{x}_j - l_j q_i^{-1}| < (q_i R)^{-1}$  ( $j = 1, 2, 3, 4; i = 1, 2;$ )  $1 \leq q_i \leq R$ ,  $(l_j, q_i) = 1$   $|\bar{x}_j - l_j q_i^{-1}| < (q_i R)^{-1}$  ( $j = 1, 2, 3, 4; i = 1, 2;$ ) satisfactory  $l_j, q_i$  whole numbers are available. In that case, according to Theorem 3.1 in R. Von

$$S(\bar{x}_j) \ll (Nq_j^{-\frac{1}{2}} + N^{\frac{4}{5}} + N^{\frac{1}{2}} q_j^{\frac{1}{2}}) \ln^4 N \quad (15) \text{ would be appropriate.}$$

In addition  $\Delta_{ij} \neq 0$  ( $\Delta_{12} \neq 0, \Delta_{13} \neq 0, \Delta_{14} \neq 0, \Delta_{23} \neq 0, \Delta_{24} \neq 0, \Delta_{34} \neq 0$ ) because  $a_{1j} r_1 + a_{2j} r_2 = l_j q_i^{-1}$  ( $j = 1, 2, 3, 4; i = 1, 2;$ ) (16)

solution of a system of equations  $r_1, r_2$  s'  $r_i = k_j q^{-1}$  ( $i = 1, 2; j = 1, 2, 3, 4$ ) can be expressed in appearance. In this case,  $k_j$  2222 is an integer positive number, and  $q$  is a positive multiplier of  $q_1 q_2 \Delta_{ij}$ .

$$\begin{cases} a_{11} r_1 + a_{21} r_2 = l_1 q_1^{-1} \\ a_{12} r_1 + a_{22} r_2 = l_2 q_2^{-1} \end{cases} \quad r_1 = \frac{\begin{vmatrix} l_1 q_1^{-1} & a_{21} \\ l_2 q_2^{-1} & a_{22} \end{vmatrix}}{\Delta_{12}} = \frac{l_1 q_1^{-1} a_{22} - l_2 q_2^{-1} a_{21}}{\Delta_{12}} = \frac{l_1 q_2 a_{22} - l_2 q_1 a_{21}}{q_1 q_2 \Delta_{12}} = \frac{k_1}{q}$$

$$r_2 = \frac{\begin{vmatrix} a_{21} & l_1 q_1^{-1} \\ a_{22} & l_2 q_2^{-1} \end{vmatrix}}{\Delta_{12}} = \frac{l_2 q_2^{-1} a_{21} - l_1 q_1^{-1} a_{22}}{\Delta_{12}} = \frac{l_2 q_1 a_{21} - l_1 q_2 a_{22}}{q_1 q_2 \Delta_{12}} = \frac{k_2}{q}$$

By making similar considerations, we can also express  $r_1 = \frac{k_3}{q}$ ,  $r_2 = \frac{k_4}{q}$ . Thus

$$1 \leq q \leq q_1 q_2 |\Delta_{12}| \leq \frac{2B^2}{9} q_1 q_2 \quad (17)$$

$(|\Delta_{12}| = |a_{11} a_{22} - a_{12} a_{21}| \leq |a_{11} a_{22} + a_{12} a_{21}| \leq \frac{2B^2}{9})$  Let's say  $t_j = \bar{x}_j - l_j q^{-1}$  if so  $|t_j| < (qR)^{-1}$  and  $t_j = a_{1j}(x_1 - k_1 q^{-1}) + a_{2j}(x_2 - k_2 q^{-1})$  ( $j = 1, 2, 3, 4$ )

$$t_j = \left| a_{1j}x_1 + a_{2j}x_2 - \frac{l_j}{q} \right| = \left| a_{1j}x_1 + a_{2j}x_2 - a_{1j}k_1q^{-1} - a_{2j}k_2q^{-1} \right| = \left| a_{1j}(x_1 - k_1q^{-1}) + a_{2j}(x_2 - k_2q^{-1}) \right|$$

From this system  $x_1 - k_1q^{-1} = (a_{22}t_1 - a_{21}t_2)\Delta_{12}^{-1}$ ;  $x_2 - k_2q^{-1} = (a_{11}t_2 - a_{12}t_1)\Delta_{12}^{-1}$

$$\left| x_1 - k_1q^{-1} \right| \leq (|a_{22}t_1| + |a_{21}t_2|) \Delta_{12}^{-1} \leq \frac{2B}{3} \left( \frac{1}{q_1R} + \frac{1}{q_2R} \right) |\Delta_{12}^{-1}| \leq \frac{3}{B} R^{-1} (q_1^{-1} + q_2^{-1}) \quad (18)$$

It's like that  $\left| x_2 - k_2q^{-1} \right| \leq \frac{3}{B} R^{-1} (q_1^{-1} + q_2^{-1})$  we find that

here  $\min(q_1, q_2) \geq Q^{\frac{1}{8}} \left( \frac{\sqrt{2}B}{3} \right)^{-1}$  (19) we show the execution of.

Suppose the opposite:  $\max(q_1, q_2) < Q^{\frac{1}{8}} \left( \frac{\sqrt{2}B}{3} \right)^{-1}$  be appropriate.

In that case according to (18)

$$\begin{aligned} \frac{3}{B} R^{-1} (q_1^{-1} + q_2^{-1}) &= \frac{3}{B} R^{-1} \left( \frac{1}{q_1} + \frac{1}{q_2} \right) < \frac{3}{B} \left( Q^{\frac{1}{8}} \left( \frac{\sqrt{2}B}{3} \right)^{-1} + Q^{\frac{1}{8}} \left( \frac{\sqrt{2}B}{3} \right)^{-1} \right) (q_1 q_2 R)^{-1} = \\ &= \frac{3}{B} 2Q^{\frac{1}{8}} \left( \frac{\sqrt{2}B}{3} \right)^{-1} (q_1 q_2 R)^{-1} = \frac{18}{\sqrt{2}B^2} Q^{\frac{1}{8}} (q_1 q_2 R)^{-1} \leq \frac{18}{\sqrt{2}B^2} Q^{\frac{1}{8}} \frac{2B^2}{9qR} = 4Q^{\frac{1}{8}} \frac{1}{\sqrt{2}qR} = \frac{\tau}{\sqrt{2}q} < \frac{\tau}{q} \end{aligned}$$

here  $\tau = 4Q^{\frac{1}{8}} R^{-1} \left| x_1 - k_1q^{-1} \right|, \left| x_2 - k_2q^{-1} \right| < \frac{\tau}{q}$  (20) according to the second (17)

$$q \leq \frac{2B^2}{9} q_1 q_2 \leq \frac{2B^2}{9} \left[ Q^{\frac{1}{8}} \left( \frac{\sqrt{2}B}{3} \right)^{-1} \right]^2 = Q^{\frac{1}{4}} < Q$$

This means that it is  $\tau \leq x_1, x_2 \leq \tau + 1$  and  $1 \leq k_1, k_2 \leq q$ , i.e.  $(x_1, x_2) \in M_2$ , which is contrary to the lemma condition.

This contradiction (19) shows the correctness of the inequality. According to (19) and (15)

$$\min\{|S(\bar{x}_1)|, |S(\bar{x}_2)|, |S(\bar{x}_3)|, |S(\bar{x}_4)|\} \ll NB^{-\frac{1}{2}} Q^{-\frac{1}{16}} \ln^4 N$$

$$\begin{aligned} \min \left\{ |S(\bar{x}_1)|, |S(\bar{x}_2)|, |S(\bar{x}_3)|, |S(\bar{x}_4)| \right\} &\leq (NQ)^{-\frac{1}{16}} \left( \frac{\sqrt{2}B}{3} \right)^{-\frac{1}{2}} + N^{\frac{4}{5}} + N^{\frac{1}{2}} Q^{\frac{1}{16}} \left( \frac{\sqrt{2}B}{3} \right)^{\frac{1}{2}} \ln^4 N << \\ &<< (NQ)^{-\frac{1}{16}} B^{-\frac{1}{2}} + N^{\frac{4}{5}} + N^{\frac{1}{2}} Q^{\frac{1}{16}} B^{\frac{1}{2}} \ln^4 N = NQ^{-\frac{1}{16}} B^{\frac{1}{2}} \left( \frac{1}{B} + \frac{1}{N^{\frac{1}{5}} Q^{-\frac{1}{16}} B^{\frac{1}{2}}} + \frac{1}{N^{\frac{1}{2}} Q^{-\frac{1}{8}}} \right) \ln^4 N \leq \\ &\leq \frac{3}{B} NQ^{-\frac{1}{16}} B^{\frac{1}{2}} \ln^4 N << NQ^{-\frac{1}{16}} B^{-\frac{1}{2}} \ln^4 N \end{aligned}$$

Thus the lemma was proved.

Representation of key results.

We express the main results of the work in the form of these lemmas.

**1-Lemma**  $I_2(b) < NQ^{-\frac{1}{2}-\delta}$  22222 for all values of  $(b_1, b_2) = b$  other than  $E_1(X) < X^2 Q^{-\frac{2}{9}-\varepsilon}$  1111 will be.

**2-Lemma.**  $\bar{b} = (b_1, b_2)$  more  $X^2 Q^{-1}$  for all values except the unit value  $I_1(b) = \sum_{q \leq Q} \varphi(q)^{-4} \sum_{\bar{h}} e_q(-\bar{h}_q) \iint_{R^2} e(-\bar{\eta}_b) \prod_{j=1}^4 H_j(\bar{h}, q, \bar{\eta}) d\eta_1 d\eta_2 + O(N^2 Q^{-5})$

would be appropriate.

**Proof of 1 lemma.** We need to show here that  $(b_1, b_2) = b$  is  $I_2(b) < NQ^{-\delta}$  places for all values other than  $E(X) < X^2 Q^{-\frac{1}{8}-\varepsilon}$ .  $\Delta_{jk} \neq 0$ , is valid for  $\forall j \neq k$  s and (14) using equality and Parseval identity.

$$\begin{aligned} \sum_{b_1=-\infty}^{+\infty} \sum_{b_2=-\infty}^{+\infty} |I_2(\bar{b})|^2 &= \iint_{M'} |S(\bar{x}_1)|^2 |S(\bar{x}_2)|^2 |S(\bar{x}_3)|^2 |S(\bar{x}_4)|^2 dx_1 dx_2 << \min \left\{ |S(\bar{x}_1)|, |S(\bar{x}_2)|, |S(\bar{x}_3)|, |S(\bar{x}_4)| \right\}^2 * \\ &* \iint_{M'} \left[ |S(\bar{x}_1)|^2 |S(\bar{x}_2)|^2 + |S(\bar{x}_1)|^2 |S(\bar{x}_3)|^2 + |S(\bar{x}_2)|^2 |S(\bar{x}_3)|^2 \right] |S(\bar{x}_4)|^2 dx_1 dx_2 << \\ &<< NQ^{-\frac{1}{8}} B^{\frac{1}{2}} \ln^4 N \int_0^1 \int_0^1 \left[ |S(\bar{x}_1)|^2 |S(\bar{x}_2)|^2 + |S(\bar{x}_1)|^2 |S(\bar{x}_3)|^2 + |S(\bar{x}_2)|^2 |S(\bar{x}_3)|^2 \right] |S(\bar{x}_4)|^2 dx_1 dx_2 \quad (15) \end{aligned}$$

we create. Now  $\Delta_{34} \neq 0$  and Sh.Valle-Pussen theorem and  $\psi(x) \approx x$  using that (here  $\psi(x)$  - Chebishev function)

$$\int_0^1 \int_0^1 |S(\bar{x}_1)|^2 |S(\bar{x}_2)|^2 |S(\bar{x}_3)|^2 |S(\bar{x}_4)|^2 dx_1 dx_2 = \sum_{L \leq n_j \leq N} \Lambda(n_1) \Lambda(n_2) \Lambda(n_3) \Lambda(n_4) << N^4 \ln^4 N$$

we find Hence from the lemma (5.2) in [2] and from equation (15)

$$\sum_{b_1=-\infty}^{+\infty} \sum_{b_2=-\infty}^{+\infty} |I_2(\bar{b})|^2 = 3N^4 \ln^4 N \cdot \left[ NQ^{-\frac{1}{16}} B^{-\frac{1}{2}} \ln^4 N \right]^2 < 3N^6 Q^{-\frac{1}{8}} B \ln^{12} N << N^6 Q^{-\frac{1}{8}} B \ln^{12} N \quad (16)$$

we create a price.

Hence  $I_2(b) \geq NQ^{-\frac{1}{2}-\delta}$  For the number of  $\bar{b}$  satisfying the condition  $E_1(X)$   $E_1(X)$ . We find that the  $E_1(X) \leq X^2 Q^{-\frac{2}{9}-\varepsilon}$  rating is reasonable.

Thus  $(b_1, b_2) = b$  of  $E_1(X) < X^2 Q^{-\frac{2}{9}-\varepsilon}$  for all values except the unit value  $I_2(b) < NQ^{-\frac{1}{2}-\delta}$  the inequality is satisfied.

Thus the 1st lemma was proved.

**Proof of the 2nd lemma.** Optional live  $\chi(\text{mod } q)$  for the character  $C_\chi(m) = \sum_{1 \leq l \leq q} \chi(l) l_q(ml)$  ba

$C_q(m) = C_{\chi_0}(m)$  we can define. In that case it is known  $|C_q(m)| \leq \varphi(m)$ . Optional

$(x_1, x_2) \in \bar{m}(h_1, h_2, q)$  for  $x_j = \frac{h_j}{q} + \eta_j$  ( $j=1,2$ ) we can write. In that case according to (10)

$|\eta_j| < \tau q^{-1}$  ( $j=1,2$ ) (17) reasonable Similar to (12)  $j=1,2,3,4$ ; for

$$\left. \begin{aligned} \bar{h}_j &= a_{1j}h_1 + a_{2j}h_2 & \bar{h}_b &= b_1h_1 + b_2h_2 \\ \bar{\eta}_j &= a_{1j}\eta_1 + a_{2j}\eta_2 & \bar{\eta}_b &= b_1\eta_1 + b_2\eta_2 \end{aligned} \right\} \quad (18)$$

in that case  $\bar{x}_j = \frac{\bar{h}_j}{q} + \bar{\eta}_j$  ( $j=1,2,3,4$ ) will be.

(7) according to the orthogonal property of definitions and characters,

$$S(\bar{x}_j) = \frac{1}{\varphi(q)} \sum_{\chi(\text{mod } q)} C_\chi(h_j) S(\bar{\eta}_j) + O(\ln^2 N) \quad (19)$$

$$\begin{aligned} S(\bar{x}_j) &= \sum_{L < n < N} \Lambda(n) e(n\bar{x}_j) = \frac{1}{\varphi(q)} \sum_{\chi(\text{mod } q)} \sum_{L < n \leq N} \bar{\chi}(l) e_q(\bar{h}_j l) \sum_{L < n \leq N} \Lambda(n) \chi(n) e(n\bar{\eta}_j) = \\ &= \frac{1}{\varphi(q)} \sum_{L < n \leq N} \Lambda(n) e(n(\bar{h}_j q^{-1} + \bar{\eta}_j)) = \sum_{L < n \leq N} \Lambda(n) e(n\bar{x}_j) + O(\ln^2 N) \\ (e(p\alpha) &= \frac{1}{\varphi(q)} \sum_{\chi} \chi(p\alpha) \tau(\bar{\chi}) e(p\eta) \text{ дан фойдаланилди}) \end{aligned}$$

Let's say  $j=1,2,3,4$ ; for  $G_j(\bar{h}, q, \bar{\eta}) = \sum_{\chi(\text{mod } q)} C_\chi(\bar{h}_j) I_\chi(\bar{\eta}_j)$  (20) and

$$H_j(\bar{h}, q, \bar{\eta}) = C_q(\bar{h}_j) I(\bar{\eta}_j) - \delta_q C_{\chi\chi_0}(\bar{h}_j) \bar{I}_\chi(\bar{\eta}_j) - G_j(\bar{h}, q, \bar{\eta}) \quad (21)$$

$I_1(b)$  6.1 in the simplification of the integral [1]; We use lemmas 6.2 and 6.3.

If  $|\bar{\eta}_j|N = |(a_{1j}\eta_1 + a_{2j}\eta_2)N| < \frac{2B}{3}\tau q^{-1}N = \frac{2B}{3}T^{\frac{1}{4}}q^{-1}$  because it is in [1]

Using Lemma 6.1, we obtain from Equation (19)

$$S(\bar{x}_j) = \frac{1}{\varphi(q)} \left\{ H(\bar{h}, q, \bar{\eta}) + O(\varphi(q)T^{\frac{3}{4}}BN \ln^2 N) \right\} \quad \text{from here. Optional from here}$$

$(x_1, x_2) \in m(h_1, h_2, q)$  for

$$\prod_{j=1}^4 S(\bar{x}_j) = \frac{1}{\varphi^4(q)} \prod_{j=1}^4 H_j(\bar{h}, q, \bar{\eta}) + O\left[ \frac{N^3 B \ln^2 N}{\varphi^3(q)T^{\frac{3}{4}}} \right] \quad (22)$$

the appropriateness follows from the determination of  $S(\bar{x}_j)$ .

Let's say  $\sum' \text{ all } h_1, h_2$  (9) - the sum that satisfies the condition. In that case, according to equations (14), (11) and (22)

$$I_1(\bar{b}) = \sum_{q \leq Q} \frac{1}{\varphi^4(q)} \sum_h' e_q(-\bar{h}_b) \int_{\left[\frac{\tau}{q}, \frac{\tau}{q}\right]^2} \int e(-\bar{\eta}_b) \prod_{j=1}^4 H_j(\bar{h}, q, \bar{\eta}) d\eta_1 d\eta_2 + O(NQ^{-3}BT^{\frac{1}{4}} \ln^2 N) \quad (23)$$

We then extend the area of the multiple integral in (23) from  $\left[\frac{\tau}{q}, \frac{\tau}{q}\right]^2$  squares to all  $R^2$  squares

To do this, integrate the field  $r_1 = \left[\frac{1}{2}, \frac{1}{2}\right] \setminus \left[\frac{\tau}{q}, \frac{\tau}{q}\right]^2$  and  $r_2 = R^2 \setminus \left[\frac{1}{2}, \frac{1}{2}\right]^2$  evaluate the integrals obtained in these areas.

According to Parseval identity

$$\sum_{b_1=-\infty}^{+\infty} \sum_{b_2=-\infty}^{+\infty} \left| \iint_{r_1} F_1 F_2 F_3 F_4 e(-\bar{\eta}_b) d\eta_1 d\eta_2 \right|^2 = \iint_{r_1} (F_1 F_2 F_3 F_4)^2 d\eta_1 d\eta_2 \quad (24)$$

Recall that

$$F_1^{(i)} = G_q(\bar{h}_j)I(\bar{\eta}_j), F_2^{(i)} = \delta_q C_{\chi\chi_0}^-(\bar{h}_j)\bar{I}(\bar{\eta}_j), F_3^{(i)} = C_{\chi}^-(\bar{h}_j)I_{\chi}(\bar{\eta}_j), \quad i = 1, 2, 3, 4;$$

using the designation

$$\prod_{j=1}^4 H_j(\bar{h}, q, \bar{\eta}) = (F_1^{(1)} - F_2^{(1)} - F_3^{(1)})(F_1^{(2)} - F_2^{(2)} - F_3^{(2)})(F_1^{(3)} - F_2^{(3)} - F_3^{(3)})(F_1^{(4)} - F_2^{(4)} - F_3^{(4)})$$

formally the multipliers of each limit formed when calculating the product  $F_1, F_2, F_3, F_4$  we get a sum of 81 extremes.



(18) дан  $\forall(\eta_1, \eta_2) \in \Gamma_1$  based on the lemmas (6.1) and (6.2) in [1]

$$\tau q^{-1} < \max \{|\eta_1|, |\eta_2|\} \leq \frac{2B}{3} \max \{|\bar{\eta}_j|, |\bar{\eta}_k|\} \quad (j \neq k, j, k = 1, 2, 3, 4;)$$

$$\begin{aligned} \begin{cases} \bar{\eta}_j = a_{1j}\eta_1 + a_{1j}\eta_2 \\ \bar{\eta}_j = a_{1k}\eta_1 + a_{2k}\eta_2 \end{cases} \Rightarrow |\eta_1| &= \frac{|\bar{\eta}_j a_{2k}| + |\bar{\eta}_k a_{2j}|}{\Delta_{kj}} \leq |\bar{\eta}_j a_{2k}| + |\bar{\eta}_k a_{2j}| \leq \frac{2B}{3} (|\bar{\eta}_j| + |\bar{\eta}_k|) \leq \\ &\leq \frac{2B}{3} \max \{|\bar{\eta}_j|, |\bar{\eta}_k|\} \quad (k, j = 1, 2, 3, 4;) \end{aligned}$$

It's like that  $|\eta_2| \leq \frac{2B}{3} \max \{|\bar{\eta}_j|, |\bar{\eta}_k|\} \quad (k, j = 1, 2, 3, 4;)$  we find that.

According to (6) and (8)  $\max \{|\bar{\eta}_j|, |\bar{\eta}_k|\} > \tau (\frac{2B}{3} q)^{-1} > T^{\frac{1}{4}} (\frac{2B}{3} QN)^{-1} > N^{-1}$

because  $T^{1/4} \cdot \frac{3}{2B \cdot Q} \geq \frac{T^{\frac{1}{4}}}{Q^{\delta} \cdot Q} = \frac{Q^{\frac{1}{4\sqrt{\delta}}}}{Q^{1+\delta}} = Q^{\frac{1}{4\sqrt{\delta}} - 1 - \delta}$  expression  $\delta < \frac{1}{25}$  greater than 1 when.

In the lemma in (6.3) in [1]  $I_\chi(y) \ll \frac{N}{(L|y|)^{\frac{1}{2}}}$  considering the excuse, from this

$$\begin{aligned} |C_{\bar{\chi}}(\bar{h}_j) I_\chi(\bar{\eta}_j)| &\leq |C_{\bar{\chi}}(\bar{h}_j)| |I_\chi(\bar{\eta}_j)| \leq |C_{\bar{\chi}}(\bar{h}_j)| \frac{N}{(L|\eta_j|)^{\frac{1}{2}}} \leq |C_{\bar{\chi}}(\bar{h}_j)| \frac{N}{L^{\frac{1}{2}} T^{\frac{1}{8}}} (\frac{2B}{3} QN)^{\frac{1}{2}} \ll \\ &\ll \frac{\varphi(q)N}{L^{\frac{1}{2}} T^{\frac{1}{8}}} (BQN)^{\frac{1}{2}} \end{aligned}$$

This is it  $\min \{F_j, F_k\} \leq \frac{\varphi(q)N}{L^{\frac{1}{2}} T^{\frac{1}{8}}} (BQN)^{\frac{1}{2}}, \quad \left( |C_{\bar{\chi}}(\bar{h}_j)| \leq \varphi(q), \max \{|\eta_j, \eta_k|\} > T^{\frac{1}{4}} (\frac{2B}{3} QN)^{-1} \right)$

means that. Using (24)

$$\begin{aligned} \iint_{\Gamma_1} |F_1 F_2 F_3 F_4|^2 d\eta_1 d\eta_2 &\leq \frac{\varphi(q)^2 N^3 BQ}{L T^{\frac{1}{4}}} \iint_{R^2} (|F_1|^2 |F_2|^2 + |F_1|^2 |F_3|^2 + |F_1|^2 |F_4|^2 + \\ &+ |F_2|^2 |F_3|^2 + |F_2|^2 |F_4|^2 + |F_3|^2 |F_4|^2) d\eta_1 d\eta_2 \end{aligned} \quad (25)$$

we find. Here for arbitrary  $1 \leq j, k \leq 4$  s we apply the (6.3) b) lemma in [1] to the multiple integral when  $\alpha = 1$ ,

$$\iint_{R^2} |F_j|^2 |F_k|^2 d\eta_1 d\eta_2 = |\Delta_{jk}|^{-1} \left( \int_R |F_j|^2 d\bar{\eta}_j \right) \left( \int_R |F_k|^2 d\bar{\eta}_k \right) \leq \left| \frac{9}{2B^2} \right| (\varphi(q)^2 N^2 L^{-1} \ln N)^2 \ll \frac{\varphi(q)^2 N^4 \ln^2 N}{L^2 B^2} \quad (26)$$

$$\iint_{\Gamma_1} |F_1 F_2 F_3 F_4|^2 d\eta_1 d\eta_2 \ll \frac{\varphi(q)^4 N^7 Q}{BL^3 T^{\frac{1}{4}}} \ln^2 N \quad (27)$$

According to the definition of (6) if  $\delta \leq 4(\delta - 10 \frac{1}{30} + \frac{1}{4\sqrt{\delta}})^{-1}$  so

$$\begin{aligned} \iint_{\Gamma_1} |F_1 F_2 F_3 F_4|^2 d\eta_1 d\eta_2 &\ll \frac{\varphi(q)^4 N^7 Q}{BL^3 T^{\frac{1}{4}}} \ln^2 N < \frac{N^7 Q^5}{BL^3 T^{\frac{1}{4}}} \ln^2 N < \frac{N^7 Q^5}{B(NQ^{-\frac{1}{90}})^3 T^{\frac{1}{4}}} \ln^2 N = \frac{N^4 Q^5}{BL^3 T^{\frac{1}{4}}} < \\ &< N^4 B^{-1} Q^{5\frac{1}{30} - \frac{1}{4\sqrt{\delta}}} \ln^2 N \ll X^2 B^{-1} N^4 Q^{-11} < (N^2 Q^{-5})^2 (X^2 Q^{-1}), \end{aligned}$$

we create.

And that's it  $\bar{b} = (b_1, b_2)$  of  $E^{(1)}(X) < X^2 Q^{-1}$

we conclude that the value  $\iint_{\Gamma_1} Fe(-\bar{\eta}_j) d\eta_1 d\eta_2 \ll N^2 Q^{-5}$  is appropriate for the integral obtained in the field  $\Gamma_1$  for all values other than the unit value.

## CONCLUSION

We now evaluate the integral obtained at  $\Gamma_2$

If  $\forall (\eta_1, \eta_2) \in \Gamma_2 = R^2 \setminus \left[ -\frac{1}{2}, \frac{1}{2} \right]^2$  so

$$\left. \begin{aligned} |\bar{\eta}_j| &\geq |a_{1j}||\eta_1| - |a_{2j}||\eta_2| \geq \frac{B}{3} (|\eta_1| - |\eta_2|) > |\eta_1| - |\eta_2| \\ |\bar{\eta}_j| &\leq |a_{1j}||\eta_1| + |a_{2j}||\eta_2| \leq \frac{B}{3} (|\eta_1| + |\eta_2|) \leq \frac{2B}{3} \max\{\eta_1, \eta_2\} \\ \frac{2B}{3} \min\{\eta_1, \eta_2\} &> 1 \Rightarrow \min\{\eta_1, \eta_2\} \geq \frac{3}{2B} > \frac{1}{B} \end{aligned} \right\} \quad (28)$$

First of all, given that  $\max\{\eta_1, \eta_2\} > \frac{1}{2}$  on the other hand  $\max\{\bar{\eta}_j, \bar{\eta}_k\} > \frac{9}{2B^2} \max\{\eta_j, \eta_k\} \geq B^{-2}$ ,

$|\bar{\eta}_j| \geq B^{-2} \gg T(\pi L)^{-1}$ . (6.3)a) according to the lemma  $1 \leq j, k \leq 4$  for  $s \min\{F_j, F_k\} \leq \varphi(q)B^2$  We find (29).

If  $F_j < \min\{|F_1|, |F_2|, |F_3|, |F_4|\}$  so, in that case  $|F_j| \leq |F_1 F_2 F_3 F_4|^{\frac{1}{4}}$  ( $j = 1, 2, 3, 4$ ) would be appropriate.

Therefore

$$|F_1 F_2 F_3 F_4| < \sum_{i=1}^4 |F_k^{(i)} F_k^{(i)} F_k^{(i)} F_k^{(i)}|^{\frac{5}{4}} \leq |F_1 F_2|^{3/2} + |F_1 F_3|^{3/2} + |F_1 F_4|^{3/2} + |F_2 F_3|^{3/2} + |F_2 F_4|^{3/2} + |F_3 F_4|^{3/2}, \quad (30)$$

According to (29)

$$\begin{aligned} \iint_{\Gamma_2} |F_j F_k|^{3/2} d\eta_1 d\eta_2 &\leq \iint_{\Gamma_2} \min(F_j, F_k)^{1/4} (|F_j|^{5/4} |F_k|^{3/2} + |F_k|^{5/4} |F_j|^{3/2}) d\eta_1 d\eta_2 < \\ &\leq (\varphi(q) B^2)^{1/4} \iint_{R^2} (|F_j|^{5/4} |F_k|^{3/2} + |F_k|^{5/4} |F_j|^{3/2}) d\eta_1 d\eta_2 \leq \\ &\leq (\varphi(q) B^2)^{1/4} |\Delta_{jk}|^{-1} \left[ \left( \int_{-\infty}^{+\infty} |F_j|^{5/4} d\bar{\eta}_j \right) \left( \int_{-\infty}^{+\infty} |F_k|^{3/2} d\bar{\eta}_k \right) + \left( \int_{-\infty}^{+\infty} |F_j|^{3/2} d\bar{\eta}_j \right) \left( \int_{-\infty}^{+\infty} |F_k|^{5/4} d\bar{\eta}_k \right) \right] \leq \\ &\left| \alpha = \frac{1}{4} \text{ бўлганда } [1] \text{ даги } (6,3)(b) \text{ леммадан фойдаланиб } \right| \\ &\leq (\varphi(q) B^2)^{1/4} |\Delta_{jk}|^{-1} \left[ 2 \left( (N^{5/4} L^{-1} T^{3/8} \ln N) \varphi(q)^{5/4} \right) \left( (N^{3/4} L^{-1} T^{1/4} \ln N) \varphi(q)^{3/2} \right) \right] \leq \\ &\leq \varphi(q)^{1/4} B^{1/2} \frac{9}{2B^2} 2 \left( N^{11/4} L^{-2} T^{5/8} \ln^2 N \right) \leq Q^{1/4} B^{1/2} \frac{9}{B^2} \left( N^{11/4} \frac{N^{-2}}{Q^{12}} T^{3/8} \ln^2 N \cdot Q^{11/4} \right) \leq \\ &\leq \frac{9}{B^2} \cdot \frac{Q^3 N^2 \cdot N^{3/4} \cdot Q^{5/8\sqrt{\delta}} \cdot N^2}{Q^{12}} \left\langle \left\langle \ln^2 N < N^2 \right\rangle \right\rangle < \frac{N^2}{Q^5} \left( 9 \cdot N^{11/4} \cdot Q^{\frac{5}{8\sqrt{\delta}} - \frac{3\delta}{2} - 4} \right) < \\ &< \frac{N^2}{Q^5} \left( N^{\frac{11}{4} + \frac{5\sqrt{\delta}}{8} - \frac{3\delta}{2} - 4} \right) \leq \frac{N^2}{Q^5} \\ &\text{if } \delta < \frac{5}{4} \left( \frac{5}{8\sqrt{\delta}} - \frac{3}{2} \right)^{-1} \text{ so} \end{aligned}$$

Hence,  $\Gamma_2$  the estimate is reasonable for the integral obtained by industry

$$\iint_{\Gamma_2} FR(-\bar{\eta}_5) d\eta_1 d\eta_2 < N^2 Q^{-5} \quad (31)$$

Now based on (30) and (31)  $I_1(b)$ ,  $\bar{b} = (b_1, b_2)$  Find out more  $X^2 Q^{-1}$  for all values except value

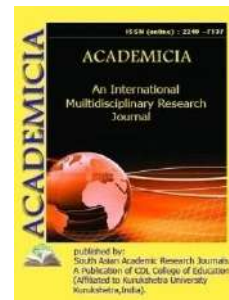
$$I_1(b) = \sum_{q \leq Q} \varphi(q)^{-4} \sum_{\bar{h}} e_q(-\bar{h}_q) \iint_{R^2} e(-\bar{\eta}_b) \prod_{j=1}^4 H_j(\bar{h}, q, \bar{\eta}) d\eta_1 d\eta_2 + O(N^2 Q^{-5}) \quad (32)$$

we make it possible to express in appearance.

Thus 2.2lemma was proved.

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DOI: **10.5958/2249-7137.2020.00675.8**

## THE ROLE OF CLOUD TECHNOLOGIES IN LIFE

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### ABSTRACT

*The development and implementation of information and communication technologies has not only shaped the modern global economy, but also led to the emergence of a new generation. This, in turn, led to a radical reform of society, as well as a change in the form of transmission, reception and processing of information. The fact that it is reflected in all spheres of the economy also leads to significant changes in the content. Cloud technology is actively used in all developed countries. They offer completely new, cost-effective opportunities for business, management, education and research. Nowadays, the very rapid change of information paves the way for the growth of knowledge, personality and successful implementation of professional activities. Therefore, it is very important to study and apply cloud technologies in our work today. This article provides information on the benefits of using cloud technology in education, medicine, entrepreneurship, and banking. There is also a site about the role of information technology in all areas using Google Drive.*

**KEYWORDS:** *Cloud Technology, Cloud Computing, Private Cloud, Shared Cloud, Mixed (Hybrid) Cloud, Cloud Education, Cloud Computing For Business, Google Drive*

### INTRODUCTION

The concept of development of the higher education system of the Republic of Uzbekistan until 2030 has been developed [1]. The content of the concept includes the tasks of higher education in Uzbekistan at the stage of national development from the national revival, normative and legal documents on the organization of educational processes, advanced educational technologies and pedagogical skills, information and communication technologies in educational processes. Recent achievements in modern methods of organizing the learning process, the development of the creative component of the teacher, the use of the global Internet, multimedia systems and

relevant forms of distance learning, relevant knowledge, etc. 'focused on the development of skills, competencies and competencies [1].

The development and implementation of information and communication technologies has not only shaped the modern global economy, but also led to the emergence of a new generation. This, in turn, led to a radical reform of society, as well as a change in the form of transmission, reception and processing of information. The fact that it is reflected in all spheres of the economy also leads to significant changes in the content.

The 21st century is the age of high technology and mass communication. Now it's hard to imagine our lives without electronic devices like computers, laptops, tablets or even cell phones. These devices have changed the lives of many people. Nowadays, one person has several computers. You have to get data from your home computer to your office. These include constantly transferring files, opening and editing documents, and thinking about the results of programs. In addition, the limited size of your computer's hard drive or flash card, the need to have a license to use the software makes it necessary to use "cloud" technology. Cloud technology is actively used in all developed countries. They offer completely new, cost-effective opportunities for business, management, education and research. Nowadays, the rapid change of information creates the basis for the growth of knowledge, personality and successful implementation of professional activities. Therefore, it is very important to study and apply cloud technologies in our work today.

**Cloud technologies** are data processing technologies in which computer resources are provided to the Internet user as an Internet service. The word "cloud" exists here as a metaphor for a complex infrastructure that hides all technical details.

**Cloud computing** (cloud computing), also known as "cloud computing") is a data processing technology that provides the user with computer resources and capabilities as an Internet service. The user has access to his data but cannot control it and should not worry about the infrastructure, operating system and the software he is running. The term "cloud" is used as a metaphor based on an Internet image in a computer network diagram, or as an image of a complex infrastructure in which all technical details are hidden. According to an IEEE document published in 2008, "Cloud computing is a paradigm in which data is permanently stored on Internet servers and temporarily stored by the client, such as on personal computers, game consoles, laptops, Smartphone's, and so on.

In addition to the different ways of providing services, there are several options for deploying cloud systems:

**A private cloud** is a specific model of cloud computing that includes a clear and secure cloud environment in which only a defined client can operate. As with other cloud models, personal clouds provide computing power using a database of physical computing resources as a service in a virtual computing environment. However, in the personal cloud model, only one organization has access to the cloud (resource fund), which provides more control and privacy to that organization.

**Shared Cloud** - Used by cloud providers to serve external customers.

**Mixed (hybrid)** cloud is a combination of the above two deployment models.



The Internet has become an integral part of people's lives and new opportunities have emerged to help them perform a variety of tasks on a regular basis. Innovation is a cloud technology that can be applied in a variety of areas: education, medicine, logistics and more.

### **Advantages of cloud services**

To get started, let's focus on the available pluses, which include:

1. You don't have to buy expensive computers and accessories to store data because everything is stored "in the cloud".
2. Computer performance is improved because in office work and other areas, cloud technology remotely controls applications, so there is a lot of space left on the computer.
3. Every year the maintenance problems decrease as the number of physical servers is constantly decreasing and the software is constantly updated.
4. The purchase price of the app is reduced because the app only needs to be purchased once for the "cloud" and that's all, and sometimes you can even order it for rent.
5. Cloud technologies have no restrictions on the amount of data that can be stored. In most cases, the volume of such services is in the millions of gigabytes.
6. Software is updated automatically, so there is no need to follow this, as in downloaded programs.
7. "Cloud" can be used on any operating system, as access to applications is done through web browsers.
8. New cloud technologies always give you access to documents because the key is the availability of the Internet.
9. Good security and protection against data loss, because the sent data is automatically saved and copies are thrown to backup servers.

### **Disadvantages in the cloud**

This "cloud" has a number of flaws that you need to be aware of and take note of:

1. Access is not possible without the Internet, and if it is not, then it is possible to work only with documents downloaded to the computer. It should be noted that the Internet should be fast and high quality.
2. The cloud service can run more slowly when transferring large amounts of data than the installed application.
3. Security rarely, but in most cases, Cloud backups, so no need to worry.
4. Many are embarrassed that you have to pay to provide a range of services, but this is a business project where people have to make money.

Cloud computing usually provides the user with computer resources and power in the form of an Internet service. In this way, the user is provided with computing resources in the form of "pure" and the user may not be able to answer questions such as what kind of computer he is running

and what type of operating system (OS) is running, and in fact there is no need to look for answers. It does not [2].

Finding similarities and commonalities, cloud technology can be compared to mainframes. However, there are fundamental differences between cloud and mainframe, in particular the fact that cloud computing power is not theoretically limited.

We know that in order for information to be transformed into information, it must have the following three qualities [2]:

- Information must be complete;
- The information must be reliable;
- The information must be valuable in some sense.

Here's a look at how cloud technology has penetrated all walks of life and how cloud services can benefit.

### **Cloud Education**

Computers and the Internet have entered the education system to improve and facilitate the process of performing a number of tasks. Cloud technologies in the learning process can be used for the following purposes:

1. Organize staff collaboration on important documents, such as an annual plan or program. Each of them is responsible for a part of the document and all users can leave comments and fill in the information if necessary.
2. General project work, so the teacher can assign assignments to students, share responsibilities, and review reports, comment.
3. Cloud technology can be used to create an electronic diary and transfer any written assignments. This is a great choice for kids who go to home school or miss classes for some reason.

### **Cloud technologies in medicine**

Recently, the “cloud” has been actively introduced in medicine, taking it to a new level. New technologies offer enormous opportunities for revolutionary change, as medical records are much easier to store and organize. The use of cloud technologies in medicine is very important because they help to quickly diagnose and draw conclusions. At present, such a service is only being introduced because there are no mechanisms to regulate medical confidentiality.

### **Cloud technologies in logistics**

The cloud has great potential in transportation and warehousing logistics. With the help of cloud technologies, it is possible to ensure full interaction of all participants in the chain, namely the sender, operators, the transport company and the recipient. They can all communicate in real time no matter where they are. The use of cloud technologies offers the following advantages:

- Open tenders for contractors;
- identify the most successful directions;

- Delivery management;
- Processing and storage of all transport data;
- Improving the quality of order fulfillment.

### **Cloud technologies in the banking sector**

The competition between banks is huge and not everyone can cope in a time of crisis. Such financial institutions are beginning to use innovative technologies to reduce costs. Cloud storage services focus on automating financial processes. As a result, the efficiency of credit institutions will increase due to the reduction of reporting costs. It should be noted that cloud storage does not store customer information because of the risk of harassment.

### **Cloud computing for business**

Businesses use the cloud for the following purposes:

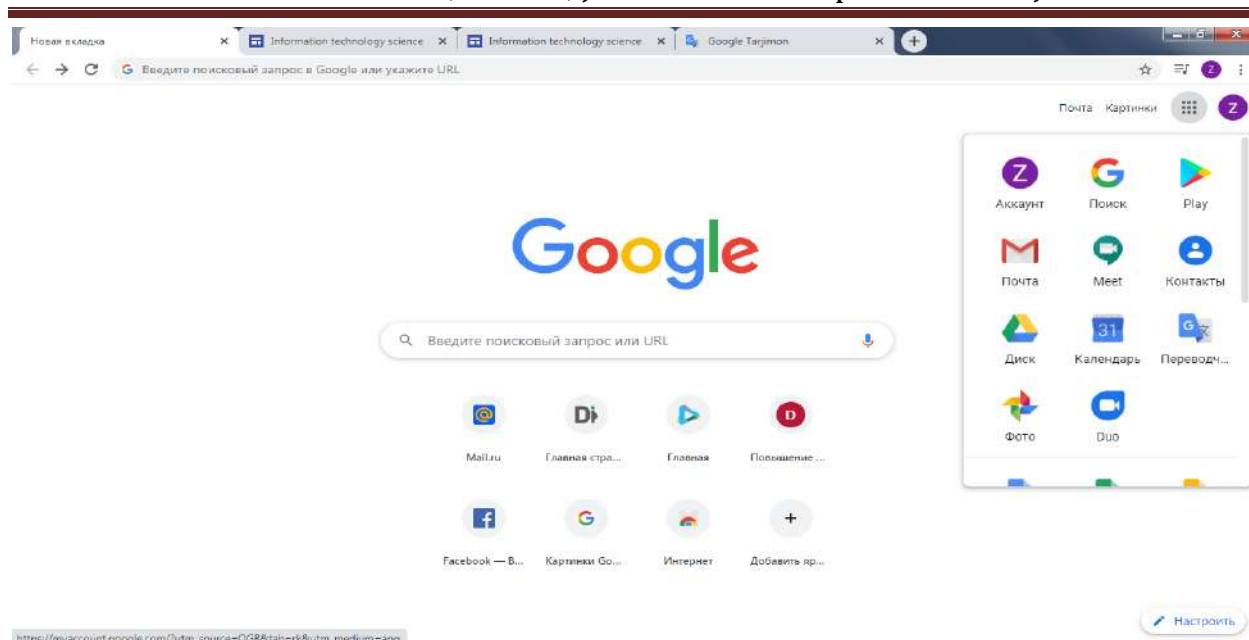
1. The virtual server is rented so that the manager can fully manage all the located services regardless of the provider.
2. Creating a virtual contact center on the network is very easy, so you can save on renting a room and organizing workplaces. Work can begin two days after the application is submitted to the provider.
3. Cloud services for business are used to create a virtual office, i.e. the workplace is not connected to a specific computer. In the cloud, the company's internal network is duplicated, meaning there are disks, folders, and programs for scheduling.

### **Games through the cloud service**

In the 2000s, a cloud streaming service emerged that allowed users to play "heavy" games over the Internet without having to download and install their computers. In America and China, the industry is already well developed. Recently, Microsoft officially announced the development of the DeLorean system, which allows a person to play through a cloud service and predict the actions of the system before pressing the buttons.

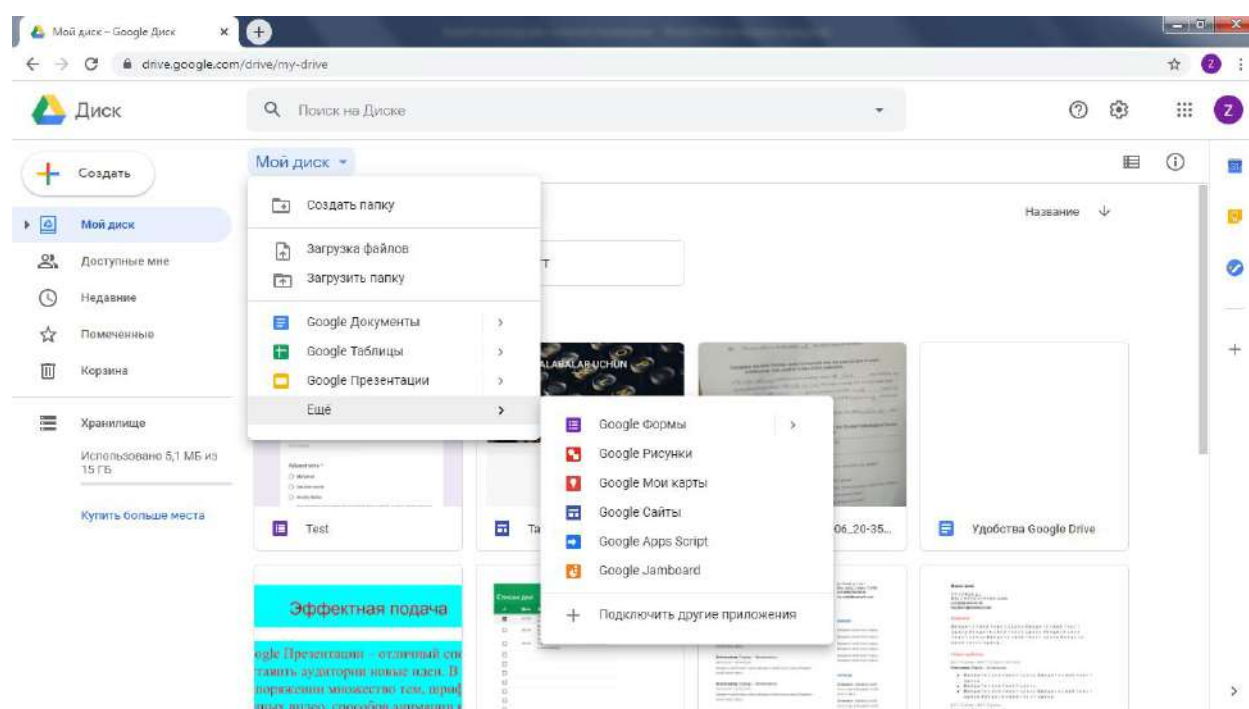
We talked a bit about cloud technology above. Now, let's do some practical work using Google's Google Drive. We decided to stop by the Google site because of the information about services such as Google document, Google spreadsheet, Google presentation.

Click on the  icon to use Google's Google drive service. As a result, the following window will open (1-picture) on the screen:



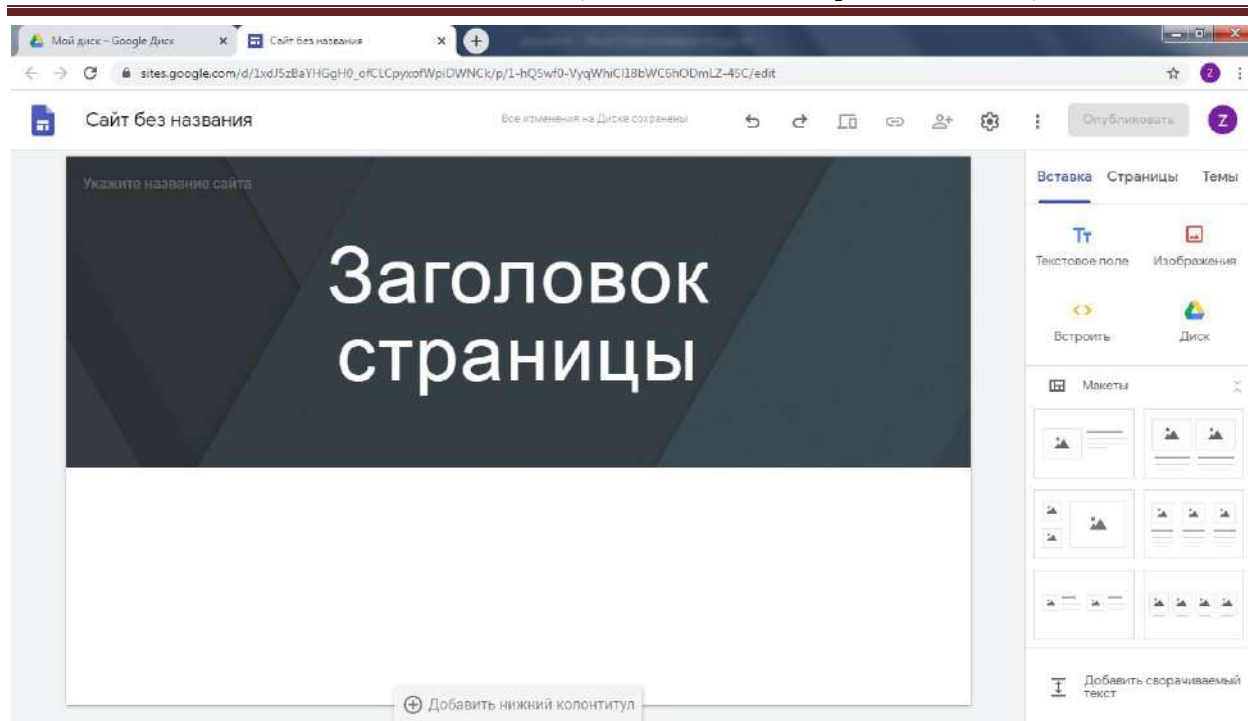
1-picture

We select Disk. We can see many actions and programs on the disk. You can see the following additional features by selecting the command again. Let's look at creating a site by selecting Google from these services. (2-picture)



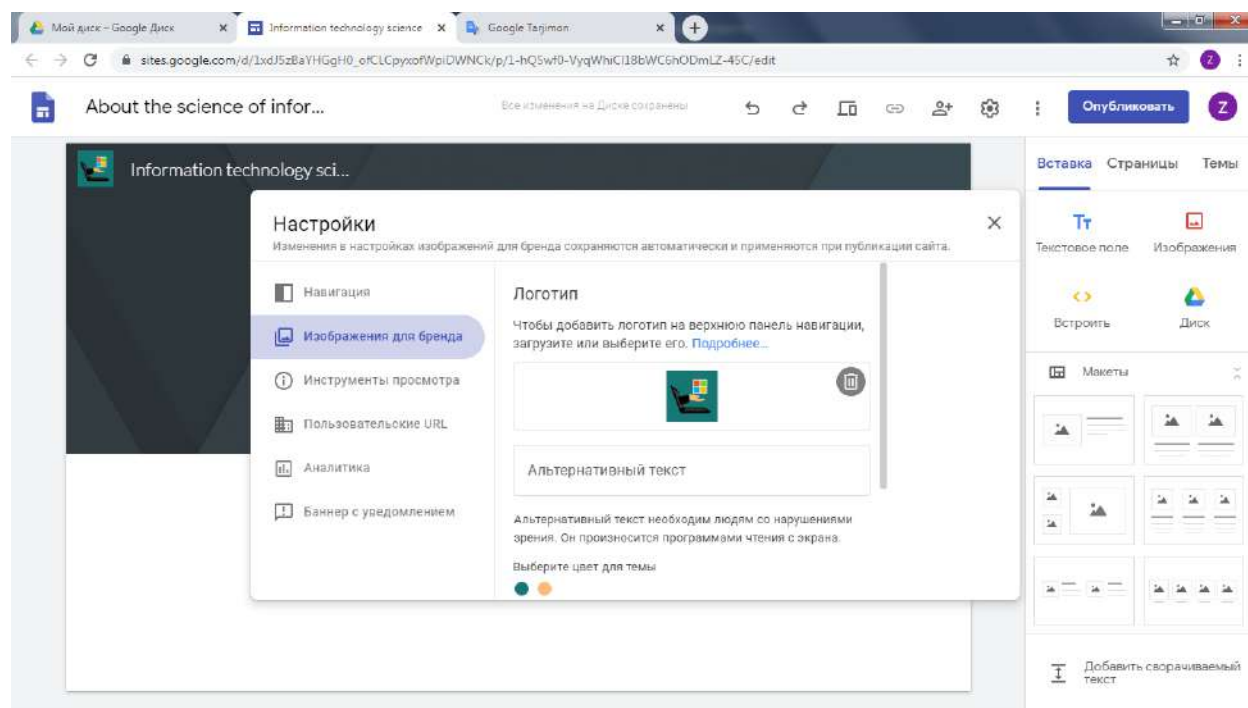
2-picture

When we select a Google site, the following window will open: (3-picture)

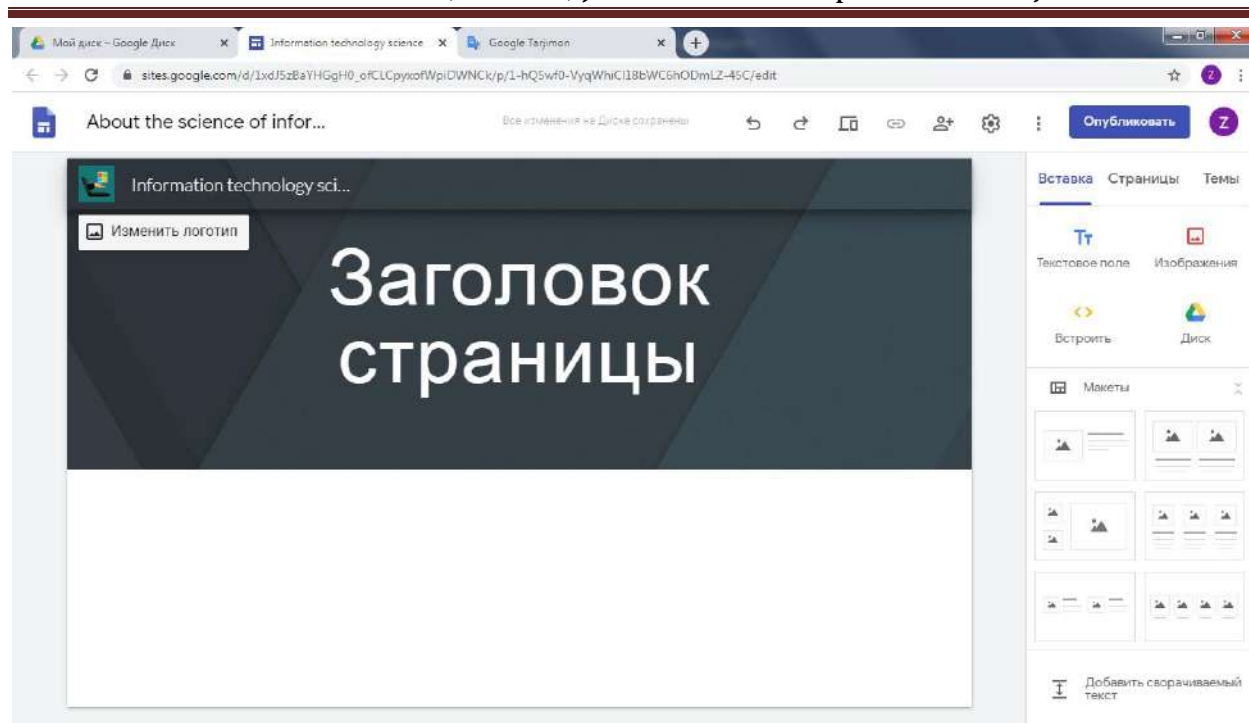


3-picture

By clicking on the site anonymously, you can add a name and logo to the site you are creating.  
(4-picture)

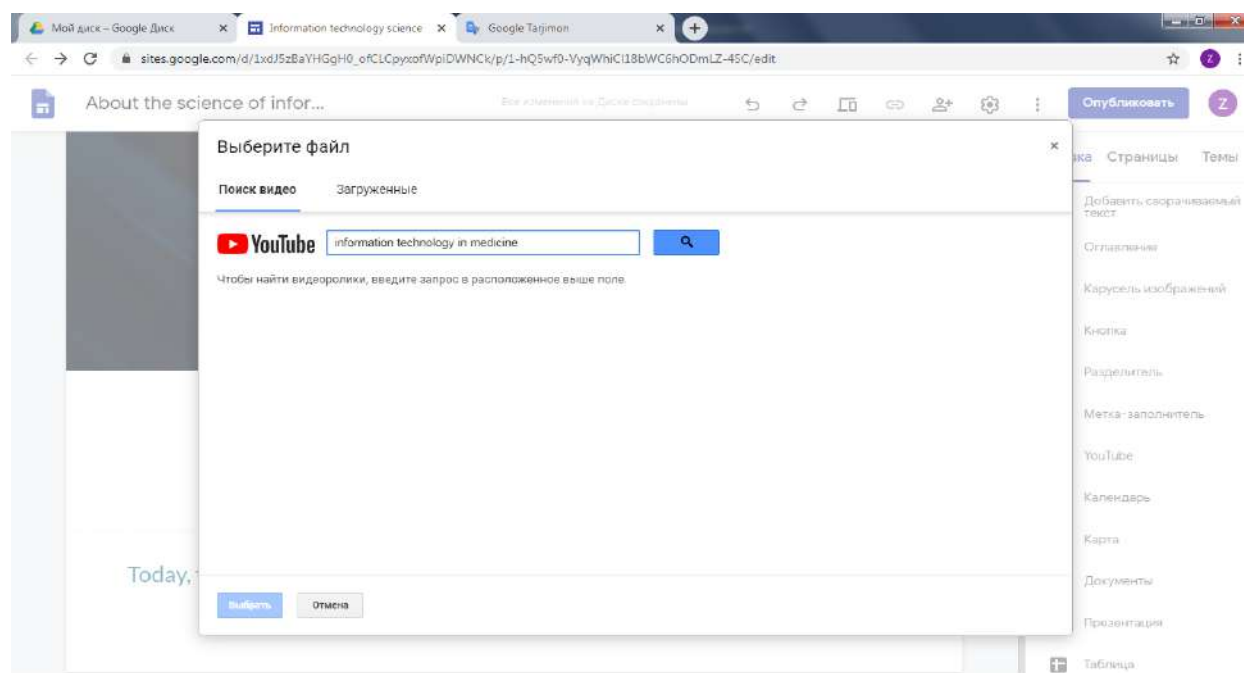


4-picture



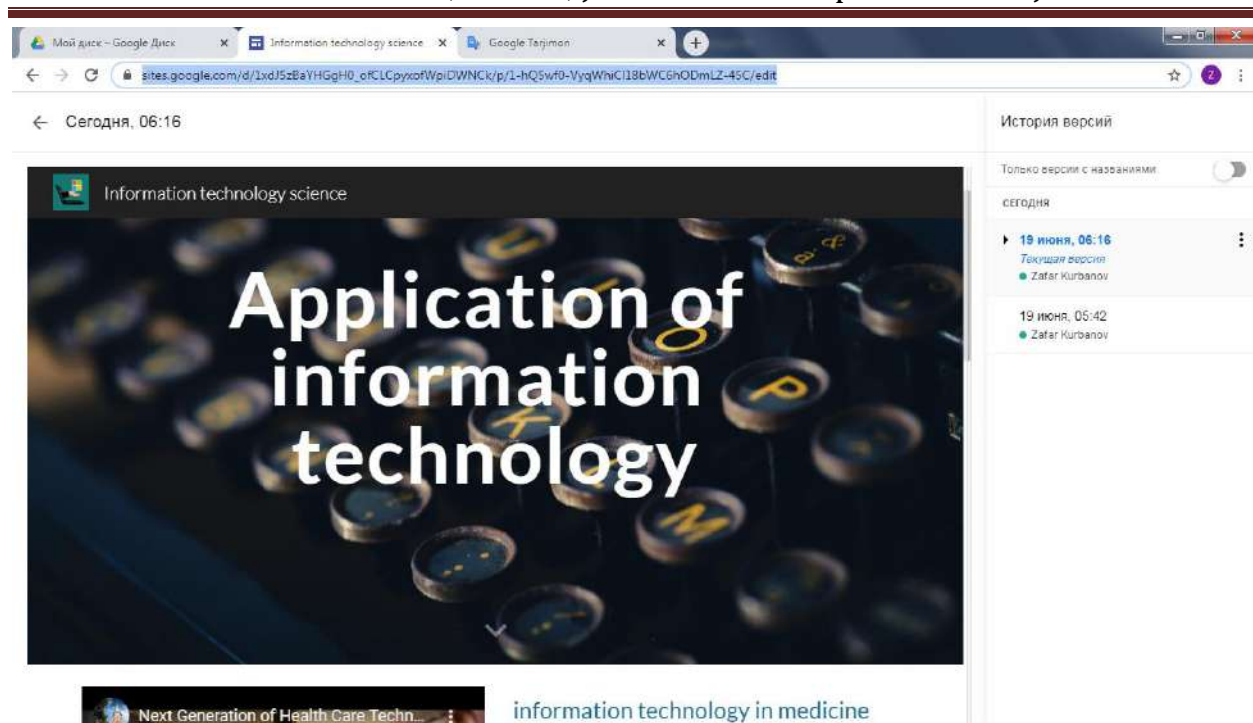
5-picture

Use the commands on the right to get your site up and running. (5, 5.1-picture) We dedicate this site to the unique importance of information technology today. In a very short time, we used Google Drive to create information about information technology for the general public. (6, 6.1, 6.2 - picture)

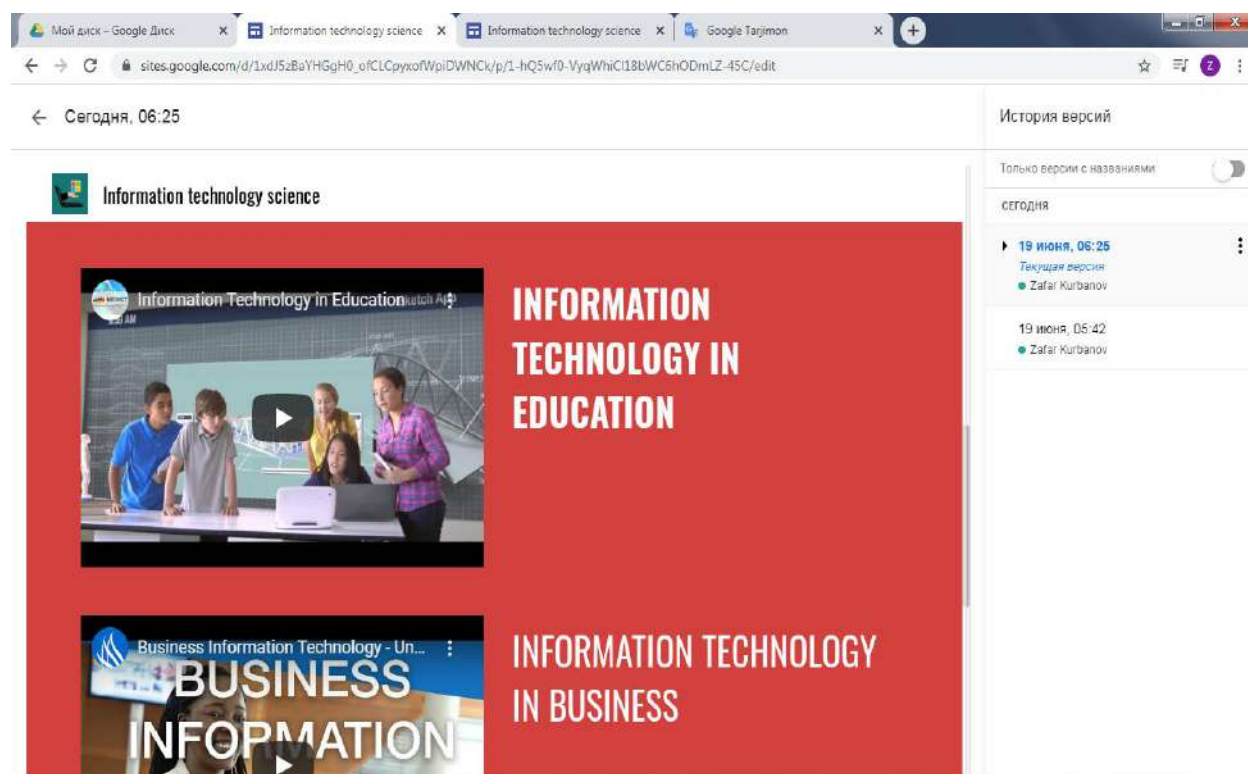


5.1-picture

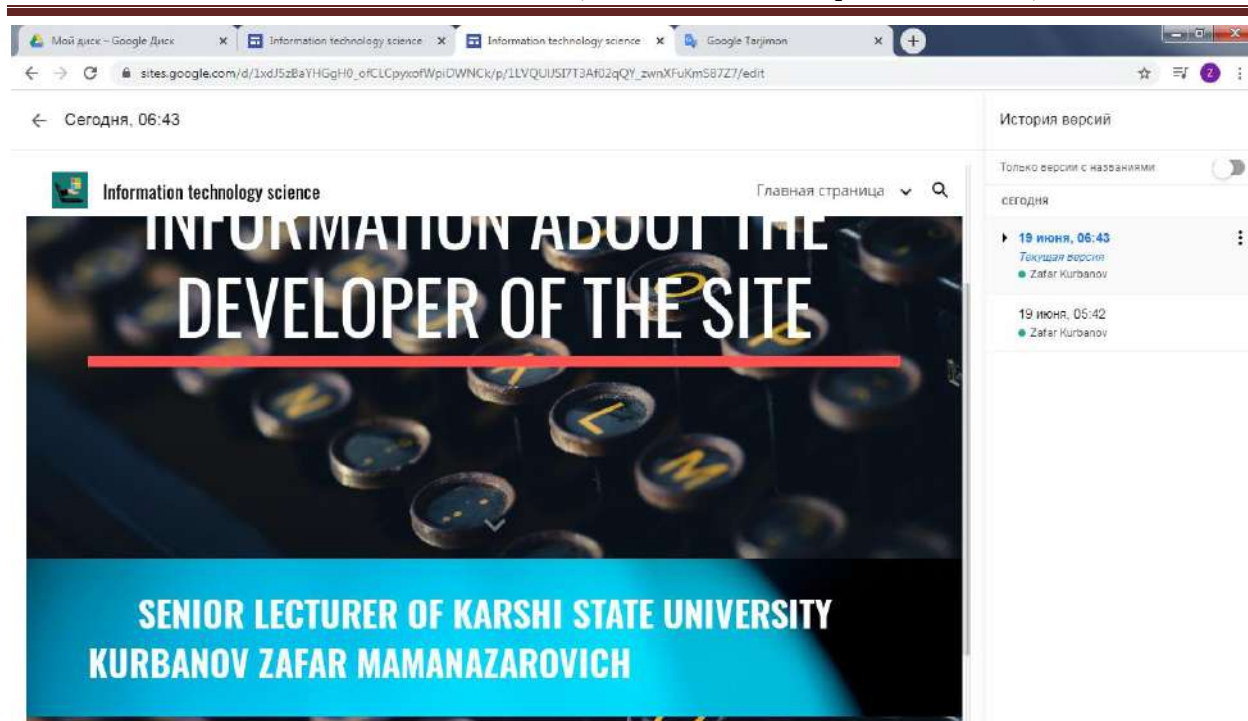




6-picture



6.1-picture



6.2-picture

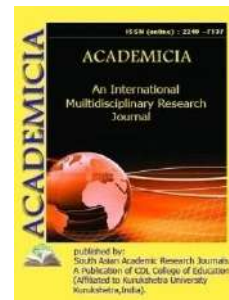
This site can be accessed and used by any user at the following address:

[https://sites.google.com/d/1xdJ5zBaYHGgH0\\_ofCLCpyxofWpiDWNck/p/1LVQUIJSI7T3Af02qQY\\_zwnXFuKmS87Z7/edit](https://sites.google.com/d/1xdJ5zBaYHGgH0_ofCLCpyxofWpiDWNck/p/1LVQUIJSI7T3Af02qQY_zwnXFuKmS87Z7/edit)

In general, the use of cloud services offers great opportunities today. After a thorough study of the above site creation, the volunteer will be able to use it in other scientific works, advertising.

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DOI: **10.5958/2249-7137.2020.00676.X**

## THE STATUS OF THE STATE LANGUAGE IN THE CONSTITUTIONS OF AFGHANISTAN

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### ABSTRACT

*This article analyzes the issue of a difficult ethno linguistic situation, the factors of its occurrence, the status of the state language and languages in the Constitutions adopted in the history of Independent Afghanistan and language policy in the country. Representatives of more than 20 nationalities live in Afghanistan, which belong to the Iranian, Turkic, Arab, North Indian and Dravidian ethnic groups, the languages and dialects spoken by the population exceed more than 30. In 1747, from the time of the founding of Afghanistan until 1936, the only state language was Dari, and to this day has the status of being widely used as a language of interethnic communication. According to Article 16 of the 2004 Constitution, the official languages are Pashto and Dari. In areas where the majority of the people speak in any one of Uzbek, Turkmen, Pashayi, Nuristani, Balochi or Pamiri languages, any of the aforementioned language, in addition to Pashto and Dari, shall be the third official language. The simultaneous functioning of two languages, and in some regions three languages as an official state language, has resulted in bilingualism and multilingualism among the population.*

**KEYWORDS:** *Ethno linguistic Situation, State Language, Official Language, National Language, Language Of Interethnic Communication, Constitution, Language Policy.*

### INTRODUCTION

Afghanistan is a multi-ethnic and multilingual country. According to the data, the country is home to more than 20 nationalities belonging to the Iranian, Turkish, Arab, North Indian,

Dravidian ethnic groups. Today, there are more than 30 languages and major dialects spoken in Afghanistan, which belong to the Indo-European (Iranian, Hindi, Dord), Turkic, Mongol, and Sami languages [1. 12]. The emergence of such a complex ethnolinguistic situation in the country is due to a number of factors. First, Afghanistan is located in a region where different ethnic areas meet. The peoples living in its central and northeastern regions speak mainly Dari, while in the northern provinces they speak Pashto, Hindi and Dord in Turkic, eastern and southern provinces. Second, due to the complex geographical conditions of the country, including limited communication capabilities, the peoples living in the gorges of the Pamir Mountains have preserved their ethnic identity, national or tribal languages to this day. As a result, the weight of languages and dialects with a small number of speakers in Afghanistan is significant. At the same time, the ethnicity of the warriors who passed through Afghanistan in ancient times and their settled remnants (Arabs and Jews, Hazaras whose ethnic roots go back to the Mongol invasion, the people of Nuristan (formerly Kafiristan) associated with the Macedonian invasion) It should be noted that [2. 3-8]. Of course, it is natural that such ethnolinguistic diversity has an impact on the official language policy in the country and the language situation in general.

### THE MAIN FINDINGS AND RESULTS

Dari language [3] (دري *dar(r)i*), in the scientific literature, there are also the terms "Persian" [4], "Farsi-ye Kabuli" [5], "Kabul Persian" [6. 1-2]) Along with Pashto, the official state language of Afghanistan has been in use by the vast majority of the population since the Middle Ages to the present day. According to statistics, 49% of the country's population considers Dari to be their mother tongue, and 37% to consider it as a second language. The following table [8] shows the ratio of languages spoken in Afghanistan:

Languages	2006 (as L1) (out of 6226)	2006 (as L2) (out of 6226)	2013 (out of 9,260)	2018 (out of 13,943)
Dari	49%	37%	79%	77%
Pashto	40%	28%	51%	48%
Uzbeki	9%	6%	9%	11%
Turkmani	2%	3%	3%	3%
Baluchi	0%	0%	1%	1%
Pachaie	0%	1%	1%	1%
Nuristani			1%	1%
Arabic	0%	2%	1%	1%
English	0%	8%	5%	6%
Urdu	0%	7%	2%	3%

The number of Pashto speakers may be higher than the figure in the table, as some Pashto-speaking areas have not been studied for safety reasons. "Concise Encyclopedia of Languages of the World", published in 2009 [9. 1320], Pashto is the mother tongue for 60% of the population of Afghanistan. The following 34-province language map of Afghanistan provides a more accurate picture of the numbers in the table:





The simultaneous use of two languages, and in some regions, the status of three languages as the state language, naturally creates bilingualism and multilingualism among the population. As noted in the table, 86% of the population speaks Dari, and there is no doubt that this language has the status of the language of interethnic communication in Afghanistan. It is also known from history that when the state of Afghanistan was formed (1747), although the state administration was mainly in the hands of Pashtuns, Dari, not Pashto, was adopted as the state language. Indeed, for the population of the new empire belonging to different ethnic groups, this language served as a lingua franca [10. 43], until 1936, Dari was the only state language in Afghanistan. By the first quarter of the twentieth century, the country began to raise the status of Pashto as the state language. Eventually, Pashto was given the status of the first state language in the 1964 constitution.

The article analyzes the status of the Dari language in the constitutions of Afghanistan.

The Afghan state has a wealth of experience in constitutional reform. In the 90-year history of independent Afghanistan, 8 (10 in some sources [10]) constitutions have been adopted.

In 1923 (10th of 1301) King Amonullah (“*افغانستان نظامنامه اساسی دولت علیه*”) and 1931 (August 8, 1310) during the reign of King Nodirkhan (“*اصول اساسی دولت علیه افغانستان*”) There is no article on the state language in the constitutions.

The third constitution, adopted in 1964 (Criterion 9, 1343) during the reign of King Muhammad Zahirshah (“*قانون اساسی افغانستان*”), contained an article on the official language:

**ماده سوم:** از جمله زبانهای افغانستان پشتو و دری زبانهای رسمی میباشد.

**ماده سی و پنجم:** دولت موظف است پروگرامهای مؤثری برای انکشاف و تقویه زبان ملی پشتو

وضع و تطبیق کند [12]

**Article 3.** *From amongst the languages of Afghanistan, Pashto and Dari shall be the official languages.*

**Article 35.** *It is the duty of the State to prepare and implement an effective programme for the development and strengthening of the national language, Pashto.*

It should be noted that although Dari is listed as an official language in the Constitution, a separate article states that Pashto is a “national language” and that the state has a duty to “develop” it.

In the fourth Constitution of the Republic of Afghanistan adopted in 1976 (also recorded as January 26, 1977 [13]) (5th hut of 1355) during the reign of Muhammad Davud Khan, "Article 3 of the 1964 (قانون اساسی جمهوری افغانستان) Constitution was repeated in Article 23 of the 1964 Constitution. :

«از جمله زبانهای افغانستان زبانهای پشتو و دری زبانهای رسمی میباشد [14]»

*From amongst the languages of Afghanistan, Pashto and Dari shall be the official languages.*

In this article, the word پشتو is not spelled as پښتو as before. There is also a clause on the condition of “development of the Pashto national language.”

The Fifth Constitution, adopted by the Democratic Republic of Afghanistan in 1980 under the leadership of Babrak Kormal (اصول اساسی جمهوری دموکراتیک افغانستان), also focuses on Pashto and Dari:

**ماده چهارم:** ...قوانین و فرامین شورای انقلابی به زبانهای پشتو و دری نشر می شود و میتوان آنها را به سایر زبانهای خلقهای افغانستان نشر کرد [15]

**Article 40:** *Laws and decrees of the Revolutionary Council shall be published in Pashto and Dari and may be published in the languages of other peoples of Afghanistan.*

1987 (Box 9, 1366) The Sixth Constitution of the Republic of Afghanistan, adopted during the reign of Dr. Najibullah («قانون اساسی جمهوری افغانستان») **Article eight:**

«از جمله زبانهای ملی کشور پشتو و دری زبانهای رسمی میباشد» [16]

*Pashto and Dari are official languages among the national languages of the country.*

If we look at this article, there is a difference between “national language” and “official language”. All languages in Afghanistan are "national" and Pashto and Dari are the “official languages”.

In 1990 (Article 8, 1369), under Dr. Najibullah, («قانون اساسی جمهوری افغانستان») the Seventh Constitution was adopted. In this case Article 8 is repeated exactly. However, this constitution is ignored by some Afghan scholars. [13] The 1994 (1372 criterion) Constitution of the Islamic State of Afghanistan, («اصول اساسی دولت اسلامی افغانستان») adopted under the leadership of Burhanuddin Rabbani, is the seventh constitution in Afghan history. [13]

However, given the Taliban regime's dominance in Afghanistan between 1996 and 2001, there is no need to talk about the historical significance of this constitution.

## CONCLUSION

Currently, the status of languages in Afghanistan was adopted by the Loya Jirga on January 4, 2004 (6th dal. 1382) and It is set in accordance with Article 16 of the Constitution, which was officially signed by Afghan President Hamid Karzai. According to him, Pashto and Dari



languages have been given the status of official state languages. Uzbek, Turkmen, Pashayi, Nuristani, Baluch and Pamir languages are also the third official languages in the densely populated regions [17].

#### ماده شانزدهم:

از جمله زبانهای پشتو، دری، ازبکی، ترکمنی، بلوچی، پشه یی، نورستانی، پامیری و سایر زبانهای رایج در کشور، پشتو و دری زبانهای رسمی دولت می باشند.

در مناطقی که اکثریت مردم به یکی از زبانهای ازبکی، ترکمنی، پشه یی، نورستانی، بلوچی و یا پامیری تکلم می نمایند آن زبان علاوه بر پشتو و دری به حیث زبان سوم رسمی می باشد و نحوه تطبیق آن توسط قانون تنظیم می گردد.

#### Article Sixteen

*From amongst Pashto, Dari, Uzbeki, Turkmani, Baluchi, Pachaie, Nuristani, Pamiri and other current languages in the country, Pashto and Dari shall be the official languages of the state.*

*In areas where the majority of the people speak in any one of Uzbeki, Turkmani, Pachaie, Nuristani, Baluchi or Pamiri languages, any of the aforementioned language, in addition to Pashto and Dari, shall be the third official language, the usage of which shall be regulated by law.*

The article also states:

دولت برای تقویت و انکشاف همه زبانهای افغانستان پروگرامهای مؤثر طرح و تطبیق می نماید.

نشر مطبوعات و رسانه های گروهی به تمام زبانهای رایج در کشور آزاد می باشد.

مصطلحات علمی و اداری ملی موجود در کشور حفظ می گردد.

*The state shall design and apply effective programs to foster and develop all languages of Afghanistan.*

*Usage of all current languages in the country shall be free in press publications and mass media.*

*Academic and national administrative terminology and usage in the country shall be preserved.*

Given the Pashto language's status as a national language, the clause on the preservation of “scientific and national administrative terms” would naturally preclude the implementation of the previously mentioned “effective programs for the strengthening and development of all languages.” Article 20 of the Constitution

«سرود ملی افغانستان به زبان پشتو و با ذکر الله اکبر و نام اقوام افغانستان میباشد» [15]

**Article Twenty:** *The national anthem of Afghanistan shall be in Pashto with the mention of “God is Great” as well as the names of the tribes of Afghanistan.*

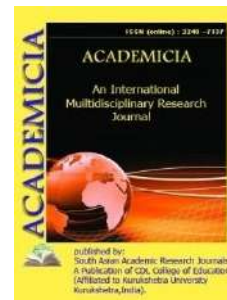
This further strengthens the status of Pashto as the official and national language.

An analysis of the official language articles in the Constitutions adopted in the history of Afghanistan once again confirms that the main focus of the country's state language policy is on increasing the prestige of the Pashto language.

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DOI: **10.5958/2249-7137.2020.00727.2**

## **JOB CHALLENGE AFFECTING PERCEIVED ORGANIZATION SUPPORT**

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### **ABSTRACT**

*The sooner you begin to make changes in the situation, or in how you respond to it, the easier it will be to handle. Human resource is the prime source which enables an organization to achieve best out of other available resources like physical, financial and organizational resources. The research literature indicates that support employees perceive is positively related to a number of outcomes favorable to both the organization and the individual namely conscientiousness in carrying out conventional job responsibilities, organizational commitment and job satisfaction. We propose that through supportive interactions with mentors, protégés may develop perceptions about whether or not the organization cares for their well-being. This can happen through the receipt of career-related and psychosocial mentoring. In the present study, the only professional activity significantly related to both affective commitment and perceived organizational support was expressed; all other interest variables were significantly related to affective commitment alone. Commitment is usually stronger among longer-term employees, those who have experienced personal success in the organization, and those working with a committed employee group.*

**KEYWORDS:** Responsibilities, Organizational, Longer-Term Employees, Commitment

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## INTRODUCTION

Actions on the part of organizational agents lead employees to personify the organization and develop perceptions about how the organization values them. Empirical research supports this assumption by finding that POS mediates the relationship between leader-member exchange (LMX; Graen & Scandura, 1987) and work attitudes and behaviors (Eisenberger et al., 2002; Wayne, Shore, Bommer, & Tetrick, 2002). While mentoring has not been examined in relation to POS, it seems reasonable to argue that supervisory mentors may also be viewed as agents of the organization. In fact, Orpen (1997) speculated that seeing the mentor as a representative of the organization is the reason mentoring leads to increased organizational commitment, although this idea has not been examined empirically.

According to Eisenberger et al. (1986), in order for POS to develop, the employee must perceive an organizational agent's actions as discretionary. Mentoring may be a specific type of discretionary pro-social behavior (Allen, 2004). Moreover, the specific types of career-related and psychosocial support that are provided to a protégé are unique currencies of exchange in a mentoring relationship rather than resources that are universally provided to *all* subordinates (Ensher et al., 2001). We propose that through supportive interactions with mentors, protégés may develop perceptions about whether or not the organization cares for their well-being. This can happen through the receipt of career-related and psychosocial mentoring.

### Job Challenge

With the rapidly changing business practices organization are facing increased and mounting challenges. Now organizations are striving to meet these uncalculated challenges which arise with each step to pass. Meeting these challenges requires best use of possible resources. Out of many resources human resource is the best of all. Human resource is the prime source which enables an organization to achieve best out of other available resources like physical, financial and organizational resources. Making best out of human resource can offer lasting competitive edge over rivals, which is dream of every business (Singh and Singh, 2010).

Job challenges can be hard to deal. Working through out can help you become a stronger, more confident employee. You can learn to stand up for yourself or change a situation when someone or something at work is causing you stress or unhappiness. A number of factors associated with the measurement process can challenge the validity and reliability of job analyses. One of these is the properties of the rating scales in use, including content validity across job types, definitions used for the scale items, and clarity of the rating procedures (Lysaght et al. 2008).

A job challenge may get worse over time and usually doesn't go away on its own. The sooner you begin to make changes in the situation, or in how you respond to it, the easier it will be to handle.

Job challenges related to health, safety and human rights issues, such as sexual harassment and discrimination, are beyond the scope of this article. If you're dealing with any of these issues, tell your supervisor and check out the links in "Additional Information" at the end of this article. You have the right to work in an environment where your health, safety and human rights are protected.

POS is affected by challenges of job directly and indirectly. Organizational rewards and job conditions play a large role in perceived organizational support as well. Sometimes, extrinsic can

mean more to an employee than intrinsic motivation because perceived appreciation has the power to turn a bitter employee into a content employee (Rhoades & Eisenberger 2002 & Eisenberger, Huntington, Hutchison & Sowa, 1986).

Challenges concepts of 'Job' but also raises a number of methodological issues. These include issues associated with developing indicators, establishing new standards of 'organization support', combining different approaches and methods, and maintaining flexibility throughout the job process.

Human resource is one of those capital resources of an organization which not only increases the efficiency and the effectiveness of the organization but it act as a sheer source of competitive advantage which is inimitable. Considering this fact organization's success is based on employee's commitment and their focus towards achieving the organization's prime goals (Mosadeghrad, 2003).

## LITERATURE REVIEW

The research literature indicates that support employees perceive is positively related to a number of outcomes favorable to both the organization and the individual namely conscientiousness in carrying out conventional job responsibilities, organizational commitment and job satisfaction. Therefore the level of support employees perceive of employees needs to be constantly reviewed to ensure favorable outcomes to the organization which ultimately leads to profitability (Krishhan & Mary, 2012).

So, organizational commitment is one of the important consequences of perceived organizational support. Employees with high perceived organizational support feel indebtedness to respond favorably to the organization in the form of positive job attitudes and organizational behaviors and also support organizational goals (Loi, Hang-Yue and Foley, 2006).

The relationship between perceived organizational support and organizational commitment is commonly explained by reciprocity and social exchange. From the social exchange theory perspective, Eisenberger, Huntington, Hutchinson, and Sowa, (1986) argued that beliefs underlie employees' inferences concerning their organizations' commitment to them in turn contribute to the employees' commitment to their organizations. High perceived organizational support creates an obligation for employees. Employees feel an obligation that they not only ought to be committed to their organizations, but also feel an obligation to return the organizations' commitment by showing behaviors that support organizational goals.

Newstrom and Davies (2002) define employee commitment as the degree to which an employee identifies with the organization and wants to continue actively participating in it. Like a strong magnetic force attracting one metallic object to another, it is a measure of the employees' willingness to remain with a firm in the future. It often reflects the employees' belief in the mission and goals of the firm, willingness to expend effort in their accomplishment, and intentions to continue working there. Commitment is usually stronger among longer-term employees, those who have experienced personal success in the organization, and those working with a committed employee group.

## Methodology & Results



**TABLE 1**

<b>Factors</b>	<b>r</b>	<b>Sig.</b>
affective commitment	.597	.001
continuance commitment	-.146	.024
normative commitment	.362	-.000
negative daily mood	-.251	.001
organization	.344	.001

**TABLE 2**

<b>Factors</b>	<b>r</b>	<b>Sig.</b>	<b>Beta</b>
affective commitment	.597	.001	-.199
Continuance commitment	-.146	.024	-.147
normative commitment	.362	-.000	-.334
collaborative working	-.150	-.000	- .294
POS affective commitment	.496	-.000	-.279
Innovations	.560	-.000	-.214

Principal components analysis was utilized in order to examine the nature of commitment within the sample population. A form of factor analysis, principal components analysis mathematically seeks commonalities between responses to questionnaire items, allowing the researcher to group psychologically similar items together. In the current context, performing a principal components analysis of commitment items allows conclusions to be made concerning the distinctiveness or similarity of the items (herein called factors). As noted previously, recent research with individuals in other occupational categories has revealed the existence of clearly delineated and separate factors for both the organizational and professional forms of affective, continuance, and normative commitment (Meyer et al., 1993). If similar results were to pertain with the present sample, it could be concluded that employees also make a distinction between commitment to the organization and commitment to their profession from both an affective, continuance, and normative perspective.

However, principal components analysis of the present data revealed three composite factors for affective, normative, and continuance commitment as opposed to the separate and distinct factors for professional and organizational commitment that have previously been noted. Employees in the current sample did not distinguish between the profession and the organization, when thinking about various aspects of commitment. Within the present sample, it can therefore be concluded that organizational commitment and professional commitment are quite compatible; in fact, they are empirically indistinguishable.

All other analyses therefore utilized these “composite” constructs of commitment. The relationship between perceived organizational support and the various forms of commitment was next examined.

Consistent with previous literature, POS evidenced a strong positive correlation with affective commitment ( $r = .597$ ,  $p = .001$ ). Individuals who felt valued and supported by their organizations were in this case more emotionally attached to the organization and to the profession as well. Also consistent with previous literature, a negative correlation was noted between POS and continuance commitment ( $r = -.146$ ,  $p = .024$ ), such that individuals with strong levels of POS were less likely to feel that they “had to” remain with the organization or

with profession because of the lack of attractive alternatives or due to the disruption in their life that leaving would involve. Finally, a positive correlation between POS and normative commitment was found ( $r = .362$ ,  $p = .000$ ), suggesting that individuals who feel supported by their organization also feel morally obligated to remain with that organization and with their profession.

Analysis of the relationship between POS and daily mood at work revealed a negative correlation between POS and negative daily mood ( $r = -.251$ ,  $p = .001$ ), such that employees who felt more strongly valued by their organization experienced a lessened tendency to feel anxious, stressed or tense in their daily work life. As expected, a positive correlation between POS and positive daily mood was also observed ( $r = .344$ ,  $p = .001$ ), indicating that employees who feel more valued also feel greater levels of enthusiasm and excitement in their daily life at work.

Finally, the relationship between POS, affective commitment, and self-reported interest in a variety of professional activities was examined (affective commitment was included in the analyses due to its strong positive correlation with POS).

Recall that objective behavioral data were not available from the districts sampled, so professional behaviors that could be construed as a kin to organizational citizenship behaviors were employed as dependent measures. A series of simultaneous multiple regression analyses were performed, in which affective commitment and POS were regressed on the various self-report measures. Individual regression analyses were also conducted using affective commitment and POS by themselves, due to the significant correlation between the variables. Overall, results indicated that it was affective commitment, and not perceived organizational support, that typically exerted a main effect on the measures. The results supported the previously observed effects of affective commitment, such that higher commitment people exhibited a greater desire to become involved in these professional behaviors. (Please note that except for the analyses concerning an individual's willingness to offer suggestions for organizational improvement, a negative beta indicates a greater level of interest in the behavior due to the way in which the questions were constructed; an alpha level of .05 was used as the level of significance in all regression analyses.)

Considering the level of interest in the writing a report, simultaneous regression analysis revealed a main effect of affective commitment ( $b = -.199$ ), whereas the effect of POS was not significant ( $b = -.147$ , ns). Individual regression analyses revealed a similar effect, wherein only affective commitment had a significant relationship to expressed interest in writing a report ( $b = -.147$ ). Concerning interest in collaborative planning, simultaneous regression analysis revealed that once again affective commitment exerted a main effect ( $b = -.334$ ), while POS did not ( $b = .139$ , ns). Individual regression analyses revealed an effect of affective commitment only ( $b = -.251$ ), such that individuals with relatively higher levels of affective commitment expressed a greater interest in collaborative planning. A positive influence of affective commitment was also noted with respect to interest in collaborative working ( $b = -.294$ ), whereas no main effect of POS was revealed. Individual regression analyses revealed that both affective commitment and POS were significantly related to interest in collaborative working ( $b = -.279$ ;  $b = -.150$ , respectively). In this case, both individuals with relatively higher levels of POS and those with relatively higher levels of affective commitment were more likely to express an interest in collaborative working. Affective commitment also exerted a positive influence on expressed

interest in incorporating organizational innovations into one's designation ( $b = -.214$ ), whereas POS was not significant. Individual regression analyses echoed these results, with only affective commitment significantly related to interest in incorporating organizational innovations in the work area ( $b = -.150$ ).

Overall, the results are consistent with the generally beneficial influence of affective commitment on pro-organizational behaviors, although the results obtained with perceived organizational supports are inconsistent compared with previous findings.

## DISCUSSION

Taken together, the results of the present study suggested that Job Challenge Affecting Perceived Organization Support maintain an integrated view of commitment, considering both their employing organization and their profession as a whole when contemplating their relationship to their work. Unlike previous research populations evidencing a clear distinction between commitment to the profession and commitment to the organization, the employees herein make no such delineation. Possibly, employees view their commitment to their organization and to their profession as essentially the same due to the fact that their employing organizations require them to daily perform the professional duties for which they were trained. Unlike individuals in a variety of other occupations who may not have the opportunity to use the professional skills they have acquired on a regular basis. Thus, it is likely that they view the activity and profession of working as intimately intertwined with the setting in which they perform that activity.

The integrated constructs of commitment found in the present study suggested that no discernable conflict exists between professional and organizational commitment within the current sample population.

Another possibility, and one that raises an empirical question, is the notion that employees may form a commitment to their profession relatively early in their training, given that most are required to undergo several professional socialization experiences. An individual who is already committed to a professional identity and who knows what he or she is seeking in an organization might therefore be more likely to accept employment only with a district in which they know that their professional orientation will be appreciated and encouraged. Thus, it may be that the overlap of professional and organizational commitment seen here is the result of a self-selection process, with industries who have some pre-existing level of professional commitment seeking a "good fit" that will meet their needs for professional expression and to which they then develop a similar degree of organizational commitment.

Regarding the influence of perceived organizational support, the results of the present research revealed that perceived organizational support was associated with a greater tendency to experience a positive daily mood at work, as well as a lessened tendency to experience negative feelings such as tension or stress on a daily basis. These results suggested that employees who feel valued by their organization, and who feel that they can depend upon the organization for support are more excited and enthusiastic on a daily basis than those who do not experience such support. Although as stated previously, the organizational actions and resources that lead to a strong level of POS vary between individuals, it would appear that industries providing adequate support to their employees are rewarded.

Finally, the results concerning self-reported interest in professional activities were somewhat curious in that they indicate a dominant effect of affective commitment over perceived organizational support on a variety of dimensions. Conversely, some previous research (albeit with a largely non-professional sample) has suggested that POS explains a greater proportion of the variance in such organizational citizenship behaviors than does affective commitment (Shore & Wayne, 1993). In the present study, the only professional activity significantly related to both affective commitment and perceived organizational support was expressed; all other interest variables were significantly related to affective commitment alone. A possible explanation for this result could be that participants viewed collaborative as a professional activity requiring more organizational resources for implementation when compared with the other behavioral possibilities presented (e.g., writing report, collaborative planning, and incorporating innovations). Thus, employees with strong levels of perceived organizational support might view their administration as more likely to provide the resources necessary for effective support.

## CONCLUSION

Current employees are better educated, increasingly mobile and are constantly seeking empowerment. The ever-changing technology, increased competition and globalization have created a new workplace of the past. In the workplace of the future, many employers are realizing that the only constant advantage that they will have is their people is their intellectual capital.

Perceived organizational support increases affective commitment by contributing to the satisfaction of the employees' socio-emotional needs such as esteem, approval and affiliation (Fuller, Barnett, Hester and Relyea, 2003). This satisfaction will serve to enhance employees' social identity by being a member of that organization which creates greater commitment and overcome challenges. Therefore it would be beneficial for organizations which want to attain high performance levels through committed employees to implement strategies that enhance perceived organizational support by creating a positive working environment.

It can also be inferred from the discussion that when employees feel supported their outcomes towards organization are always positive which helps organization to achieve its goals. In summing up it can be concluded that giving value to employees will overcome job challenge.

It is suggested that administrators should take the time to discover the organizational resources that individual value and take measures to provide such resources where possible. As in perceived organizational support literature, the management of a firm must use discretionary or voluntary actions above and beyond that which is required to elicit commitment from its employees. So, the other suggestions are as follows:

- Improving compensation benefits and motivate;
- Commitment levels as well as improve output;
- Innovative schemes to improve employee morale would help increase commitment levels.

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DOI: **10.5958/2249-7137.2020.00546.7**

## SHARP (SPAND) BARG SANO - SASSIA ASUTIFOLIA DEL. THE IMPORTANCE OF PLANTS AND AGRO-TECHNOLOGY OF GROWTH

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UZBEKISTAN

### ABSTRACT

*In recent years, the pharmaceutical industry has been developing rapidly in many countries, including the Republic of Uzbekistan. Therefore, the demand for pharmaceutical companies for raw materials for medicinal plants is growing rapidly. In order to further strengthen the activities in this direction, on May 3, 2017, the President of the Republic of Uzbekistan signed a decree "Nukus-farm", "Zamin-farm", "Kosonsoy-farm", "Syrdarya-farm", "Boysun-farm", "Bostanlik-farm" and Decree PQ-5032 on the establishment of free economic zones "Parkent-farm" was published [1].*

**KEYWORDS:** "Syrdarya-Farm", "Zamin-Farm", Pharmaceutical

### INTRODUCTION

In this decree, the establishment of free economic zones as a priority in the further development of the pharmaceutical industry is identified.

According to the decree, today 146 local pharmaceutical companies in Uzbekistan produce more than 2,000 types of medicines. It was noted that the world pharmaceutical industry produces 8,500 types of medicines, 6,300 of which are imported for the needs of our people.



The raw material reserves of medicinal plants in nature are lagging behind the needs of the pharmaceutical industry. An effective way to create a sustainable stockpile of raw materials for the preparation of plant-derived drugs is to create plantations of medicinal plants. It also allows you to protect the natural resources of medicinal plants and get a quality product.

The volume of cultivation of medicinal plants in the country is determined by the lack of formation of seed reserves and the lack of regional agro-technologies for their cultivation.

It is known that 71 out of 350 species of medicinal plants currently used in medical practice are grown on industrial plantations established in the country. This is not enough to continuously produce medicines that are in high demand and demand under local conditions. With this in mind, the establishment of new plantations in areas with productive capacity, clean and ecologically clean is one of the urgent tasks of the developing pharmaceutical industry.

For the establishment of industrial plantations of medicinal plants, it is necessary to develop agro-technologies adapted to local soil and climatic conditions, as well as to create sufficient conditions for the manifestation of the biological potential of plants.

It should also be noted that the growing demand of the pharmaceutical industry for raw materials for medicinal plants in the future due to the limited reserves of naturally growing medicinal plants can be met mainly through the cultivation of medicinal plants. [2,3].

**Purpose of the work:** To study the types of medicinal plants used in folk medicine and official medicine medicinal plants, their chemical grouping, the use of surface and underground organs of the plant, what phase, when, and from what regions to prepare raw materials for use. Also, the study of medicinal plants used in medicine and formal medicine, the study of natural and introducible medicinal plants flowering, fruiting, seed dormancy, seed germination, and seed recovery, and field phenological and biometric observations, laboratory and field experiments. study and study of chemical composition, their analysis, and evaluation. In addition, the study of the propagation of medicinal plants in nature, the time of maturation of raw materials, the rate of harvesting, and the continuity of harvesting - folk medicine and official medicine. to meet the need as much as possible.

**Materials:** Sharp (spear) leaf Sano - *sassia asutifolia* del. legumes - belongs to the family Saesalpiniaesae. Both hyacinths are semi-shrubs up to 1 m tall. The stem is branched, the lower branches crawl on the ground. The leaf is compound with double feathers, consisting of 4-8 pairs of leaves, arranged in a row with the peduncle. The flowers are gathered in clusters. The flower is curved, the corolla is 5, the base is united, the corolla is 5, the corolla is yellow, the father is 10, all free, the maternal node is one-chambered, located at the top. Fruit - flat, flat ovoid, sometimes slightly curved, greenish-brown, and multi-seeded pods. The seeds are yellow or green, almost rectangular, reticulate, 6-7 mm long. It blooms from late June to autumn. Fruits ripen from September.

**Geographical distribution.** Sano is found in the wild in the desert and semi-desert regions of Africa (Sudan, Nubia, and the Red Sea coast) and the south of Arabia. It is grown as an annual plant in Central Asia and the Caucasus. “*Sassia asutifolia* del”, It is also known as Africa, Egypt, or Alexandria sanctuary because it is exported through the port of Alexandria. “*Sassia asutifolia* Vahl”, It is called Indian sana because it is grown in India. Another type of sana is the blunt-leaf sana (Italian sana) *Sassia obovata* Sollad. This hymn also originates from the central part of

Africa and differs from other species by the shape of the leaf (the leaf is blunt, inverted ovate). The active substance in the leaf composition of this plant - anthracene yields are low.

**The appearance of the product.** The leafy product consists of a mixture of whole or partially crushed leaves, common bands, and a thin, non-woody part of the stem, and a mixture of flowers, of a double-feathered compound leaf. The leaves are lanceolate, with a sharp tip, the leaf blade is asymmetrical, straight-edged, brittle, short-banded, 1-3 cm long, and 0.4-1.2 cm wide (the narrow leaf is 2-6 cm long and 0.6 cm wide). 2 cm). The secondary root of the leaf forms a sharp angle with the main vein and joins with the tip to form a line parallel to the edge of the leaf blade. The product has a weak distinctive odor and a mucous-bitter taste. According to **XI DF**, the moisture content of the product is 12%, total ash 12%, 2 mm thick stem fragments 3%, brown, darkened and yellowed leaves 3%, and fruits 4%. Crushed particles passing through a sieve with a hole diameter of 1 mm 3.5% , organic compounds should not exceed 3% and mineral compounds more than 1% and the content of leaves should not be less than 60% and the content of aglycones (compared to chrysophanic acid) of anthracene products should not be less than 1.35%. In addition, for crushed (cut) product, particles larger than 7 mm should not exceed 10% and fine particles passing through a sieve with a hole diameter of 0.5 mm should not exceed 10%. The fruit is broadly oval, flat, thick, slightly curved, 3-5 cm long, 1.5-2.5 cm wide, brown-green pods. The seeds are flat, angular - heart-shaped, yellowish-green, the top is twisted.

**Chemical composition.** The sum of anthracene yields (sennozid A, sennozid B, sennozid C, sennozid E, rein, 6.17% in the leaf, 2.70% in the fruit, 3.77% in the narrow-leaved sage, and 4.6% in the fruit) tin-emodin, gluco-tin-emodin, glucorein, etc.). In addition to anthracene products, sano leaves contain flavonoids (isoramnetin, campherol, and their glycosides), as well as salicylates and other organic acids, resins, and very small amounts of alkaloids. The fruit does not contain resin. Anthracene products accumulate in the young leaves of the sage, and as the leaves age, their quantity decreases. If the total amount of anthracene products in young leaves containing sharp-leaved sage is 5.8%, as the leaf level increases, these compounds decrease and eventually remain 3.8%). In contrast, anthracene products accumulate to the maximum during fruit ripening. As a result of hydrolysis of the main active glycosides of seno leaf - sennoside A and sennoside B, part of the sugar - glucose, and aglycones - is broken down into sennidine A and sennidine V. These compounds are stereoisomers of each other, sennidin A is optically active (has a strong physiological effect) and sennidin V is not optically active (physiological effect is much weaker). Growing in the arid (low humidity) regions of India, the narrow-leaved sage leaf contains up to 4.23% sennosides and up to 3.54% rein.

**Utilization.** Sano drugs are used as an exile. The resins in the leaves are soluble in alcohol and boiling water, these resins have the property of irritating the intestines. Therefore, the prepared tincture should be cooled and filtered after the resin has settled. Sometimes the resin in the leaves is dissolved in alcohol and then medicinal types are prepared.

**Medicinal products.** Leaf tincture, complex sano tincture (Vienna drink), dry extract (released in tablet form), leaf powder (powder) complex anise (chuchukmiya) powder (powder), sano leaf and fruit kafiol are included in the complex preparation. As the fruit does not contain resin, it has a much milder effect. Drugs made from the leaves of Sano in India - senade and glaxena, and a similar drug produced in the former Soviet Union - senadexin. Tea, which is used as a sano surgi and used in hemorrhoids, is also included in the collection.

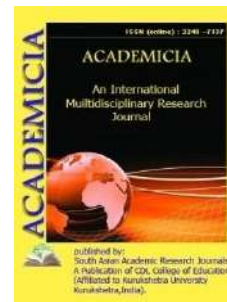
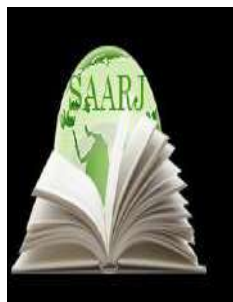
**Sano Plant Growing Technology** - Sano is a semi-shrub plant that belongs to the legume family and grows up to 1 meter in height. Sano xerophyte is a plant, light-loving, and heat-loving. The plant does not like moisture. It grows well when the soil temperature is 25-30 ° C. Fertile for praise. It is recommended to sow in soils with moderate mechanical composition. In the autumn, before plowing, 20-25 tons of organic fertilizers are applied at a depth of 25-28 centimeters. Sano is not recommended for planting in areas planted with legumes. The soil is plowed twice in the spring before planting. Seeds are sown in mid-April when the soil temperature is 18-20 ° C. Before sowing, the seeds are soaked in sulfuric acid (3: 1 ratio) for 18-20 minutes, washed and dried in water, and in vegetable planting equipment (SO-4.2 or SKON-4.2) with a spacing of 70 cm and 2-3 cm. seeds are sown at depth. It is advisable to spend an average of 8-10 kg of seeds per hectare. Propagated by seeds of praise. Sano seeds germinate in 12-15 days. If the air temperature drops after planting, the humidity is high, and in areas with stubbornness, root rot is damaged and germination is delayed. After emergence, the grasses are cultivated to a depth of 6-8 cm and cleared of weeds, isolated and irrigated. After emergence, the stems are cultivated to a depth of 8-10 cm, the plant space is loosened, weeded and fertilized with mineral fertilizers. During the growing season, the soil is irrigated 6-7 times, fed 80-90 kg of nitrogen, 70 kg of phosphorus and 50 kg of potassium per hectare. Each fertilization is carried out before watering. It is advisable to feed the planted areas after the raw material of the industry has been harvested.

**Product preparation.** The harvest period of the sage begins from the time when the plant is in full bloom and bears fruit (when the leaves of the plant turn blue). First of all, the leaves on the lower branches are picked by hand for 4-5 days. The second harvest is carried out after 20-25 days, and this process continues until the frost. The seeds (pods) of the plant are picked, cleaned and dried several times by hand after ripening. Collected leaves of sano are dried in a cool place, spread on a tarpaulin. At the end of the season, 10-12 quintals of dried leaves and up to 300 kg of seeds can be harvested from each hectare of well-maintained sano.

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DOI: **10.5958/2249-7137.2020.00547.9**

## THE SEMANTIC CLASSIFICATION OF PHRASES IN "BABURNAME" AND PROBLEMS OF THEIR TRANSFER IN TURKISH TRANSLATIONS

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### ABSTRACT

*"Baburnome" is an encyclopedic work, as unanimously said by world Turkologists. From it, all scientists in the field can find information that is relevant to them. That is why this work has been translated into about twenty languages of the world. Even some languages have multiple translation options. The Turkish translation is one of such successful translations. It is a requirement of the time to compare such translations with the original. In this article, the phrases used in "Baburnome" are semantically classified and their expression in the Turkish translation is analyzed.*

**KEYWORDS:** "Baburnome", Phrase, Parema, Phrasema, Semantic, Lexical, Sema, Translation, Unit.

### INTRODUCTION

In recent years the phraseology entered in a row of widely explored areas. Researches of spiritual features to phrases of Uzbek, their relation with the phenomena of related languages, the phenomena of a homonymy, a synonymy and an antonymy between expressions, their role and a technique in realization of sense of the offer, a comparative research Uzbek to phrases from phrases of other languages were conducted.

The phraseological unit is perceived as the secondary nomination, which arose from a steady combination of two and more words. Also they are considered by phrases as the linguistic phenomenon which is in a language layer lexemes are higher and offers are lower [2.18]. The phraseological value isn't the sum of lexical meanings of the words, which are a part of a phraseological unit, it has the general integrity. There are common features between

phraseological and lexical values, but at the same time, there is also a number of peculiar characteristics. Common features indicate two similar aspects of these phenomena and peculiar characteristics as distinctive (differential) sign confirm that they represent the separate phenomenon-taking place in a language system.

It is known that the differential sign of free and stable combinations are the properties of “reproducibility” and “stability”. In accordance with these properties, in a phrase joining the opposition, a stable member is perceived as strong, marked, and free as weak, unmarked [6.59]. Despite the fact that stable combinations have common features, due to the properties of “reproducibility” and “stability”, they nevertheless differ in accordance with certain differential signs and, on this basis, are divided into small groups. Phrases as a linguistic unit arise in finished form. At various stages of historical development, they are actively used in various language layers. Features phrases inherent in the stages of linguistic development, can be determined through an analysis of the language of historical, artistic and literary sources.

Since “Baburname” is a large, stylistically perfect work, it is impossible to imagine its language without phrases. The expressions used in the work, in particular phrases indicating the nature and condition can be investigated by dividing them into certain groups in accordance with the structure of the phrases, their semantics and their constituent parts.

In the semantic relation phrases, used in “Baburname”, it is possible to classify as follows:

1. Phrases with the seme “Action - condition”: **gunohini bag'ishlab** - forgive sins (Hoja Kalonning shifoati bila gunohlarini bag'ishlab, ahl va ayollarini alarga qaytib ruxsat berildi (Thanks to the intercession of Khoja Kalon, they forgiven his sins and allowed him to return his property women)). [5,162], **ta'ziyat tutmoq** - to grieve (Ul o'lganda Mirzo bisyor qattiq ta'ziyat tutqondur (When he died, Mirzo very much grieved) [5,49], **so'zni bu yerga qo'ymoq** - to agree (mening ulug onam Esan Davlatbeginning qoshida yig'ilib, so'zni bu yerga qo'ydilarkim, Hasan Ya'qubni ma'zul qilib fitnasiga taskin berilgay (Having gathered with my grandmother Esan Davlatbegim, we agreed to free Khasan Yakub and suppress him)[5.47], **tilimtutuldi** - (my tongue paralyzed) lose the ability to speak (Andoqkim, to'rtkunchatilitimtutuldi, og'zingapaxtabilasuvtomizurlaredi (It so happened that until four days I could not speak, they put water into my mouth with cotton). [5.63], **boshsizliqqilgon** - refuse to obey (Qorabuloqqatushgandaba'zikirgankend-kesakkaboshsizliqqilg'onmug'ullarnitutibkelturdilar (Upon arrival in Karabulak, they were caught and brought to us by the Mughals, who refused to obey the local landowners) [5.56].

2. Phrases with semy "Subject phenomenon": **jon vahmi** - fear of death (Olamda jon vahmidin yomonroq nima bo'lmas emish (There is on light nothing worse than fear of death) (Page 99), **moli omon** - preservation of property (type of tax) (Talon va taroj qilmay, Bhira eliga moli omon solib, naqd va jinsdin to'rt lak shohruhiy olib.) (Without plundering Bkhira's people, and having appointed by it a tax for preservation of property and having taken away 40,000 shakhrukh (currency) money and goods...), **zeridasti** - in submission (Samarqand podshohianingzeridastiedi (The king of Samarkand was subordinate to it) [5.195.], **Besh kun o'tardunyo** is the perishable world (Besh kun o'tardunyouchunbiro' zio'sturg' onvaline' matzodasiniko' rqildi (For the sake of the perishable worldm, he blinded his only child for the world)) [5.49].



3. Phrases with semy "sign": **so'ziga o'z** - keeping the word (Saydi Qaro agarchi so'ziga o'z edi, qilichiga sustroq edi. (Saydi Caro always kept the word pledged to them, but in possession of a sword wasn't strong) [5.82], **tili qisiq** - not to be able to put pressure (Xeyli tili qisiq edi (We couldn't put pressure)) [5.186], **jon tortqon** - betrayed (Ko'rsamkim, Qutluq Muhammad Barlos va Boboyi Pargariykim, mening jon tortqon navkarlarim o'n-o'n besh, yigirma kishi bo'lg'ay, yetib keldilar (I watch, Kutlug Mahomed Barlos and Boba Parvari, my devoted soldiers arrived, having gathered ten - fifteen, twenty people) [5.100], **so'zgamungiyo'q** - eloquent (So'zgamungiyo'qedi. Og'asiBoyqaro Mirzoningo'rtanchao'gli Sulton Vays Mirzog'achiqaribedi (Eloquent. Married to the middle son of his brother BaykaroMirzo - Sultan Weiss Mirzo) [5,139], **rioyatqobili** - worthy of attention (Muncharioyatqobiliemasedi (Not such a person was worthy of attention.) [5,137]

Our scientists also consider the affirmative and negative forms characteristic of a verb as parts of speech as a category of existence (*mavjudlik*) [3.36]. Unlike verbs, not all phrases possessing an action-state semecan be equally used in both aspects.

According to category of existence with semy "action state" can be present at phrases:

1. The expressions used both in affirmative, and in negative forms: **so'zlariniquloqqaolmoq - to believe** (Ushmundoqmahaldamuxoliflarningfiribomuzso'zlariniquloqqaolib, ...elchilikayubordilar (In such time, having believed the false words of the people of"Ushmundok"... sent them the envoy) [5.64]. **Yuzlarigakeltirmay - without reproaching** (SultonHusaynMirzoborig'aehsonmaqomidabo'lib, yomonliklariniyuzlarigakelturmay, in'omlar ham qildi (Sultan HusaynMirzo showed generosity, I didn't reproach them for deeds angrily and even I presented with gifts) [5.123]. **Yaxshimaoshqildi - is polite to manage** (Bu jihatdinbu tog'elibilanyaxshimaoshqilmoqvojibvalozimedi (It was in this regard necessary and has to manage politely with these mountain people) [5.166]. The expressions from the above examples are used in the work in both forms, that is, in the affirmative and in the negative. For example, the phrase **yomonmaoshqilmoq** (behaving rudely) is given several times in the form: **yomonmaoshqildi** (was rude) - **yomonmaoshqilmadi** (was not rude) or **yaxshimaoshqildi** (was polite).

2. The expressions used only in an assertive form: **burunidinchiqdi - left a nose** (backfired) (Nechayilqilg'onbekligivasaltanatitamomburunidanchiqdi (The whole years of its power and board left at it a nose (backfired to it)) [5.104]. **Behuzurbo'ldi - it is bad to feel** (Meningonamxonimbehuzurbo'ldilar, xeyliyomonbehuzurlikedi (My madam mother got sick, the disease was very heavy) [5.86]. **Shunqorbo'ldi - to die** (UmarshayxMirzozardinkabutarvakabutarxonasibilauchub, shunqorbo'ldi (UmarshaykhMirzo fell down together with the pigeons and a dovecot and I died) [5.37]. **Jong'ayettuk - to bother** (biz ham aningaxloqvaaf'olidinjong'ayettuk, ruxsatberduk (We were bothered by his behavior too and we released it) [5.125]. **Qochmakkayuzzo'ymoq - to begin to run away** (Uylarini ham sog'indilar. Birar-ikkirarqochmoqqayuzzo'yidilar (Missed their house. Began to run on one, on two persons)). The given examples are used only in an assertive form, and is valid, it is impossible to use them in a negative form. For example, as **shunqorbo'ldi (died) - shunqorbo'lmadi(didn't die)**.

3. Expressions used only in negative form: **ko'zgailmasedi - ignore(do not count)** (AgarchiDarvesh Muhammad tarxonto'ravamuchabilamundanulug 'edi, vale

bufir'avnaniko'zgailmasedi (Despite that Darves Muhammad was older than him both in position and age, this self-built pharaoh ignored with him) [3,45]). **Pisandtutmas - to be neglected** (o'zidino'zgahechkishinihechishdapisandtutmasedi. (Apart from himself, he neglected everyone and everything) [5.50])).

The study of phrases, in particular the study of the semantic field of phrases associated with the names of body parts, is recognized as one of the leading topics in modern linguistics.

Studying the semantics of phrases in historical works provides important information about the history of the phraseology of the Uzbek language, about the worldview of the people, about its customs and traditions. In this sense, the study of phrases in “Baburnama” is relevant at present.

In “Baburnama”, the expressions incorporating the words ko'z (eye) and qo'l (ilik) (hand) are fruitfully used. Among them: ko'zyetaryerda (as far as there are enough eyes - under review), ko'zilmas (not to watch), (you watch) ko'z soling, arkniiiklamog (to take fortress), ilikolishtilar (tried forces), ilikkatushishdi (fell into hands (in captivity)).

As phrases with the component of “ko'zlar”(eyes) serve expression of the boundless and various feelings, feelings and physiological processes peculiar to the person. Their main part in the structural relation represents two - or three-component verbal structures of the building a noun + a verb [4.6]: "ko'zyetaryerda" (... ko'zyetaryerdabirotningustidabirnimayiltirabko' rinadir (under review on some horse, something brilliant was seen)), "ko'zilmas" (Bu fir'avnaniko'zilmasedi (This posing as the Pharaoh I didn't reckon with it), "ko'z soling" (O'ygako'z soling, o'yniiturmang (You look for cows, don't lose them), "ko'zimuyqug'abordi" (... birzamonko'zimuyqug'abordi (through some time I fell asleep (the dream made laugh eyelids))). In these examples, the verb carries out a task of a grammatical basic component, and the word “ko'z” is a semantic basic component and defines a logical basis to phrases.

In these examples, the phrases “ko'zyetar” and “ko'zilmas” express the concepts of distance and area, and the phrases “ko'z soling” (see), “ko'zlarig'a mil tortqaylar” (blind), “ko'zimuyqug'abordi” (fell asleep ) serve as carriers of the state seme.

In phrases containing the word “qo'l” (hand), the use of this component in the role of both grammatical and semantic bases is observed: “ilikolishtilar” (BoysunqurMirzoningkishisibilailikolishtilar (They tried their strength (fought) with the people of BaysunkurMirzo)), “o'zimningiligimda” (o'zjilovimo'zimningiligimdabo'lur (my will is in my hands)), “ilikkatushdi” (ilikkatushgannavkarlar (captured soldiers)), “arkniiiklamog” (ShayhBoyazidnitutmoqkerak, arkniiiklamogkerak (We must catch Sheikh Bayazid, we must capture the fortress.) In all the above examples, the word “ilik”, i.e. “qo'l” (hand) is used in a figurative meaning, namely: will, possession, which is a consequence of the people's lifestyle and worldview.

Since parems are a linguistic phenomenon with a more complex component structure than lexical units, re-creating them in translations places a special responsibility on the translator.

This is due to the fact that parems as art-graphic means participate in the usual presentation of thought, but moreover they serve to express stylistic features that increase the figurative and emotional-visual value of the work. Therefore, the desire for expedient translation by a couple, taking into account their peculiar characteristics, is equivalent to creating an artwork anew.

In a comparative study of the nature of proverbs and sayings of the languages of the original and the translation, the identification of meaningful and stylistic correspondences between them, the determination of the ways and possibilities of interpreting one of them through the other lays of the foundation for creating an entirely adequate translation. In the “Baburnama”, which is the object of our study, the author skillfully used proverbs, sayings and phrases. This is the reason for the smoothness and attractiveness of the language of the work. In the translations of the phrase from “Baburnama” into Turkish, the following are observed:

1. The phrasemis translated using a phrase that is close in meaning to it.

“Bir tom uygakirib, o’tyoqib, birzamonko’zumuyqug’abordi“(I came into one house, I lit fire and I fell asleep)[5,99].

“Duvarla çevrilmiş bir eve girip, ateş yakıp, bir müddet uykuya daldım”[1,125].

In translation of expression of “ko’zimuyqug’abordi”, the component of “ko’z” isn’t used, and as its equivalent the phrase of “uykuyadaldım” is used. Babur represents a condition of a dream concerning “ko’z”(eyes), and in translation of “uykuyadalmak” is used concerning all body. Together with it, the three-component phrases (ko’zimuyqug’abordi) is translated by means of a two-component phrases (uykuyadaldım). In Uzbek, the word “uyqu” isn’t combined with the concept daldi - to drown, used with the words “xayol” (dream), “o’y” (thought). It also is one of distinctive characteristics of phrases in the Uzbek and Turkic languages.

2. Phrases translated literally (word for word):

- expression of “ko’z ilmas” (not to pay attention) is used in the form of “nazar-ı by dikkate almazdı” (not to notice).

“Bu fir’avn ani ko’z ilmas edi” [5.45]. (This Pharaoh didn’t reckon with him)

“Fakat bu fir’avn onu nazar-ı dikkate almazdı” [1.26].

The component “ko’z” as a part of this expression in Turkish is recreated by means of the adverbial noun relating to “ko’z” from an izof (an additional particle) - ı: “nazar-ı dikkate”. A concept not to pay attention (not to be considered) in the semantic relation it is also a little softened, instead of “to ignore” it is brought closer to a concept only “not to notice”.

Shayx Boyazidni tutmoq kerak, arkni iliklamoq kerak[5,95].

(We must catch Sheikh Bayazid, we must seize with force)

Şeyh Bayezdni yakalamak ve erki ele geçirmek lazım [1,126].

In these examples, the phrase “arkni iliklamoq” is translated in the form “erki ele geçirmek” (to seize with force). In the translation, instead of the concept of “qo’l” (ilik - hand), another phrase is used, transmitting the meaning with force –“kuch”.

3. The value is transferred by phrases by means of a phrase:

The phrase “ko’z yetar yerda” is translated by means of “gözle görünür”.

“Kun tush bor edikim, ko’z yetar yerda bir otning ustida bir nima yaltirab ko’rinadir” [5, 99].  
(Time was midday, under review on some horse, something brilliant was seen)

“Öğle vakti gelmişti; gözle görünür bir yerde bir at üzerinde bir şey parlıyordu” [1.124].

“İlikka tushgan navkarlarning tamom bo’yniga urdirdi”[5,57]. (I ordered to behead all taken prisoner Dzhigits).

“Eser düşen adamlarının hepsinin başlarını kestirdi” [1,43].

Here the phrase of “ko’z yetar yerda” is translated by means of a phrase “gözle görünür” (visible to an eye), and expression of “ilikka tushgan” by means of “eser düşen” (taken prisoner).

In the first phrases, the component “ko’z” was saved, only grammatical categories were changed, in the second example, the phrases “ilikka tushkan” were replaced by the expression “asir tushish” that passed this value, which facilitated the understanding of the text. It should be noted that the expression “asir tushish” is also found in Uzbek historical sources.

1. Phrase disappears, and its meaning is conveyed in one word.

“O’yga ko’z soling, o’yni iturmang, to yo’ning qay sari chiqari ma’lum bo’lg’ay”[5, 87]. (Look after the cows, do not lose them, it will be seen which side of the road to go).

“Öküze bakın, ne der; yolın nereye çıkacağı malum oluncaya kadar yürü”[1,101].

“Ushbu kun ba’zi beklar Xiyobon boshida Boysunqur mirzoning kishisi bila ilik olishtilar” (On this day, some beks at the beginning of the Square fought with the people of Baysunkur Mirzo) [5,56].

“O gün bazı içki beyler hiyaban başında Baysungur Mirza’nın adamları ile çarpiştılar”[1,41].

In this situation, expression of “ko’z soling” is recreated in the form of “bakın” (look, watch), the phrase of “ilik olishtilar” is expressed by means of the word “çarpiş tılar” (faced). It simplified the sense put in the text.

## CONCLUSION

Thus, the comparative and structural research of the expressions used in “Baburname” and their translations into Turkish helps to reveal today's evolution of historical to phrases and to define their originality in translations. And it is capable to provide with important scientific-theoretical information such branches of science as language history, the theory of linguistics, a lexicology, a lexicography and phraseology. In the somatic phraseological units and their transfers considered by us above it is possible to observe the common and various features in customs, a way of life and traditions of our people.

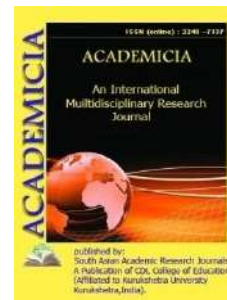
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DOI: **10.5958/2249-7137.2020.00548.0**

## ASSESSMENT OF THE STABILITY OF QUARRY BOARDS USING THE "USTOI" PROGRAM

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### ABSTRACT

*The article considers methods for calculating the stability of slopes that allow us to quantify the impact of various factors on the state of the rock mass. A generalized classification for slope stability calculation methods is provided. The considered method allows us to take into account the coefficient of structural weakening, that is, the fracturing of rocks. Entering the appropriate coefficients ensures sufficient accuracy of calculations of the stability of the sides of the quarry, especially at large depths. In this work, in addition to calculations based on computer programs, calculations were made using the VNIMI method. The article discusses methods for calculating the stability of slopes that allow us to quantify the impact of various factors on the state of the rock mass. A generalized classification for the slope stability calculation method is given. The considered method allows us to take into account the coefficient of structural weakening, that is, the fracturing of rocks. Entering the appropriate coefficients ensures sufficient accuracy of calculations of the stability of the quarry sides, especially at great depths. In this work, based on the VNIMI methodology, the software of the USTOI computer software complex was calculated, and the corresponding coefficient of stability margin was obtained. These methods of engineering calculations are based on the method of algebraic summation of forces on curved sliding surfaces and the method of polygon forces. Calculations of the formula for various forms*



*of a uniform slope collapse prism are considered. The geometry and load of elements in various forms of the prism are obtained.*

**KEYWORDS:** *Quarry, Board, Stability, Slope, Dump, Ledge, Tectonic Forces, Rock, Massif, Finite Element Method, Coefficient Of Stability Margin Of The Board.*

## I. INTRODUCTION

To date, a large number of works on the stability of slopes and quarries are known. About 100 methods and techniques for calculating the stability of ledges, sides of quarries and dumps have been developed.

Their analysis should be based on a special classification. For the main classification feature, they took the shape of the sliding surface of the slope. However, this feature cannot be considered sufficient because, first, not all methods provide for the construction of the sliding surface, and secondly, the ways to account for the acting stresses even in the conditions of the same sliding surface differ significantly from each other.

Pevsner M. E. proposed a classification of methods based on the scheme: class of methods - group of methods-the main method (methods) of the group-calculation methods and schemes; using the main method [1-3].

The main classification principle for allocating classes of methods is considered to be the principle of determining the parameters of a stable slope.

## II. MATERIAL AND METHODS

Methods for calculating slope stability allow us to quantify the influence of various factors on the state of the rock mass. The most widely used methods and schemes of G. L. Fisenko and his school (methods of VNIMI). Due to the existence of many methods and schemes of other scientists, for a General idea of all methods, we use the classification of M. E. Pevsner, table 1, for methods for calculating the stability of slopes, based on the method for determining the parameters of a stable slope [4-5].

**TABLE 1 CLASSIFICATION OF METHODS FOR CALCULATING SLOPE STABILITY**

Class-Main method	Group-features	Explanations
A-po V. V. Sokolovsky, S. S. Golushkevich	1-Numerical integration 2-Graphical integration	The slope contour is constructed as the outer boundary of the area, at each point of which the limit equilibrium condition of the form (6.3)
B-po N. N. Maslov, M. N. Troitsky	-	The slope is divided into horizontal layers. the stable slope angle of the layer is determined by the condition that the slope angle is equal to the tangent angle of the shear resistance.
B-the limit equilibrium Condition is fulfilled	1-Flat PS 2-Krugolina-historical	Authors - L. N. Bernatsky, P. N. Tsybmarevich.

along the sliding surface (PS)	SS 3-PS: logarithmic. spiral 4-PS: complex shape 5-PS: polyline form	Authors - V. Fellenius, G. Krey, K. Terzaghi. Subgroups of methods: 1-slope equilibrium. 2 - the balance of the compartments. Authors - G. Krey, K. Terzaghi, R. R. Chugaev. Authors - L. Rendulic, G. L. Fisenko. Application in the finite element method. Authors - A. P. Asanas, N. N. Maslov, R. R. Chugaev.
G-po VNIMI-12 typical schemes. 8 volumetric schemes for Carpi.	-	A special limit equilibrium condition is met along the sliding surface. Slope attenuation is taken into account, as well as the volume of the collapse prism
D-	-	Methods for probabilistic estimation of slope stability.

V. Sokolovsky developed the theory of limit equilibrium granular medium with reference to the plane problem, the mathematical model of which is to jointly address the conditions of strength in the ultimate stress and the differential equilibrium equations of a plane problem.

The most widely used engineering methods of G. L. Fisenko and his school (methods of VNIMI), which were recommended for use by Gosgortekhnadzor, were found in practice [6, 13].

Methods of engineering calculations are based on the method of algebraic summation of forces on curved sliding surfaces and the method of polygon forces (vector expansion of forces), which uses concentrated forces acting on sites that delimit adjacent blocks of the collapse prism.

The method of polygon of forces is extremely graphic. The closure of the polygon constructed for the entire collapse prism means its stability with a reserve coefficient  $p$ , which is set indirectly by entering it into the strength characteristics. If the polygon of forces does not close (discrepancy), the slope stability does not correspond to the accepted value of  $p$ . Enter a different value of  $n$  in the strength characteristics and repeat the construction. By plotting the DE ( $n$ ) graph, we get the desired value of  $n$  from it [7-12].

### III. RESULTS

The above development of the VNIMI method, as well as the model of the critical slope line, allow us to automate the corresponding calculations using computer technology. The USTOI computer program [13-15] is designed to solve engineering problems of assessing the stability of the quarry side. In table. 2 shows 5 identified cases of changing the width of the upper platform of the prism (a) for a uniform slope.

**TABLE 2. THE ESTIMATED SHAPE OF THE PRISM OF THE COLLAPSE OF A HOMOGENEOUS SLOPE**

The condition for determining the parameters of the model				N the shape of the wedge
$\alpha$	H	a	$\varepsilon$	
$\alpha=90^\circ$	$H > H_{90}$	----	$\varepsilon > 0$	1
	$H \leq H_{90}$	----	$\varepsilon = 0$	2
$\alpha < 90^\circ$	$H \leq H_{90}$	----	$\varepsilon = 0$	2
	$H > H_{90}$	$a > 0$	$\varepsilon > 0$	5
		$a \leq 0$	$\varepsilon > 0$	4
			$\varepsilon = 0$	3

To those named in the table. 2 forms of the collapse prism of a homogeneous slope added a sixth form – for moving along two intersecting violations in the anisotropic slope. All forms are shown in Fig.1 with the direction of the additional load of R. Analytical expressions for forms 1-5 was obtained above.

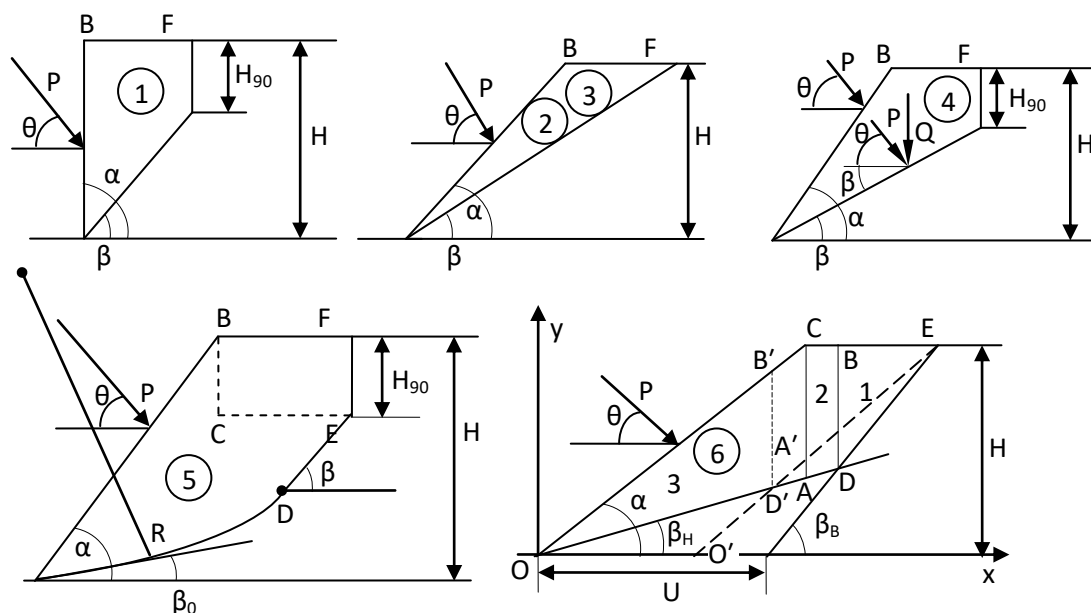


Fig. 1. slope collapse Prisms in the USTOI program

### Bringing the p fit to the slide line for forms 1-4

To get the formula for calculating n for a loaded slope

(Fig. 1-4), the numerator (2) is supplemented by components from the influence of force P:

$$n = \frac{Q \cos \beta \cdot \operatorname{tg} \rho + K \cdot L + P \sin(\theta + \beta) \operatorname{tg} \rho + P \cos(\theta + \beta)}{Q \sin \beta}. \quad (2)$$

From here, denoting the result (2) by  $n_0$ , we get after the transformation:

$$n = n_0 + \frac{P \cos(\theta + \beta - \rho)}{Q \cos \rho \cdot \sin \beta}. \quad (3)$$

Taking into account the formulas and notation of the critical slope line and adding the notation  $J=P/(\gamma H^2)$ , we get:

$$n = n_0 + 2 \frac{J}{M} \frac{\sin \alpha \cdot \cos(\theta + \beta - \rho)}{\cos \rho \cdot \sin(\varphi - \beta)}. \quad (4)$$

### Analytical dependencies and reduction of the load P to sliding lines for form 6

The prism of a possible collapse formed by two intersecting attenuations in the slope (Fig. 1.1-6, strength characteristics: KH, pH-at the bottom; KB, Pb-at the top), depending on the steepness of the upper attenuation ( $\beta_B$ ) m. b. is divided into two blocks (1, 2, 3):

- dividing line BD to the right of line AC (solid lines),
- Dividing line B'd' to the left of line A'C (dotted lines).

Formulas for calculating the prism elements for these variants are shown in table 3.

**TABLE 3 GEOMETRY AND LOAD OF PRISM ELEMENTS, FIG.1-6**

a	b
$OD = \frac{\sin \beta_B}{\sin(\beta_B - \beta_H)} U, \quad x_C = \frac{\cos \alpha}{\sin \alpha} H, \quad x_D = OD \cdot \cos \beta_H, \quad y_D = OD \cdot \sin \beta_H.$	
$OA = \frac{x_C}{x_D} OD, \quad AC = \frac{\sin(\alpha - \beta_H)}{\cos \alpha} OA.$	$O'A' = \frac{x_C - U}{\cos \beta_B}, \quad A'C = H - O'A' \cdot \sin \beta_B.$
$BD = H - y_D.$	$BD' = \frac{\sin(\alpha - \beta_H)}{\cos \alpha} OD.$
$Q_1 = \frac{\gamma}{2} \frac{BD^2}{\tan \beta_B}.$	$Q_1 = \frac{\gamma}{2} \frac{A'C^2}{\tan \beta_B}.$
$Q_2 = \frac{\gamma}{2} (BD + AC)(x_D - x_C).$	$Q_2 = \frac{\gamma}{2} (BD' + A'C)(x_C - x_D).$
$Q_3 = \frac{\gamma}{2} AC \cdot x_C.$	$Q_3 = \frac{\gamma}{2} BD' \cdot x_D.$
$F_y = Q_1 \cos \beta_B \cdot \tan \rho_B + (Q_2 + Q_3) \cos \beta_H \cdot \tan \rho_H + DE \cdot K_B + OD \cdot K_H$	$F_y = (Q_1 + Q_2) \cos \beta_B \cdot \tan \rho_B + Q_3 \cos \beta_H \cdot \tan \rho_H + D'E \cdot K_B + OD' \cdot K_H$
$F_c = Q_1 \sin \beta_B + (Q_2 + Q_3) \sin \beta_H$	$F_c = (Q_1 + Q_2) \sin \beta_B + Q_3 \sin \beta_H$

For a free slope, the stability margin is estimated using the formula stability margin coefficient, and for a force-loaded slope, P:

$$n = n_0 + \frac{P}{F_c \cdot L} A \cos(\theta + \lambda), \quad (5)$$

where indicated:  $L=OD+DE$ ,

$$A = \sqrt{\left[ \frac{\sin(\beta_H - \rho_H)}{\cos \rho_H} OD + \frac{\sin(\beta_B - \rho_B)}{\cos \rho_B} DE \right]^2 + \left[ \frac{\cos(\beta_H - \rho_H)}{\cos \rho_H} OD + \frac{\cos(\beta_B - \rho_B)}{\cos \rho_B} DE \right]^2}, \quad (6)$$

$$\operatorname{tg} \lambda = \frac{\cos \rho_B \cdot \sin(\beta_H - \rho_H) OD + \cos \rho_H \cdot \sin(\beta_B - \rho_B) DE}{\cos \rho_B \cdot \cos(\beta_H - \rho_H) OD + \cos \rho_H \cdot \cos(\beta_B - \rho_B) DE}.$$

### Methodological aspects of calculations of the stability

The results given in this section were obtained using the USTOI computer software package. The history of creating the main algorithms goes back to publications [1-3], in which the authors (in contrast to the work [6]) provide precise and compact formulas for analytical calculation of all elements of the possible collapse prism, which was previously built graphically on the basis of the well-known VNIMI technique for a flat homogeneous slope. The use of these formulas made it possible to automate the method of algebraic summation of forces by creating computer programs: Slope and Ledge, where a number of tasks were solved to evaluate and select stable parameters of quarry sides on a homogeneous model. At the same time, in the development of the vnmi technique, 4 cases of prism degeneration were identified in which the "classical" representation of the prism lost its physical meaning (for example, when the width of the prism at the top became negative). In addition, an approach was developed to account for the vector of external loading affecting the prism, in relation to all cases of its degeneration.

The USTOI software package generalizes models and algorithms of Ledge and Slope programs and complements them with an interactive dialog service on an IBM computer. Physical models embedded in the calculation algorithms of the USTOI complex distinguish 5 types of possible collapse prism shapes for a uniform slope of the side and 1 type of shape for the collapse prism for violations in the instrument rock mass (Fig. 1). These algorithms allow you to change the defining parameters of the Board (tilt and height) in a wide range, including the "impossible" (for example. tilt angle-up to 90 degrees; height - up to values less than H90) and get a continuous functional relationship to determine any of the parameters of the Board when setting the values of the rest. Cases of degeneration of a round-cylindrical prism were replaced by a rectilinear "mini-segment", i.e. a straight line of such an inclination to the horizontal, at which the no value is minimal. The degeneration forms of prism 1-5 are set automatically, as shown in table 4.

A characteristic feature of the USTOI complex is the ability to solve problems of stability of the Board under the action of external loading of an arbitrary direction, such as-the structure of strengthening the Board, installed equipment, static seismic loads. Taking into account the loading factor  $n$  is based on the condition of uniform distribution of the loading vector along the line of displacement of the free instrument array and algebraic summation of the corresponding components of the vector with the amount of holding forces for the free rock array. The impact of the non-flat shape of the structural profile of the side is estimated as for a 90° angle of action and the value automatically calculated for a given area of slope deviation from the flat profile.

**TABLE 4 ALGORITHM FOR DETERMINING THE CALCULATED SHAPE OF THE DISPLACEMENT PRISM FOR A FLAT UNIFORM SLOPE**

Condition for the defining parameter of the prism				N the shape of the wedge
a	N the shape of the wedge	Ak	A90	
$\alpha=90^\circ$	$H>H90$	-	-	1

	$H \leq H_{90}$	-	-	2
$\alpha < 90^\circ$	$H \leq H_{90}$	-	-	2
	$H > H_{90}$	$A_K > 0$	-	5
		$A_K \leq 0$	$A_{90} > 0$	4
			$A_{90} \leq 0$	3

#### IV. DISCUSSIONS

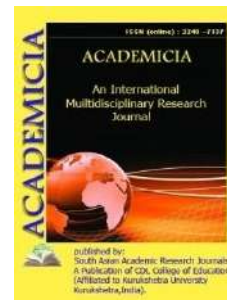
The complex provides the ability to assess the stability of the Board for straight-line attenuations specified in the rock mass (up to 2), which have an intersection point (form 6), as a solution to a separate problem. The algorithm for solving this problem is based on the assumptions of the method of algebraic summation of forces  $v_{nmi}$  when taking into account the cost of part of the shear forces to work on the destruction of the prism at the break point of the line of displacement. Accounting for these costs can be enabled or disabled in the task's source data. In General, the USTOI complex is a tool for computer solution of a wide range of problems related to stability assessment and selection of parameters of the quarry side.

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DOI: **10.5958/2249-7137.2020.00549.2**

## TO STUDY THE LEVEL OF FORMATION OF CONCEPTS ABOUT FAMILY AND FAMILY LIFE IN STUDENTS

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### ABSTRACT

*This article discusses the research conducted to prepare students for family life and to determine the psychological and ethnic characteristics of the problem, the level of formation of concepts about family and family life in adolescents.*

**KEYWORDS:** *Family, Youth, Ethnic Characteristics, Psychology, Social, National, Parental, Preparation For Family Life, Upbringing.*

### INTRODUCTION

**Relevance.** The modern family and its problems serve as the object of study of a number of disciplines - psychology, pedagogy, sociology, demography, economics. The concept of "family" has its own inner meaning for everyone. For a child, it is the mother, father, brothers, sisters, grandparents, uncles and aunts involved in his upbringing. For a young man after marriage, the family is first him and his young wife, then the children.

Consequently, preparation for family life generally solves the problem of complex socialization and upbringing of young people. The main problem in addressing this issue is that there are currently no clear independent disciplines in secondary schools that perform this function.

The introduction of psychology and family psychology classes in schools can enable young people to find themselves in this world, develop themselves and learn about themselves, help them overcome difficulties and dangers in present and future life, and take a conscious approach in determining their future paths.

A survey was conducted among 437 adolescents and their parents in Nukus and Kanlikul districts of the Republic of Karakalpakstan.

The purpose of the study: to determine the degree of formation of concepts about family and family life in adolescents.

The results of the survey show that when asked what kind of compliments teenagers would like to hear from their parents, most teenagers asked, "Is my child doing well in school?", "Is my child doing well in school?", "Do you have grades in your diary? "I love you" and so on.

### **Main part**

These answers show that it is the needs of the students. This indicates that it is more likely to negatively affect the relationship between parents and children as well as the upbringing of the child. The reasons for this are:

- Lack of parental attention to the interests of the child, lack of affection for them;
- Unstable parental relationships;
- The insincerity of the relationship and so on.

Students' perceptions of family life are formed primarily by parents, and in order to determine this, the following questions were developed:

1). Who first gave you information about the family? - 41% of teenagers answered that they are from their parents, 12% from their mother, 8% from their school teachers, 5% from their grandmother, 3% from life, 1% from their friends, 1% from their sister, 6% from others. detected.

It is obvious that in Karakalpak families, every parent emphasizes to their children from an early age what their family members are like, what kind of family members they can marry. This rule is strictly defined in the Karakalpak nation. Every young man knows the names of the tribes (ruo) from a young age, which tribal representatives can and cannot marry each other. When they go to circles and get to know each other, they definitely ask which seed (ruo) they are from. This protects you from accidentally flirting with a girl or boy of your own kind, while at the same time avoiding making inappropriate jokes. This is an unwritten rule of the Karakalpak nation and an unwritten law.

2). Do you want your children's family to be like yours? - to the question asked to the parents, yes 72% indicated, why? When we said, "Peace, everything is fine, I'm happy, I'm happy, I'm like-minded, I love you." Now, the answer that said no was 28%, why? when we said - I don't want it, my son, my daughter should be educated, don't quarrel. The majority of such responses were found to belong to 18% women, 8% to men, and 2% did not respond.

3) Do you want to be like your future family, the family of your current parents? - When we turned to the teenagers, it was found that those who want their future family to be different from their parents' family, that is, 22% answered that they do not want, and 8% said that they do not know.

4) Did you inform your child about family, family life? When we compared the answers of parents, the answer was yes - 45%, no - 51% and no answer - 0.4%.

It was found that 51% of those who answered "no" have not talked to teenagers about this topic, and even parents - "How do we explain this topic to our children?", "Nobody taught us what a

family is! What can we say?" !, How to provide information about family lifestyle? " we were asked for advice.

45% answered "yes" and answered as follows. Most of the answers were about informing their children about career choices, education, the impact of financial status on living, mutual respect, not going astray in life, choosing a spouse, the role of the family, the role of men in the family, family conflicts, social status, mother-daughter friendship and more.

5). Who do you think should provide information about family and family life? - To the question of teenagers, 55% of them answered that they are only parents, 2% - only father, 32% - only mother, then only grandmother - 2%, teacher - 6%, life and society. 1%. It turns out that our children get two-thirds of their knowledge of family and family life from their parents, and one-third from their mothers. Not only this, it was found that he received information for himself and his future family from the influence of all the people in the family and from some character of his friends, mentor, all the people around him.

6). At what age should family life information be provided? When we turned to the parents, their answers were as follows. That is, 13% from kindergarten age, 20% from primary school, 51% from 10-15 years, 11% from 16-18 years, and after 20 years. an parents accounted for 5%.

As can be seen, most parents provide information about family life and lifestyle from the age of 10-15.

Our study found that there were conflicting opinions among teachers, school administrators, and parents about preparing young people for family life in public school, as well as some social functions of the family, such as the need to prepare for sex. against giving, that is, they believe that it only leads to the violation of their children, and they prefer to give information about sex education themselves, in the family. However, most educators look to the education system with confidence in the possibility of successfully preparing young people for family life.

In short, the preparation of adolescents aged 14-16 for family life should, in our view, begin with the formation of ethnic norms, values, knowledge and skills adopted by young people. The reason is that in preparing for family life - the lifestyles of both parents and pedagogical psychologists as well as their peers in the environment can have a nurturing effect for the adolescent. In doing so, we need to make the following recommendations to parents and pedagogical psychologists:

- increases the positive coverage of family life in the media;
- psychologists carrying out consulting work are highly competent;
- separate explanatory work for boys and girls in preparation for family life is carried out by male and female psychologists;
- It would be expedient to organize a seminar-training on the preparation of adolescents with their parents by school practicing psychologists for family life.

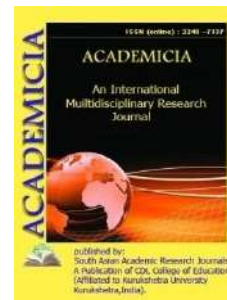
## CONCLUSION

A teenager brought up in such a psychological environment can feel free to be a pillar in the acquisition of the necessary knowledge in family life. At the same time, if such training is carried out in a comprehensive and harmonious partnership with parents, relatives, teachers, peers and

others, adolescents will gain knowledge about marriage and family relationships and will form an idea of life.

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DOI: **10.5958/2249-7137.2020.00550.9**

## RESTORATION AND REPRODUCTION OF USEFUL BRUCELLOSIS STRAINS COLLECTION FOR INDUSTRY AND PRODUCTION

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### ABSTRACT

*This article provides a rationale for the need to create a domestic production of immunobiological preparations for veterinary medicine as well as individual scientific studies results on the experimental microseries of anti-brucellosis vaccines from brucella strains with different species and virulent affiliation.*

**KEYWORDS:** Industry, Brucella, Production Strain, Selection, Genetic Trait, Marker, Immunogenicity, Agglutinogenicity, Antigenicity, Harmlessness, Antibodies, Biological Properties.

### INTRODUCTION

**Relevance.** Uzbekistan's economic growth depends on the development of its industrial sectors, including its leading agricultural sector. The main sectors of agriculture are livestock and poultry. The priority areas for industrial policy implementation are industrial production, industrial products, the domestic market, a dynamic investment process, and a long-term plan. At the same time, new innovative technologies introduction ensures both production growth and employment in the relevant sectors.

With agricultural production growing intensification in Uzbekistan, animal and bird health issues, as well as related issues of food safety and raw materials of animal origin, are becoming increasingly acute. Therefore, planned specific vaccination importance and animals and birds infectious diseases diagnosis is growing. In its turn, the regular diagnosis and vaccination depends on high-quality vaccines sufficient quantity availability, diagnostics, and other means of agricultural animals preventing infectious diseases.



There is no immunobiological preparations industrial production in Uzbekistan. All means of vaccine specific protection, therapeutic serums, diagnostic preparations, tests systems, etc. are purchased from abroad, and considerable budget funds are spent annually for these purposes.

The high-quality immunobiological preparations release directly depends on reference presence, production and microorganisms' strains control (reference). Therefore, one of the main tasks of the biotechnological production development in any country is the creation of its own standards collection for production microorganism strains, which, in fact, are the technologies for production.

These collections in many countries are created by selection and careful study of microorganism biological properties, their inherent genetic traits stability (markers), biosafety, persistence in animals, and the interaction between macro and microorganisms. The main markers in virulent and a virulent strains characterization of any microorganisms are agglutinogenicity and agglutinability. These markers features are the main ones in strains selection intended for vaccines and diagnosticums manufacture. Also important are biotechnological techniques for biological products manufacture, their standardization and quality control. Therefore, the main requirement for the production technological process is the presence of a "passport of the production strain of the microorganism" characterizing its basic properties.

Since 2018, in the RDIVS in the brucellosis laboratory, scientific research has begun to restore, reproduce, replenish and store the collection of brucella strains necessary for the industrial production of anti-brucellosis vaccines and diagnosticums. It is supposed to create "Passports" for all useful brucella strains. Deposits and the creation of a depository on a digital electronic platform for bio-industrial enterprises, firms, and other institutions are planned with the goal of standardizing future bioproduction, state registration, unified accounting of beneficial microorganisms in the country, as well as commercializing products made from these utility models.

In addition, a passport and a deposit procedure will allow:

- classify all production and control strains of brucella in the country and thereby improve the biosafety system, including through digitalization;
- clone microorganisms;
- establish biochemical characteristics (i.e., the acquisition or loss by microorganisms of the ability to use certain amino acids);
- determine growth factors (the ability to utilize carbohydrates, etc.);
- know antigenicity (agglutinogenicity, agglutinability, and other qualitative properties);
- determine pathogenicity, residual virulence;
- establish the degree of immunogenicity (required in at least 70% of animals);
- recognize stability (i.e., attenuation-artificial resistance, attenuation of virulence of pathogens that retain the ability to induce immunity)
- evaluate the biological form (biotypical affiliation) and the degree of dissociation of microorganisms.

The results will be of scientific and practical importance, as well as important economic and social value for the country, which consists in the fact that:

- In Uzbekistan, the basic biological and biochemical properties of the former and currently used production strains of brucella with different species and virulent affiliation will be studied and standardized;
- the biotypic affiliation of epizootic strains circulating in the country will be established in order to classify territories, electronically record and register foci of infection, which will allow for more effective measures for the prevention and control of animal brucellosis;
- a collection of production and other strains of microorganisms intended for large-scale (reactor) production of vaccines, diagnostics, test systems for analyzes and other biological preparations will be created;
- developed and recommended the main requirements for the technological process of industrial production of immunobiological preparations, as well as universal design schemes for Uzbek analogues.

Summarizing and concretizing the foregoing, it can be noted that, **scientific novelty** of scientific research consists in the selection and study of genetically fixed properties, biotypical affiliation of epizootic strains of brucella.

**Practical relevance** in production the development and implementation and reference cultures (utility models) for the industrial production vaccines and diagnostics, in digital depository creation on an electronic platform for bio-industrial enterprises, firms, and other institutions.

**The economic importance** is in eliminating the country's strategic dependence on an external supplier of veterinary drugs, establishing domestic production of vaccines, diagnostics and other products, its commercialization, which will save budget funds and create additional jobs.

**Social significance.** In reducing the occurrence risks and brucellosis disease spread among animals and humans, as well as training and advanced training of young specialists, scientists, microbiologists, technologists, bioproductors, biologists, biochemists, etc.

In our previous publications in various publications, we reported on the types and characteristics of vaccines used in Uzbekistan. Brucellosis vaccines developed by domestic scientists were mentioned, such as Nevsky-12, Nevsky-13, Nevsky-14 (Nevsky S.N., Abidzhanov M.A., Grinko V.K., Yaraev R.G., etc.), Soviet - 82, 104M, 89/23, K-24, (Orlov E.S., Salmakov K.M., Shumilov K.V., Klimanov A.I., Sklyarov O.D., Kolmykov V.V., Kirilov L.V., and others) American - 19, Rev-1, RB51 (Cotton, Buck, Smith, Alberg, Hersberg, Shuring et al), European - 45/20, 53H38 (Ron-Merieux company) and others.

The listed vaccines were used both, in killed (with adjuvant), dissociated (R-S), and live (S and R) forms. Along with the advantages, these vaccines have a number of disadvantages, which are manifested mainly in the duration of the preservation of post-vaccination antibodies in immunized animals, increased reactogenicity, abortogenicity, etc.

In this scientific work, the goal is set to restore and reproduce the collection of useful brucella strains for industry and production.

**Size and research methods.** All scientific research was carried out in the brucellosis laboratory equipped with modern equipment, including for conducting research at the molecular genetics level (IFA, PCR, etc.) and the corresponding biosafety level 2 (BSL-2). The laboratory has a vivarium equipped for keeping laboratory animals with equipment for conducting bacteriological and pathological studies.

In practical work, selected strains were used Br. abortus 104MUZ, 19UZ, Br. melitensis Rev-1UZ. As a nutrient medium, Meat-peptone hepatic glucose-glycerin agar (MPHGGA) and Meat-peptone hepatic glucose-glycerol broth (MPHGGB) were used. Incubation was carried out in a thermostat with an operating mode of 37-38<sup>0</sup> C for 2-6 days.

The study of cultural, morphological, biochemical, agglutinable, residual virulence and other properties of Br. abortus 104M UZ, 19 UZ, Br. melitensis Rev-1 UZ, as vaccines, was carried out in accordance with the methods recommended by the FAO / VOZ for working with brucella cultures.

The affiliation of brucella cultures of one kind or another was studied by the ability to form hydrogen sulfide (H<sub>2</sub>S) using lead acetic acid. Tinctorial properties in sensitivity to basic fuchsin and thionine when it is contained in various concentrations in a nutrient medium (1: 25000, 1: 50000, 1: 100000). The virulent properties of the studied cultures were evaluated by growth and sensitivity to various concentrations of penicillin in a nutrient medium (0.5, 5, 10, 50 U / ml) and erythritol (1: 1000). The stability, variety and degree of dissociation of colonies of epizootic cultures of brucella was studied using the thermo agglutination reaction, the use of acriflavine, S, R positive sera and the White-Wilson method using a crystal violet in a working dilution of 1: 2000.

The agglutinable properties of 2 billion suspensions of cooked antigens were studied in RA to the limit titer, by the classical method.

As the basis of the technology for manufacturing micro-series of anti-brucellosis vaccines was used "Instructions for the manufacture and control of dry live vaccine against brucellosis from strain Br. abortus 19 " used at the Schelkovo Biocombine of the Russian Federation. In accordance with this instruction, the basic properties of the manufactured microseries of anti-brucellosis vaccines from strains of strains were studied Br. abortus 104M UZ, 19 UZ, Br. melitensis Rev-1 UZ.

The immunizing dose was determined based on the content of live brucella in one ml, which was controlled by plating on solid nutrient medium (MPPGA) in Petri dishes. To obtain the vaccine and determine the number of living microbial cells in the vaccine, a medium previously tested for the growth properties of brucella was used. The nutrient medium (MPPGA) was considered suitable if at least 90 colonies grew on average on 3 Petri dishes from 1 billion suspension of a 2-3-day-old culture of control strain 19 diluted 10<sup>-6</sup> when sowing 0.1 cm<sup>3</sup>.

The harmlessness (reactogenicity) of each of the experimental series of vaccines from strains of Br. abortus 104M UZ, 19 UZ, Br. melitensis Rev-1 UZ, was tested on 3 mice weighing 18-20 g., at a dose of 250 million microbial cells in a volume of 0.25 ml subcutaneously.

Pathogenicity and antigenic properties were tested on guinea pigs weighing 370-450 gr. at a dose of 1 billion microbial cells in a volume of 1 ml. subcutaneously in the area of the right groin. Previously, the injection site was treated with a cotton swab soaked in 70% alcohol. For control, 3 white mice and 3 guinea pigs, to which the vaccine was not administered, were used.

Observation was carried out for white mice for 10 days, guinea pigs for 25 days. When guinea pigs were slaughtered after 25 days, they paid attention to the state of internal organs and lymph nodes.

The antigenic properties of the experimental vaccine series were checked by establishing an agglutination titer in guinea pigs that were vaccinated in order to determine its pathogenicity and harmlessness. Before and after the slaughter, blood was taken from guinea pigs and the RA was placed with a single brucellosis antigen for RA, RSK and RDSK to the maximum titer.

The reactogenicity of the experimental vaccine series was tested on sheep in an experiment to study the immunogenic and abortogenic properties. Immunogenicity and tension of immunity of experimental experimental series of vaccines from strains of Br. abortus 104M UZ, 19 UZ, Br. melitensis Rev-1 UZ, was checked after 6 months on 18 sheep of Karakul breed. Infection of 18 sheep, including the control, was carried out 165 days after immunization.

**Research results and discussion.** When studying the properties of strains, first of all, attention was paid to dissociation. Since during dissociation, deep morphological, functional, biochemical disturbances occur in the cell, which are associated with a change in biological properties, which leads to the transformation of the antigenic structure of brucella. In this regard, one of the main requirements for most highly effective brucellosis vaccines is the presence of 95-97% of cells in the S form in the composition used in the production of microbial culture. This indicator was controlled in a sample with acriflavine, the reaction of thermo agglutination and the White-Wilson method. It was found that all three strains of Br. abortus 104M UZ, 19 UZ, Br. melitensis Rev-1 UZ did not give a positive reaction in the sample with acriflavine (1: 1000) and R - brucellosis serum at a 1:10 dilution. At the same time, the strains gave a clear positive reaction with S serum diluted 1:50. When setting the reaction of thermoagglutination, it was established that in all test tubes with 2 billion suspension, when heated for 45 minutes at 380 ° C, the suspension remained homogeneous and no precipitation was observed. Using the White-Wilson method showed that all colonies from each strain have the appearance of a smooth, convex (without roughness) yellow shape (not stained), that is, they are in a stable S-shape. To preserve the properties of the strains, sucrose-gelatin medium was used. (Table 1)

The main passport characteristics of brucella strains selected for the preparation of vaccine microseries

**TABLE 1.**

Passport characteristics	III tamm		
	19UZ	104M UZ	PeB-1 UZ
Microbe type	Br. abortus	Br. Abortus	Br. Melitensis
Place of deposit	A unique collection of animal microorganisms RDIVS	A unique collection of animal microorganisms RDIVS	A unique collection of animal microorganisms RDIVS
Production method	Selected from individual colonies of S-forms of strain 19 VGNKI	Selected from individual colonies of S-forms of strain 104 VGNKI	Selected from individual colonies of S-forms of strain Rev-1 VGNKI
Growth pattern on culture medium	S-shape, smooth, convex yellow	S-shape, smooth, convex yellow	S-shape, smooth, convex yellow

Tinctorial properties: Thionine Magenta	- +	- +	+ +
Monoserum Agglutination A M	+ -	+ -	- +
H <sub>2</sub> S Products	+	-	-
Note: “-” - absence sign; “+” - presence sign			

When studying data on the accumulation of microbes, the relatively close biomass yield for cultures of the abortus species 104M UZ and 19 UZ attracts attention. A significant difference in biomass yield was established between abortus 104M UZ and Melitensis Rev-1 UZ (40-50 billion microliters). This, in turn, can be significant in scalable vaccine production.

Antigenic properties and pathogenicity in all strains of Br. abortus 104M UZ, 19 UZ, Br. melitensis Rev-1 UZ has been studied in previous studies on agglutinogenicity in rabbits and residual virulence in guinea pigs. When rabbits were immunized once with a 1 billionth suspension of agar cultures killed by heating, the agglutinin titer in RA on day 30 in rabbits immunized with vaccine strains 19 UZ and Rev-1 UZ was significantly higher than that of the vaccine strain 104 M UZ, respectively 80, 100 IU / ml against 40 IU / ml. The results of a comparative study of the residual virulence of brucella at various doses in experiments on guinea pigs also showed that the selected vaccine strains of Br. abortus 104M UZ, 19 UZ, Br. melitensis Rev-1 UZ do not differ in their virulent properties from those of commercial analogues. The greatest residual virulence has a strain of Br. melitensis Rev-1 UZ which at a dose of 100 thousand microns. class takes root in the body of guinea pigs. Strain Br. abortus 104M UZ, in its residual virulence, occupies an intermediate position, which, although it can take root at a dose of 100 thousand microns. class in the animal organism, however, the indices of infection and spleen indices are noticeably lower than that of strain Rev-1. Strain Br. abortus 19 UZ, has the least residual virulence compared with strains 104M UZ and Rev-1 UZ. Br. abortus 19 UZ well survives at a dose of 1 billion microns. C., but not settled in a dose of 10 and 100 thousand microns cl.

Thus, these and other studies carried out necessary to determine the basic biological properties of the standards of industrial cultures of Brucella strains allow the construction of experimental micro-series of anti-Brucella vaccines in accordance with the requirements.

The main biological properties of the standards of industrial cultures of strains of Br. abortus 19UZ, br. abortus 104M UZ and Br. melitensis Rev-1UZ brucella are presented in table 2.

The main biological properties of the standards Brucella crops

**TABLE 2**

Metric Unit	The value of the indicator for the strain		
	19UZ	104M UZ	REV-1 UZ
The accumulation of live			

microbes in a dense nutrient medium in (X + I95) * 109 live mk.tel / ml			
In test tubes	17,0 $\pm$ 2,0	20,0 $\pm$ 3,0	13,0 $\pm$ 3,0
In matrix	160,0-170,0 $\pm$ 10,0	180,0-190,0 $\pm$ 15,0	140,0-150,0 $\pm$ 20,0
The presence of dissociation of the sample with acriflavine	Missing	Missing	Missing
The presence of dissociation in the reaction of thermoagglutination	Missing	Missing	Missing
The level of dissociation in (X + I95), in percent	1,9 $\pm$ 3,0	1,7 $\pm$ 3,0	1,3 $\pm$ 3,0
Title in RA with brucellosis agglutinating serum	Not less than 1000 IU / ml	Not less than 1000 IU / ml	Not less than 1000 IU / ml
Virulence for guinea pigs with subcutaneous infection	Avirulent	Avirulent	Avirulent

The study found that all three strains of Br. abortus 104M UZ, 19 UZ, Br. melitensis Rev-1 UZ used in the production of vaccine micro series according to their cultural, morphological, biochemical, tinctorial, antigenic, virulent and other properties meet the requirements and did not differ from those indicated in their passports.

Test microseries of anti-brucellosis vaccines from Br. abortus 104M UZ, 19 UZ, Br. melitensis Rev-1 UZ was a suspension of live brucella vaccine strains in a protective medium. Vaccines from each strain individually were inoculated subcutaneously to white mice and guinea pigs. Vaccines were administered to white mice weighing 18-20 g., Subcutaneously at a dose of 250 million microbial cells in a volume of 0.25 ml, in the back. Guinea pigs weighing 370-450 gr. at a dose of 1 billion microbial cells in a volume of 1 ml. subcutaneously in the area of the right groin. For control, 3 white mice and 3 guinea pigs, to which the vaccine was not administered, were used.

Observation of white mice was introduced within 10 days. During this period, white mice did not show visible deviations from the physiological norm. All mice remained active, the appetite was preserved, and changes in appearance (ruffled hair, etc.) were not observed.

Guinea pigs were observed for 25 days. During the period of observation, deviations from the physiological state were not observed; all guinea pigs had an active appetite. After 25 days, all 12 heads of guinea pigs, including control, took blood from the heart, and then underwent an autopsy for subsequent pathological examination of the state of internal organs. As a result of a pathological study of the heart, liver, spleen, pharyngeal, inguinal, mediastinal, paraaortic lymph nodes, changes characteristic of brucellosis infection were not found. The marked hyperplasia of individual spleen follicles in almost all guinea pigs, except for the control ones, was a consequence of the immune restructuring of the body.

A study of the antigenic properties of the microseries of vaccines showed that all test series have high agglutininogenicity  $\sum x = 160-320$  IU / ml.



The results of the study of the properties of experimental microseries of vaccines

**TABLE 3.**

Kind of animal	Animals amount	Dose	Microseries of vaccines	Harmlessness (reactogen.)	Pathogenicity	Agglutinog IU / ml
White mice	3	250 million microns cl. / 0.25 ml	19 UZ	harmless	Avirulent	Not investigated
	3	-//-	104MUZ	harmless	Avirulent	Not investigated
	3	-//-	REV-1-1UZ	harmless	Avirulent	Not investigated
	3	control				
Guinea pigs	3	1 billion mk.cl / ml	19 UZ	harmless	avirulent	320
	3	-//-	104MUZ	harmless	Avirulent	160
	3	-//-	REV-1-1UZ	harmless	Avirulent	240
	3	control				0

Thus prepared experimental micro-series of vaccines from strains of Br. abortus 104M UZ, 19 UZ, Br. melitensis Rev-1 UZ during the study turned out to be harmless, avirulent and highly agglutinogenic and, according to these criteria, meet the requirements of the developed temporary technological instructions.

When checking the reactogenicity of the experimental series of vaccines from strains of Br. abortus 104M UZ, 19 UZ, Br. melitensis Rev-1 UZ in sheep; results were also obtained indicating the lack of reactogenicity of the tested vaccines. In some cases, a short-term increase in the total body temperature in sheep by 0.3-0.5<sup>0</sup> C was noted, and in some sheep lameness was noted. These deviations disappeared in the next 24-48 hours and no other changes were observed in the sheep.

The study of the immunogenic properties of the experimental series of vaccines from strains of Br. abortus 104M UZ, 19 UZ, Br. melitensis Rev-1 UZ was scheduled at two dates 6 and 12 months after infection. For this purpose, 36 sheep were vaccinated with different doses of the tested vaccines. After 165 days, 15 heads of sheep immunized with various doses of experimental vaccines were infected with a reference strain of Br. melitensis “Novocherkassk-102”.

All 36 sheep of the Karakul breed were previously pre-vaccinated in the RBP, RA and IFA before vaccination and were immunized after receiving negative results.

After 10 days, all 15 experimental sheep were bled and examined in RBP and RA. Subsequently, serum for the presence of antibodies was examined monthly in all sheep. The results of serological studies showed that in all sheep, starting from 10 days after immunization and for 6 months, antibody titers were detected in the plate agglutination reaction with rosenal antigen

and agglutination reaction. Moreover, the intensity of the plate reaction of agglutination was pronounced and amounted to at least 50%. The presence of antibodies in all sheep was also found in RA already 10 days after immunization. However, its intensity varied depending on the duration of the study.

So, if on day 10 the average titer of antibodies in sheep immunized with a vaccine from strain Br. abortus 104M UZ at a dose of 5 billion mk.cl. amounted to 366 IU / ml, at a dose of 20 billion mk.cl. also 366 IU / ml, at a dose of 40 billion sq.m. 566 IU / ml. Then when using a vaccine from strain Br. abortus 19 UZ at a dose of 40 billion microliters.cl this indicator was the highest and amounted to 700 IU / ml. Antibody titers when using a vaccine from strain Br. melitensis Rev-1 UZ at a dose of 2 billion microns cl. were lower compared to strain Br. abortus 19 UZ and averaged 533 IU / ml.

The average values of antibody titers when using a vaccine from strain Br. abortus 104M UZ, at a dose of 5 billion mk.cl. and 20 billion microns. class were the same, but 1.5 times lower than when using the same vaccine at a dose of 40 billion mk.cl.

30 days after immunization, the average antibody titers in all groups did not differ. Indicators of antibody titers decreased 5 months after vaccination in all groups. So in groups of sheep where vaccine samples from Br. abortus 19 UZ and Br. melitensis Rev-1 UZ at the doses recommended by the instructions for their use (40 billion and 2 billion microliters per liter) antibody titers decreased markedly by 1.9 and 1.6 times, respectively.

Indicators of antibody titers in sheep when using a vaccine from strain Br. abortus 104M UZ at a dose of 5 billion mk.cl. for the fifth month it was almost halved. In the group of sheep immunized with the same vaccine at a dose of 40 billion microns cl. this indicator also decreased by 2.1 times.

Thus, the antibody dynamics study titers showed that all vaccines experimental series are highly agglutinogenic, and the increase level and antibody titers extinction when using all vaccines studied microseries without exception are their analogues characteristic.

After 165 days, all 15 immunized sheep were infected with a culture of the virulent strain of Br. melitensis "Novocherkassk - 102".

Three non-immunized control sheep were also infected with a similar dose of reference strain culture of Br. melitensis "Novocherkassk - 102".

35–40 days after infection, all 18 sheep, including controls, were slaughtered for bacteriological research.

Currently, experiments to study antibody titers dynamics and immunity are ongoing.

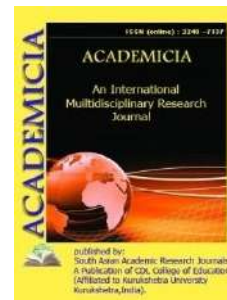
## CONCLUSION

1. For the first time in the Republic, an Interim Technological Instruction has been developed and a technology has been developed for the manufacture of domestic vaccines from domestic Br. abortus 104M UZ, 19 UZ, Br. melitensis Rev-1 UZ strains and deposited in Uzbekistan.

2. For the first time, the basic passport characteristics of industrial crops standards of brucella and Br. abortus 104M UZ, 19 UZ, Br. melitensis Rev-1 UZ strains were developed and intended for the manufacture of anti-brucellosis vaccines.
3. For the first time in the country, the basic biological properties parameters of brucella industrial cultures standards designed for domestic vaccines manufacture have been developed
4. It is established that in one milliliter of the vaccine the microbial cells varies number for strain Br. abortus 104M UZ from 180 to 190 billion microns. cl., for strain Br. abortus 19 UZ - 160-170 billion microns cl. and for strain Br. melitensis Rev-1 UZ - 140-150 billion microns cl. however, a significant difference in the biomass yield established between Br. abortus 104M UZ and Br. melitensis Rev-1 UZ (40–50 billion microliters of cells) can be significant in large-scale vaccine production.

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DOI: **10.5958/2249-7137.2020.00551.0**

## **PATHOLOGICAL CHANGES IN MIXED BACTERIAL INFECTIONS OF BIRDS**

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### **ABSTRACT**

*The article presents data on pathological changes in the body of birds experimentally infected with pathogens of colibacteriosis, pullorosis and pasteurellosis of birds. Experiments have shown that when chickens are infected with 2-3 species of pathogens, the mentioned infections occur with severe clinical signs and complex pathological changes. At the same time, transience, high mortality with a severe form of the disease were clarified. More pronounced pathological changes were observed with a prolonged (5-6 days) course of the disease. In the acute course of this mixed infection, the liver is enlarged with small areas of necrosis, signs of acute catarrhal enteritis are observed. A higher pathogenicity of the pathogen of pasteurellosis *P. multocida* was found in the associated course with pullorosis and colibacteriosis, in contrast to mono infections. In this case, the pathogen *P. multocida*, in combination with *S. pullorum-gallinarum* and *E. coli*, was more aggressive and therefore the infection process was more difficult as a synergy.*

**KEYWORDS:** *The Experiment, Mixed Infections Of Birds, Pasteurella Of Chicken's, Salmonella Of Chicken's, Colibacteriouses Of Chicken's The Bacterial Researches, Pathomorphological Changes, Differential Diagnostics Of Mixed Bacterial Infections Of Birds.*

### **INTRODUCTION**

**Relevance.** Poultry farming is one of the most dynamic sectors of world and domestic industrial food production. The scale of world production of poultry products has been growing dynamically for several decades.

Bacterial safety in modern poultry farming is one of the key factors of production efficiency, and such a factor that plays a basic role. It is obvious that violation of the requirements of bacterial

safety, as well as optimal zootechnical and veterinary-sanitary conditions for keeping the bird poses not only a serious threat to the productivity of the bird, but also potentially carries the risk of a significant reduction in the number of herds.

It is not by chance that there is a special danger of the spread of infectious diseases, primarily of a bacterial nature, which exceed 60% (L. Vengererenko, 2009). Important features of bacteriological diseases of birds are: - their associative nature (Borisenkova A.N., 2006; Lazutkina E.A., Bessarabov B.F., 2007; Cavanagh D., 1999), - high pathogenicity for humans (Bondarenko V. M., Shamanova M.A., 2004; Stepanshin Yu.G. et al., 2005; Thamm V., 2000), - high lability and adaptability of pathogenic strains with respect to the antibacterial agents used.

Mixed bacterial diseases occupy a significant place in the pathology of birds and are characterized by polyetiologicality, significant variability of the antigenic composition of pathogens. The economic damage caused by them is very significant and is determined by the death of embryos and chickens, decreased productivity (live weight, egg production) and feed conversion, increased costs for medical and veterinary-sanitary measures.

Based on the foregoing, in the experiments on chickens we studied the course of the disease, clinical manifestations, pathoanatomical changes in experimental colibacteriosis, pullorosis, pasteurellosis separately, as well as in experimentally combined infections (with colibacteriosis and pullulosis, with colibacteriosis and pasteurellosis in; ; with colibacteriosis, pullorosis and pasteurellosis) birds. In strictly controlled experiments, the duration of the incubation period was established for different methods of infection, peaks of manifestation of clinical signs and mortality of chickens with pronounced pathological changes.

The aim of the research was to, in a pure experiment, in a comparative aspect, trace the dynamics of the manifestation of clinical signs, study pathological changes, both in case of mono infections (separately in colibacteriosis, salmonellosis, pasteurellosis) and in experimental mixed infections.

To achieve this goal, we set the following tasks:

1. To study the pathogenic effect of pasteurella, salmonella and E. coli separately on the development and course of the disease in the bird;
2. To determine the pathogenic effect of the above pathogens with the simultaneous introduction of two or three pathogens in various combinations.
3. To establish clinical features, pathoanatomical changes in experimental colibacteriosis, salmonellosis, and pasteurellosis of birds and in various combinations;

Scope and research methods. Experimental studies were conducted on 48 heads of young animals of 40 days of age. They were divided into 8 groups of 6 goals each. Of these, the first 7 groups were experimental, and the 8th group served as a control (table). Experienced chickens were infected with diurnal cultures of E. coli, S. pullorum-gallinarum and P. multocida. The first group of chickens was infected only with E. coli, the second-S. pullorum-gallinarum, the third - P. multocida in doses of 0.5 ml (2 billion suspension of cultures). The fourth group was infected simultaneously with E. coli and S. pullorum-gallinarum in 0.5 ml, the fifth in E. coli and P. multocida, the sixth in S. pullorum-gallinarum and P. multocida in doses of 0.5 ml (1 billion suspension cultures). The seventh group was infected simultaneously with E. coli, S. pullorum-

gallinarum and *P. multocida* in a dose of 0.5 ml (1 billion suspension of cultures). Control chickens (6 goals) were injected with saline in a dose of 1 ml (table.). In acute experiments on the infection of chickens with causative agents of colibacteriosis, pullorosis and pasteurellosis, the dynamics of the manifestation of clinical signs in the comparative aspect was tracked and pathological changes were studied in experimental mono-(separately: with colibacteriosis, pullorosis and pasteurellosis) and mixed infections (separately: pulaculosis and colibac; pasteurellosis and colibacteriosis; pasteurellosis and pullorosis; pasteurellosis, pullorosis and colibacteriosis). The disease was diagnosed on the basis of clinical manifestations, pathoanatomical and necessarily bacteriological studies.

For clinical, pathological studies used conventional methods. In a clinical study, the general physiological state was determined: appetite, activity, condition of the external integuments, mucous membranes, body temperature, respiration, pulse, etc. In a post-mortem examination, attention is drawn to the consistency of internal organs, volume, color, the presence of hemorrhages, and the condition of the mucous membranes. Particular attention was paid to possible hemorrhages, organ changes, etc.

During the experiment, the experimental and control groups were created equal conditions of maintenance and feeding, traced the dynamics of the state of the body.

### Research results and discussion

In the experiment, on day 5-6, out of 48 goals of infected chickens, 22 animals died and the rest were killed in an agonal state (visible clinical signs). Of these, on days 7-8, groups IV, V, VI, VII of 6 birds killed 4-5 animals each (mixed pathogens), but groups I, II, III, of 6 animals killed only 3 animals and the rest were forced to be killed. The autopsy of dead chickens was carried out in the laboratory of VITI with the participation of the commission and pathological changes were studied.

Colibacillosis. On the 5th day after infection, one head fell, on the 6th day - two, on the 7th - one and on the 8th day two heads. In post-mortem chickens, post-mortem changes were detected mainly in the gastrointestinal tract and in the parenchymal organs. At the same time, signs of sepsis were noted - massive hemorrhages on the serous and mucous membranes, copious spot and spotted hemorrhages in the gastrointestinal tract, spleen, heart, liver and kidneys. An increase in the spleen and liver was detected. Pericarditis (inflammation of the serous membrane of the heart), hepatitis, catarrhal enteritis, inflammation of the periocular tissues (swollen head syndrome) were also noted.

Pullorosis. 1-3 days after the onset of clinical signs, sick chickens died. On the 4th day after infection, two heads fell, on the 5th day - two, on the 6th and 7th day, one at a time. An autopsy revealed an enlargement of the liver, sometimes of a grayish-yellow color. Enlarged liver was degenerated, flabby consistency, there were multiple, small necrotic foci of grayish-white color. Similar changes were observed in the heart and lungs. Often serous-fibrinous pericarditis was noted. The heart muscles were flabby to the touch, had the color of boiled meat. The kidneys were also enlarged and degenerated. The intestinal mucosa in most cases was in a state of catarrhal inflammation, externally swollen, reddened, with spot hemorrhages. Blind processes of the intestine and cecum are filled with curd masses of white color, mixed with blood. In the subcutaneous tissue in some parts of the body, diffuse serous-fibrinous infiltrates were noted.



**Pasteurellosis.** Against the background of progressive weakness, 2-3 days after the onset of clinical signs, the chickens fell. So on the 4th day after infection, three heads fell, on the 5th day - two and on the 6th - one head. In a super-acute course, pathoanatomical changes were mild. They were characterized by vascular injection in parenchymal organs with single hemorrhages on the epicardium. In the acute course, hemorrhagic diathesis, numerous hemorrhages on the epicardium, spleen and kidneys were noted. The same hemorrhages were detected on the mesentery and on the serous membrane of the intestine. The intestinal mucosa was diphyletically inflamed and dotted with hemorrhages. The intestinal contents are reddish. The outwardly swollen liver, with blunted edges, is yellowish in color, under the capsule in the parenchyma, point hemorrhages were noted. Serous fibrinous pericarditis was noted. The heart muscles are flabby, had the color of boiled meat. The spleen was enlarged, flabby, dark red in color. One dead bird in the spleen showed white-yellowish-gray foci of necrosis.

**Pullorosis and colibacillosis.** 1-3 days after the onset of clinical signs, sick chickens died. So on the 3rd day after infection, two heads fell, on the 4th day - two, on the 5th and 7th day, one head each. At a postmortem autopsy of the victims of experimental pullorosis and colibacteriosis, an enlargement of the liver with a grayish-yellow hue was revealed. The liver was reborn, flabby in it noted multiple point hemorrhages and small necrotic foci of grayish-white color. Often found changes in the heart in the form of pericarditis. Hemorrhages, usually detected in sepsis, were also found on the serous membranes of the heart. The heart muscles are flabby, had the color of boiled meat. An increase in spleen with hemorrhage under the capsule was more often observed. The kidneys were also enlarged and reborn. Catarrhal hemorrhagic inflammation of the intestinal mucosa was observed, externally swollen, reddened with point hemorrhages. In most cases, spotted hemorrhages were also noted on the serous membranes. Blind processes of the intestine and cesspool were filled with curdled masses of white color, mixed with blood.

**Pasteurellosis and colibacillosis.** In patients, weakness progressed over time and 2-3 days after the onset of clinical signs, the chickens fell. On the 3rd day after infection, three heads fell, on the 4th day - one and on the 6th - two heads. In a super-acute course, pathoanatomical changes were mild. They were characterized by vascular injection in parenchymal organs with single hemorrhages on the epicardium. In the acute course, hemorrhagic diathesis, numerous hemorrhages on the epicardium, spleen and kidneys were noted. The same hemorrhages were detected on the mesentery and on the serous membrane of the intestine. The intestinal mucosa was inflamed and dotted with hemorrhages. The intestinal contents are reddish. The outwardly swollen liver, with blunted edges, is yellowish in color, under the capsule in the parenchyma, point hemorrhages and whitish foci of necrosis were noted. Serous fibrinous pericarditis was noted. The heart muscles are flabby, they found gray-white foci of necrosis. The spleen was enlarged, flabby, dark red in color. Three dead chickens in the spleen in the lung also observed white-yellowish-gray foci of necrosis.

**Pasteurellosis and pullorosis.** On the 3rd day after infection, three heads fell, on the 4th day - two and on the 5th - one head. In fallen chickens from an experimental mixed infection (pasteurellosis and pullorosis), pathological changes were characterized by hemorrhagic diathesis, multiple punctate and sometimes spotty hemorrhages on the parenchymal organs. Such changes were found on the epicardium, spleen, kidneys, mesentery and serous membrane of the intestine. The intestinal mucosa was catarrhally-hemorrhagic and inflamed with hemorrhages. The intestinal contents are reddish. The liver is reborn, flabby, outwardly swollen, yellowish,

under the capsule in the parenchyma, point hemorrhages and miliary foci of necrosis were noted. At autopsy, croupous pneumonia was noted and fibrinous pericarditis was detected on the serous membrane of the heart. The heart muscles were flabby, had gray-white necrotic foci. The spleen was enlarged, flabby, dark red and miliary foci of necrosis in it. Blind processes of the intestine and cecum are filled with curd masses of white color, mixed with blood. In the subcutaneous tissue, diffuse serous-fibrinous infiltrates are expressed in various parts of the body.

Pasteurellosis, pullorosis and colibacillosis. Over time, weakness progressed, and 1-2 days after the onset of clinical signs, the chickens died. On the 3rd day after infection, four heads fell, on the 4th day - two. When opening the dead chickens from an experimental mixed infection, where three pathogens (*P. multocida*, *S. pullorum-gallinarum* and *E. coli*) took part, a septic process was detected. Pathological changes in the fallen chickens were characterized by massive punctate and spotty hemorrhages on the serous membranes and parenchymal organs. At the same time, pronounced hemorrhagic diathesis, numerous hemorrhages on the epicardium, under the capsule of the spleen and kidneys were noted. The same hemorrhages were detected on the mesentery and on the serous membrane of the intestine. The intestinal mucosa was inflamed and dotted with hemorrhages. The intestinal contents are reddish. Liver externally swollen, increased in volume, yellowish in color, under the capsule in the parenchyma, point hemorrhages and whitish foci of necrosis were noted. Serous fibrinous pericarditis was noted. The heart muscles are flabby to the touch, they found gray-white foci of necrosis. The spleen was enlarged, flabby, dark red in color. Four dead chickens in the spleen in the lung also observed white-yellowish-gray foci of necrosis.

Thus, in separate experiments on chickens, we studied pathological changes in mono-infections: pasteurellosis, pullorosis and colibacteriosis of each separately, as well as in mixed diseases in various combinations - pullorosis and colibacteriosis; pasteurellosis and colibacteriosis; pasteurellosis and pullorosis; pasteurellosis, pullorosis and colibacteriosis. Moreover, pathological changes testified to significant differences in the form, severity and transience of the manifestation of mono- and mixed diseases. The most striking clinical signs and post-mortem changes, transience, with severe morbidity were noted when infected with two or three types of pathogens, however, even when the colibacteriosis pathogen was infected, the chickens had 100% morbidity and mortality with a relatively moderate severity of the disease.

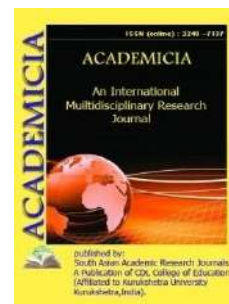
Thus, a higher pathogenicity of the pathogen was manifested in the associated course of the disease, especially if the causative agent of pasteurellosis, *P. multocida*, was present in the group of infected material. In mixed infections, necrotic foci in the liver, heart, kidneys, and hemorrhages of almost all surfaces of the serous and mucous membranes of the intestine were a distinctive feature of pathological changes. On the whole, the data obtained allow us to conclude that under experimental conditions there is a more pronounced significance of mixed forms of bacterial diseases than in case of mono-infections.

**Conclusion** As a result of the studies, it was found that in experimental mixed infection, when pasteurellosis, pullorosis and colibacteriosis occur simultaneously, the most striking pathological signs of the disease appear already 2.5-3 days after infection with the daily culture *P. multocida* and *S. pullorum-gallinarum* and *E. coli*. At the same time, transience, high mortality with a severe form of the disease were clarified. More pronounced pathological changes were observed with a prolonged (5-6 days) course of the disease. In the acute course of this mixed infection, the

liver is enlarged with small areas of necrosis, signs of acute catarrhal enteritis are noted. A higher pathogenicity of the causative agent of pasteurellosis *P. multocida* was found in the associated course with pullorosis and colibacteriosis, in contrast to mono infections. In this case, the pathogen *P. multocida*, in combination with *S. pullorum-gallinarum* and *E. coli*, was more aggressive and therefore the infection process was more difficult as a synergy. A distinctive feature of pathological changes in the above mixed infection is the detection of necrotic foci in the liver, heart and kidneys, as well as hemorrhages of almost all surfaces of the intestinal mucosa. When diagnosing mixed infections, it is necessary to take into account the entirety of the obtained information of clinical signs, pathological changes, but bacteriological studies are of particular and decisive importance, because without isolating the pathogen from the pathological material, it makes a final diagnosis of the disease, it is not possible. It is necessary to achieve isolation of the pathogen and its identification by microbiological, virological, serological and molecular biological methods or antigens of a microorganism, virus using immunological tests.

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DOI: **10.5958/2249-7137.2020.00552.2**

## REFLECTION OF PHRASEOLOGICAL UNITS IN TRANSLATION

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### ABSTRACT

*The translation process is always one of the most complicated issues. This article also demonstrates in detail how difficult the translation process can be, especially what is important in the way phraseological units are reflected in a translation. Also, the translation process is based on the basis between two main points that do not occur in a separate, special convenience, difficult or easy setting. To translate, one must first understand, identify, interpret, analyze, and critically evaluate the text being translated using language images, that is, elements of the language being translated.*

**KEYWORDS:** Translation, Pragmatics, Use Of Equivalents, Stylistic Function, Grammatical Form, Methodological Task, Artistic Means, Conformity To The Original.

### INTRODUCTION

Translation is one of the most ancient forms of human activity, and because of this activity we can clearly imagine the history of human development. Translation is a tool or a bridge between nations. The tool that triggers this "weapon" is pragmatism. Pragmatics is important in translation. Its main task is to convey the meaning expressed in the original - the content in the same way in translation.

*Lyonz says: "Pragmatics describes the use of appropriate linguistic units in communication in order to encourage the listener to accept the transmitted information as the speaker wishes. This pragmatism is tantamount to defining the role of linguistic means in interpersonal communication."* Linguistic units in different languages are not always completely interchangeable. Words specific to one language may not exist in another. For example, when translating "*La maison de Havai*" into Uzbek, the translator uses some linguistic means to convey its original meaning and translates it not as "*Gavaidagi uy*" but as "*Gavai orolidagi uy*". The word "*orol (island)*" has been added to make the meaning of the tube clear to the Uzbek listener. If the main task of the original text is to convey information, then pragmatics ensures the

correct and accurate expression of that information. In this process, the translator can make the necessary changes in the appropriate places to achieve a full understanding of the text. Lack of knowledge in translation leads to the translator to explicitly explain some of the information, to make additions, comments to the content of the text. This is especially evident in the process of translating phraseological units from one language to another.

### **Main part**

Phraseological expressions are also relevant because they are combined with different words in different languages, and words with the same meaning have different meanings in other languages. Although the role of phraseological expressions in foreign language learning, especially in colloquial and artistic style, is enormous, it has not yet been sufficiently studied. Advanced linguists believe that any translation must scientifically reflect all the sources relevant to the original, with the need for scientific generalization. Creating a translated text of an artistic monument written in another language at the level of the requirements of the time makes it necessary for the artist to be well-equipped with practical and theoretical knowledge in this field. Because only a penman who has mastered the secrets of artistic mastery in all respects, as a talented person who has mastered the art of original expression of the idea that is the product of this work, can perform such a very responsible work as creating full artistic translations. The need for a careful interpretation of the relationship of form and content in translation imposes on the artist the task of choosing alternative language and speech units that can creatively reflect the functions of all linguistic-methodological means that create the artistic sophistication and national character of the work. Usually, translating phraseological phrases from one language into another using equivalents is the most effective way to create an adequate translation, because in equivalents, in addition to the meanings of phrases, their figurative bases are similar. This makes them more compatible in terms of stylistic function. That's why experienced translators try to use this method more in their work. However, when translating using equivalents, using the meanings of both original and translated expressions without a deep understanding of the stylistic functions they undergo can lead to inadequacy. Below, we now classify equivalent French and Uzbek phraseological expressions and base our classification on the grammatical structure and semantic features of the two linguistic phraseological expressions. In our opinion these conclusions will have a positive effect on the enrichment of the theory of literary translation. Equivalents that differ in meaning, lexical structure, function, and number, but differ in word order:

***Rusé comme un renard- as cunning as a fox, être malin comme un singe- to be as cunning as a fox.***

The fact that the word order in such units differs from each other can also cause certain difficulties for the translator. In the process of translation, the phraseological phrase of the native language is not synonymous with another synonym of the base component or functionally close to it. can cause a change in style. This reduces the effectiveness of the phrase. False phraseological equivalents and translation. The two languages, which are lexically compatible, differ in terms of phraseological meaning and methodological function. This is explained by the fact that each letter approaches and evaluates the things and events that occur and occur in the material life, independently, without the influence and pressure of other languages. Accordingly, there are some inconsistencies and differences in the way of life of peoples and in their opinions



and observations, and these factors are more evident in their use of the resources of their mother tongue. If the representatives of a certain nation can see a certain trait and characteristic in a certain movement, attitude and behavior, the children of other nations will evaluate these aspects in a completely different way. As a result, when a certain people or event expresses a concept when it is the object of a figurative assessment, in the words of children of other peoples it acquires a fragmentary assessment, as a result of which two lexically compatible phraseological units serves to express different meanings and methodological tasks.

In the absence of a phraseology equivalent to the phraseological unit originally used in the target language, adequacy is often achieved through alternative options. Phraseological units of two languages, which are compatible in terms of meaning and methodological function, in some cases differ from each other in lexical content, either completely or in elements other than the basic components. Alternatives may alternate in translation. This is because there are no national words in the structure of these units that hinder their exchange. However, translators sometimes allow for inadequate interpretation of the expression, failing to take advantage of the opportunities available in their own language. In terms of semantic and methodological task, only the basic components of the corresponding alternatives are similar to each other, while the other words are different. Such interchangeable phraseological units are usually created for the figurative or emotional expression of the same event, action, character, and are fully compatible with each other.

Adequate interpretation of phraseological units in translation, which are more complex linguistic means than lexical units of language, is one of the most complex and, at the same time, very responsible issues of translation practice. Because phraseological units as artistic and descriptive means of speech, taking into account more diverse methodological tasks than a simple, neutral statement of thought, the desire to interpret them in translation is a zeal to recreate the figurative and emotional-pictorial value of the work of art closely related. The fact that the translation of phraseological units is a very complicated practical process depends mainly on the nature of these units - their lexical, semantic and structural complexity. Also, many phraseologies have a national character, which poses a number of practical difficulties for translators. The comparative study of the nature of the original and translated languages, the identification of semantic-methodological similarities between them and the ways and means of interpreting one of them through the other in the process of translation provide the basis for a complete translation. Only on the basis of scientific and textual analysis can it be determined whether a particular phraseological unit selected in the target language corresponds in terms of meaning and methodological function to the phraseology encountered in the original. Because phraseologisms, like lexical units, are so ambiguous and multifunctional, two linguistic units that are semantically appropriate do not always replace each other in translation. Phraseological equivalents or alternatives that can replace each other in a particular textual situation may differ from each other in terms of semantic features or methodological functions in another textual situation, so that the artist has a scientific and creative approach to his responsibility. only eliminates the risk of misinterpretation of the original in translation.

In the translation of phraseological units, it is also vital to clarify the existence or falsity of the image based on them in the selection of language tools that are content and methodologically appropriate to the original linguistic units in the target language. The translation of figurative and obvious phrases with the help of alternative linguistic means ensures the re-creation of the

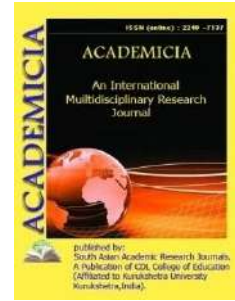
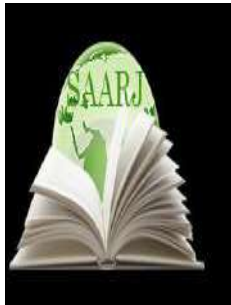


semantic-methodological feature of the original in the translation. However, sometimes the imagery is not through linguistic means, but through the use of fully stable figurative compounds, or, conversely, through the use of fully stable figurative compounds, or, conversely, through the use of figuratively stable compounds. We see that this feature of the obvious phraseology is adequately interpreted by the extinct linguistic means, in which case the pragmatic correspondence between the two linguistic units is formed by the addition of adaptive means. By defining the semantic and methodological function of the phraseological unit originally used in the translation on the basis of text analysis, the choice of a pragmatic linguistic means in the translation creates a communicative similarity of the two language units.

**In conclusion**, the interchangeability of two languages in translation, given their figurative or emotional expressions, their semantic similarity, can lead to a lack of pragmatic adequacy. It is natural that units whose true semantic and methodological functions are interchangeable in a deep textual situation may acquire additional semantic features in a different speech situation and not be able to replace each other. In addition, many phraseologies are not always used in their traditional meanings and functions, but are used in the form of occasional changes in the form and content of artistic speech, which gives them an additional methodological function. further complicates the translation process. The responsibility for the full interpretation of such conceptual meanings and functions acquired by language units necessitates the selection of as many alternative verbal and figurative means as possible in the target language.

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DOI: **10.5958/2249-7137.2020.00719.3**

## CONSIDERATIONS FOR MAKING SUCCESSFUL MERGERS AND ACQUISITIONS (M&A) PROPOSALS: A STUDY

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### ABSTRACT

*Mergers and Acquisitions (M&A) holds a major role in corporate restructuring and growth of companies in the post-globalisation era. 'Most Mergers Fail' despite all efforts to make it successful. This study intends to study what all factors should be considered by Organisations while drafting the M&A proposal. Initially, it is studied why majority of the mergers fail as it may help policy makers to take of CSFs while drafting M&A proposals. Seven CSFs were suggested for consideration while drafting M&A proposals. The study ends with recommendations based on the study for successful M&A proposals.*

**KEYWORDS:** *Mergers And Acquisitions (M&A), Critical Success Factors (CSF), Acquisition Purchase Premiums (APP), Merger Wave, Value Gap (VG).*

### INTRODUCTION

Mergers and Acquisitions (M&A) are a fundamental part of the growth and development strategies of companies across the world. Companies and industries are being restructured in response to globalisation, changes in technology, regulation and deregulation and are involved in the capacity of buyers, sellers or sometimes both. As Companies strive hard to upsurge market share, it drives businesses into Merger and Acquisitions. Managers generally regard purchasing a company for access to markets, products, technology, resources, or management talent as less chancy and faster than accomplishing the same objectives through internal efforts.

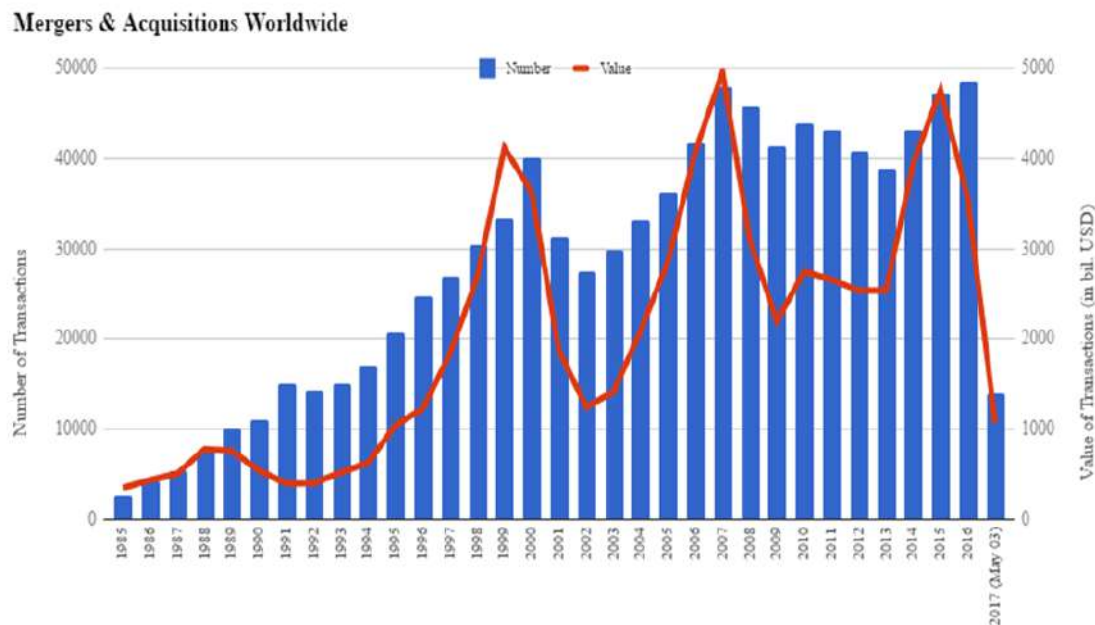
Evercare Partners' Roger Altman mentioned in 2013 that, "M&A cycles tend to last five to seven years and we are 2 years into it". According to him, the fourth and final post-1980 merger wave is already happening and is described as 'the 2011-19 merger megaboom'. "Most Mergers don't work" (Clarke, 1991), based on the today's most defendable financial criteria: returns to the acquiring Company's shareholders. But new analysis frameworks and approaches aimed at

developing superior understanding of transaction timing within the merger cycle, segmentation of target opportunities, and bid limits based on realisable synergies, emerge to improve the odds of M&A success for the acquirer seeking to excel in this great merger boom.” (Clark and Mills, 2013).

“Study after study of past merger waves has shown that two of every three deals have not worked; the only winners are the shareholders of the acquired firm, who sell their company for more than it is really worth.” (The Economist, 1991). But in the opinion of Clark and Mills (2013), attempting to restrict mergers because of bad outcomes would be like arguing against the institution of marriage because of what happens at the divorce court. There is always an urge to merge as it is a permanent part of firms’ value growth strategies. Capacity augmentation through combined forces, achieving the competitive edge, surviving the tough times, diversification of operations, cost cutting etc. are some of the drivers of M&A. Lot of success stories of M&A across the world are available to support M&A as a fundamental growth and developmental strategies for Companies. Hence it is suitable to analyse why mergers fail and to identify what exactly are the ingredients of a successful M&A proposal. This study intends to critically analyse the factors contributing to successful deals and to come out with recommendations for pursuing a successful M&A journey.

### **Present Scenario**

The year 2015 was a record-breaking year for M&A in terms of value followed by a near to 18% reduction in the year 2016. The predictions for 2017 remains uncertain due to politically driven factors like Trump’s presidency, Brexit negotiations, UK, Germany and France elections etc. The number of transactions increased in 2016 when compared to 2015 but the aggregate value of M&A came down. US remained as the most sought after location for M&A deals in terms of number and value of transactions. AT&T Inc's high profile acquisition of Time Warner was the largest deal of the 2016 and was worth US\$ 105.0bn. Another notable feature of the year 2016 was China’s voracious craving for overseas acquisitions with near to US \$185 Billion and 258 transactions. US topped the league tables with 4,951 deals worth near to US \$ 1.5 trillion. (Mergermarket, 2016). Analysts predict a UK and EU inbound activity from the US will continue like the previous years due to the perception of investors that UK and EU countries are an attractive investment alternatives supplemented by attractively priced credit. Notwithstanding the political turbulence, the M&A market looks in good shape and expect to perform like it did in the political shockwaves of 2016.

**Figure 1**

Source:

<https://imaa-institute.org/mergers-and-acquisitions-statistics/>

According to researchers Martynova and Renneboog (2008), “It is a well-known fact that Mergers and acquisitions(M&A) come in waves”. Professor Rhodes-Kropf (2004) talks about six great merger waves during the past century as follows:

1. Late-1890s (followed by the Panic of 1901),
2. 1920s (followed by the Great Depression),
3. 1960s (during the Nifty Fifty Bubble),
4. 1980s (followed by the Savings & Loans Crisis),
5. Late-1990s (during the Tech Bubble), and
6. Mid-2000s (followed by the Subprime Mortgage Crisis).

The 7<sup>th</sup> one as we are in now, is referred to as a ‘Merger Megaboom’ by Roger Altaman (2013).

Clark and Mills (2013) identified there were four post-1980 merger waves and the following table indicates the name of the waves and signature events associated with each wave.

**TABLE 1**

Period	Wave Name	Signature event
1982-90	LBO	RJR Nabisco Acquisition
1996-00	Dot Com 1	Netscape, Worldnet IPOs
2002-08	Subprime	Countrywide financial Acquisitions in US
2011-2019?	Dot Com 2, Megaboom	Facebook, Linked In IPOs

### Why mergers fail?

While endeavouring to explicate the constituents for drafting proposal for a successful M&A, it is of utmost importance that we understand why majority of mergers fail. Some of the notable busted M&A deals include AOL Times Warner, Sprint and Nextel Communications, Daimler Benz & Chrysler, New York Central & Pennsylvania Railroad, Quaker & Snapple etc. Deloitte CFO insights (2016) explains the mistakes during merger waves as unclear growth strategies, overpaying and lack of options. Vincent Ryan (2000) identified integration of culture, information system and organisational culture, less than optimal handling of integration and issues, lack of an executive champion and focus, lack of clear plan and strategy for integration and leaving employees without a sense of goals and objectives of merger as reasons for failure of mergers. The McKinsey quarterly (2001) elucidated how failure to focus on revenue can be an important factor in explaining why so many mergers didn't pay off. Their study on 193 high profile mergers found that revenue growth was elusive and the belief that mergers drive revenue could be a myth. Only 12% percent of companies under study could accelerate growth over the 3 years following merger. Kose John et.al. (2010) observes many firms experience dramatic value destruction during and after M&A transactions citing the example of ATT acquisition of NCR. It was observed that the "joint "overconfidence" of AT&T's and NCR's CEOs played a major role in the massive overpayment and value destruction that occurred". The study gave evidence that overconfident CEOs pay more than non-overconfident ones in merger deals. Paul J Siegenthaler (2010) in his article in telegraph pointed out 10 reasons why mergers and acquisitions fail.

1. Wasting time awaiting clearance from regulatory authorities
2. Absence of common vision of merged company
3. Poor due diligence
4. Underestimation of resource requirements
5. Poor governance and unclear resolution process
6. Poor communication
7. Insufficiently detailed implementation plans
8. Lack of courage to take tough decisions
9. Weak leadership and
10. No clarity regarding the company culture after merger.

### Considerations in formulating an M&A proposal

Academics and practitioners came out with studies relating to critical success factors (CSFs) for Mergers and Acquisitions proposal. Rockwell (1968) explains the 4 must-do factors for M&A as pinpointing the objectives, specifying gains for owners, checking management ability and seeking a good fit. DiGeorgio (2002, 2003) in his article on 'Making M&A work' divides the factors for success into 2 stages as selecting the right target and achieving combination objectives. In selecting the right target section, he identifies leadership, climate within the stakeholder team, time, resources and tools for M&A analysis, learning mechanisms and cultural fit as the CSFs. Selecting the right leadership, structuring the integration team and detailed

planning regarding communication, integration and people are identified as the CSFs for integration success in his studies. Gadiesh et al. (2001) gives an outline of 6 golden rules for successful M&As as setting 6 key rationale, letting the 'why' inform the 'how', sense of urgency, keeping customers at the forefront, communicating the vision and managing 3 phases of integration viz. Set the stage, design the new company and make the integration happen. Epstein (2005) in his 'study on determinants and evaluation of merger success' come up with 6 keys to merger success. Strategic vision and fit, deal structure including the price paid and structure of financing, due diligence, pre-merger planning, post-merger integration and identification of external factors that damage the long-term merger value are those factors.

Hoang et.al. (2008) in their study on CSFs of Mergers and acquisitions gave 10 success factors for M&A based on literature till date. Complete and clear objectives, goals and scope of the project, Client consultation and acceptance, Project manager's competence and commitment, Team members' competence and commitment, Communication and information sharing and exchange, Project plan development, Resource planning, Time management and tight secrecy, Price evaluation and financing scheme and risk management were those CSFs.

The recognition and critical analysis of the ingredients of successful Mergers and Acquisitions in this study is based on the 'seven keys to M&A success' proposed by Clark and Mills (2013) as the following:

TABLE 2

No.	Seven keys to M&A success
1	Following the right merger success criteria
2	Optimal timing within the merger cycle
3	Exploiting superior understanding of merger segmentation
4	Adhering to absolute and relative limits on Acquisition purchase premiums (APPs)
5	Bid pricing integrated with in-depth four synergy type PMI investigation
6	Synergy elements: real distinguished from vapor, offsets included
7	Avoidance of transaction by 'wounded quail' acquirers, overreaching egos

Source: Clark, Peter; Mills, Roger. Masterminding the Deal: Breakthroughs in M&A Strategy and Analysis. Chapter-8, Kogan Page.

The main content of this study which is the description and critical analysis of the above seven factors are as follows:

- 1. Following the right merger success criteria:** It was rightly said about the criteria measurement in M&As that 'You can't manage what you can't measure'. There is always a debate as to whether qualitative or quantitative criteria should be used to determine whether merger or acquisition is a success or failure. For acquirers, quantifiable financial returns are considered as the prime MergVal criteria. The following question will which of the financial valuation criteria is more acceptable. Event studies (ES) and Total shareholder returns (TSR) had its own strengths and weaknesses which led to the dominance of discounted Cash Flow (DCF) methods. Value gap (VG) which is the APP (Acquisition Purchase premium) minus NRS (Net realisable synergies) and IVE (Incremental value effect) which is DCF Company value for standalone vs combined are the most preferred DCF valuation techniques.



It was identified that Merger excuses and motivations was confused with merger valuation criteria in many cases. It was observed by majority of the researchers that the acquirer shareholder's gain was zero or in some cases negative. (Mueller and Sirower, 2003).

**TABLE 3: FOUR ALTERNATIVE MERGER VALUATION METHODOLOGIES**

<b>Alternatives</b>	
<b>1. Event studies (ES)</b>	
<b>Description</b>	Acquirer's pre-vs post- announcement share price trend relative to index and/or industry comparables
<b>Positives</b>	Inertia and ample availability of base data
<b>Negatives</b>	Both long term and short term event studies are subject to distinct distortions
<b>Future role</b>	Marginal use due to distortion disadvantages, Absence of explicit APP leads to M&A overpayment
<b>2. Acquirer Total Shareholder Return (TSR)</b>	
<b>Description</b>	Return based on increase in Market capitalisation over time, sometimes compared to WACC.
<b>Positives</b>	Easy statistical calculation for a completed round turn, Reflect financial market impact of Company's performance
<b>Negatives</b>	Multiple potential distortions including dividend effect, biased towards divestment and opportunistic short term turns
<b>Future role</b>	Measure is limited to acquirers for whom round turn and return per transaction important
<b>3. Value Gap (VG)</b>	
<b>Description</b>	APP Minus PV of NRS i.e. Net realisable merger related synergies
<b>Positives</b>	Debunks the 'Good acquisition, even though we overpaid' illusion, Recognition that prevailing APP may not result in viable deal, Potential for improved bid pricing.
<b>Negatives</b>	Potential illusionary synergy assumptions, Zero or negative VG do not ensure successful acquisition due to other factors
<b>Future role</b>	Increasing use and visibility as a second financial measure to IVE.
<b>4. Incremental value Effect (IVE)</b>	
<b>Description</b>	Comparison of DCF of target and acquirer as future standalone and future combined Companies
<b>Positives</b>	Consistent with leading company valuation basis, Reliance on ultimate source of Company's worth, correctly developed and incorporates APP.
<b>Negatives</b>	Possible inaccuracies due to non-futuristic projection model, components, unrealistic synergies.
<b>Future role</b>	Prime role in DCF analysis of internal investment and synergy assessment

Many experts add a 5<sup>th</sup> method also along with 4 major primary merger valuation methodologies which is termed as 'multiples'. Many acquiring company CEOs and CFOs looks at prospective targets and bids in term of multiples. Multiples refers to share price to earnings per share ratio (P/E Ratio). There is another infamous multiple called the price to revenue (P/R Ratio) which

contributed to the rise and crash of Dot-com companies in the late 90s. Despite all the limitations, multiples are considered as a fall back method due to future uncertainties. "Corporate bidders have access to all publicly available information, but only imperfect information about the target company's future cash flow. (Varaiya and Ferris, 1987). Six safeguards are devised to support multiples in Merger Valuation analysis. They include: Cycle-normalised price, Trend comparisons rather than spot, Price/FCF, dynamic sub-categorisation including SBU analysis by distinct product or service, Performance and solvency adaptation of preliminary analysis, and triangulation from fundamental investigation.

**2. Optimal timing within the merger cycle:** It cannot be guaranteed that nimble timing will increase the prospects for acquisition success but mistiming may reduce the chances of merger success based on the VE-IVE two-method merger valuation approach. As we assume that we are in the fourth post-1980 merger wave, understanding the patterns and characteristics of the three earlier merger waves will help us to understand more about the relevance of timing.

Clark and Mills (2013) gives the following features of three post-1980 merger waves:

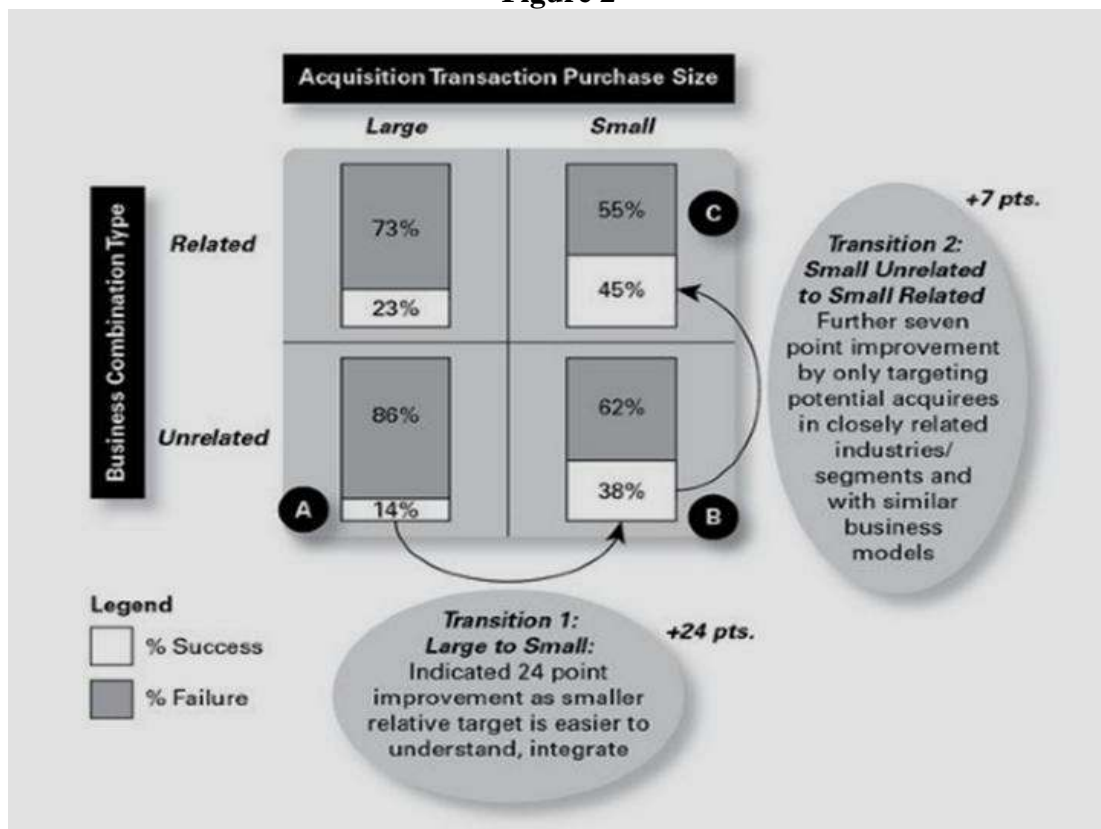
- *"Identify early phase opportunities for those acquirers not highly dependent on external acquisition financing.*
- *Understand M&A whipsaw: by the time that the merger boom is widely acknowledged, a) the waves' 'sweet spot' has already been underway for longer than a year and b) the cycle's end is just over the horizon.*
- *Comprehend and respond effectively to landmark events over the course of the new merger wave: the signature event (IPO), indications of approaching maturity, specific indications of imminent merger wave climax*
- *Avoid the value-destruction from mid-phase 4 onwards- Do the extreme risk of end-of-wave deal closings exceed the realistic returns?"*

An acquirer must be extremely cautious while phase 3 transition to final phase. It would have been several years since the merger boom started. Cheaper availability of merger financing in plenty may lead to miscalculation of merger cost of funds. Target companies that were not taken by anyone in the initial stages will be available at a higher price with no added synergies. Only very few firms get out before the bubble burst without much harm.

**3. Exploiting superior understanding of merger segmentation:** The CEO of the acquiring firm who pursues external growth through acquisition assumes that he/she is in control and gulps in the advice of banker of the deal is at no mistake unless they are steered by the base objectives and business models of other firms. "Differences between types of acquisitions may, however, be an important factor in determining which deals are likely to work." (Pautler, 2003). Despite the perceived reality of 'Most Mergers Fail (MMF)', there is a persistence in the failed deal behaviour. Researchers attribute some of these failures to poor learning from past deal failures (Tuch and O'Sullivan, 2007) and acquiring Company's CEO's hubris which results in overpayment (John et.al, 2007). Cultural disparities contributed to cultural meltdowns post-merger at DaimlerChrysler, AOL TimeWarner and PennCentral. It also happens like the investment bankers bring up Companies those were rejected in the initial stages and present them to their customer companies eliminating the due diligence concern regarding such overlooked

Companies. Coley & Reinton (1988) comes up with a 4 quadrant details from 116 merger transactions to explain the impact of segmentation on M&A performance.

**Figure 2**



Source: Clark, Peter; Mills, Roger. Masterminding the Deal: Breakthroughs in M&A Strategy and Analysis. Chapter-4, Kogan Page.

In figure 2, it is clarified that when target companies for acquisition are larger than acquiring firm and unrelated, only 14% M&A success was observed. But when the target company is made smaller than the acquiring company the success rate improves by 24% to 38%. This explains that a smaller target is less complex and results in fast and easy mergers. Further a 7% improvement was observed when related companies are integrated. Seven dimensions of merger research into target company differences was identified in the study. They are 1) relatedness and 2) relative size of the merger partners as mentioned in the previous study along with 3) Domestic vs International mergers, 4) Horizontal vs Vertical merger, 5) Overpayment by acquirer due to timing, 6) Overpayment due to hostility and 7) Phase timing in the merger wave. The 4 categories of mergers were identified as follows:

- I. Opportunistic- Related to timing
- II. Operational-Related to core businesses
- III. Transitional- Related to consolidation mature and consolidation emerging
- IV. Transformational- Looking in a dramatic new direction.

The deal types were classified into 9 where bottom-trawlers (Actively seeking companies in distress) has highest deal success probability of 87-92%. They were followed by Bolt-Ons (Target business that fits seemingly into the acquirer's existing product service range) who have an 80-85 percent success profile. Speculative strategic deals secure the bottom position in the merger type list with minimal profile success of 15-20%. This type of mergers is characterised by "desperation and/or enticed by the siren song of a dramatic, visionary ego-acquisition". Clark and Mills (2013). San Miguel's purchase of 49% stake in Philippines Airlines as a move away from food and beverages was a perfect example of speculative strategic deal.

**4. Adhering to absolute and relative limits on Acquisition purchase premiums:** The price paid for target company is an integral element in the success or failure of merger transaction. High APP was considered as the reason for dramatic failure of many merger transactions, a perfect example being AT&T's acquisition of NCR. (Kose John et.al., 2010). Many experts were left scratching their head when Microsoft agreed to pay \$26.2 billion to acquire LinkedIn wondering why they would pay such a high premium for a money losing Company with slow growth. Even though they claim to gain massive synergies in return for high purchase premium, it is highly probable that the deal may end with a value destruction as in the case of Nokia and quantize.

The MMF theory proves that bid-first myopia results in completion of deals that should not happen at any price and value destroying purchase bases in case of completed transactions. High APP means that the post-merger synergies are never going to match up with the extra money paid and will end up in value destruction. Researches by Andrade et.al. (2001) and Azofra et.al. (2007) came up with some practical APP ceilings which suggests that APP percentages more than 37-38% means a failed transaction. There is another concept of 'relative APP' which advocates for reasonableness of bid by making sure that premia are in line with comparable transactions.

**5. Bid pricing integrated with in-depth four synergy type PMI investigation:** There is a need of transition from bidding to synergy-informed bidding which places more standing on performance in terms of VG-IVE criteria and independent information gathering. It depends on quality of pre-close synergy analysis. Hence the question we are trying to answer is "*What is the present value of realisable synergies, adjusted for offsets, synergy duration and/or feasibility adjustments, implementation of delays, relating to expense (e-), revenue (r-), tax (t-) and other financial (f-) categories?*" (Clark and Mills, 2013)

It is assumed that synergy intelligence issues arise over 4 M&A periods

- a) **Announcement date:** In this period, the prospective acquirer express interest in the target firm when synergy guidelines are extremely limited. The number of bidders and bid cycles are expected to have an impact on the purchase premium at this stage. Early diagnosis to ensure that APP can be justified based on expected NRS is needed to avoid wasted costs and pains of going for lengthy vain bid chases.
- b) **Pre-bid acceptance period:** It is known as the active chase period where bidders have expressed their interest in target companies formally. Experts and research analysts may come up with APP-NRS VG math to prove that increased bid range is warranted and will result in value creation. Prospective acquirers may demand substantial justification regarding NRS due to the widening awareness regarding MMF.

- c) Exclusivity period: A significantly high bid from the prospective acquirer can exclude the other bidders from getting an inside track even if the transaction can be undone at this stage. The threat of high APP leading to value destruction is still persistent unless eliminated by credible synergy calculations. Garnering more synergy intelligence is anticipated to be limited till this stage.
- d) Initial days following the close: In this stage, the synergy gap- the gap between acquiring companies projected synergies and actual NRS- is realised.

**6. Synergy elements: real distinguished from vapor, offsets included:** One of the dreadful situation for acquiring company's executives, analysts and advisors is distinguishing real synergies from illusions. Insufficient PMI NRS to cover bidder's APP will lead to a failed deal joining the other transactions in MMF category. There should be clear demarcation between real from the illusionary synergies based on vague or non-existent factors and imaginary visions in each of the four synergy categories. (e-, r-, f-, m-). NRS is measured as discounted incremental cash flow associated with the nominated synergies and not only with incremental revenue, incremental expense or incremental customer base. It is arrived at after deducting all cost including start-up costs. The gross prospective synergies are to be adjusted for the offsets that accompany them like the cash flow attributes that generate the synergies.

Some synergies are realised immediately on merger while some are realised over a long period post-merger. The relevant discount rate for synergy purpose is same as the WACC for IVE calculation. The scope of synergies available for consideration should not be too broad as it may lose focus on critical factors. Synergy scope should not be too narrow too as unexpected and false indicators may arise and the NRS can never match upto the APP. The smaller the universe of net synergies, less likely that projected NRS can match APP. e- and r- synergies are considered as the major categories and any synergy calculation which do not consider the critical difference between the four categories are susceptible to failure.

**7. Avoidance of transaction by 'wounded quail' acquirers, overreaching egos:** "Desperate acquirers contribute to buyers' panics and may destabilise the M&A market overall because of: a) acquisition decisions made on a non-economic basis; and b) extreme overbidding-far beyond levels suggested either by realisable synergies or comparables." (Clark and Mills, 2013). "The high-ego acquisition means a deal made on the most indefensible of qualitative reasons (Temporarily boosts struggling management's image), increases threat of winner's remorse caused by hubris." (Roll, 1986). ATT-NCR acquisition is normally given as a perfect example of where acquirer and target CEOs manifest a high level of hubris. Malmendier and Tate (2005a and 2008) explains how CEO overconfidence have an impact on corporate investment policy and ability to create value in Forbes 500 firms. Doukas and Petmezas (2007) showed that overconfident bidders resulted in lower announcement returns of M&As by using a large sample of UK firms.

Distracted CEOs ignore trouble signals in target companies due to his/her enthusiasm as target appeal and lives in misperception about his/her management aura. A type of 'saviour acquisition' leads managers to sincerely believe that the proposed business combination is essential to protect the interests of acquiring company's shareholders. Typically, company shareholders are helpless and dispersed to avert the value destructions instigated by charismatic leaders and hence the board of directors are in a better position to alleviate their firms from value destruction.



## CONCLUSION

1. The MMF reality is demanding the firms targeting value creation through M&As to stand aside and do nothing to prevent value destruction. Putting aside the egos and prioritising the shareholder's wealth maximisation may need the manager to be at the other side of acquisition i.e., as a seller as MMF theory identifies that even in failed mergers there is value creation happening in case of seller company shareholders.
2. Careful and patient acquirers can take advantage of promising targets which may come their way later in the form of non-continuing units divorced from the first acquirers, sellers who missed the first or best offer but still want to exit and last man standing companies that believe that consolidation and contraction will create less value.
3. Self-assessment and identifying the priority pathways is required in finding good opportunities and maintaining a competitive edge resulting in value creation. The strengths, weaknesses and opportunities for growth and development are to be assessed. A strategy should be developed to complement the strength of the acquiring company while trying to overcome the weaknesses for gaining a competitive edge rather than being a reactor.
4. Improving the performance of the target Company is one of the major value creation strategy. Targeting a company which has potential to generate more revenue and reduce cost will be ideal than one which is generating high revenue and profits.
5. Consolidations should be aiming at removing excess capacity from the industry through consolidation rather than creating spare capacity which results in supply more than demand.
6. Consolidation should aim at increasing market access for innovative products of target companies. Additional sales force and market reach of acquiring firm will result in value creation through consolidation.
7. M&As should aim at acquiring the technology faster than the time they take to build it. Apple acquisition of speech recognition pioneer Novauris in 2014 and Cisco systems acquiring Key technologies in 2013 are perfect examples of acquiring technology through M&A than development.
8. Exploit the economies of scale to create value through M&As. Higher economies of scale can be achieved through integration of small companies than large companies as large ones might have already achieved the maximum possible economies.
9. Picking the winners early and helping them develop the business is another suitable strategy for value creation. This is in contradiction to the earlier recommendation to stay patient and cautious because of MMF theory. But right choices made like Johnson and Johnson acquisition Depuy in 1998 resulted in annual growth rate of 17%. Acting before the competitors will be the key in this case.

It is appropriate to end this study with the merger rules given by Peter F Drucker (1981) which seems relevant even after years of research and analysis.

1. *"Acquirer must contribute something to the acquired company"*
2. *A Common core of unity is required*



3. *Acquirer must respect the business of the acquired company.*
4. *Within a year or so, acquiring company must be able to provide top management to the acquiring company*
5. *Within the first years of merger, managements in both companies should receive promotions across the entities.” (Weston et.al., 1990)*

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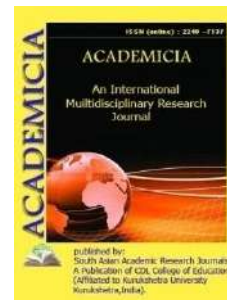
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DOI: **10.5958/2249-7137.2020.00707.7**

## REGIONAL ASPECTS OF ATTRACTING FOREIGN INVESTMENTS

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### ABSTRACT

*The article discusses and summarizes the scientific theories of attracting foreign investment to the region. Trends in economic development due to foreign investment were identified throughout the region and important characteristics were identified. The concept of investment and foreign investment is described. The advantages of direct import of foreign investments for the host region are shown. The decisive factors for making positive decisions about foreign investment in the region have been identified. Various forms of cooperation with foreign investors in the region are considered. The forms of attracting foreign investments were studied and their world experience was studied. The advantages and disadvantages of foreign investments attracted in various forms are summarized.*

**KEYWORDS:** Foreign Investment, Foreign Direct Investment, International Capital, Regional Economy, Investment Resources, Concession Agreement, Production Sharing Agreement (PSA), Free Economic Zones (SEZ), Special Economic Zones (SEZ)

### I. INTRODUCTION

The globalization of the world economy and the intensification of international capital flows have created great prospects for the development of the national economy by attracting foreign investment to developing countries and regions. The problem of attracting foreign investment to Uzbekistan and its regions in the context of economic modernization required the development of new strategic priorities for it. As President of the Republic of Uzbekistan Sh.Mirziyoyev noted, "we must take measures to fully realize the investment potential of our country in order to attract foreign investment. If we can formulate investment projects by region and industry for investors who want to invest in our economy, we can achieve a positive result."

Today, the need for structural adjustment, competitiveness and innovative development of the economy of Uzbekistan and its regions requires special research to study regional aspects of attracting foreign investment and improving their efficiency. In particular, the measures taken and the results achieved in recent years to attract foreign investment have shown that they can become a practical factor in activating investment processes at all levels of the national economy. However, the share of foreign investments in the total volume of investments attracted to our country and its regions is insufficient.

It is important to attract foreign investment to the economy of Uzbekistan and its regions. This requires the term strategy for attracting foreign investment. The importance of restructuring the national and regional economic sectors requires investment cooperation.

The main advantage of investment cooperation is that it includes the constant attraction of scientific and technical knowledge, know-how, especially innovative in the region, increasing the level of employment of the region's population and increasing labor productivity in it, improving the use of natural resources in the region, increasing competition and, as a result, the development of the region's economy.

Increasing the scientific, theoretical and practical significance of the problem of attracting foreign investment to the regions and inadequate development of its effective economic mechanism for regions that have chosen the path of innovative development determine the relevance, goals and objectives of the selected research.

The purpose of the study is to identify the specifics and priorities of attracting foreign investment to the regions and to develop scientific proposals and practical recommendations for improving the socio-economic mechanisms of its implementation. According to the purpose of the study, the task was to generalize the regional aspects of attracting foreign investment and identify factors that affect this process.

## II. LITERATURE REVIEW

Various regional aspects of attracting and using foreign investment in the region and the activities of enterprises with their participation are reflected in the scientific work of a number of foreign and domestic economists. In particular, R.Vernon [2] identified the relationship between attracting FDI and the product life cycle, based on research by M.E.Porter[3] discovered a system of factors that provide a competitive advantage, J. Dunning [4] selects and combines the best factors, ideas and doctrines for TNCs to enter the world capital markets.

Features of the use of foreign investment in the economy of developing countries Russian scientist V.K.Bugaev analyzed the factors that affect the change in the degree of openness and isolation of the regional system [5], and L.V.Davidova outlined the strategic foundations of the country's economy and its regions. F. S. Tumusov described regional and territorial concepts [7], E. Kocherin classified the features of foreign investment [8], Yu.A.Yudanov analyzed the foreign trade activities of TNCs [9], in the study Z. Vdovenko reveals important aspects of attracting foreign direct investment[10].

A.Kayumov, F.Egamberdiev [11] and A.Sadykov [12] investigated the theoretical and regional aspects of the use of foreign investment in Uzbekistan and its regions. A.Vakhabov [13] showed the advantages of FDI inflows. R.Yuldashev analyzed the level of transaction costs of foreign economic activity in Uzbekistan [14]. Project financing is reflected in the scientific work of

Sh.Yuldasheva[15], improving the competitiveness of tourist and investment activities in the region is reflected in the research work of O.Khamraev and S.Nasretdinov[16].

This study focuses on the nature of foreign investment and its attraction to the national economy. However, no specific research has been conducted on the regional specifics of attracting foreign investment to the region in the context of economic modernization. All these facts show that this study is fundamentally different from other studies in this area.

### III. RESEARCH METHODOLOGY

Summarize the theoretical basis for attracting foreign investment and clarify the factors that affect this process. The methodology used in this article is aimed at identifying the specifics and priorities of attracting foreign investment to the regions and improving the socio-economic mechanisms for their implementation. The study used scientific abstraction, analysis and synthesis, induction and deduction, comparison, and grouping.

### IV. Analysis and results

The international movement of capital plays an important role in the development of the world economy, as it will strengthen the foreign economic and political ties of countries, thereby increasing their foreign trade turnover. This will accelerate economic development, increase production, increase the competitiveness of industrial products on the world market, increase the technical capabilities of importing countries and increase employment in the country. But in the global economy, no investor invests in other countries or regions. To do this, it is necessary to attract foreign investors to the country's economy, attract them to invest in this country and region, and form their material interest.

Today, there are five theoretical perspectives that justify attracting foreign direct investment to the world economy. These include:

1. The theory of the product life cycle;
2. The theory of the flying geese;
3. The theory of competitive advantage;
4. Eclectic paradigm theory;
5. Theory of the way of investment development.

The product life cycle theory was developed by the French scientist R. Vernon in 1966 [2]. He found a link between attracting FDI and the product lifecycle. R. Vernon created the "product life cycle" theory by analyzing the capture of markets by North American corporations in the commodity and capital markets after world war II. According to the research By R. Vernon, corporations change their development strategy depending on the product life cycle in the market and will rely on the following areas:

- manufacture of products for the home;
- export of goods;
- Transfer of products to foreign markets.

The form of development strategy chosen by the Corporation depends on the ratio of its production costs and revenue. Stages: 1) the stage of production of innovative products; 2) the



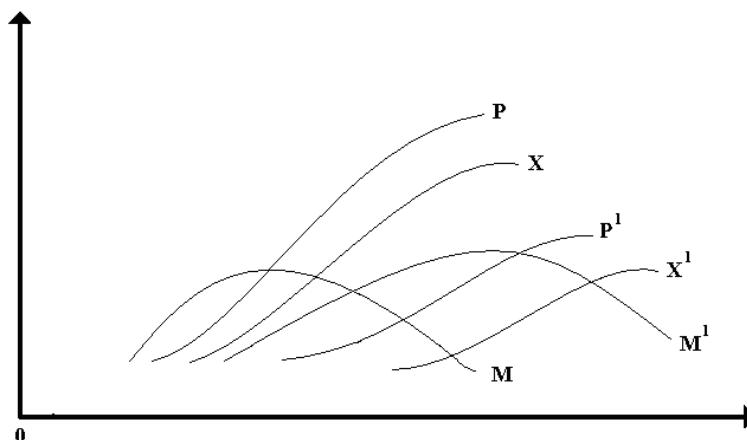
maturity of the product, that is, the stage of its full production; 3) the stage of mass production and sales of products.

In the innovative product phase, the Corporation uses its monopoly position in the market to create a temporary monopoly. This will allow it to cover part of its investment in research and development and marketing research. When a product enters the second phase of maturity, its perfect production, the company faces a number of competitors in the market. The fight against competitors requires significant costs from the company, which can lead to a weakening of the company's economy. Therefore, the company needs to gradually export its products and find new markets. This is related to the company's strategy for foreign economic expansion, export of goods or capital.

Export of products is typical for a Corporation at the second, Mature stage of its production, and the need to move production abroad, and at the third stage of mass production and export. Typically, a Corporation is more interested in exporting a product during the Mature phase of the production cycle, while a Corporation is more interested in exporting capital during the mass production phase. During the period of brand maturity, the competitive environment for the company increases and becomes extremely aggressive. During this period, the company had to spend a lot of money to win the competition. This reduces the amount of profit that the company receives per unit of production. Exporting a product or capital for a company is a solution to this problem, freeing it from unnecessary costs.

If goods and capital are successfully exported, the Corporation maintains its business leadership. At the same time, in the new market, the Corporation will be able to reduce the cost of production due to the availability of cheap labor and other factors of production. At the same time, the Corporation can conveniently extend the product lifecycle. The Corporation also provides leadership in a new market and produces low-cost products, as well as providing leadership at home by re-exporting cheaper products to its markets and selling them at lower prices than competitors.

According to the theory of economic development, based on an empirical study of 40-50 years of development of the Japanese textile industry in the early 20th century, the Japanese scientist K. Akamatsu notes that the economic growth of the sector will consist of three stages. At the first stage, the network cannot meet the national demand for goods. Part of the demand is covered by imports. In the second stage, the industry gained significant potential through the development of production by attracting FDI, creating new businesses and jobs. In the third stage, the network expands its product markets and creates more capital. The revival of production in the industry will lead to the fact that the country will turn from an importer to an exporter. Based on these studies, K. Akamatsu noted imports of Japan's textile industry (M), national production (R), and exports (X) in a graph where he found the contours of the movement of wild geese.

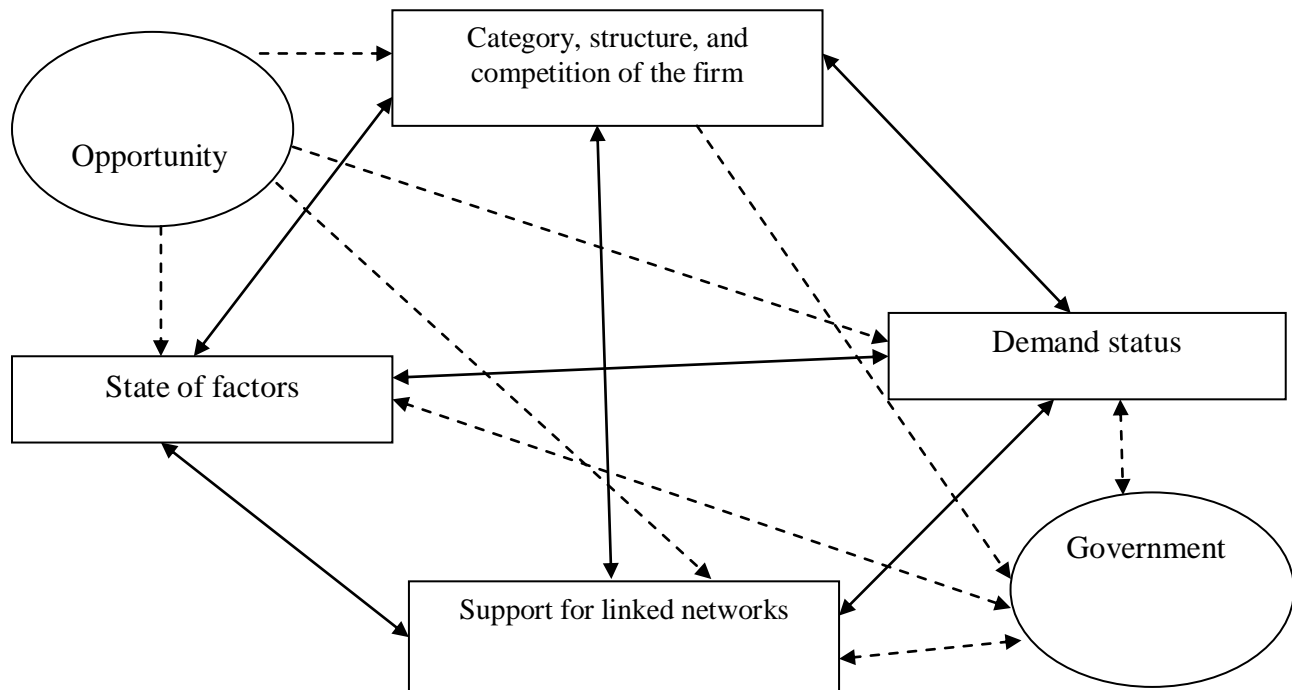


**Figure 1. Illustration to the theory of flying geese [17].**

**P-national production, X-export, M-import.**

Japanese scientists Kojima and Ozawa studied TNCs as a catalyst for economic growth in 1985, and then in 1990 and 1992, and found that their investment strategies for the host country of FDI were diverse. The first is a trading strategy, and the second is an anti-trading strategy. In accordance with the trade development strategy, TNCs export goods and capital abroad to generate more revenue. According to the anti-trade strategy, TNCs export goods and capital that have a small competitive advantage abroad, while maintaining a competitive advantage at home. The goal of this strategy for TNCs is to keep companies on the foreign market in the long term. This is why countries that implement FDI should take into account the different types of investment strategies that TNCs develop in their structural policies of their national economies. The theory of "flying geese" suggests that the protection of national production should be combined with a rational foreign economic strategy. This theory does not lead to the separation of a country or region from the outside world, but rather to the effective use of foreign capital to revive the region's economy.

The theory of competitive advantage. As we know, economic science since the time of A. Smith has proved that in a competitive environment, firms need to create and control a number of positions to maintain market competitiveness. Today's conditions force firms to look for new opportunities and directions to establish such dominance. This problem was highlighted in 1990 by Porter in his book "The Competitive Advantage of the Nation" [3].



**Figure 2. Porter's "diamond competitive advantage" [3].**

He summarized extensive research on nearly 100 industries in 10 countries with industrial and export-oriented operations. Porter's research began to determine the system of factors that provide a competitive advantage. To do this, you need to answer the following questions:

1. Why did some corporations manage to enter foreign markets?
2. Why do some countries attract foreign direct investment in high-value-added industries?
3. Why did TNC investments lead to improved technological efficiency of national companies in some countries, but in other countries industrial modernization failed?

M.Porter proved that the strategies of TNCs and recipient countries are based on the advantages of the existing competitive advantage and that the competitive advantage lies in four areas:

1. Advantages of corporate governance;
2. Priority of production factors;
3. Volume of demand (market) in the country;
4. Benefits associated with support and additional networks.

M. Porter called the synthesis of these factors a "Diamond of competitive advantage", implying that they guarantee success in capital growth. Additional factors include a reasonable investment policy of the state and "happy States".

M.Porter argues that a country exporting capital can develop sustainably if it cooperates with the relevant industry in the recipient country. Domestic suppliers reduce production costs, reduce customs duties, and reduce production costs. It encourages donor countries to explore the potential of FDI recipients and join a cooperative economic chain with them. M. porter proved that the existence of interconnected industries in a country creates great competitive advantages and opportunities for a country that receives FDI. He stressed that the state should give an impetus to the development of clusters by industry and sector. For example, the development of the modern food industry in the country requires running of agricultural products (milk, meat,

spices, preservatives, etc.), respectively the availability of appropriate packing and packaging machinery and modern retail system for development of automotive industry in the country needs to develop enterprises that produce separate components and units (plastic parts, motors, batteries, etc.).

The theory of the eclectic paradigm was proposed in 1981 by the famous British scientist J. Dunning. The term "eclecticism" was chosen because J. Dunning chose the best factors, ideas and doctrines for entering the global capital markets of TNCs and combined them into one system.

J. Dunning classified the following advantages that the company can demonstrate in the global capital market:

O – Advantages are those that depend on the internal potential of investor companies. These include advantages related to the size and position of the company, management and management of the company, technical and technological aspects, trademarks, organizational structure and strategy;

I – advantages related to the degree of ownership of foreign goods in local markets in relation to local ownership of their goods and production capabilities in the process of internationalization;

L – Benefits provided by the recipient country (preferential tax system, state participation in financing investment projects, infrastructure services, etc.).

According to the eclectic paradigm, recipient countries should not rely solely on low resource costs to attract foreign investment. This factor alone is not enough to attract foreign investment to the national economy. Therefore, the focus should be on creating a favorable investment climate. Thus, the eclectic theory justifies how a firm can successfully operate in foreign markets if it can use all three advantages at the same time. For example, if a firm is exceptionally dominant in terms of ownership or location, it may use a different type of service in a foreign market, such as an export or franchise.

The concept of J. Dunning was supplemented by the German scientist I. Sten (1989). He tried to show how the company chooses an expansion strategy based on the advantages (O, I, L) suggested by J. Dunning. There are three alternative options for choosing an expansion strategy: selling licenses, exporting goods, and FDI. According To I. Shten, TNK, which has entered the path of foreign economic expansion, is looking for a path with a low level of risk. If the recipient country offers an advantage, the TNC prefers to include FDI in this area.

The theory of the path of investment development (1994) is applicable to J. Dunning and the Dutch scientist R. Narula. According to this theory, a country's export or import of FDI depends directly on the level of development of its economy. This development path consists of five stages and describes the dependence of FDI on the level of economic development of the country. Countries with high labor intensity, low-tech production and mining industries are usually countries that import FDI (first stage). These countries ' efforts to promote high production and scientific and technological development will lead to an increase in FDI imports (second stage). If the import of foreign capital is supported by an incentive policy and an export-oriented policy, the country will start exporting its FDI (Stages three and Part two). The fourth stage is typical for developed countries, and FDI exports are higher than their imports. In the fifth stage, FDI exports and imports are balanced and characteristic of highly developed

countries. These countries have all the advantages (O, I, L) and are leaders in the most technologically advanced and capital-intensive industries in the world.

The current stage of development of the economy of the Republic of Uzbekistan, the active development of its regional structure and the main part of the functions of managing economic processes are characterized by the fact that the regions are at the level, which in turn requires improving the principles of organization and implementation of investment processes in the regions. The importance of conducting research on regional coordination of investment activities lies in the fact that investment management is an important support for the structural adjustment of the production and social potential of Uzbekistan, improving its efficiency, and implementing practical economic policy. The most important task of the modern regional economy in this regard is to study, justify and agree on new methods and forms of regional regulation of investment activity based on the relevant object laws of the market economy.

Attracting investment resources to the region's economy is a complex process, since this requires strategic mobilization of all potential opportunities for existing investment resources, including foreign ones. Along with the foreign capital itself, the development of the region's economy, including the growth of employment in it, the increase in high wages and labor productivity, in addition, leads to a large economic effect in the form of development and modernization of the real sector. The strategic plan for the use of foreign investment eliminates the economic lag in a number of important areas of the economy and is one of the effective methods of integrating the national economy into the world economy.

The law of the Republic of Uzbekistan "on investment activity", adopted on December 24, 1998, provides for the following definition: "investments – material and non-material benefits, as well as rights to them, subject to inclusion in economic and other objects of activity" [18].

In accordance with article 3 of the Law of the Republic of Uzbekistan "on foreign investments", foreign investors are recognized as "all types of tangible and intangible assets and rights associated with them, including rights to property, any income received from foreign investments in the territory of the Republic of Uzbekistan" [19], which foreign investors mainly add to business and other activities. In our opinion, foreign investments are all property, financial, and financial assets that are mobilized by foreign investors in completely different areas of the state's economy, business, and other activities in order to obtain a high level of income and achieve efficiency. Foreign investment is based on an external source of financing, as opposed to domestic investment. They are attracted to the national economy from abroad, having an incentive for their arrival.

"In General, attracting foreign direct investment (FDI) and high-tech management skills will lead to certain changes in the production methods of national firms. From the point of view of economic modernization, it is necessary to stimulate the flow of FDI, without which there will be no transfer of high technologies. The acquisition of technology itself is expensive for many developing countries, as well as countries with economies in transition, and it is often also impossible to do so. FDI can increase the existing package of high technologies in domestic firms. It is also important to adapt new technologies to local conditions"[20]. An analytical approach to the definition of "foreign investment" allows us to give the following interpretation of this concept: foreign investment is short-term and long-term foreign capital of various forms

and types that are withdrawn from one country in order to obtain a positive socio-economic effect and are included in the activities of economic entities in another country.

There are many classifications of foreign investments in the economic scientific and educational literature. In our opinion, we need to pay more attention to the classification of foreign investments by the following criteria:

- depending on the form of ownership, investment resources;
- Depending on the object of foreign investment.

First of all, clearly consider the difference between foreign investment in the form of private and state ownership. Related to public investment (in international practice-official):

- grants and loans (including concessional loans) for loans that are granted on terms that are not repayable by international financial institutions and foreign governments and governmental organizations;
- The international monetary Fund (IMF), the world Bank, etc., these funds are government agreements on the transition to an international scale. Diagonal relationships can be formed when a consortium of private banks invests in States;
- guaranteed loans from foreign commercial banks at the state level;
- subsidized and concessional loans, ranked from official sources (official development support) - directed to industrialized countries, mainly for non-productive purposes, during the transition period and in developing countries, as usual, on a bi-or multilateral basis;
- Private (non-public) investments, private firms, companies or citizens of one country, in turn, give to other state structures. Commercial banks, manufacturers, exporters, and various intermediaries do not have adequate credit guarantees at the state level[21].

Investment relations are extremely complex and diverse, as the relationship between individuals and the state is closely interrelated in many ways. Analysis of trends in the development of foreign economic activity is impossible without identifying objects of foreign investment. Forms of foreign investment are classified as follows:

- foreign direct investment – direct investment in industrial, commercial, and service enterprises;
- portfolio (or financial) investments – foreign capital placed on financial markets, national States, and private securities markets;
- other types of foreign investments – international loans provided by foreign States, loans from international financial organizations, commercial and industrial corporations, debts of banks and other financial institutions, commercial loans, Bank deposits, etc.

Transnational companies (TNCs) that fully control foreign branches and "maiden" companies can be cited as a classic form of foreign investment. According to the conclusions of foreign researchers, more than 100 thousand industrial complexes from more than 37 thousand TNCs covered almost the entire planet [22]. This is a planetary type, that is, a unique economic, stable and dynamic economic system that includes a third of the planet's production assets, produces about 40% of the planet's gross product, more than half of foreign trade turnover, more than 80% of sales of new technologies, and controls more than 90% of capital output[23].

One of the most common methods of attracting foreign investment is the creation of joint ventures and the conclusion of contracts between companies. Creating joint ventures is about



identifying risks when investing in partners, achieving economies of scale, using partner retail networks, and so on. this allows you to do this. But the participation of foreign investors in their contribution does not give them the right to fully manage the project and the enterprise. Foreign direct investment increases the value of the company's share capital and changes the ownership structure.

Foreign direct investment consists of capital resources and intangible assets. First of all, it is necessary to pay attention to the following aspects: they must be capital in the form of shares, the foreign investor must have purchased a share of the company located in this country (at least 10% of the authorized capital); have reinvested income; debts within the branch must be assimilated between the "parent" companies and its branches.

Important elements of foreign direct investment are intangible assets, including technologies, trademarks (brands), management experience, etc. it is the intangible assets that allow you to distinguish a particular company from another. Direct and portfolio investments have different natures and have different effects on the economy of the host region. Foreign direct investment penetration into the host region has the following advantages:

- acceleration of economic, scientific and technical development;
- availability of a stable source of funding;
- updating and upgrading production assets;
- penetration of technology, management skills, trademarks, patents, and licenses;
- export diversification;
- the emergence of advantages for skilled labor in industries with a high percentage of added value;
- relations with foreign markets;
- increasing the competitiveness of the host region's economy;
- Training of personnel that meet the requirements of the market economy[25].

Along with foreign direct investment, portfolio investment also has a different impact on the economy of the host region. This can be seen in their comparative description of the following:

- foreign direct investment gives investors the right to control, while portfolio investment does not;
- if direct investments allow the company to have a share of only 10% or more of its authorized capital, the portfolio expresses the right to carry out investment relations with a share of less than 10% of the investment;
- direct investment is a long-term investment, while portfolio investment is a short-term investment;
- at the same time, a feature of the global capital market trends is that many institutional investors own long-term assets without control in foreign companies, so the difference between direct and portfolio investments is almost invisible.

If the first is an incentive to expand opportunities for transferring and implementing technologies to investors in the domestic market, the second is the reason for the development of the country's domestic market. At the beginning of portfolio investments, the financial sector has a strong macroeconomic impact on determining liquidity and asset price dynamics. On the contrary, direct investment will help to change the production structure in the host region at the microeconomic level:

- The portfolio has a more volatile description, although its final result when comparing investments with direct investments depends on the policies of "maiden" companies. But direct investment, when the share of profit is taken mainly abroad, the balance of payments deficit of the receiving region may increase, for example, due to portfolio investments. Bonds require currency risks when balancing assets and liabilities in different currencies, such as direct investment, portfolio investment, and Bank credit. Thus, as long as tangible assets remain in the invested country, TNCs can transfer their financial resources to other countries;
- Foreign portfolio capital is characterized by relatively short-term investments, although it has high liquidity compared to direct investments. The buyer of portfolio investments in real estate will leave the region in an average of 4-5 years, and direct investments in 8 years;
- For direct investments, the portfolio also includes intangible assets that are not specific to the investment.

In the process of investing the foreign capital in question, it is necessary to identify the following circumstances, namely:

- who are foreign investors?
- what motivates foreign investors?
- What investment result does a foreign investor expect when investing?
- How does a foreign investor make an investment decision?

Foreign investors are considered to be the main participants in investment processes. The generalized definition of the term "foreign investor" covers a fairly wide range of subjects that differ from each other in legal cases, which include: in the current Law of the Republic of Uzbekistan "on foreign investments", foreign investors are divided into the following categories of subjects:

- foreign legal entity;
- foreign organizations that are not legal entities;
- foreign individuals, i.e. persons permanently residing abroad, foreign citizens and stateless persons;
- Persons who live outside the Republic of Uzbekistan but are citizens of the same country;
- other international organization;
- foreign state.

The development of a long-term strategy to attract foreign investment in the economy of Uzbekistan and its regions, including the Namangan region, requires a number of promising areas of strategic cooperation in terms of the importance of restructuring national and regional economic sectors.

The main advantage of investment cooperation in the region is the constant attraction of scientific and technical knowledge, know-how, especially innovative in the region, increasing the level of employment and productivity, more efficient use of natural resources in the region, increased competition and, as a result, the development of the small business sector in the region, the presentation of modern organizational and management practices in the region.

In developing long-term strategies for attracting foreign capital in the Republic of Uzbekistan and its regions, there are various forms of cooperation with foreign investors. Of these, the following should be emphasized:

- creation of joint ventures in various forms depending on the share of foreign investors, including through the sale of shares of joint-stock companies to foreign investors;
- creation of branches and "subsidiary" companies abroad;
- creation of new companies abroad with full foreign investors;
- ownership as a result of intercompany mergers and acquisitions, that is, the acquisition of ownership or citizenship through the acquisition or addition of a company;
- building a strategic partnership;
- own property, including securities;
- the introduction of foreign capital on the basis of contractual relations between the state and investors - the conclusion of concessions and production sharing agreements;
- conclusion of an international financial lease (leasing) agreement;
- creation of free economic zones;
- bank loans and commercial loans based on state guarantees;
- provision of loans for export financing;
- Issue and placement of shares through the American Depository Receipts Program.

All of the above forms of attracting foreign investment are of a long-term strategic nature. The correct answer to these questions will help to solve the problems of structural, sectorial and intersectional changes in the economy of Uzbekistan in the shortest possible time and due to low investment costs, not only in solving the country's financial problems. Concessions, production sharing agreements and free economic zones play an important role in effectively attracting foreign investment in the country and its regions.

Based on the purpose of the study, we will consider them in detail. Concession is the most common form of relationship between a country (or region) and investors with an agreement and a production sharing agreement. A concession agreement is the right to carry out economic activities related to the use of renewable and non-renewable natural resources and the use of state property, but not the right to economic management and operational management of organizations, institutions and enterprises; but also the right to carry out certain types of activities at enterprises under the state monopoly. Thus, the concession is the subject of an agreement with the right to limit or write off the share of the turnover in state ownership.

According to international experience, the main feature of the concession agreement is the following: the right of ownership of the concessionaire to all manufactured goods, as well as free transfer of property to the state for the execution of the agreement after the expiration of the user agreement of the concessionaire; the concessionaire must pay all taxes for the concession in the territory of this country, including the use of mineral resources and so on. Based on the foregoing, it can be said that the doctrinal definition of the general concession agreement is accurate, namely, that the concession agreement has special and exclusive rights to the state on a temporary and reimbursable basis (the special nature of this right is that the state is committed to neutrality in this areas of activity). An agreement between the state and a foreign investor on the provision of such activities.

Until recently, the legislation of Uzbekistan did not have a clear definition of the concession agreement, and the purely theoretical significance of the study of concession problems arose. In addition, the contract, which is a concession contract, lists several elements recognized by law (civil and other types of law).

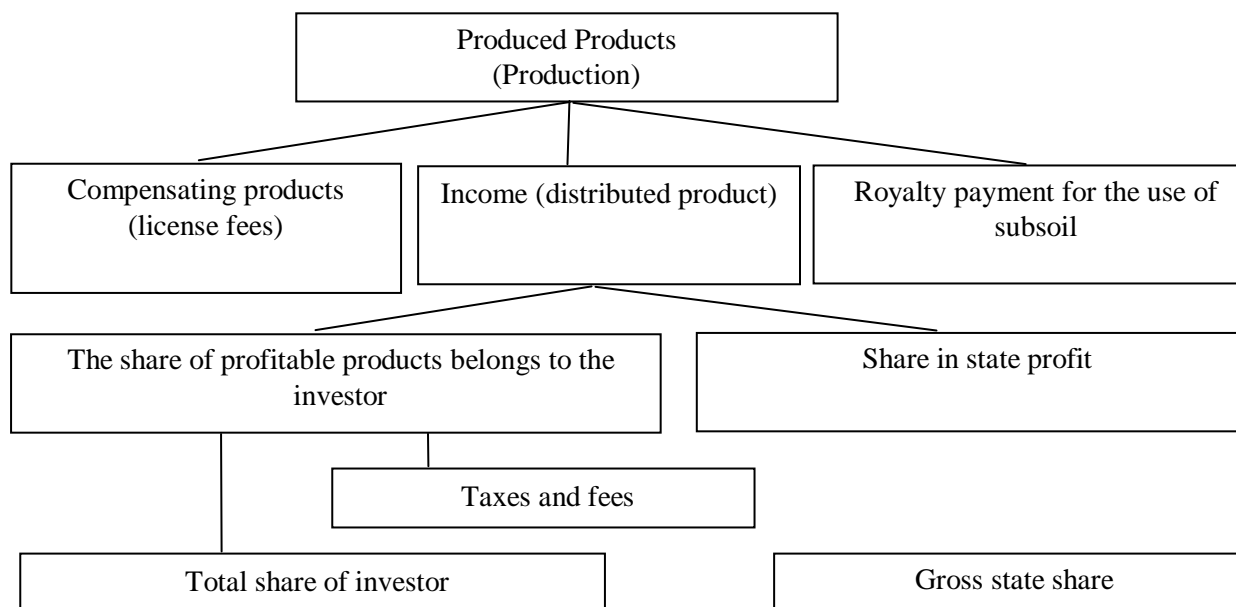
The objects of the concession agreement are:

- objects of road transport infrastructure; objects of railway transport; oil and gas pipelines, vehicles; sea and river ports and ships; airfields and airports; hydraulic engineering facilities and structures; objects of electric and thermal energy;
- Utility infrastructure system; metro and public transport; funds used for medical and preventive and curative activities, and others.

The Law "On Concession Agreements" differs from international documents regulating relations related to concession agreements in the following features:

- The objects of the concession agreement include renewable and non-renewable natural resources;
- the procedure for the concession agreement is determined by holding tenders between potential concessionaires by posting information about the concession on the Internet.

Another important way to attract foreign investors to extract natural resources in the region is to conclude production sharing agreements (PSA). Production sharing agreements are not recognized in the Foreign Investment Law, but are recognized internationally and in many regulatory documents. The essence of the production sharing agreement is that the state gives foreign investors the right to a certain period of exploration, exploration and mining, while the investor risks doing this at his own expense. The right to use subsoil plots for production under production sharing conditions is established by the legislation of the country. The contract is recognized by a special commission and signed by the winner of the auction. The distribution scheme of products is shown in Figure 1.



### Figure 3. Product distribution pattern \*

*\*Based on the author's study*

Prior to the commencement of industrial production of mineral raw materials, the investor is entitled to reimburse the costs incurred in the development of deposits. The rest of the product received after reimbursement is distributed between the parties (government and investor) under the PSA. The investor must pay income tax.

The essence of the PSA and its uniqueness is also reflected in the calculation mechanism, namely in the production sharing agreement. The law does not establish a clear mechanism for the distribution of products, but it defines the principles that should be applied by the parties. Based on these principles, the PSA determines the total cost and volume of production. The specific part of the product, including the degree of redistribution of the product manufactured in the PSA, is determined by the conditions of its transfer to the investor to cover the costs associated with working on the PSA. This is a compensating product. The structure of expenses incurred by the investor at the expense of compensation products is determined in the PSA in accordance with the legislation of the Republic of Uzbekistan. In the mutual distribution of profits between the investor and the state, deductions are made for manufactured products and the use of mineral resources. The conditions and procedure for the distribution of the "profit product" received in the PSA between the state and the investor, as well as the payment of part of the product payable to the state or its equivalent, are established.

The share of production of the Republic of Uzbekistan in PSA is additionally distributed between the republican budget and the subjects of the regional budget. Distribution coefficients are set by their authorities in separate agreements between the region and the republic.

An investor can direct its share of production in any direction (sector) without any restrictions. The state share includes a part of the profit from the product, including royalties (payment for the use of minerals) and the inclusion of tax products. One of the main achievements of the investor, established by the legislation of the Republic of Uzbekistan, is the right to export an unlimited amount of its products from Uzbekistan. According to the law, the investor must pay VAT, income tax, fees for the use of minerals and one-time social payments. During the PSA, the investor is exempt from certain taxes and duties, excise taxes and other obligatory payments. The collection of all these taxes and fees will vary depending on the conditions of distribution of the product in accordance with the PSA. PSA provides the following benefits to the host:

- ensuring the development of new deposits without the need for significant state financial resources and loss of control over the use of natural resources;
- revenues to the republican and regional budgets in the form of taxes and payments for the use of subsurface resources;
- the acquisition of raw materials for the country's processing industry, the creation of additional jobs and the development of transport infrastructure in the PSA region;
- a positive impact on regional development in the implementation of PSA, etc.

Risks play an important role for investors, including risks of political, tax and other risks for the population, as well as risks associated with inefficient mining, that is, the size and quality of mineral resources. The following drawbacks of PSA for the host country and the region are as follows: export of raw materials from the region and giving foreign companies the right to use

mineral resources as a raw material base, which to some extent weakens control over them. At the same time, this reduces the competitiveness of domestic enterprises as contractors and suppliers. As one of the forms of PSA that attract foreign direct investment, completing the study, emphasizing its shortcomings, we can conclude that this is a form of mutually beneficial cooperation for both national and foreign investors.

One of the traditional ways to attract foreign investment is to create a free economic zone. The free economic zone (FEZ) is a region with a special economic and legal status, with favorable conditions for attracting foreign and national investments. Foreign trade, tax, financial and administrative incentives for the FEZ operation contribute to the development of the export potential of the national economy and contribute to its integration into the world economy. In General, the creation of a free economic zone is very important for a large diversified economy, especially for Uzbekistan, which has complex balances in regional development. The concept of FEZ includes several types of territories. We can see different categories based on different criteria. Below are some of the most common categories of free economic zones that are accepted from an economic point of view:

- Free trade zone (FTZ) outside the national customs territory. The main ones are: free customs zone, free ports and transit zones;
- Industrial zones - for companies engaged in export or import substitution. Such territories include import zones, import-substituting products, export-import substitutes and export products;
- Areas of application of equipment and technologies, which are areas for national and foreign research, design and research activities. Their main types are science and technology parks and technopolises;
- Service areas that provide preferential business conditions to firms and organizations providing financial, economic, insurance and other services. These include offshore zones, financial centers, banking services, travel services (leisure areas for tourists) and much more.

Special economic zones (SEZ) include a number of functions, such as industrial zones, research and development areas, and innovation areas. The implementation of SEZ will increase the attractiveness of the country's regions for investment and innovation. The favorable economic and geographical position and developed infrastructure of the region will also be a strong incentive to ensure a large influx of foreign capital in the SEZ.

The effectiveness of free economic zones is reflected in the positive impact on the economies of countries and regions. The benefits of free economic zones can be summarized as follows:

- increase in total exports and foreign exchange earnings;
- an increase in local employment and an increase in per capita GDP;
- advanced training of employees, as well as the increase in wages that they receive;
- obtaining new technologies and achieving a “demonstration effect” for national companies;
- Restructuring the region's economy and improving the efficiency and quality of infrastructure.



SEZ along with their specific positive impact on the country's economy, can also have the following negative consequences: the withdrawal of capital from other regions of the country, as well as a decrease in the value of new components arising from import substitution, and a decrease in the volume of current investments.

Summing up the study of FEZ, it can be noted that due to the lack of specific concepts, conditions and infrastructure necessary for the effective functioning of FEZ, despite the adopted law, this means of stimulating foreign investment is still problematic.

Thus, it is necessary to take into account the peculiarities of each of these forms in order to choose one form or another of attracting foreign capital and bring it into line with the country's socio-economic development and the principles of economic security. At the same time, the goals, forms and possibilities of attracting foreign investment do not coincide at individual levels of government. Therefore, it is necessary to compare various forms of attracting foreign investment resources and, above all, take into account the interests of business entities and regions.

It may be a common goal to attract foreign capital at the country or region level and at the level of individual enterprises. This should increase its technical and technological level, expand its production and competitiveness on the way to foreign markets. However, goals for individual, regional and country goals may vary.

To attract additional technological, material and financial resources at the enterprise level (associations, concerns, associations) it is necessary to solve specific issues: the introduction of foreign technologies in the form of licenses and know-how; acquisition of new imported equipment; attracting foreign managerial experience in order to improve methods of access to the market and improve product quality; expansion of production in a market that is in demand, including in the world market; Import and use of non-existent equipment and the introduction of our own equipment, etc.

When it comes to a country or region, the range of goals that can be achieved by attracting foreign capital will increase dramatically. But this is not only about the modernization of the existing enterprise but:

- the creation of new types of enterprises for the restructuring of the economy and the production of new, insufficient, new products necessary for the domestic market;
- organization of new export-oriented and import-substituting goods;
- creation of a new system of business units for the development of a competitive environment;
- accelerating the development of new deposits in order to strengthen the domestic market and export potential;
- accelerating the development of regions with a relatively low level of development;
- The goal of creating an infrastructure system with the participation of foreign capital to use foreign experience in consulting, marketing and staff training.

For these purposes, you can choose the forms of attracting foreign investment in the economy of the region, but not all forms can be used at the same level. For example, it is impossible to use concession or free economic zones to attract foreign investment at the level of an individual

enterprise. The choice of forms of attracting foreign investment in the country and its regions depends on their state regulation.

## V. Discussion of research results

In our view, the theoretical concepts of FDI are important when studying the international investment activities of transnational corporations and their impact on the development of the national economy. Rational use of these tools will allow effective economic policy tools to be used to increase FDI by studying the business strategy of a Multinational company (TNC) and the investment decision-making process. Some theories can be applied to countries in transition to apply effective policy tools and increase the flow of foreign investment. In particular, the natural product life cycle framework can be applied globally to a wide range of products, industries, and technologies by government agencies and agencies responsible for attracting FDI. This theory can provide practical support for research and monitoring the life cycle of leading industries (such as engineering, pharmaceuticals, high-tech chemicals, textiles and light industry) and advanced technologies (such as microelectronics, new materials, or biotechnology). In addition, from the eclectic theory of international production, the advantages of TNCs (brand advantages such as ownership of production technology, organizational resources, and marketing methods), and the advantages of the location of the national economy (location advantages used to serve the domestic market or as an export base, including a broad domestic market, skilled labor, low transportation costs, investment incentives, and political and macroeconomic stability), it can be used for systematic monitoring of comparative advantages.

A systematic analysis of all FDI theories shows that none of them represents the absolute truth about attracting FDI. This is because all theories, in particular, represent only a narrow circle of international capital flows in the form of FDI. According to our conclusions, J. Dunning's "Eclectic theory" and R. Narula's "Investment development theory", these theories of economic development in the international movement of capital are relatively broad and complete. In addition, these theories, in our opinion, are increasingly clearly illuminating the relationship between international capital movement and the process of forming a national economy.

The practical value of FDI theory is that it gives us a reliable answer to the following questions: why did a potential foreign investor choose a particular country or another region? He invested in one way or another - licensing and selling, franchising, mini - or cross-industry joint venture with 100% foreign investment.

Based on research and analysis of various approaches from the point of view of national economic development, we believe that FDI can be characterized as follows: FDI is a long - term economic relationship with a long-term distribution and use of international capital to support economic growth, minimize economic risk, create additional opportunities for profitability and maximize investor exposure to investment opportunities by withdrawing innovative resources from the national economy. It is obvious that international capital is the most important element at all stages of reproduction.

In conclusion, the study of foreign investment should say that today there is no General concept that describes in detail the process of foreign investment. It is important for an investor to choose the right region so that they can invest first. The most promising method in this regard in the context of economic growth in Uzbekistan is the "Follow the investor" method, which is based on the analysis of the benefits provided to investors who have invested their capital and are

currently working in Uzbekistan. This method is used as an analysis of complex investment conditions created in Uzbekistan, and provides them with the necessary and sufficient information for making management decisions when investing. The investor will be able to draw conclusions about the risk factors depending on the behavior of several investors who made other investments, taking into account all the risk factors in full.

As long as the same regions are considered consumers of investment funds, the decisive factors in making a positive decision by an investor to introduce certain foreign investments to the country's region are:

- capital policy of local governments of the region receiving foreign investment;
- geographical location of regions that have received investment;
- saving on transport costs and customs duties;
- stability of the profit value due to the state's scientific and technical policy, trade and political regimes, currency and tax legislation, and various games in certain industries, countries, and regions;
- take into account the level of socio-economic development of regions receiving investments;
- striving for a higher rate of return by exploiting differences in national production costs;
- distribution and redistribution of goods and services between foreign industries depending on the state of economic conditions of individual States and regions;
- penetration of technical, technological, managerial innovations, trademarks and brands, as well as others.

## VI. CONCLUSION/RECOMMENDATIONS

Based on the study of regional aspects of attracting foreign investment in the context of economic modernization, the following conclusions were made:

- J. Dunning's theory of eclecticism and R. Narulo's theory of investment development provide a broader and more comprehensive view of economic relations in the international movement of capital. Therefore, when studying the regional aspects of attracting foreign investment, it is necessary to take into account the fact that these theories fully and clearly describe the relationship between the movement of international capital and the formation of the national economy.
- FDI aims to achieve a significant impact on investment mechanisms by attracting innovative resources to the national economy, creating additional opportunities for economic growth, minimizing risks and maximizing profits, and highlighting the economic links that can be created with the short - and long-term use of international capital.

In our view, the following are important characteristics of FDI, which is a form of international capital flows between economic entities and the national economy:

- per share: first, the acquisition by a foreign investor of an enterprise of at least 10-20% of the total cost of capital issued by the joint venture, and second, each part of the profit in accordance with the investor's share in the share capital. Regardless of repatriation, reinvestment of profits after distribution of dividends, third, in the internal system of the enterprise in the relationship between the parent company and its subsidiary. debt settlement processes arising from the provision of credit and similar transactions;

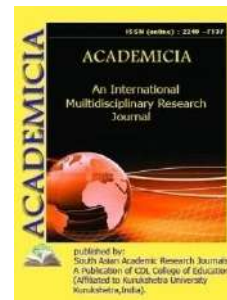
- type of control: foreign direct investment allows the investor to have broad control and even control over the object of investment;
- lifetime: foreign direct investment is distributed over a long period of time;
- by gross element level: a comprehensive description of FDI (standard assets with capital, technology, market access, and environmental assets);
- by investment: a specific new or existing production that contains a description of FDI, as well as specific marketing strategies and production technologies.

Foreign investment plays an important role in the sustainable development of the investment process in Uzbekistan and its regions. Legal norms in the legislation of Uzbekistan are aimed at regulating foreign investments and the activities of foreign investors, but at the same time they present a number of problems and misunderstandings that arise in the process of implementing investment projects. This can be explained by the fact that the processes of structural transformations in this system continue consistently. The main concept in the classification of forms of foreign investment is considered to be portfolio and foreign direct investment, each of which has its own impact on the economic development of countries. Thus, the region is considered as a very important structural stage of attracting foreign capital for the state and enterprises, which creates the need to choose the most effective forms of investment.

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DOI: **10.5958/2249-7137.2020.00677.1**

## POLITICAL CULTURE AND PROSPECTS FOR THE DEVELOPMENT OF POLITICAL INSTITUTIONS IN KARAKALPAKSTAN

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### ABSTACT

*The article analyzes the current problems of political culture, the role of democracy in the development of society, the role of modernization in the political life of society, approaches to the development of political culture in Karakalpakstan. Emphasis is placed on aspects of political culture in the activities of political institutions that ensure the development of society. It is also assessed as a regulatory framework for the protection of human rights and freedoms, as expressed in the strategic goals and objectives of socio-political movements.*

**KEYWORDS:** *Political Culture, Political Institutions, Social Organization, Modern Society, Political Goals, Political Ideology, Democratization, Modernization, Rule Of Law, Civil Society.*

### INTRODUCTION

Historical, philosophical and legal aspects of the political culture of the peoples of Uzbekistan and Karakalpakstan have been extensively studied, and numerous monographs, books and brochures have been published in this regard. However, the modern problems of political culture, its role in the development of democracy, the modernization of the political life of society, are still neglected by researchers. There are more than 50 definitions of political culture in the scientific literature. It is our task to analyze them and revise each new definition. We derive from the assumption generally accepted by scholars that "all emerging political institutions, their social functions, power and individual, forms of interaction of groups were determined by the existing political culture of society. Political culture, therefore, consists of a set of values, guidelines, beliefs, goals, and emblems that are generally accepted and serve to regulate political practice and govern the political behavior of all members of society. It combines not only political ideals, values, guidelines, but also the existing norms of political life. At the same time,



political culture and political behavior, the interaction of government, the individual and society, define the simplest patterns and rules[1; P. 260 -261].

### ***Purpose***

The purpose of the article is to study the political culture of the Republic of Karakalpakstan and to determine the role of political culture in modern politics of the Republic of Uzbekistan.

### ***Method***

Method This article uses such scientific methods as an integrated approach, content analysis, system functional analysis, retrospective approach, expert assessment, etc.

### ***Main part***

According to the subject (agent) of political culture, the political culture of a person is the initial stage; group, political culture of the institute - middle, corporate stage; society, community political culture - can be divided into social stages. These stages of political culture are in constant interaction, they complement each other and create the political culture of a society. Therefore, the political culture of an individual, group, and institution is in some extent an expression of the political culture of society, and conversely, the political culture of society is to some extent an expression of the political culture of an individual, group, and institution. However, this does not mean that they are compatible in everything, not at all, sometimes these stages can deny each other, or even fight with each other. Only a democratic society can use its contradictions in the development of the political system and the strengthening of democratic values without regard to political interests. Political institutions have both common features as a social organization and specific features as a special political organization [2; P. 38 – 45]. These features of political institutions are summarized and, in general, are reflected in their political behavior and activities. The ideals, norms, values, and guidelines that define these behaviors and activities constitute the political culture of political institutions.

Modern society is a politicized society because politics has permeated all spheres of life of society, individuals and institutions. The fact that politics encompasses all things unites the bone society, summarizes its achievements and directs it to the goals of social significance, enabling people to participate in the management of public affairs [4]. Despite the fact that politics is all-encompassing, absorbed into all spheres of community life, only political institutions have been politicized from beginning to end. Political culture is closely linked to this feature of political institutions and directs them to political goals.

The politicization of the actions and activities of political institutions stems from their essence and function. The essence of political institutions is to serve social groups, the people to organize their political activism in order to achieve their political and administrative goals and objectives, to influence the activities of government agencies. “As a mission or reason for an organization’s existence, the mission will continue to exist in its activities on a permanent basis, in all its forms, regardless of what goals the organization currently pursues. The mission (task) of a political organization is to fulfill the needs of society in the implementation of political activities and participation in the formation of state power and local self-government”[2; P. 260- 261]. Political culture expresses the essence and mission of political institutions in its real actions and activities.

The political culture of the sovereign state of Karakalpakstan is reflected in the strategic goals and objectives of the specific socio-political actions it carries out. For example, the Republic of Karakalpakstan is committed to the principles of human rights and state independence, is committed to the ideas of democracy and social justice, aims to build a humane democratic state governed by the rule of law, civil peace and national accord, draws on the historical experience of Karakalpak statehood. Announced. To achieve these goals and objectives, Karakalpakstan has created a regulatory framework for the protection of human rights and freedoms. It supports the separation of powers into legislative, executive and judicial branches, a multi-party system and the activities of non-governmental organizations. All this is a manifestation of the political culture of the Republic of Karakalpakstan, its readiness to continue democratic reforms, its commitment to the ideals of social justice and humanity. The state, as the main institution, not only shapes its behavior and activity in the political environment, it is obliged to form the political culture of the whole society and to support political movements that do not contradict the norms of laws and universal models. Every document of the state is a reflection of its political culture - the steps it intends to take, its relations with citizens, its relations with other states. Therefore, the behavior of the main political institution does not go unnoticed for other political institutions and for society as a whole.

The state is not an unorganized organization, its political culture and image are shaped by those in power, officials, leaders. If politics stems from the fact that people are in control of their interactions with government, it requires them to be reputable, organized, representing the will of the community and the public interest. As such, political leadership, both key figures and political institutions, can emerge [3; P. 99]. Therefore, the political culture, socio-political qualities of the leader are of great importance for the formation of a positive image of the political institution. Unfortunately, in political science there is no clear understanding of the role and importance of political culture in its socio-political life, in the management of the state and society. Apparently, civil servants, community leaders need to develop a socio-political model of political leaders and criteria for the functioning of political institutions, which will determine their development prospects.

Political goals, ideals, values, and guidelines are expressed in ideology or political ideology. The ideology of politics and political institutions is their natural state. Political ideology, which consists of socio-political ideas, is a theoretically formed expression in the understanding of the identity of a particular social group, stratum, class, nation, ethnicity, or other community.

Political ideology also determines the mechanism of theoretical protection of their political interests, embodies the intellectual and spiritual basis of political activity[5; P.142]. The following stages of political ideology are distinguished: theoretical-conceptual, in which the most important rules of the theoretical model are formed, which reveal a specific worldview based on the interests and ideals of a particular class, class, nation or state; program-political, in which goals, principles and ideals are transformed into programmatic slogans and requirements of the political elite and form the basis for making management decisions and targeting the political behavior of the population; updated, which describes the degree to which citizens have mastered the goals and principles of this ideology, which is reflected in their participation in political life[5; P. 142]. These stages, in essence, also form the theoretical and methodological basis of political culture, directing it to the performance of a particular political task. For example, the theoretical-conceptual stage of political ideology develops the concept of political

action, gives it a goal-oriented nature, substantiates theoretical models, ideological guidelines. Thus, the theoretical-conceptual stage and its practical implementation emerge as an expression of political culture.

V.V. Ilin. Thinking, Ideas and ideologies are socio-cultural phenomena because they represent the interests, goals, traditions and ethno cultural characteristics of people, socio-groups. The year emphasizes that ideas or ideologies are embodied in the spirit of the people[6; P. 339]. Therefore, a state, a social community, a people or a nation cannot live without an idea, an ideology, which is a self-evident fact. Ideology ideologically strengthens certain ideas, goals, and norms, and seeks to inculcate them in people's minds in one way or another.

President Sh. As Mirziyoyev noted, "in order to fulfill the great tasks set before us, we need to develop a national idea that will be a source of strength for us" [7].

Ideas, ideologies are socio-cultural phenomena because they represent the interests, goals, traditions and ethnocultural characteristics of people, socio-groups, ways of thinking. V.V.Ilin. The year emphasizes that ideas or ideologies are embodied in the spirit of the people [5; P. 339]. Therefore, a state, a social community, a people or a nation cannot live without an idea, an ideology, which is a self-evident fact. Ideology ideologically strengthens certain ideas, goals, and norms, and seeks to inculcate them in people's minds in one way or another. President Sh. As Mirziyoyev noted, "in order to fulfill the great tasks set before us, we need to develop a national idea that will be a source of strength for us" [7].

Political institutions develop their own ideas or ideologies, but they should not contradict the interests of the community, social development. Every member of society, every political institution is a free creator of the 'ideological environment' and the 'free market of ideas', but at the same time it cannot exist without society, without regard to its interests and needs, ideals and moral values[5; P. 100]. If we are talking about the main political institution - the state, it, by its very nature, has always been a supporter of the idea of gathering people, communities around the government and the homeland. The Republic of Karakalpakstan is home to more than 80 peoples, ethnic groups and ethnic groups, but at the same time the idea of national independence is gaining national character. The driving force of this ideology is the indigenous people of Uzbekistan, the Uzbek people.

It is he who unites other peoples around him and encourages them to cooperate, support each other and participate in the formation of civil society.

Today, national-democratic institutions are constructive, creative and lively in their goals and objectives. Therefore, national-democratic institutions express positive political and cultural ideas and values.

Culture, by its very nature, is a democratic phenomenon. In the political science literature, democracy and culture are seen as dialectically interrelated phenomena, and if this hypothesis is followed, politics and culture are also in dialectical unity, reflecting the level of political culture of the community, its adaptability to modern modernization challenges. The democratization of political institutions is reflected not only in their commitment to democratic principles and ideals, but also in their adaptability to changing needs, the challenges of global development. President of the Republic of Uzbekistan Sh. Mirziyoyev "Even though our countries are geographically far from each other, values such as diligence, tolerance and patriotism unite our

peoples" [11]. Therefore, political culture is not only expressed in the commitment of political institutions to the ideals of democracy, but they must adapt to the changing world, modernize, assimilate and apply its new political and cultural paradigms. One of such political and cultural paradigms today is the idea of "open civil society" and "democratic state governed by the rule of law." Although the origins of this idea go back to antiquity, it began to be developed in a new era as a theoretical and political concept.

Advances in science, technology and freedom of creativity have made it possible to modernize political and cultural life, and the ideas of civil society and the rule of law have emerged. In particular, it gained a mass, global scale in the second half of the twentieth century. Uzbekistan's independence has provided an opportunity to adopt the idea of civil society and the rule of law, to modernize the socio-political, economic and spiritual-cultural system in accordance with their requirements, the laws of their development. Therefore, the Republic of Karakalpakstan connects its development prospects with the formation of civil society and the rule of law, the modernization of social and political institutions in accordance with the new political and cultural paradigm.

Democracy is not an ointment for all ills, it can create destructive forces and attitudes. When democracy is based only on the traditions of political culture, the phenomenon of creativity becomes a socially positive value and allows it to develop in accordance with modern challenges. According to the respondents, 64% of respondents see the development of political institutions in Karakalpakstan as "their commitment to democratic ideals", "their determination of political and cultural values", "their ability to protect human rights and freedoms." Today, the task of increasing awareness of the normative documents and laws adopted for our society is urgent, without which the rule of law and the political activism of citizens can not be formed. In short, legal culture, as part of political culture, creates conditions for the growth of legal knowledge of the population or institution, allowing them to participate effectively in the political life of the country. It is in this context that we see legislation and legal culture as one of the conditions for the development of political culture and political institutions. Reforms in this area have developed mainly since 2017, at the beginning of a radical turning point in the reform of society. At the same time, President Sh.M. The beginning of the modernization of state bodies played an important role in the application of the principle put forward by Mirziyoyev "The people should serve our people, not government agencies," and on this basis the creation of a legal framework that will allow the formation of a new civil society. In the socio-political life of the country "the adoption of the" Action Strategy "on the five priorities of the development of the Republic of Uzbekistan in 2017-2021 and the realization of its objectives, marked a turning point in the development of society and the state." The first direction of the "Strategy of Action" identified "priorities for improving the state and society" [12. P. 4 – 8]:

- Enhancing the role of the Oliy Majlis in the system of state power, further expanding its powers to address important issues of domestic and foreign policy of the country and to exercise parliamentary control over the activities of the executive branch;
- Radical improvement of the quality of lawmaking, aimed at strengthening the impact of the adopted laws on the ongoing process of socio-political, socio-economic and judicial reform .....

- Ensuring the transparency of government and administration, the introduction of modern forms of providing information on the rights and freedoms and legitimate interests of individuals and legal entities.

The fulfillment of these tasks should be based on the achievements of the world social thinking and the traditions of national culture, relying on the people's confidence in their own strength and capabilities. Along this path, it is important to develop a political culture that is focused on the realization of the interests and aspirations of the people, which will change the way people think. The Council of Ministers of the Republic of Karakalpakstan, regional and city khokimiyats, the Republican Center for Spirituality and Enlightenment, the Republican Fund "Mahalla" and other public organizations have been tasked to promote legal knowledge. In Karakalpakstan, a model of continuous legal education has been developed, which is divided into stages: 1) in the family; 2) in preschool educational institutions; 3) in general educational institutions; 4) in academic lyceums and professional colleges; 5) organized in higher education institutions.

The rule of law is not only that citizens know their rights and duties, but also that they can exercise them. In the socio-political sphere, this is not only the ability of citizens to work with the authorities based on their legal norms, but also the ability to demand compliance with the law by officials of the state apparatus. It is here that the legal culture and political culture of the institute intersect and together they become the socio-political culture of the community. Therefore, legal culture stems from the goals and objectives of the political system and serves to strengthen it, thereby facilitating the development of political institutions through the mechanisms of legal norms.

It should be noted that the legitimacy of political institutions is, first of all, a legal document, a legal status, but it is also a manifestation of the political culture of society, the state. The state will always be the dominant factor influencing the behavior of political institutions. Ignoring this fact, which is often practiced by most legal scholars, weakens the role of not only the socio-political sciences, but politics in general. Political institutions in their activities are primarily driven by corporate interests. Therefore, any organization has not only its own internal structure and hierarchical interactions, but also corporate goals and objectives. Political institutions, for example, have their own programs, action plans, which distinguishes them from other political organizations.

Political culture expresses the corporate interests, goals, and objectives of a political institution and allows them to carry out their functions, but on the other hand, it is not limited to these. The political culture of a political institution is a part of the general culture of the community, which constantly seeks to interact and complement each other with the culture of the society. Therefore, the corporate nature of political institutions, no matter how important for their independent functioning, always strives for its common source and only then finds its usefulness and suitability for society. For example, this allows us to explain to the population the activities of NGOs and political parties, the differences between them. Together with them, we went to meetings in rural areas and monitored the activities of the parties, as a result of which a lot of useful information was collected about the attitude of the people to the elections.

Today in Uzbekistan, favorable conditions are being created for the effective operation of non-governmental non-profit organizations. As a result, their number is growing from year to year and the scope of activities is expanding, for example, in 1991 there were about 100 NGOs in the



country, now their number is 9,478 (as of July 1, 2017 - 8,801). Of these organizations, 6,561 were public associations, 434 were institutions, 488 were public foundations and 1,995 were in other organizational and legal forms (including 1,423 water use associations). There are more than 3,000 non-governmental non-profit organizations in Karakalpakstan.

Also, in accordance with the Decree PF-5430 "On measures to radically increase the role of civil society institutions in the process of democratic renewal of the country" adopted on May 4, 2018, radically increase the role and importance of civil society institutions in the comprehensive development of the country. and the Civil Society Advisory Council under the President of the Republic of Uzbekistan was established in order to gradually implement the tasks set out in the Action Strategy for the five priority areas of development of the Republic of Uzbekistan in 2017-2021 "[13].

The most popular and largest non-governmental non-profit organizations in Uzbekistan are the Federation of Trade Unions of the Republic of Uzbekistan, the Youth Union of Uzbekistan, the International Non-Governmental Charitable Foundation "Mahalla", "Soglom Avlod Uchun" and the Republican Center for Spirituality and Enlightenment.

Currently, outside the state, political institutions are active in achieving their corporate goals. Therefore, they cooperate with the state on a partnership basis to protect their rights and freedoms legally and theoretically. The experience of political institutions in developed countries shows that unless political institutions realize their goals and are active in defending them, they can never influence the activities of the authorities, but rather become their structure over time and thus their social identity as NGOs and lose their independence. In the future, the corporate goals of political institutions should become their driving force based on the formation of their tasks and action plans. No matter how much the activities of political institutions are focused on corporate interests, it cannot ignore the principles of humanity and benevolence. At the heart of all reforms, the activities of political institutions are human interests, the call for modern modernization, in essence, politics must be benevolent.

Political culture should strengthen these principles, help political institutions to do good in the political environment. "Social philanthropy," writes Professor U.M Abilov, Doctor of Philosophy, "arises in a renewing economy, focusing directly on man, his objective needs and certain requirements, not only the basic shifts, but also superficial processes, the political and moral development of society.[14; P. 134] " changes in their structures. The political situation and the moral condition of society are spheres of social life, in which social goodwill is an additional incentive to strengthen or stop, but also in the functioning of government structures, social activism, the development of democracy, the strengthening of political culture. Despite the fact that the Republic of Karakalpakstan has set its strategic goal - the formation of civil society and a benevolent rule of law, political institutions may respond differently, sometimes inconsistently. At the same time, they naturally promote their own political models for the development of society and seek to direct the activities of political institutions to their political goals. From a political-cultural point of view, both of them have a right to exist. It is here that the political culture of a society must have its say and justify which of the competing models is acceptable for the future of the community. The criterion for the development of political culture is not the declaration of humanity and benevolence in the activities of political institutions, but their compatibility with the political culture of society, their potential for modernization of social consciousness, guidance and values.



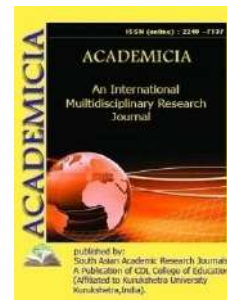
## CONCLUSIONS

The experience of modernization in Western countries has highlighted two of the most important areas in this process. The first is that the socio-cultural foundations of non-Western societies are only able to adopt innovations once new values and norms have been adapted, a process that takes a long time. The second is that the adaptive form of new values can be a symbiosis and synthesis of them with the specific socio-cultural basis of a particular society as an acceptable model of democratization and modernization of a non-Western society.

The prospects for the development of political institutions in Karakalpakstan largely depend on the level of political culture of the society and its potential for modernization. These dialectically interrelated features are reflected in the politicization, ideologicalization, democratization, legitimacy, corporate nature, humanity, and benevolence of political institutions. These features have only just been formed, some of which are still in the recovery stage. Only in the future will they be able to present themselves brighter and more stable. The benevolent attitude of political institutions to the establishment of civil society and the rule of law in the Republic of Karakalpakstan has already become an irreversible process of democratization, which allows us to conclude that the prospects for the development of political institutions are provided.

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DOI: **10.5958/2249-7137.2020.00678.3**

## NATURAL TOURISM RESOURCES AND OPPORTUNITIES FOR THEIR USE IN SURKHANDARYA REGION

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### ABSTRACT

*The article summarizes the views and comments on the existing natural-tourist resources in the Surkhandarya region and their classification and their effective use. Every year, large-scale reforestation work is carried out, which is under the control of the Committee for Nature Protection in the region. Between 1987 and 1997, 9,450 hectares of new forests were planted. The caves and their pictures, which are considered to be the first places of humanity in the mountainous areas, attract tourists. These caves in Boysun, Sherabad and Altynsay districts are important potential as tourist and recreational resources. In order to actively and comprehensively promote tourism products in the world market, large-scale reforms are being carried out to make it one of the leading sectors of our economy.*

**KEYWORDS:** *Natural Tourism Resources, Beautiful Nature, Medicinal Plants And Medicinal Waters, Tourism Infrastructure, Qualified Personnel, Recreational Resources.*

### INTRODUCTION

Given that the share of tourism in world GDP is 10 percent, efforts are being made to develop the sector in many countries, including strategic sectors. According to the data, eco-tourism, which accounts for 7% to 10% of the total tourism industry revenue, is projected to grow from \$ 295,650 million in 2019 to \$ 508,580 million in 2025<sup>1</sup>.

Creating a favorable economic, administrative and legal environment for the rapid development of the tourism industry in Uzbekistan in recent years, including ensuring the priority participation of the private sector, further improving its competitiveness and quality of services, expanding economic potential and income base, creating new jobs, In order to actively and comprehensively promote tourism products in the world market, large-scale reforms are being

carried out to make it one of the leading sectors of our economy. For this purpose, Uzbekistan has sufficient tourist potential, the effective use of which will allow it to become one of the most developed countries in the field of tourism<sup>2</sup>.

## LITERATURE REVIEW

A regional approach to the efficient use of tourism resources to increase competitiveness is observed in studies of scientists from the former Soviet Union, such as V.A. Qvartal'niy and I.V. Zorin<sup>3</sup>, E.A. Zaliznyak<sup>4</sup>, V.S. Preobrazhensky<sup>5</sup>, M.P. Krachilov, N.G. Ignatenko<sup>6</sup>. The scientists of our country N.E. Ibadullaev, S.A. Abdukhamidov<sup>7</sup> suggested studying tourist resources, dividing them into primary and secondary tourist resources and effectively using resources in the regions, B.Kh. Turaev<sup>8</sup> studied the organizational mechanisms for the development of regional tourism. Recommendations for the efficient use of accessible tourism resources were developed by experts from European practice.

## MATERIAL AND METHOD

The methodology of present research based on the results of previous studies of domestic and foreign researchers on natural tourism development, as well as decrees and resolutions of the President of the Republic of Uzbekistan on tourism and its development. In this regard, the methodological aspect of this study is the substantiation of the ways in which the ideas of innovative development in our country are implemented.

## Analysis and results

The natural tourism resources of Surkhandarya region are diverse, from the Gissar Mountains in the north (Khazrati Sultan peak - 4643 m) in the upper reaches of the Aksu River to the south-west many branches Boysun (Khojapiriyah - 4625 m), Ketmonchopti (3168 m), Surkhan, Suvsiztog (2122 m), Kohitang (3137 m) mountains are distinguished by their healing springs<sup>9</sup>. In the eastern part, Babatag is located, while the central and southern part of the region consists of plains.

Although the Amudarya flows in the south, the southern regions are dry deserts and the north has a favorable subtropical agroclimate. Provided with thermal reserves and sufficient moisture, high quality, high yield, low cost and 2-3 times the growing season of vegetables and melons, delicious, ecologically clean fruits, subtropical crops (lemon, banana, sugar cane) the region has the potential to form a competitive advantage.

Precipitation ranges from 130 mm to 360 mm per year in the plains, and from 445 mm to 626 mm in the foothills and mountains. The largest rivers are Topalang, Sangardak, Khanjiza, Khojaipok, Surkhandarya, Machaydarya, Sherabaddarya, with more than 320 springs. In the rivers and reservoirs there are usach, white amur, carp.

There are more than 4,000 species of plants in Uzbekistan, 301 of which are included in the Red Book of the Republic of Uzbekistan, more than 100 of which grow in Surkhandarya region: almonds, wild grapes, wild figs, maples, dates, anzur onions, tograyhon, namatak, kiyikot, tulips. are rare plants. Ephemeral spikes grow in the mountains, and various plants in the high mountains. Among the trees and shrubs there are spruce, wild fruit trees, tugai forests on the banks of the Amudarya, pistachios in Bobotag. In the mountains there are gazelles, mountain goats, wild boars, jackals, lynx, wolves, brown bears, jays, birds: pheasants, partridges, sparrows.

The forests in the region are divided into 3 different vegetation zones: pine forest zone, high mountain zone, steppe zone. The total area of 5 forestries in the mountainous areas of the region: Termez, Uzun, Bobotag, Sherabad, Boysun is 83,238 hectares. 7536 hectares are covered with forests in Gissar forestry and 10258 hectares in Surkhan reserve. The forests of the region consist mainly of spruce and cover an area of 53,000 hectares. Every year, large-scale reforestation work is carried out, which is under the control of the Committee for Nature Protection in the region. Between 1987 and 1997, 9,450 hectares of new forests were planted. Here, 186 hectares of fruit trees are planted with walnuts, 4.7 thousand hectares with almonds, and 2000 hectares with pistachios.

Protection of landscapes and natural objects is carried out through the organization of specially protected areas. These include nature reserves, national parks, natural monuments, and nature reserves. A similar nature reserve was established in Surkhandarya region in 1987, with a total area of 27.6 thousand hectares, of which 10.2 thousand hectares are covered with trees and shrubs. The Surkhandarya State Nature Reserve is home to 810 species (of which 25 species are rare), where the mountain landscape and the Zarautkamar archeological monument are protected. Practical work is underway to protect and restore rare and endangered plant species in the reserve.

Surkhan State Reserve has fauna and flora species, fishing and hunting grounds, mountain slopes, caves, mineral springs and lakes, which are found only here.

The caves and their pictures, which are considered to be the first places of humanity in the mountainous areas, attract tourists. These caves in Boysun, Sherabad and Altynsay districts are important potential as tourist and recreational resources. Teshiktash Cave, located at a height of 400 meters near the village of Machay, Boysun district, was the first human settlement of the Muste period of the Paleolithic period. There was found the skull of a Neanderthal child aged 8-9 years, the age of the find is 100-40 thousand years<sup>10</sup>. Another ancient site, the Machay Cave, is a major Mesolithic monument of the Middle Stone Age, such large archeological monuments are numerous in the region, and the unique resources make it possible to attract a certain category of tourists.

The Khoja Gur-Gur ota, Boybulak and Vishnevsky caves in Boysun district have been studied by foreign experts since 1984, called the underground Everest, the Dark Star, and the depth of these caves is more than 2650 meters, making it one of the deepest caves in the world.

7860 cubic meters of medicinal water is extracted annually from Jayronkhana, Semashka, Surkhan sanatoriums, Khanjiza resort, Khojaikon salt cave, Uchqizil underground mineral water wells of the region, which is used for treatment of the population. The 100-bed sanatorium in Boysun district is characterized by a large number of visitors. While the water temperature in the cave of Omonkhona is 5-6 degrees in summer, the water temperature in winter is +20-22 degrees, which surprises many<sup>11</sup>.

Khojaipokota shrine, one of the places where locals rest and visit in the mountainous areas of Sariosiyo and Altynsay districts, is also famous for its sulfur healing water, where visitors can visit all year round. The mountainous landscape of the area and the part of the headwaters of the Khojaipok River attract visitors with the beauty of the scenery. Sangardak in the Gissar mountain range, the clear mountain air in Khanjiza and the waterfall attract many visitors here in summer.

For the development of tourism in Surkhandarya region and the effective use of existing tourism potential, the Cabinet of Ministers of the Republic of Uzbekistan in Boysun district - Boysun small tourism zone, covering the areas of Omonkhona village, Zovboshi mountainous area, Darband village;

In Sariosiya and Uzun districts on the slopes of Khanjiza mountain ranges and in the territory of Sangardak village of Sariosiya district - Sariosiya small tourism zone;

Sherabad village, Shalkan district, Khojaikon salt deposit, as well as orchards in the area - Sherabad small tourist zone.

For the development of tourism, it is necessary to effectively use the potential of the regions in the Surkhandarya region, where natural tourism resources are available (Table 1).

**TABLE 1 NATURAL TOURISM RESOURCE POTENTIAL OF SURKHANDARYA REGION**

Resource type	Potential areas
Beaches	Uchqizil lake, South Surkhan reservoir, Oktepa reservoir
Sea, river, lake, shores	Topalang, Sangardak, Xonjiza, Khojaipok, Surkhandarya, Machaydaryo, Sherobodaryo
Mountains and landscapes	Hisar mountain ranges, Boysuntog, Kohitangtog, Bobotog slopes
Forests	Surkhan State Reserve, Bobotag, Uzun, Termez, Sherabad, Boysunforestries
Waterfalls	Sangardak waterfalls
Lakes	Uchqizil, Khamkonlakes
Caves	Machay cave, Khojaikon salt cave, Khojaipokota cave, Teshiktash cave, Qoratepa cave, Amir Temur cave, Khoja Gur-Gur ota, Boybulak and Vishnevsky caves
Birds, including flora and fauna	More than 1,000 flora (more than 100 are listed in the Red Book) and 126 species of fauna
Mineralsprings	More than 320 mineral springs (Omonxona, Khojaipokota, Gurimbulak, etc.)
Protected areas - parks, nature reserves	Surkhan State Reserve, Bobotag, Uzun, Termez, Sherabad, Boysunforestries
Others	Denau Arboretum garden

By identifying these resources by district, it is possible to evaluate the possibilities of their effective use in the future. Especially, health-improving, recreational-entertainment in mountainous and foothill areas planning of sports health facilities is expedient (Table 2)

**TABLE 2 NATURAL TOURISM RESOURCE POTENTIAL IN THE DISTRICTS OF THE REGION**

Area	Natural tourist resource	Types of tourism
Termezcit	Surkhandarya coast, Zooparks	Health tourism, recreational tourism
	-	-

Angor		
Baysun	Machaydarya, Boysuntog, Gissar mountains, Boysun forestry, Teshiktash cave, Qoratepa caves, Amir Temur cave, Khoja Gur-Gur ota, Boybulak and Vishnevsky caves, Omonkhana sanatorium	Ecotourism, health tourism, speleotourism, extreme hunting, photo hunting, hunting tourism
Denau	Hisar foothills, arboretum, Topolang river	Extreme tourism, mountaineering, kayaking
Djarkurgan	Oktepa reservoir, healing springs	fishing, health tourism, beach tourism
Qiziriq	-	-
Kumkurgan	South Surkhan reservoir, Gissar mountain ridges	Beach tourism, ecotourism, hunting tourism
Altinsay	Hissar mountain ridges, Khojaipokota shrine, vineyards, orchards	Ecotourism, health tourism, agrotourism
Sarasiya	Hissar mountain ranges, Sangardak, Khanjiza resorts, Topalang, Sangardak, Khanjiza rivers	Ecotourism, agrotourism, health tourism, extreme tourism
Termez	Termez forestry, Uchqizil lake resort area, gardens, fields, Jayronkhana, Southern Pearl health centers	Agrotourism, medical and health tourism, beach tourism
Uzun	Long forestry, foothills of Bobotag, hills	Ecotourism, agrotourism
Sherabad	“Surkhan” state reserve, “Gurimbuloq” health resort, Khojaikon salt deposit treatment area, slopes of Kohitang ridge, Khamkon lake	Ecotourism, agrotourism, beach tourism
Shurchi	Pista field in the foothills of Babatag	Ecotourism, agrotourism

Taking into account the resource potential of the region, Boysun district includes the areas of Omonkhona village, Zovboshi mountainous area, Darband village - Boysun small tourism zone;

In Sariosiyo and Uzun districts on the slopes of the Khanjiza mountain range and in the territory of Sangardak village of Sariosiya district - Sariosiya small tourist zone;

Sherabad small tourism zone has been established in Shalkan village of Sherabad district, including Khojaikon salt deposit and orchards in the region.

Construction of modern hotel complexes, cultural, health, trade, entertainment and other facilities of tourism importance in the territory of these small tourist zones, as well as programs for the organization of modern engineering infrastructure are being developed and implemented.

In 2019, there will be 77 accommodation facilities in the region, including<sup>13</sup>:

- 13 hotels (289 rooms, 579 places);
- 64 guest houses (289 rooms, 571 places) were built and put into operation.



As a result, the number of accommodation facilities in the region reached 111, of which 46 were hotels (1085 rooms, 1988 places), 65 guest houses (292 rooms, 580 places).

## CONCLUSION

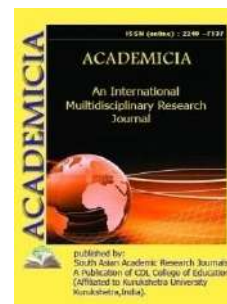
The favorable natural and geographical location of Surkhandarya region has had a positive impact on the formation of tourist resources, there are the highest peaks in Uzbekistan, deserts, rivers, healing springs and other natural tourism, which create favorable conditions for tourism development. Therefore, the development of this or that type of tourism is promising, first of all, based on the potential of the region's tourist resources.

In the future, the following types of tourism:

- Extreme mountain tourism;
- speleotourism;
- Medical tourism;
- Beach tourism;
- Cultural and health;
- Recreational activities will increase the efficiency of efficient use of natural tourism resources in the region.

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DOI: **10.5958/2249-7137.2020.00679.5**

## WORTHY CONTRIBUTION OF THE INHABITANTS OF SURKHANDARYA REGION TO THE GREAT VICTORY IN THE SECOND WORLD WAR

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### ABSTRACT

*The article under discussion analyzes the positive qualities of the residents of southern regions of Uzbekistan who sent material aid to the front, showed patriotism and contributed their share to the contribution of Uzbek people to the victory over fascism during the Second World War. The author of the article believes that the Second World War was a difficult test for all humanity. It caused countless losses and was rich in extraordinarily significant lessons, the most important of which is the need to prevent war, as well as the fact that the preservation of world peace is one of the human problems. The population of the Surkhan Oasis, along with all of them, made a worthy contribution to the supply of warm clothes and food to the front, to the construction of military equipment and replenishment of defense funds, and thus made a significant contribution to the victory over fascism.*

**KEYWORDS:** *Front, Rear, Warm Clothes, Food, Defense, Fund, Loan, Material Assets, War, Evacuation, Mercy And Love.*

### INTRODUCTION

In the history of mankind, the Second World War was the most terrible war that took countless human lives. In that war, all of humanity mobilized all of its forces and capabilities to achieve victory over fascism. The Uzbek people, along with all other peoples, also contributed their worthy share in achieving that victory. On the fields of bloody battles, the Uzbek fighters fought mercilessly against the enemy. In addition, the Uzbek people actively participated in the delivery of warm clothing and food to the front, the

replenishment of defence funds and the collection of funds for the construction of military equipment.

In the Second World War, 62 out of 73 independent states took part and eighty per cent of the world's population was covered by combat operations. The remaining 11 States that did not join the war, for whatever reason, had to be loyal to one side or the other. Battles were fought on the territories of 40 states, three continents and four oceans. It is estimated that 110 million armed soldiers took part in the war, which killed 60 million people. And that's why everyone admits that this war was truly a world war.

In this regard, it is worth noting that the people of Uzbekistan have made their worthy contribution to the victory over fascism. A total of 1.5 million people out of Uzbekistan's 6.5 million population were mobilized at the very beginning of the war. 500 thousand of our compatriots died with weapons in the hands of those who fought against the invaders, 132670 people went missing, and 60452 of our countrymen became disabled. Most of these people, who became models of courage, were awarded combat orders and medals.

Despite the fact that the war ended 75 years ago, the hearts of the people are still troubled by the trauma and suffering it has caused. President of the Republic of Uzbekistan Shavkat Mirziyoyev said in his address to the Oliy Majlis, "In 2020, the 75th anniversary of victory in World War II will be widely celebrated internationally. We have deserved to be proud of our courageous, invincible and magnanimous people, who have made their unique contribution to the great Victory. Our people will always remember that of more than a 1.5 million of sons and daughters of Uzbekistan, who bravely fought in this bloody war for peace and freedom, every third has not returned to his relatives and friends, we will never forget the feat of our compatriots who worked in the rear of the front. We should not only honor our war and home front veterans on holidays, giving them honor and respect, but also take care of their health every day and every hour". It is necessary to remember that for the sake of future peaceful life, our fathers and grandfathers, who suffered unimaginable suffering and suffered huge losses, sometimes sacrificed their lives, left an indelible mark in the history of mankind, showed unimaginable examples of courage and bravery, participating in overcoming the scourge of fascism that befell the world.

Today, with the adoption in November 2004 of the UN General Assembly resolution on the memory of the victims of the Second World War, the announcement that 8 and 9 May will be celebrated as the Day of Remembrance and Reconciliation is considered an important measure in this regard.

Peace in the world, ensuring a peaceful and quiet life of the humanity are considered the most urgent tasks of our time. Since the first day of its independence, the Republic of Uzbekistan has been calling for peace and understanding among peoples. The world plays an invaluable role in ensuring the future of our country, its stable economic and political development, in nurturing the younger generation in the ideals of patriotism, courage in the spirit of courage, devotion to our historical traditions, in achieving every success, in every peaceful dawn. Throughout its history, mankind has endured countless wars, big and small, in which it has suffered considerable damage and great losses. For that reason, the importance of the victory over fascism achieved in the Second World War will never lose its value.

## METHODS

In the coverage of the topic, the methods of historical objectivity, problematic chronological, geographical determinism, comparability, comparison, consistency from simple to complex syncretics were used in general. The issue raised in the article is a relatively little-studied field in the field of historiography. However, Sh. Karimov's "Contribution to the Victory" - Tashkent, 1992. describes the contribution of the Uzbek people to the front, S. Tursunov and T. Pardaev's "Courage of Sherabad during the Second World War" - Termez, 1998, "Unforgettable Courage" by the same authors - Termez, 1995, S. Tursunov, O. Soatov, H. Juraev's researches "Memory is eternal-appreciation forever" - Tashkent, New edition-2009, only some aspects of the subject are covered. However, this topic has not been specifically studied as an object of study.

## RESULTS AND DISCUSSIONS.

Achieving victory in the bloody confrontation with the enemy dictated the need to help fighters not only with warm clothes and food, but also with other types of material values. Taking this into account, in the short period from the first day of the war to August 15, 1941, the population of the Surkhan Oasis sent 12897 horses and 1334 cars to the front to meet the needs of the army. Hard winter of 1942 required sending even more warm clothes. In this regard, an intensive movement to collect warm clothes for the fighters started in all districts of the region. Including in replenishment of funds for collection of warm clothes for the needs of the army Boysuns collected 220 pieces of fufaks, 2426 pieces of leather, Saryasians 1606 kg of wool, 3276 pieces of sheep and cowhide skins, 209 pieces of blankets, 201 pieces of fufaks, 314 pieces of woollen gloves, Djakurganians 401 pieces of fufaks, 424 pieces of shirts, 1745 pieces of tulups, 526 pieces of various cotton clothes, 2734 kg. of wool and 4767 pcs. of sheep skins and thus showed a special example of patriotism [1]. In general, in the period up to December 31, 1942 the warehouse of the regional military commissariat received 55 pieces of cotton trousers, 108 pairs of socks, 2 pairs of woollen gloves, 565 pieces of handkerchiefs, 116 pieces of summer shirts, 27 pieces of blankets and 19 pieces of tulups [2].

The war aimed at overcoming fascism took on the character of a public movement. Everyone, from young people to elder ones, considered it their human duty to contribute to the victory over the enemy. Pupils of the region's schools also made a special contribution to the victory won over the enemy. In addition to working in the rear production plants and agricultural fields, they also set a special example in the collection and dispatch of warm clothing and food for the fighters. In particular, on the initiative of pupils of school named after Stalin of Shirabad region M. Ashurbaeva and B. Khamroev's gifts for soldiers were sent on August 10, 1941. Pupils of the school named after K. Marx in Termez collected and handed over warm clothes worth 7000 rubles. The care for the fighters shown by Nadya Aleinikova, an 11-year-old resident of Termez, deserves special attention. The ruthless war left a deep wound in Nadya's soul, who received a funeral about her father, who went to the front. Nadya, who had an endless hatred for the enemy, swore to take revenge over her father and bought 30 pieces of needles, 15 coils of thread, a few kilograms of dried hook,

jids, raisins and sent them as a gift to the soldiers. On the box with the enclosed gifts she personally displayed the inscription "Avenge the damned Germans for my father" [3].

In the intensive movement of delivery of large amounts of warm clothes and foodstuff to the front, letters from the front addressed to compatriots working in the rear had a great influence. Thus, the soldiers of the Ukrainian front sent a letter addressed to the Djakurgan youth. In this message, addressed to the young men and women of Djakurgan, engaged in creative work behind the front line, it was explained that they can achieve even greater success by actively participating in the organization of collection of material assistance to the front. Only on January 7, 1943 the population of the oasis sent to the front 257 coats, 224 sleeveless jumpers, 195 hats, 145 pairs of gloves, 93 pairs of socks and 39 pairs of boots [4].

The organization of sending gifts to the soldiers by February 23, 1943 in the field took a lively character. In this connection, on January 14, 1943 the Regional Executive Committee adopted a resolution on strengthening the delivery of gifts to the soldiers. In accordance with the resolution, the collection of festive gifts in the field was extremely hot. In particular, employees of MTS of Saryasia district collected and sent 30 parcels as presents to the soldiers. If Djakurganians sent more than 500 gifts, thanks to the actions of infinitely generous residents of Shurchin district soldiers were sent 9349 kg of millet, 3 tons of barley, 192 kg of barley, 468 gristle oil, 9 kg of tobacco, 75 pairs of socks, 33 pairs of gloves, 2 gramophones and 43 pieces of records[5]. Denauts sent 2 carriages of gifts to the front. The total weight of the gifts sent was 23038 kg, among which there were 3000 liters of wine, 1400 kg of dried fruits, 14 tons of vegetables and melon products, 237 kg of wool, 6 gramophones, 136 records and 420 personal gifts.

On January 27, 1943 the collective farm "Lenin Yula" of Boysun district accepted the appeal addressed to all youth of Uzbekistan. In the appeal adopted by the youth of Boysun it was emphasized that sending more festive gifts to the soldiers is the main task of every young man in the rear, together with an appeal to all youth of Uzbekistan to participate actively in this cause. The day after the adoption of the appeal, its authors sent 3800 kg of meat, 625 kg of dried fruits and 811 kg of vegetables as presents to the soldiers [6]. Members of collective farms "Mekhnat Rohat", "Namuna", va "Kyzyl Soqchi" of Djakurgan rural council of Djakurgan district sent 7 heads of sheep, 60 kg of vegetable oil, 20 centners of grain, 6.5 tons of pumpkin and 2 tons of carrots to the fighters as material aid [7]. Along with all peace-loving peoples of the world, the victory over the enemy gained by the fighters in Stalingrad brought boundless joy to the pure hearts of people of Surkhansk region. Inspired by this victory, the inhabitants of the oasis began to carry out the business of organizing gifts to the fighters even more intensively. For example, only wives of soldiers living in the dormitory of the military garrison located in Termez city collected 260 pieces of various warm clothes in order to provide more assistance to the soldiers. In the movement of organization of material aid to the soldiers a worthy example was shown by residents of Shirabad district of the region. Only for the period from January 1 to September 10, 1943 as means of material aid Shirabad soldiers sent 41186 kg of meat, 875488 rubles of money,



297 kg of wool, 320 hides, 71757 kg of grain, 269 centners of vegetables and melon products, 2784 kg of dried fruits and 570 kg of melted oil [8].

School children also showed a special example in sending aid to soldiers. In particular, if by the efforts of pupils of the secondary school named after K.Marx of Termez city as a help were collected and sent to the fighters of various sweets to the total sum of 1200 rubles and more than 100 books, the pupils of schools of Djakurgan during 3 days were collected and handed over to the fund of health protection of fighters 365 kg of peach seeds, 52 kg of hook seeds, 140 kg of melon seeds and pumpkin seeds. The members of "Kyzyl Yulduz" collective farm, located on the territory of "Zang" village council of Djakurgan district, who received the news about the victory in the Battle of Stalingrad, decided to sow barley, 8.5 hectares of millet, 10 skeletons of onions and send the harvest to the fighters as a gift. Members of the collective farm "Dekhkun Burlashov" sowed barley and wheat on 2 hectares of land for the fighters. In addition, they collected and sent to the fighters as a gift 1 sheep, 100 kg of barley, 6 centners of pumpkin, 10 kg of wool and 10 hides. [9].

In fact, thanks to the extraordinary efforts and active work of the masses of people of all the Union republics and despite the negative consequences of the administrative and command system of government, the creation of a single system of nationwide action within the whole country was achieved, as well as the national strengthening of the unity of the rear and the front. As Marshal Zhukov noted, victory in the last war was not granted by some supernatural force, a great personality or a happy accident, but was achieved thanks to the unimaginably huge amount of blood shed by the soldiers, unceasing work, as well as the boundless patience of the frontline soldiers. In this regard, one of the largest commanders of the Second World War, marshal G.K. Zhukov, stopping on this side of the problem wrote: "First of all, we must deeply worship our Soviet people. In order to organize the victory over the enemy, in order to fulfill the tasks set before them, they did everything in their power, giving up all the essentials, food and sleep [10]. Elsewhere he cites the following addition: "Wherever this man is on the front, inside the country, in the rear of the enemy, in fascist concentration camps, in bonded labour in Germany, everywhere he did everything in his power to bring the hour of victory over fascism closer" [10]; naturally, the Uzbek people also made their incomparable contribution to the victory won over fascism.

During war workers of area together with put to the state about 800 thousand tons of grain, 210 thousand tons of cotton, 15 thousand tons of meat, 5 thousand tons of rice, 170 thousand pieces of doodlebags, 360 tons of cocoons and 100 tons of vegetables and fruits, have sent to fighters 14 million rubles of money, 300 tons of meat, 530 tons of grain, 30 tons of vegetable oil, 180 tons of fruits and vegetables, more than 55 thousand pieces of various warm clothes. During the war 260 women were nominated for leadership positions, 600 women mastered technical professions.

During the war years, the region's patriotic residents allocated funds for the construction of military equipment - they showed a special example of patriotism by collecting and surrendering over 45 million rubles for military equipment. In those war years, 50365 patriotically minded guys of the region defended the freedom of their homeland with



weapons in their hands, ruthlessly fighting the enemy. More than half of the 50365 patriots mobilized for the war gave their lives on the fields of these bloody battles.

Out of 3769 Surkhandarya fighters awarded with orders and medals of the country 6 persons became Heroes of the Soviet Union, 3 persons became holders of the Order of Glory.

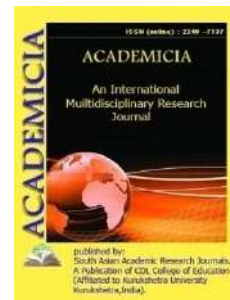
Indeed, the extremely great contribution of the Uzbek people in ensuring the victory over fascist Germany is beyond doubt. During those disturbing years of the war, the Uzbek people also showed an example of unimaginable heroism. The relentless work behind the front lines, the countless losses and endless suffering our people endured became yet another severe test of the patience and courage of our people. The courage and fearlessness of the Uzbek fighters who took part in deadly battles behind the front line became an example of truly unforgettable heroism.

### CONCLUSION

As a general conclusion, it should be noted that the Second World War was a difficult test for all humankind. It caused countless losses and was rich in extraordinarily significant lessons, the most important of which was the need to prevent war and the fact that the preservation of world peace is one of the universal problems. The population of the Surkhan Oasis, along with all of them, made a worthy contribution to the supply of warm clothes and food to the front, to the construction of military equipment and replenishment of defense funds, and thus made a significant contribution to the victory over fascism.

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DOI: **10.5958/2249-7137.2020.00681.3**

## RAMAN SPECTRA OF CADMIUM SELENIDE FILMS

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### ABSTRACT

*The presence, along with the crystalline, amorphous phase in the film coating of cadmium selenide, dramatically affects the electro-physical characteristics of materials. In this work, we have identified these phase states for single-crystal silicon samples with a film coating of cadmium selenide CdSe deposited by vacuum evaporation. The study was conducted using Raman spectroscopy on an In Via Raman Spectrometer when excited with RL785 Class 3B Laser lines of a laser with a wavelength of the radiation 785 nm.*

**KEYWORDS:** *Mono-Crystal, Cadmium Selenide, Crystal, Amorphous, Semiconductor.*

### INTRODUCTION

For many decades, the efforts of a large number of researchers - experimenters and theorists - have been aimed at elucidating the physical picture of the processes occurring in surface-barrier structures. The task turned out to be quite complicated, but the need to solve it is connected with the practical capabilities of devices with a Schottky barrier, which to a large extent constitute the elemental base of modern microelectronics and nanotechnology. Cadmium selenide is a semiconductor with a band gap of 1.74 eV at 300 K. In case of violation of stoichiometry, or the introduction of foreign impurities into CdSe crystals, most often elements I and VII gr. of a periodic system (for example Cu, Cl) cadmium selenide acquires photosensitive properties and is used in targets of vidicons (cadmicons) operating in the visible region of the spectrum as well as in electro photography. Cadmium selenide is an active medium in semiconductor lasers, a material for the manufacture of photo resistors, photodiodes, solar cells, a pigment for enamels, glazes and art paints. Various silicon-based semiconductor structures using cadmium selenide CdSe are one of the main elements of modern optoelectronics and microelectronics. The creation of such materials is associated with the use of various technological influences, such as ion implantation, annealing of various types, alloying, etc. Obviously, in the course of these technological cycles, a number of defects can occur both in the volume and in the surface layer of the materials being created, such as, for example, a modification of the structure of the crystal

lattice. This, in turn, can lead to a significant change in the electro-physical characteristics of materials.

## THE MAIN FINDINGS AND RESULTS

Based on this, conducting research on the physical, including optical properties of these materials, after the completion of all technological cycles, is a very urgent task, the results of which can also be used to solve both fundamental and a number of applied problems. Taking into account the trend towards creating nanometer-sized semiconductor devices, the relevance of using optical methods for diagnostics of such structures, in particular, the Raman scattering method (Raman), is increasing. The presence, along with the crystalline, amorphous phase in the film coating of cadmium selenide, as already noted above, dramatically affects the electro physical characteristics of materials. In this regard, we have identified these phase States for single-crystal silicon samples with CdSe cadmium selenide film coatings applied by vacuum evaporation, and the results obtained are presented in this paper. The results of the present work and our previous works [11-13], were obtained through the method of cattle (Raman spectroscopy) allows and ensures the implementation of the qualitative and quantitative analysis of the surface and the volume of the test sample, qualitative and quantitative analysis of film coating structures, registration of defects and stresses in the analyzed structures, control the phase state of the investigated structures, including identification of amorphous and crystalline phases.

## Methods of Experiment

Using the Raman scattering method, due to the laws of change in the Raman spectra [1-8], provides a wide range of parameters of the object of study. Raman spectroscopy, or Raman spectroscopy, is applicable for determining the characteristics of research objects as an express non-destructive analysis method that allows one to estimate the size of nanocrystals by the shape and position of Raman scattering peaks, evaluate the ratio of amorphous and crystalline phases, analyze the composition of crystals, and evaluate strains and stresses in crystals. We studied these samples using Raman spectroscopy on an InVia Raman Spectrometer manufactured by Renishaw, UK, when an RL785 Class 3B Laser laser was excited with a radiation wavelength of 785 nm. In the process of measurements, a diffraction grating with a period of 1200 lines / mm was used, and the standard detector Renishaw CCD Camera was used as a recording device.

## *Experimental Results and Discussion*

Figure 1 shows the Raman spectrum of a single-crystal silicon sample with a film coating of cadmium selenide CdSe deposited by vacuum evaporation.

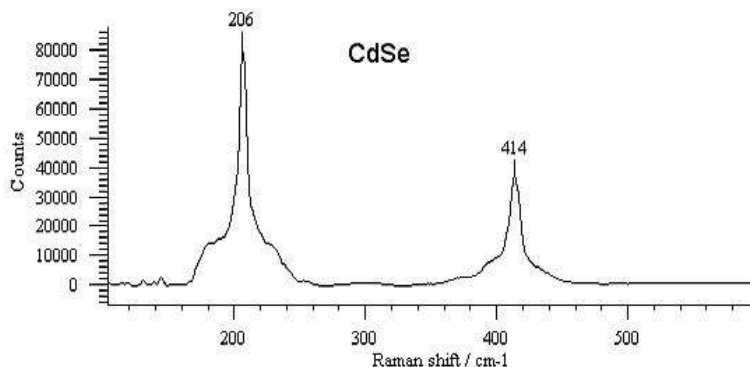


Fig. 1. Raman spectrum of a single-crystal silicon sample, with a film coating of cadmium selenide CdSe, deposited by vacuum evaporation.

An analysis of the spectrum using the results and conclusions presented in [1–10] suggests that the spectrum exhibits both modes of amorphous cadmium selenide  $\sim 180 \text{ cm}^{-1}$  and modes responsible for the presence of a crystalline phase in the film  $\sim 206 \text{ cm}^{-1}$ , i.e. the film has an amorphous-crystalline structure. The broadening of the Raman scattering bands, as a rule, indicates structural features, in particular, the degree of crystallinity and the quality of the crystals.

Figure 2 shows the Raman spectrum of a single-crystal silicon sample, with a film coating of cadmium selenide CdSe, deposited by vacuum evaporation, subjected to subsequent annealing in vacuum at a temperature of  $800^{\circ}\text{C}$ .

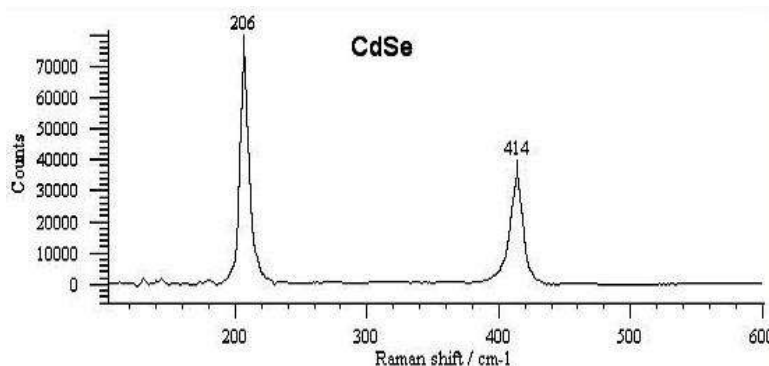


Fig. 2. Raman spectrum of a single-crystal silicon sample, with a film coating of cadmium selenide CdSe, deposited by vacuum evaporation, subjected to the procedure of subsequent annealing in vacuum at a temperature of  $800^{\circ}\text{C}$ .

Subsequent annealing of the test sample at a temperature of the order of  $800^{\circ}\text{C}$  leads to a modification of the corresponding Raman spectrum (Fig. 2), which indicates a significant restoration of the crystal structure of the film coating. These results are in good agreement with the data presented by the authors of [9].

If necessary, analyzing the Raman spectrum of cadmium selenide, it is possible to determine the ratio of amorphous and crystalline components in the film structure. For this, it is sufficient to calculate the integrated intensities corresponding to the crystalline and amorphous peaks.

Using this technique, it was determined that for our sample, the Raman spectrum (UN) of which is shown in Fig. 1, the proportion of the amorphous phase in the structure of the cadmium selenide film is about 17%.

## CONCLUSION

The Raman method was used to study the presence of amorphous and crystalline components in cadmium selenide films. It was experimentally shown that the final annealing of the sample at a temperature of the order of 8000 ° C leads to a significant decrease in the peak corresponding to the amorphous component in the Raman spectrum of cadmium selenide. Using this technique, it was determined that for our sample, the proportion of the amorphous phase in the structure of the cadmium selenide film is about 17%. The results obtained are of significant interest for research in the field of microelectronics, defect formation, as well as in the creation of materials for optoelectronics and nanotechnology. We hope that our results will make a huge contribution to the developed nano-electronics, as well as for the speedy creation of nano-robots for modern medicine.

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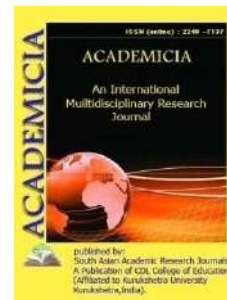
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DOI: **10.5958/2249-7137.2020.00682.5**

## ELEMENTARY SCHOOL PUPILS BY MEANS OF PHYSICAL CULTURE OF NATIONAL AND UNIVERSAL VALUES, WAYS OF INTIMIDATION

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### ABSTRACT

*Forming and developing main tendencies of delivering the senses based on national and general human traditions to primary class pupils by means of physical culture. To this end, the object of the scientific research is to identity the current state of pedagogical technologies in the inculcation of feeling based on national and universal values in general secondary school students through physical culture. In the following article, we were able to convey to students in an easy and effective way, based on national and universal values, through the technologies of systematic organization of indicators of Islamic culture.*

**KEYWORDS:** *Physical Education, Physical Culture, Sport, Material And Spiritual Tradition, National And Human Tradition, Patriotism, Bravery, Wisdom, Sense Of National Pride, Courage, Firmness, Harmony, Teamwork Sense, Trustworthiness, Patience, Peace-Loving, Loyalty, Faith.*

### INTRODUCTION

The rich national spiritual, educational and material values of our people are an important foundation for the upbringing of a healthy generation. Indeed, raising a healthy generation has become an everyday issue today.

In particular, the primary school is the formation and development of the main directions of the inculcation of feelings in students based on national and universal values through physical culture.

The scientists of the republic of physical culture of national and universal values through the promotion of the scientific study of students minds and Abdullayev A, Abdumalikov R, Atoev A, Akhmedov.F, Davletshin M, Djamoliddinova O, Ibragimov U, Inomova M, Mahkamjonov

K, MardonovSh, Meliev X, Musurmonova O, Nasriddinov F, Nishonova S, Rafiev X, Salomov R, Usmonkhodjaev T, Yarashev K, Khonkeldiev Sh. Khomidov X, Khujaev F's articles, pamphlets, methodical manuals, monographs and dissertations written by them for academic degrees, as well as scientific research work on inculcating national and universal research work carried out on the values of intimidation separate is pleasant to it.

The above research work conducted by scientists studying the scientific and analytical starting grade students to broker a national culture and universal values based on feelings of intimidation in carrying out scientific research in order to further improve the educational technology planned.

To this end, the object of the scientific research is to identity the current state of pedagogical technologies in the inculcation of feeling based on national and universal values in general secondary school students through physical culture. The subject of scientific research: the basics of instilling in students feelings based on national and universal values through physical culture.

The purpose of the study was to develop methodological, methodological guidelines for the development and implementation of scientific, theoretical and practical bases for the inculcation of feelings based on national and universal values in schoolchildren through physical culture.

The objectives of the study were to scientifically determine the current state of inculcation of emotions based on national and universal values in students through physical culture:

- analysis and drawing conclusions of the existing scientific and methodological literature to inculcate national and universal values in students through physical culture;
- pupils by means of physical culture based on the values of national and universal felling I Arnie insinuated to determine the indicators (factors);
- development of scientific and methodological recommendations for students to inculcate feelings based on national and universal values through physical culture;
- development and testing of pedagogical technologies for inculcating in students feelings based on national and universal values through physical culture, the implementation of the results in practice.

One of the key factors in a healthy lifestyle for school students is physical culture. The concept of physical culture has been variously defined by experts. In particular, professors L.M. Matvey, A. D. Novikov described as follows. See the achievement of physical maturation of the members of the community physical culture eligible for sadga for the implementation of specific devices, methods and conditions of the achievements on their complex. Physical culture in general see the rise of social development.

On this basis, experts F.K.Akhmedov, N.S.Kulboyev substantiated the indicators of physical culture of higher education students.

Based on the given definitions and classified indicators, the main indicators, of students' physical culture were identified and classified as follows:

Figure -1

Basic indicators of students' physical culture		
Availability and condition of sports facilities in general secondary schools	Availability and content of educational and normative documents on physical culture and sports for primary school (state educational standard, Curriculum, documents on extracurricular activities, action plan)	The school in creating conditions for students to engage in physical education and sports.
Startus of methodological support for physical education of students (textbook, manual, visual).	Physical education teachers and sports couples for primary school	Level of professional training (professional competence, education, category of primary school physical education teachers).
The state of integration of physical culture and sports into the lifestyle of students (involvement of children and adolescents in sports schools and sports clubs)	Indicators of physical fitness and physical development of students	Physical education activities for students with disabilities

Through these indicators, students were also identified with feelings based on national and universal values through physical culture:

Figure -2

Feelings based on national and universal values		
Patriotism	A sense of national pride	Courage
Bravery	Tenacity	Andishalik
Harmony	Sense of community	Hohesty
Loyalty faith	A sense of appreciation for material and spiritual wealth	
Peace-loving	A sense of confidence	

The initial class of students by means of physical culture through the following indicators based on national and universal values and feelings of intimidation in order to research and educational research was carried out.

According to the research region Bulungur district № 12, №43, № 60 it intends to secondary schools, Alat district of Bukhara region's № 1, № 2, № 25 secondary schools at Sharaf Rashidov district of Jizzakh region № 40, № 44, № 46 were conducted in secondary schools.

In the course of the research, the following indicators were used to express feelings based on national and universal values in physical education classes, extracurricular activities, physical education and sports activities, textbooks on physical education, manuals, visual aids, pictures,

videos, the diagnostic qli meetings with athletes from elementary school students through the imposition of melting in di.

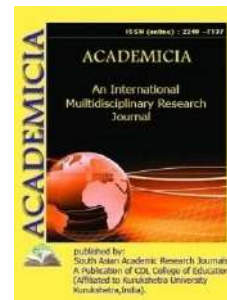
While there are various ways to di. While there are various ways to assimilate and shape the above human emotions into students, the pedagogical technologies of assimilating emotions based on national and universal values through physical culture have not been scientifically substantiated.

In the following article, we were able to convey to students in an easy and effective way, based on national and universal values, through the technologies of systematic organization of indicators of Islamic culture.

The tools, methods, physical education and sports activities used in the process of inculcating feelings based on national and universal values through physical culture serve to ensure the comprehensive physical development and healthy upbringing of primary school students.

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DOI: **10.5958/2249-7137.2020.00683.7**

## CALCULATION OF THE CHANGE IN THE PARAMETERS OF THE CONDITION OF CONDITIONED AIR IN TWO-STAGE EVAPORATIVE COOLING SYSTEMS OF AIR

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### ABSTRACT

*The scheme steam air-coolings for central airs of buildings is offered. Parameters of the thermal processes occurring in two-level installation are considered. The calculation showing efficiency of decrease of air temperature in room is executed. Thus humidity does not reach critical values at reasons of hygiene. Considered parameters of thermal processes occurring in the two-step installation. The calculation showing the effectiveness of lowering the room temperature.*

**KEYWORDS:** Microclimate, Parameter, System, Temperature, Pressure, Evaporative Cooler, Regenerative Heat Exchanger.

## INTRODUCTION

Air conditioning is the automatic maintenance of all or some parameters of air (temperature, relative humidity, purity, speed of movement) in a closed place at a certain level in order to provide mainly optimal meteorological conditions that are most favorable for people's well-being, maintenance of the technological process, culture.

Health, efficiency, and just a person's well-being are largely determined by the conditions of the microclimate and the air environment in the premises [1,2,3,4]. Modern automated air conditioning systems support the set air parameters in the room regardless of fluctuations in environmental parameters. Air conditioning is carried out by a complex of technical means, called the air conditioning system.

## METHODOLOGY

The main parameters of air condition in air conditioning systems in accordance with [4,5,] are temperature and relative humidity. All other parameters, such as heat content ( $I$ ), moisture content ( $d$ ), specific heat ( $Cp$ ) for given barometric pressure ( $P_\delta$ ) are a function of temperature and relative humidity [3].

Thus, the problem of determining the potential of the evaporation air cooler being developed can be reduced to determining the temperature and relative humidity of the supply air for given values of the efficiency coefficients of evaporative coolers and rotating regenerative heat exchangers.

First of all, we determine the functional dependence of the moisture content of the conditioned air on its temperature and relative humidity. As already noted [5], the use of the I-d diagram for the solution of the problem, although possible, leads to significant errors with barometric pressure values lower than 715 mm Hg, which are typical for the regions of the Tashkent, Namangan, Samarkand, Karshi regions of the Republic of Uzbekistan [3,4,5,6,].

Atmospheric air mainly consists of dry air and water vapor [1,2,3]. The moisture in the air is in a super heated state, therefore, the mass of  $M$  kg of atmospheric air (i.e., unsaturated moist air) is composed of  $M_{um}$  and the mass of dry air ( $um$ ) and  $M_{wv}$  kg of water vapor mass ( $wv$ ), i.e.

$$M_{ha} = M_{um} + M_{wv} \quad (1)$$

The ratio of the mass of water vapor ( $M_{wv}$ ) to the mass of dry air ( $M_{um}$ ) determines the moisture content, which is denoted by  $d$ , i.e.

$$d = \frac{M_{wv}}{M_{um}}, \frac{kg \cdot wv}{kg \cdot um} \quad (2)$$

To determine the dependence of  $d$  on  $t$  and  $\phi$ , we use the equation of Mendeleev of Clapeyron [8], for ideal gases, i.e.

$$PV = RMT, \quad (3)$$

where  $P$  is the pressure;  $V$  is the volume,  $R$  is the gas constant of the substance (in this case, dry air  $R_{da}$  and water vapor  $R_{wv}$ );  $M$  is the mass amount of the substance (in this case, the mass of dry air ( $M_{da}$ ) and water vapor ( $M_{wv}$ ),  $T$  is the absolute temperature.



According to Dalton's law for dry air and water vapor in moist air, as an ideal gas, equation (3) can be represented in the form

$$P_{da} V = R_{da} M_{da} T, \quad (4)$$

$$P_{wv} V = R_{wv} M_{wv} T, \quad (5)$$

$M_{wv}, M_{um}$  from (4) and (5), we define the ratios  $M_{wv}$  with  $M_{um}$

$$\frac{M_{wv}}{M_{da}} = \frac{R_{da} P_{wv}}{R_{wv} P_{da}} \quad (6)$$

Taking into account the values  $R_{da} = 287,1 \frac{\text{Dj}}{\text{kg} \cdot \text{K}}$  and  $R_{wv} = 461,5 \frac{\text{Dj}}{\text{kg} \cdot \text{K}}$  the relation (6) can be represented in the form

$$\frac{M_{wv}}{M_{da}} = 0,622 \frac{P_{wv}}{P_{da}}. \quad (7)$$

The total barometric pressure of moist air ( $P_{\delta}$ ) in accordance with Dalton's law [4,5,6] is composed of the partial pressures of dry air ( $P_{da}$ ) and water vapor ( $P_{wv}$ ), i.e.

$$(P_{\delta}) = P_{da} + P_{wv} \quad (8)$$

In turn, the value of  $P_{wv}$ , depending on the relative humidity of the air ( $\varphi$ ) and the saturation elasticity of water vapor in moist air at a given pressure and temperature, is determined from

$$P_{wv} = \varphi P_s \quad (9)$$

$$P_s = E_s 10^{\frac{745t}{235+t}} \quad (10)$$

- the saturation elasticity of water vapor in moist air at t.

Substituting (10) into (9), we obtain

$$P_{wv} = E_s 10^{\frac{7.45t}{235+t}} \quad (11)$$

Let us determine the value of  $P_{da}$  in (8)

$$P_{da} = P_{\delta} - P_{wv} \quad (12)$$

Substituting the values of  $P_{wv}$  from (11) and  $P_{da}$  from (12) into (7), and then obtained in (2), we obtain

$$d = 0.622 \left[ \frac{P_{\delta}}{\varphi \cdot 4.579 \cdot 10^{\frac{745t}{235+t}}} - 1 \right]. \quad (13)$$

As can be seen from the solution obtained, other things being equal (in the form of a moist-air temperature -t), the moisture content of moist air, as expected, is directly proportional to its relative humidity ( $\phi$ ) and inversely to its barometric pressure. In addition, as follows from (13), any error in determining  $P_\delta$ , although insignificant, leads to a corresponding error in determining the moisture content of the air.

Another important parameter of the state of humid air is its heat content or enthalpy ( $I_{ha}$ ).

On the basis of, the specific (per unit dry air mass) enthalpy of moist air can be determined from expression

$$i_{ha} = \frac{I_{ha}}{M_{da}} = (Cp_{da} + Cp_{da})t + r_o \quad (14)$$

Substituting the value of d from (13) into (14), we obtain

$$I_{ha} = Cp_{da}t + 0,622 (Cp_{wv}t + r_o) \left[ \frac{P_\delta}{\phi \cdot 4,579 \cdot 10^{\frac{745t}{235+t}}} - 1 \right]^{-1} \quad (15)$$

As the results of relatively simple calculations show, at  $t = 30^\circ\text{C}$ ,  $\phi = 0.5$  and  $P_\delta = 715 \text{ mmHg}$ , the value of  $i_{ha}$  for moist air is  $66493.18 \text{ DJ / kg}$ . The fraction of enthalpy of dry air in the composition of moist air is  $30150 \text{ J / kg}$  (ie, 45.3%), and the water vapor content of moist air is  $36,349.18 \text{ J / kg}$  (ie, 54.7%). As can be seen, neglecting the relative humidity of the conditioned air in calculating its specific enthalpy can lead to significant (more than 100%) errors.

On the basis of expressions (13) and (15), it is possible to derive the corresponding expressions for determining other parameters of the thermal state of the conditioned air.

In addition to the moisture content (d) and the specific heat content (i.e., the specific enthalpy -i), the specific heat of the conditioned air is important in the calculation of air conditioning systems.

According to [2, 4,5,6,8,9], the specific heat ( $I + d$ ) kg of moist air  $Cp_{ha}$  equals the sum of the specific heat of 1 kg of dry air ( $Cp_{da}$ ) and the specific heat of d kg of water vapor ( $Cp_{wv}$ ) contained in it, i.e.

$$Cp_{ha} = Cp_{da} + dCp_{wv} \quad (16)$$

Substituting the value of d from (13) into (16), we obtain

$$Cp_{ha} = Cp_{da} + 0,622 Cp_{wv} \left[ \frac{P_\delta}{\phi \cdot 4,579 \cdot 10^{\frac{745t}{235+t}}} - 1 \right]^{-1} \quad (17)$$

As can be seen, from expression (17), the specific heat of moist air, other things being equal (atmospheric pressure - $P_\delta$  and its temperature -t) is directly proportional to its relative humidity. So, for example, at  $P_\delta = 715 \text{ mm Hg}$  and  $t = 24^\circ\text{C}$  with a change in the relative humidity of air from 0.2 to 0.8, the growth of  $Cp_{wv}$  according to (17) is from  $1012.58 \text{ J / kg}$  to  $1035.92 \text{ J / kg}$ .

the increase of  $S_{wv}$  is 2.3%. Unfortunately, this factor is not paid due attention to the existing approaches to the thermal calculation of air conditioning systems.

We shall derive the basis expressions for calculating the main parameters of the thermal state of conditioned air with its heat and moisture treatment in air conditioning systems [3,4,5,6].

In this mode, when the room air passes through a dry air cooler, its moisture content does not change. The relative humidity of the flowing air increases due to a decrease in its temperature. In these embodiments of the air conditioning system of the evaporative cooling system and the rotary regenerative heat exchangers, there may be installations outside the premises. This in turn allows you to completely eliminate the entry into the room of unpleasant odors, mold, formed in evaporative cooling systems by moist air. Calculations to determine the values of  $t_{ha}$  and  $\phi_{ha}$  show that as a result of the introduction of a recuperative heat exchanger (room dry air cooler) into the system, it is possible to reduce the supply air temperature by 1.0-1.5 °C (i.e., up to 18 ÷ 19 °C) and relative humidity by 25 % (ie, up to 0.5) compared with the previous version [2,4,6].

In dry air coolers, room air is cooled in a dry air cooler located inside the room. As a rule, the process of cooling air in dry air coolers at temperatures above the dew point (ie,  $t > t_p$ ) occurs in a constant moisture content mode, i.e.  $d = \text{const}$ .

It is of interest to determine the increase in the relative humidity of conditioned air with a decrease in its temperature from  $t'_{ha}$  to  $t''_{ha}$ .

To determine the change in the relative humidity of conditioned air, we rewrite expression (13) for its two states, i.e.

$$d'_{ha} = 0,622 \left[ \frac{P_\delta}{\phi'_{ha} \cdot 4,579 \cdot 10^{\frac{745 t'_{ha}}{235 + t'_{ha}}}} - 1 \right]^{-1} \quad (18)$$

$$d''_{ha} = 0,622 \left[ \frac{P_\delta}{\phi''_{ha} \cdot 4,579 \cdot 10^{\frac{745 t''_{ha}}{235 + t''_{ha}}}} - 1 \right]^{-1} \quad (19)$$

Since the process of cooling air-conditioned air in a dry air cooler occurs in a regime of constant moisture content, we can assume that

$$d'_{ha} = d''_{ha} \quad (20)$$

Substituting the values of  $d'_{ha}$  from (18) and  $d''_{ha}$  in from (19) into (2.20), we obtain

$$\phi''_{ha} = \phi'_{ha} 10^{\frac{7,45 t'_{ha} (235 + t''_{ha}) - t''_{ha} (235 + t'_{ha})}{(235 + t'_{ha})(235 + t''_{ha})}} \quad (21)$$

For example, with dry cooling of conditioned air from the state  $t'_{ha} = 28^\circ\text{C}$  and  $\phi'_{ha} = 0,30$  to  $t''_{ha} = 20^\circ\text{C}$ , the growth of according to (21) is from 0.30 to

$$\phi''_{ha} = 0,3 \cdot 10^{\frac{7,45 (28(235 + 20) - (235 + 28))}{(235 + 28)(235 + 20)}} = 0,485.$$

it is important from the point of view of energy saving in air conditioning systems to determine the dew point value for given values of  $t_o$  and  $\phi_o$ .

Analogously to the previous example, we write expression (13) for the unsaturated ( $t_o$ ,  $\varphi_o$ ) and saturated ( $t_m$  and  $\varphi = 1$ ) states of moist air

$$d_o = 0,622 \left[ \frac{P_\delta}{\varphi_o \cdot 4,579 \cdot 10^{\frac{745t_o}{235+t_o}}} - 1 \right] \quad (22)$$

$$d_m = 0,622 \left[ \frac{P_\delta}{1 \cdot 4,579 \cdot 10^{\frac{745t_m}{235+t_m}}} - 1 \right] \quad (23)$$

Due to the fact that in the process of cooling the moist air to full saturation (ie  $\varphi_{ha} = 1$ ) in the  $d = \text{const}$  mode, the equality  $t_p$  and  $t_m$  takes place.

In this connection, on the basis of (20), (22) and (23), we can write

$$\varphi_o \cdot 10^{\frac{745t_o}{235+t_o}} = 10^{\frac{745t_p}{235+t_p}} \quad (24)$$

Approximating the dependence  $= f(t_m)$  in a straight line within the variation of  $t_m$  from 8 to 20°C, we obtain

$$\frac{745t_p}{235+t_p} = 1,70 + 0,17(t_p - 18) \quad (25)$$

The maximum relative error in determining  $t_p$  is 3.8%.

Substituting (25) into (24), we obtain

$$\varphi_o \frac{745t_o}{235+t_o} = 1,70 + 0,17(t_p - 8)$$

or

$$t_p = 5,88 \varphi_o 10^{\frac{745t_o}{235+t_o}} - 2, \quad ^\circ\text{C} \quad (26)$$

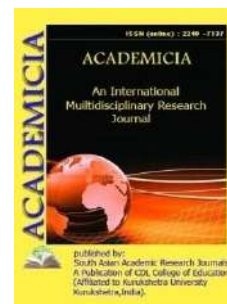
At  $t_o = 30^\circ\text{C}$ ,  $\varphi_o = 0,3^\circ\text{C}$  The value of  $t_m$ , defined in [4,5] is 18.1 °C, and  $t_p$  is determined according to (26) and is 10.3°C.

## CONCLUSION AND FUTURE WORK

As the results of comparison of the data obtained in this way with the data of exact calculations show, the relative error in determining  $t_p$  from the approximation formula (26) is no more than 4%.

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**DOI: 10.5958/2249-7137.2020.00717.X**

## **TO MEASURE SWELLING ADAPTIVE ABILITY FOR CLIMATE CHANGE: A STUDY 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 Puttlam 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



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## 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**

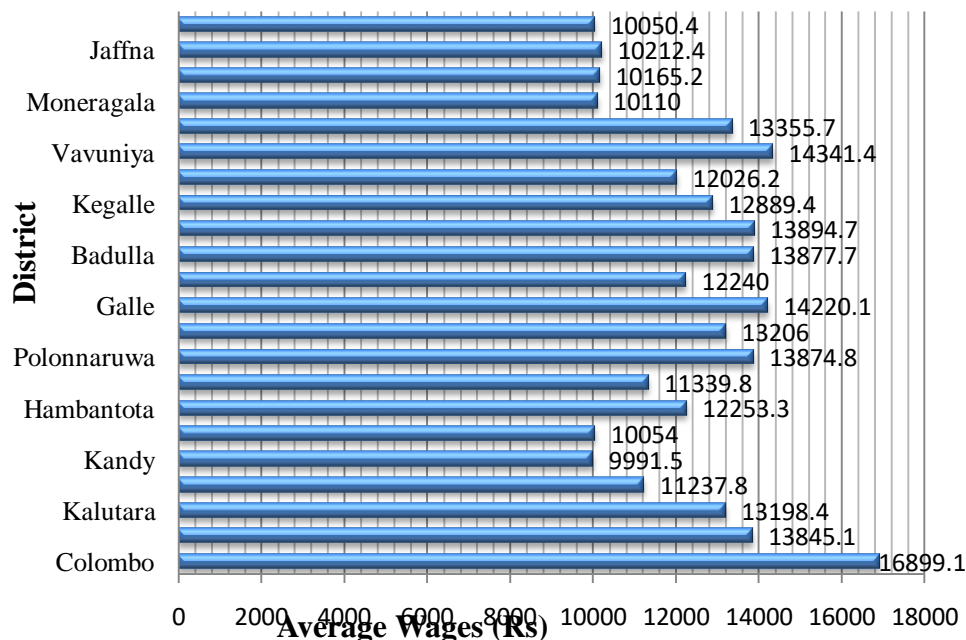
The algorithm used to construct indices of adaptive capacity in this paper follows, with the inclusion of data standardization for the input variables and the final index scores. The computations are carried out using the following steps:

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 times 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

$Economic = 0.585 Income + 0.714 Employment + 0.798 Expenditure$  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 lose 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 assume 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 loading 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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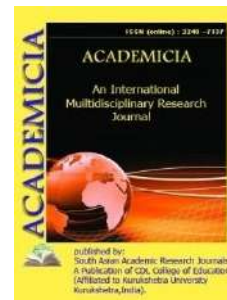
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DOI: **10.5958/2249-7137.2020.00754.5**

## PRODUCTION OF VINYL ACETATE FROM ACETYLENE

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### ABSTRACT

*The paper presents the "Sol-gel" technology for creation of nanocatalysts, having high efficiency, activity and selectivity for the catalytic acetylating acetylene. The textural characteristics of the catalyst  $(ZnO)_x \cdot (CdO)_y \cdot (ZrO_2)_z$ /keramzite with high activity were studied. Kinetic objective laws of synthesis of vinyl acetate on the created catalyst were investigated, material balance calculated. In addition, advanced technologic scheme of vapor phase synthesis of vinyl acetate was offered.*

**KEYWORDS:** *Acetylene, Acetic Acid, Vinyl Acetate, Catalyst, "Sol-Gel" Technology, Material Balance, Scheme.*

### 1. INTRODUCTION

The main application of VA monomer is industrial. It is an integral part of polyvinyl acetate, which is used for the production of water-based paints and varnishes, various types of glue, impregnations, floor tiles, acrylic fibers, paper coatings and non-woven materials. In addition, polyvinyl alcohol is produced from VA monomer, a compound raw material in the manufacture of packaging film and laminated glass. A small part of VA monomer is used for the production of polymers based on ethylene vinyl acetate, barrier resins from ethylene vinyl alcohol and polyvinyl butyral[1-5].

The technology for the production of vinyl acetate is constantly being improved. BP Chemicals has developed technology that reduces production costs by a third. Celanese specialists were able to increase production by 95% and reduce production costs by 15%. Praxair came up with a way to increase output by 5%. Today, the most cost-effective raw material for its production is

ethylene, which replaced the acetylene production technology. The main technology for the production of VA through a catalytic reaction (a metal catalyst is used) in the vapor phase between acetic acid and ethylene in the presence of oxygen[6-8].

Global vinyl acetate market trends are easily predictable. The substance is widely used in industry, therefore, market growth, according to experts, will continue at a slow pace, comparable to the growth of world gross domestic product. Experts predict an annual increase in the global market by an average of 5% per year, higher growth rates are expected in Asian countries, primarily in China[9-10].

At rates exceeding the world average, VA consumption will increase in the production of barrier resins from ethylene vinyl alcohol, polymers based on ethylene vinyl acetate and polyvinyl butyral. However, these markets occupy a small share of the global consumption of monomer, therefore they will not have any effect on the overall performance.

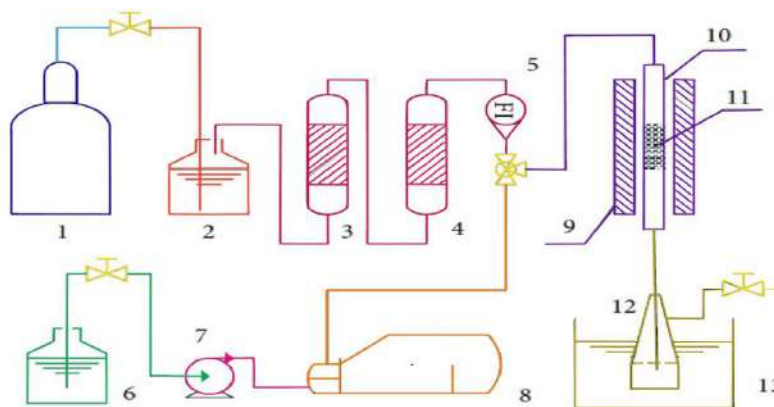
The vapor-phase process of synthesis of VA on an industrial scale was first carried out in Munich after the First World War. To obtain VA, excess acetylene and acetic acid vapors were passed at a temperature of 210-250 °C over zinc acetate, which is used as a catalyst supported on activated carbon. The conversion of acetic acid in this case was 15-20%. The catalyst, over which a mixture of acetylene and acetic acid vapor circulated, was placed in a shaft furnace[11-12].

## 2. Experimental part

The catalytic acetylation reaction of acetylene was carried out in a flow reactor under the following optimal conditions:  $t=180^{\circ}\text{C}$ ,  $\text{C}_2\text{H}_2:\text{CH}_3\text{COOH} = 4:1$ ,  $V_{\text{C}_2\text{H}_2}=280\text{ h}^{-1}$  [13-15].

The reaction products were analyzed by a flame-ionization detector using gas-liquid chromatography under the following optimal conditions: a stationary liquid phase with a particle size of 0.250-0.315 mm in Tsvetochrom -545, 15% nimlestosil, glass column 1000C, the flow rate of the incoming gas - nitrogen 30 ml / min.

Qualitative analysis of "witnesses" and the retention time of parameter values is based on a comparison method; and quantitative analysis is calculated based on the method of internal normalization [16-18].



**Figure 1. Schematic diagram of the synthesis of vinyl acetate**

1-acetylene gas; 2-20% NaOH solution; 3-silica gel; 4-activated carbon; 5-gas flow meter;

6-acetic acid; 7-piston metering pump; 8-gasifier; 9-heating device; 10-reaction tube;

11-layer catalyst; 12-collector; 13th ice bath.

The texture characteristics of the intermediate materials and finished samples of keramzite carriers were studied by low-temperature nitrogen adsorption using the FISIONS Carlo Erba integrated system, including the Soptomatic-1900 adsorption device. When determining the specific surface of ABET ( $\text{m}^2/\text{g}$ ), we used 10–12 experimentally measured equilibrium values of nitrogen adsorption at 77 K in the relative pressure range  $P / P_0 = 0.05\text{--}0.33$ . The total pore volume  $V_{\Sigma}$  ( $\text{cm}^3/\text{g}$ ) was calculated from the adsorbed amount of adsorbate in the saturation region of the adsorption branch of the isotherm ( $P/P_s > 0.992$ ), expressed as the volume of liquid. The micropore volume  $V_{\text{mic}}$  ( $\text{cm}^3/\text{g}$ ) was calculated according to experimental data from the Dubinin-Radushkevich equation

The phase composition was studied on a DRON-3 diffractometer ( $\text{CuK}\alpha$  radiation) by X-ray diffraction. The dispersion properties of the catalyst were checked in a scanning electron microscope (JSM-6510 LV). The catalytic activity of the obtained sample was studied in acetylene acetylation reaction.

The methodology for determining the activity and stability of the catalyst. The activity of the catalyst was studied in an isothermal reactor with a current volume of  $6 \text{ cm}^3$  and a height and a catalyst layer of 7.5 cm. Acetic acid was taken out using a medical syringe through a steam reactor. The experiments were carried out at 160, 170, 180, 200, and  $220^\circ\text{C}$  to 50% acetic acid. The mixture flow rate was  $350 \text{ h}^{-1}$ , with a molar ratio of  $\text{C}_2\text{H}_2 : \text{CH}_3\text{COOH}$  4:1. The activity of the catalyst was calculated by the formula

$$\eta = \frac{\% \cdot m}{V_{\text{cat}} \cdot \tau} \text{ (g/l}\cdot\text{h)}$$

where, % - the percentage of vinyl acetate in the sample, m-mass of the sample, g;  $V_{\text{cat}}$ - catalyst volume, l;  $\tau$  - time interval of the taken sample, h.

### 3. RESULTS AND THEIR DISCUSSION

The main element of the technological scheme is the reactor, and the quality of the product depends on its perfection.

To calculate and study the optimal parameters of the process, the kinetics of the reaction under differential reactor conditions were studied and the reactor model was created and the process was optimized and an improved technology of catalytic acetylation process and catalyst creation was proposed.

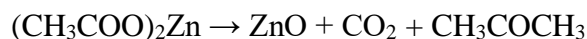
The effect of various factors on the reaction rate was studied in the field of catalytic acetylation of acetylene and the creation of an improved technology of the process of synthesis of vinyl acetate. It has been shown that the yield of vinyl acetate increases with increasing acetylene concentration over a wide range of variations in the studied temperatures and reagent concentrations, and decreases with increasing acetic acid partial pressure. The addition of vinyl acetate to the reaction mixture does not affect its rate of formation. The addition of water enhances the hydrolysis of vinyl acetate at temperatures above  $2100^\circ\text{C}$ , but does not affect the activity of the catalyst. Acetylene: The conversion of acetic acid reaches practically 100% when the water mole ratio is 10: 1 and the synthesis temperature is increased to  $2000^\circ\text{C}$  and the contact time is 4 seconds. Acetylene: The yield of vinyl acetate is 95-96% when the contact time is



reduced from 4 seconds to 2 seconds while maintaining a temperature of 2000C in a water-to-molecular ratio of 10: 1 mol.

As a result of the research, an improved technological scheme of vapor phase vinyl acetate synthesis was proposed. Figure 2 below shows an improved technological scheme for the production of vinyl acetate in the vapor phase. The acetylene is transferred from the buffer (6) through the buffer (14) to the evaporator (15). 96.0% acetic acid from the tank (7) for acetic acid is sent to this evaporator. Acetylene and acetic acid in a 4: 1 ratio go to the contact apparatus (16). Contact apparatus is a system of tubes in which the reaction mixture is distributed. The tube is filled with a nanocatalyst containing  $(\text{ZnO})_x \cdot (\text{CdO})_y \cdot (\text{ZrO}_2)_z$  and heated to 180-2000C with a diphenyl mixture. A steam-gas mixture is sent from the top of the reactor to reduce the catalyst drive. The reactor is a tubular device in which the tube is filled with a catalyst, and a heat carrier is placed in the interstitial spaces (to dissipate the reaction heat). The capacity of one unit compared to vinyl acetate is 22,000 tons per year. It can also be done by using the evaporation method of aqueous condensate with steam extraction in the interstitial space to return heat. Heat loss can also be achieved by evaporation of the liquid diphenyl mixture if necessary. The diphenyl mixture cools due to evaporation of the aqueous condensate in the heat exchanger. The reactor gas exits the bottom of the reactor and is sent through a heat exchanger to the water cooler and then to treatment. During this time, a small amount of acetaldehyde is formed along with the vinyl acetate. The reaction products are passed through the tray (17) to the series-connected refrigerators (8-10). The refrigerator is cooled with water at (8), cooled to -150C with saline solution at (9), and -400S with saline solution at (10). The vinyl acetate condenses in refrigerators and passes through (18) and (19) to the pressure tank (1). The unreacted acetylene is sent to the buffer (6). The vinyl acetate is sent from the pressure tank (1) to the rectification column (2). Lightly volatile components are separated from the column at 210S and they are condensed in a refrigerant through a deflegmator (3) (4) and collected in a collector (20). The liquid products (2) are sent from the column to the rectification column (11), where the temperature in the column is 730S (at the top of the columns), where the vinyl acetate vapors are separated. The vinyl acetate passes through the deflegmator (5), condenses in the refrigerator (12), and is collected in the collector (13). Acetic acid is released from the bottom of the column (11) and it is collected in the tank (21) and then in the collector (7) by means of a pump.

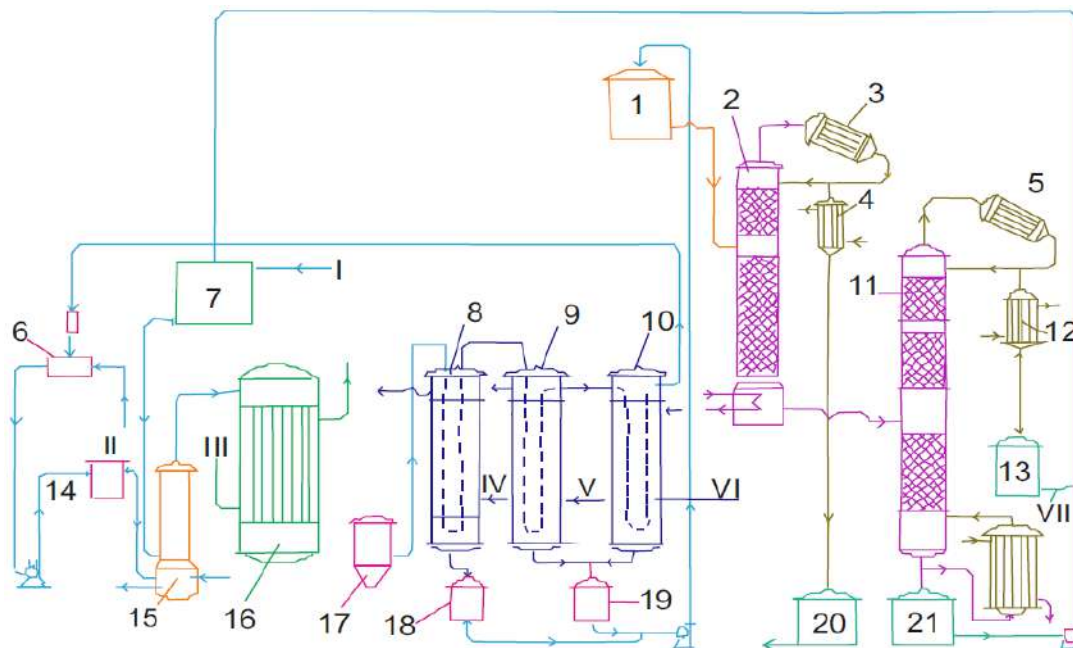
The process of obtaining vinyl acetate from acetylene and acetic acid takes place in the presence of the catalyst  $(\text{ZnO})_x \cdot (\text{CdO})_y \cdot (\text{ZrO}_2)_z$ . During the reaction, the catalyst activity decreases. The main reason for this is the decomposition of zinc acetate:



and condensation of acetone, acetaldehyde, and reaction by-products in the catalyst pores. The inclusion of  $\text{ZrO}_2$  in the catalyst reduces the formation of additional reaction products and prevents their formation in the catalyst pores by the formation of resin, which leads to an increase in the operating time of the catalyst. Vinylacetate is purified from unreacted acetic acid and by-products by absorption (as a adsorbent for acetic acid can be used vapor gas condensate of the reactor, or xylene is used as an external adsorbent).

The column works when the number of phlegms is  $R = 2-3$ . (11) The column distillate is separated from the easily volatile components (acetaldehyde, acetone, methyl acetate, heteroazeotropy of vinylacetate with water) through the intermediate tank (5) and sent to the

rectification column (12). This column works when the number of phlegms is  $R = 50$ . Here, vinyl acetate is separated from polymers, inhibitors, acetic acid and croton aldehyde fractions. When the number of phlegms is  $R = 100$ , the distillate is diverted to 80% acetic acid, ~20% croton aldehyde-retaining fractions. This technology ensures the production of vinyl acetate with a purity of not less than 99.9%. Since the reaction is strongly exothermic, it is necessary to dissipate heat from the reactor. To do this, a high-temperature boiling heat carrier, such as a biphenyl mixture (which is cooled in an external cooler) or aqueous condensate, is fed into the inter-tube space (in a stationary layer catalyst reactor). The latter option is convenient because, no external cooling is required, water vapor is released.



**Figure 2. Technological scheme for the production of vinyl acetate from acetylene and acetic acid by the vapor phase method**

System: I - acetic acid; II - acetylene; III – moy; IV - suv; V - saline solution,  $-15^{\circ}\text{C}$ ;

VI - salt water,  $-40^{\circ}\text{C}$ ; VII - vinyl acetate.

1 container for vinyl acetate; 2.11-rectification column, 3.5-deflegmator;

4,8,10,12,18,19-refrigerators, 6-acetylene generator; 7-acetic acid; 9 saline solution;

13.20 collector, 14 cleaner; Evaporator 15; 16-reactor; Trap 17; Capacity 21

**Modeling a vinyl acetate synthesis reactor.** The technology of many processes is completely related to the activity of the catalysts. The synthesis of vinyl acetate from acetylene and acetic acid was carried out in an ideal tube reactor manufacturer with an inert layered catalyst. Given the catalyst deactivation, the mathematical model of a compression reactor, ideally suited for the synthesis of vinyl acetate from acetylene and acetic acid, can be described as follows:

$$\frac{\partial x}{\partial l} = \frac{\Theta(v+1)}{v_{\text{Vol.}}} r(m, V_{\text{Vol.}}, T, x);$$

$$\frac{\partial \Theta}{\partial t} = \Theta k_p(T)$$

In terms of convergence:

$$x(0, t) = 0; \quad t \in [0, t_k]; \quad \Theta(\ell, 0) = \Theta_0; \quad \ell \in [0, \ell_p]$$

Where,  $V$  is the volume ratio of acetylene and acetic acid;  $v$  - volumetric consumption of raw materials;  $t$  - time catalyst action;  $\Theta$  - a value representing a change in catalytic activity;  $T$  - temperature ( $T \leq 180^\circ \text{C}$ );  $\ell_p$  - length of the reactor;  $t_k$  - catalyst run time. As a result of the calculation, the main parameters of the operation of the tubular reactor in the production of vinyl acetate were determined (Table 1).

**TABLE 1. THE MAIN PARAMETERS OF THE TUBULAR REACTOR IN THE PRODUCTION OF VINYL ACETATE**

T, °C	P, MPa	$U_{g \cdot p \cdot mg}$ , m/s	Heat carrier	G, thousandt/year	D, m	h, m	N, thousandpiece
170-200	0.1	0.60	Hot water	50	2.5	6.5	4.7

Optimization of the vinyl acetate synthesis process In the synthesis of vinyl acetate from acetylene, the product yield from three factors: the process temperature, the space velocity of acetylene ( $x_2$ ), and the height of the catalyst layer. A series of preliminary experiments was conducted on 23 full-factor experimental designs. The full coefficient is a matrix of the experimental design, its results are shown in Table 2.

**TABLE 2 COMPLETE PLAN OF THE FACTORIAL EXPERIMENT OF THE PLAN MATRIX AND ITS RESULTS**

Transitional changes and degrees of factors		$x_1$	$x_2$	$x_3$	
Zero power ( $x_i = 0$ )		185	280	40	
Transitional change ( $\Delta x_i$ )		25	50	10	
Low degree ( $x_i = -1$ )		160	230	30	
High degree ( $x_i = +1$ )		210	330	50	
	Plan	$x_1$	$x_2$	$x_3$	$Y$
Experiences	1	-	-	-	20.5
	2	+	-	-	28.3
	3	-	+	-	26.8
	4	+	+	-	34.6
	5	-	-	+	26.4
	6	+	-	+	44.2

	7	-	+	+	52.7
	8	+	+	+	70.5

As a result of processing the experimental results, the following multifactorial results were obtained:  $Y = 21 + 8x_1 - 16x_2 + 10x_1x_2$ . To conduct analytical optimization of the model, we will have an equation of two linear types, if we consider the model as an integral equation and solve it optimally:

$$\frac{\partial y}{\partial x_1} = 8 + 10x_2 = 0 \rightarrow x_2 = -\frac{8}{10} = -0,8$$

$$\frac{\partial y}{\partial x_2} = 16 + 10x_1 = 0 \rightarrow x_1 = -\frac{16}{10} = -1,6$$

In this case, the optimal equation takes the following form:

$$Y_{x_2=0,8} = 21 + 8x_1 - 16 \cdot 0,8 + 10x_1 \cdot 0,8 = 8,2 + 16x_1$$

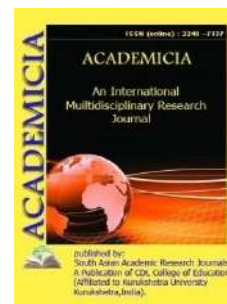
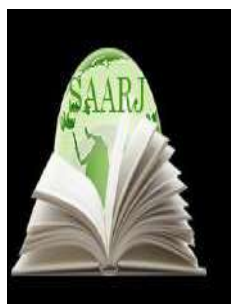
#### 4. CONCLUSION

Thus, a nanocatalyst for the catalytic acetylation reaction of acetylene was created on the basis of Zol-gel technology. The texture characteristics of the catalyst containing the selected high catalytic activity  $(\text{ZnO})_x \cdot (\text{CdO})_y \cdot (\text{ZrO}_2)_z$ /keramzite clay and the kinetic laws of the process of vinyl acetate synthesis were studied. As a result of the research, an improved technological scheme of vapor phase vinyl acetate synthesis was proposed.

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DOI: **10.5958/2249-7137.2020.00755.7**

## ON THE PRODUCTIVITY OF THE INTERVAL LINEAR ECONOMIC MODEL OF THE INTER-INDUSTRY BALANCE

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### ABSTRACT:

*In this paper, we consider the interval formulation of the intersectoral balance problem, which is the basis of many linear economic models. The analysis of the productivity of the Leontief model in the conditions of interval uncertainty of the initial data is given. A theorem on the productivity of the interval linear model of the inter industry balance is formulated and proved. Here we rely on the interval Frobenius eigenvalue for the considered interval matrix of coefficients of direct production costs.*

**KEYWORDS:** *Intersect oral, Compotentwise, Leontief's Interval, Circuit Idealization.*

### 1. INTRODUCTION

It can be noted with confidence that the history of the application of mathematical methods in solving economic problems begins with the first attempts of an ancient person to count the objects surrounding him, living things, the resources at his disposal, for example, the amount of game killed, pets, or money. In addition, we can accept the thesis that in many cases it was economic interest that was the motivation for the development of mathematical methods. However, the direct application of mathematical methods in solving economic problems, in the sense that the mathematical methods themselves make it possible to predict or make decisions without practical action, has become possible with the creation and justification of differential and integral calculus, higher algebra, probability theory and mathematical statistics.



Recently, a large number of mathematical models have been successfully applied in solving real problems and have a practical effect. First of all, they should include a class of linear programming models such as cutting tasks, diet problems, transport problems, etc., as well as a cross-sectoral balance scheme, which has become a working tool of the planning bodies of the national economy. The idea of inter sectoral balance was first explicitly formulated in the 20s of the XXth century in the works of economists of the former Soviet Union and was later developed in the works of V.V. Leontyev on studying the structure of the American economy.

Let the entire production sector of the national economy be divided into  $n$  clean industries i.e. the products of each of these industries are assumed to be homogeneous.

A clean industry is a kind of economic abstraction that does not necessarily exist in the form of any organizational forms. Of course, such inclusion of only pure sectors in the inter industry balance sheet makes it difficult to directly apply it, since in practice planning and reporting are carried out within organizational structures. But circuit idealization

- allows a detailed analysis of the existing technological structure of social production and distribution;
- The experience gained in the study of a simplified scheme usually leads to the construction of more meaningful models.

The facts of successful application of optimization methods and management of economic processes based on information technologies are especially valuable and significant for practice. At their core, economic problems in most cases are variational, which in mathematical modeling leads to optimization problems. In turn, optimization problems with arbitrary amounts of data or in a general statement are significantly resource-intensive - they require a lot of computer time and large amounts of memory. Classical problems such as the general linear programming problem, the backpack problem, the traveling salesman problem are NP-complete, that is, unambiguously exhaustive problems. The presence of non-determinism of data, characteristic of many economic problems, introduces a discrete or, in the general setting, continual multivariance, which necessitates the use of fundamentally new structural approaches. Traditional probabilistic and statistical methods for the synthesis of mathematical models and analysis based on them of economic situations are not always adequate and as an alternative, researchers are increasingly turning to methods of the theory of fuzzy sets and methods of interval analysis.

The desire to bring economic and mathematical modeling closer to reality, to make models more "computable" in the conditions of non-determinism of data dictates the need to develop adequate methods. One of them is - interval analysis methods. Interval analysis and its specific methods are of the greatest value in problems where uncertainties and ambiguities arise from the very beginning, being an integral part of the problem statement. But this in no way excludes other fruitful applications of interval analysis, in particular, in problems formulated generally without involving an interval language. For example, in recent decades, interval analysis has become widespread as the basis for the so-called evidence-based (verified, reliable) computer calculations, calculations with guaranteed accuracy, etc.

Tasks of this type are the most important sphere of interval analysis applications, and the interval description of uncertainty itself is one of the most popular, along with fuzzy (blurry) and

probabilistic (stochastic) descriptions. A wide variety of problem statements with input intervals is provided by identification under uncertainty, when the data on the object obtained as a result of measurements, or in some other way, are not known exactly, but we still need to find or somehow evaluate the parameters of the object.

In this paper, we propose an interval formulation of the intersectoral balance problem, which is the basis of many linear economic models. An analysis is made of the productivity of the Leontief model with interval parameter uncertainties.

## 2. Formulation of the problem.

Suppose that each industry produces only one type of product, and different industries produce different products. So, in the production and economic system we are considering, it is produced  $n$  types of products. Each industry in the production process of its type of product needs products from other industries.

In production planning for a period of time  $[T_0, T]$ , the task is formulated as follows: for a given vector  $c$  final consumption required to find vectors  $x$  gross output

$$x - Ax = c, \quad x \geq 0. \quad (1)$$

Equation (1), called the linear equation of the interindustry economic balance, is the classical Leontief equation [1].

In practice, the determination of the coefficients  $a_{ij}$  it is not difficult for a single enterprise, but it is very difficult to find them throughout the industry. As a rule, instead of the exact values of these coefficients, they are operated with estimates obtained by one or another technique. It is even reasonable to assume that the coefficients of direct production costs are known to us only with some uncertainty, which we will assume *interval*. In other words, let  $a_{ij} \in \mathbf{a}_{ij}$  и  $\mathbf{A} = (\mathbf{a}_{ij}) = ([\underline{a}_{ij}, \bar{a}_{ij}])$ .

Similarly, the requirement for the final consumption vector is also naturally formulated in the interval form: as a rule, we are satisfied with the situation when real consumption is maintained within a certain interval  $\mathbf{c}$ . In the real case, the solutions of system (1) with respect to  $x$  allows you to predict the volume of production by industry, necessary to obtain the planned final consumption  $\mathbf{c}$ .

Below we assume familiarity with the basics of interval analysis [2] and the notation system for interval objects adopted in [3]. In particular, interval objects in the text will be highlighted in bold, indicating if necessary the lower and upper boundaries:  $\mathbf{a} = [\underline{a}, \bar{a}]$ , and also uses the concept of magnitude interval  $|\mathbf{a}| = \max\{|\underline{a}|, |\bar{a}|\}$ , which for vectors is understood component wise.

In the interval case, instead of (1), we have the equation

$$x = \mathbf{A}x + \mathbf{c}, \quad x \geq 0 \quad (2)$$

with an interval vector of final consumption by industry  $\mathbf{c} \in \mathbb{R}^n$  and interval matrix  $\mathbf{A} = (\mathbf{a}_{ij}) \in \mathbb{R}^{n \times n}$  - coefficients of direct production costs, which were considered in the works [1, 4].

In the interval version for (2), the question can be formulated as follows:

*for what volumes of production  $x$  at any values of the coefficients of direct production costs  $\mathbf{a}_{ij}$  within  $\mathbf{a}_{ij}$ , we still get the final consumption from a given interval  $\mathbf{c}$ ?*

Here, the set of all real vectors  $\mathbf{x}$  included in the interval vector  $\mathbf{x}$  - production volumes by  $n$  branches, and forms an admissible set of solutions of the interval linear system  $(\mathbf{I} - \mathbf{A})\mathbf{x} = \mathbf{c}$  [2], где  $\mathbf{I} \in \mathbb{R}^{n \times n}$  - unit matrix. If there is an inverse matrix  $(\mathbf{I} - \mathbf{A})^{-1}$ , then there exists a solution to equation (2). In the case when a solution to system (2) exists for any non-negative vector  $\mathbf{c} \in \mathbf{c}$  final demand, then the Leontief interval model (and matrix  $\mathbf{A}$ ) *productive*.

If the intervals of some coefficients of direct production costs represent the limits of their possible control, say, as a result of some changes in production technology or administrative decisions, then the problems of determining the volumes of production that ensure final consumption lead to the consideration of controlled sets [2] of solutions of linear linear systems algebraic equation.

### 3. RESULTS AND DISCUSSIONS.

In mathematical terms, the productivity of the model under consideration is completely determined by the interval value of the Frobenius eigenvalue  $\lambda_A$  of the interval  $\mathbf{A}$  matrix. It is under this assumption that the issue of productivity was investigated in [1] and the following was proved:

**Theorem 1.** *Leontief's interval model is productive if and only if  $|\lambda_A| < 1$ .*

In this paper, one more criterion of productivity is considered:

**Theorem 2.** *If for a non-negative and indecomposable interval matrix  $\mathbf{A}$ ,  $\mathbf{r}_i$  - the sum of the elements of each row (column),  $|\mathbf{r}_i| \leq 1$  and for at least one row (column)  $|\mathbf{r}_k| < 1$ , then Leontief's interval model is productive.*

**Proof.** Let be  $\mathbf{p}_A$  - left Frobenius interval vector for the interval matrix  $\mathbf{A}$ ,  $\mathbf{e} = (1, 1, \dots, 1)^\circ \in \mathbb{R}^m$ . Then  $\mathbf{A}\mathbf{e} = \mathbf{r} = (\mathbf{r}_1, \mathbf{r}_2, \dots, \mathbf{r}_n)^\circ$ . From here we get

$|\mathbf{p}_A \mathbf{r}| = \sum_{i=1}^n |\mathbf{r}_i| |(\mathbf{p}_A)_i| < \sum_{i=1}^n |(\mathbf{p}_A)_i|$ . Here we use the fact that for an indecomposable matrix  $\mathbf{p}_A > 0$

. On the other hand,  $|\mathbf{p}_A \mathbf{r}| = |\lambda_A| \sum_{i=1}^n |(\mathbf{p}_A)_i|$ , where do we get that  $|\lambda_A| < 1$ . According to Theorem 1, the last inequality gives the productivity of this model.

We carry out numerical experiments confirming the practical significance of this result, expressed in the expansion of the considered classes of problems.

#### 4. Numerical experiments.

Table 1 contains the balance sheet of three industries for a certain period in the material case.

**TABLE 1. BALANCE SHEET DATA FOR THREE INDUSTRIES IN THE REAL CASE**

№	Industry	Consumption			Gross output
		1	2	3	
1	Hydrocarbon Production and Processing	5	35	20	50
2	Energetics	10	10	20	100
3	Engineering	20	10	19	70

Now suppose that each industry contains interval data, i.e. has interval uncertainty (table 2):

**TABLE 2. BALANCE SHEET DATA FOR THREE INDUSTRIES IN THE INTERVAL CASE**

№	Industry	Consumption $x_{ij}$			Gross output $x_j$
		1	2	3	
1	Hydrocarbon Production and Processing	[4,6]	[33,37]	[19,22]	[40,52]
2	Energetics	[9,11]	[9,11]	[18,23]	[88,104]
3	Engineering	[15,22]	[9,11]	[17,21]	[67,75]

Define the coefficients of the matrix of direct production costs:

$$A = x_{ij} / x_j = \begin{pmatrix} [0.0769, 0.1501] & [0.3173, 0.4205] & [0.2533, 0.3236] \\ [0.1730, 0.2751] & [0.0865, 0.1251] & [0.2399, 0.3383] \\ [0.2884, 0.5501] & [0.0865, 0.1251] & [0.2266, 0.3089] \end{pmatrix}, \quad e = \begin{pmatrix} 1 \\ 1 \\ 1 \end{pmatrix}.$$

Multiplying the matrix  $A$ , on vector  $e$  get the sum of the elements  $r_i$  each row:

$$Ae = r = \begin{pmatrix} [0.6475, 0.8940] \\ [0.4996, 0.7383] \\ [0.6016, 0.9839] \end{pmatrix}.$$

Left Frobenius Interval Vector  $p_A = ([40,52],[88,104],[67,75])$ . Now calculate

$$|p_A r| = [106.0570, 197.0505] = 197.0505 = \sum_{i=1}^n |r_i| |(p_A)_i|,$$

$\sum_{i=1}^n |(p_A)_i| = 231.0000$ , from here  $|\lambda_A| = 197.0505/231.0000 = 0.8530 < 1$ . Since the conditions *theorems 1* are carried out.

So a similar calculation for columns  $|\lambda_A| = 0.83645623538672 < 1$ , also claims compliance *theorems 1*.

Numerical calculations for this problem were carried out on the INTLAB interval package [5], which runs in the core of the MatLab computer math system.

## 5. CONCLUSION

Having concluded, we note that the Leont'ev material model reflects only the potential opportunities inherent in production technology. In (1), it is assumed that the production process takes place instantly - all intermediate products turn out to be produced by the time they are needed. In contrast, model (2) includes both the results of an already held and future cycle, and the intervals  $a_{ij}$  and  $c_i$ , allows you to scroll simultaneously a continuous set of production cycles and consumption options.

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DOI: **10.5958/2249-7137.2020.00756.9**

## THE PLACE OF SYMBOLIC AND VIRTUAL IMAGES IN UZBEK STORIES OF THE INDEPENDENCE PERIOD

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### ABSTRACT

*This article is devoted to the analysis of short stories in Uzbek literature of the independence period. Emphasis was placed on Uzbek short stories created during the years of independence, their content, artistic development, and the reality expressed in them. The works of talented writers such as Lukman Borikhan and Abdukayum Yuldashev were analyzed. Lukman Borikhan's short stories "The Young Man Who Seen Hizr", "The Mysterious Teacher", and "The Woman Doesn't Believe in Tears" created during the years of independence were analyzed. They focused on new analyzes of the eternal themes of love and hate, life and death. The role of artistic detail, individuality in the image, and a unique style of expression are revealed in the stories of the talented writer Abdukayum Yuldashev, such as "The Way of the Star" and "The Sky". The author's story "Skyfall" was compared to the author's famous story "Poincaré". Emphasis is placed on the similarities and differences between the two works. News in Uzbek short stories and the ability of artists to create characters are listed on the basis of evidence.*

**KEYWORDS:** *Mental State, Detail, Conflict, Image, Essence, Symbolism, Image, Character.*

### INTRODUCTION

During the years of independence, Uzbek short stories have appeared, which further expanded the possibilities of our national prose. Due to the freedom of creativity, the attention to the artistic word, our writers with a new worldview and imagination began to create works that can be proud of. A number of our artists, such as Togay Murod, Murod Muhammad Dust, Erkin Azam, Khayriddin Sultanov, who entered the late 70s and early 80s of the last century, expressed their reality in a unique way. The formation of the responsibility to have, the creation of artistically different works that are different from each other, showed that the Uzbek literature of the independence period can be viewed with great hope.



The interest of writers such as Erkin Azam, Lukman Borikhan, Abdukayum Yuldashev, who have been gaining attention in the Uzbek prose of the independence period with their stories, short stories and novels, in the creative process, in the creative process. The fact that it is a matter of faith is an indication that real masters of the word are being formed in our literature. As worthy successors of their masters, it is noteworthy that this group of artists strives for artistic detail of the protagonist of the work of art, depicting the contradictions of man and the environment through bitter satire and covert imagery. It is commendable that they strive for a realistic assessment of the realities of life, especially as they reveal the philosophical depth of life's problems.

At the same time, the ranks of new heroes in Uzbek storytelling are growing. As we read the stories, we become convinced that they are our closest and dearest contemporaries. These heroes are ordinary people like you and me, so they captivate any reader and take a deep place in their hearts. Well-known literary scholar Umarali Normatov speaks about the development of Uzbek short stories: "When we look at today's short stories, first of all, the theme, the problem, the form, the variety of methods attract attention. Among them are works on historical, modern, socio-political, family, romantic, traditional romantic, realistic, modernist, serious and humorous adventure-detective works. "

Indeed, new names and unique literary heroes in Uzbek storytelling give unforgettable meaning to our lives and artistic thinking. One of the creators of such works is Lukman Borikhan.

The work of Lukman Borikhan plays a special role in the development of Uzbek prose during the period of national independence. The author's artistic research, which makes a worthy contribution to the development of the literary process with a series of novels, short stories and short stories, correctly assesses the relationship between the individual and society, expresses the tension of real life, directs the image to independence of expression, the desire not to be tied to form, to show the artistic reality in a new mirror, is reflected in the work of the writer.

## METHODS

The author's short stories "The Boy Who Seen Hizr", "The Mysterious Teacher", "The Girl in Search", and "A Drop of Youth" created during the years of independence are based on such eternal themes as love and hate, life and death. These stories, written on such topics, are full of interesting and moving stories. It is invaluable in terms of beautiful, attractive artistic language, richness of vivid, vivid images, captivating the involuntary reader, and delighting the reader. The fact that Lukman Borikhan's story "The Mysterious Teacher" (2006) won the competition of the Ministry of Public Education (2006) as the best work from the life of a teacher also shows how deeply the writer describes life events. In addition, reading this story, one comes to the conclusion that the life of an ordinary school teacher, his great passion for science, no matter what hardships befall him, he must not despair of the bright future. The author's collection of short stories "The sun has not yet set" has been published. The stories in this collection are significant for their artistic excellence. It describes the lives of many modern Uzbek youth. There are images of people living a simple life, with a pure heart and faith. These images do not lag behind each other in terms of their artistic significance, their place in the play, and their participation in the events. The protagonists of the story are not the same. But with the purity of heart, with the height of dignity, these destinies are connected. Asians and national identities are mentioned several times in the play.

The story "The Guardian of Chorbog or the Young Man Seen by Hizr" is a similar work, which tells the story of our life in a serious humorous mood. Written by the talented writer Luqman Borikhan, this work vividly depicts the lifestyles of people with different destinies, different characters, and different past owners. The story also reflects the actions, thoughts, moods, and dreams of some Uzbek youth, who are moving towards Western culture. The events in Bekkul Turakulovich's garden, the shameless actions of Bahodir and Sayyora, the lying of Jahangir and Gulyuz on the ground, the rise of drunkenness and laughter, and the shouting have captured the minds of Uzbek youth. Through this, the author calls young people, parents to awareness.

Another achievement of the author is that he does not exaggerate or praise his heroes, shows all the flaws in them. It does not allow artificiality in the course of events. In the story, Korjovboy, who is one of the young people in the garden, is also emotionally weak. Under the influence of alcohol (he takes it in his mouth for the first time!), Marjona can't hide her feelings. If you feel sorry for one of his actions, one action will make you laugh. The play reflects the realities of life, the inner recognition that people are not without flaws, that a person should know himself first, and that a person should always be worthy of the honorary title. The same can be seen in the actions of such characters as Korjovboy, Husan, Chorshanbi chol. They are the same in life as they are in the play. That is why these images are reliable and natural.

Lukman Borikhan's story "Woman does not believe in tears" is a work that fully meets the criteria of art. It reflects the realities of social life. Throughout the story, a combination of moral values and the positive and negative aspects of man is reflected. When the author studies the spiritual existence of man, he forms the criterion of artistic perception of reality. Creativity encourages people to understand the essence of human life, to fill in the gaps, to draw conclusions from the shortcomings. The story is a mixture of life, time and personal interests. The writer's worldview and the state of society are discussed in a highly poetic way. This is such a problem that its solution depends on philosophy, psychology, religion. The author finds an answer to the question of what is the essence of life and how a person should live by comparing the analysis of issues such as religion, consequences and beliefs with the owners of different destinies. Every reader who reads this book begins to think about the essence of tomorrow, the importance of the future, the readiness of man for everything during the so-called journey of life, the need to endure the hardships of life, to live life to the fullest. He looks back on his life, draws conclusions from mistakes, understands the responsibility to be kind to people, especially close relatives. The story is ideologically mature, rich in content, simple in form, but full of great realities. The author's skill in revealing the meaning expressed in it is incomparable.

During the years of independence, a number of works have been created in our national prose, in which the fate of the heroes, their thoughts inspire the reader to think deeply, while others create images of hatred, half-smiles, laughter at their weakness.

The actions, deeds, plans for the imaginary future of the protagonist of the story "The Way of the Star", published in the 5th issue of "Youth" magazine in 2008 by Abdukayum Yuldashev, a talented writer, a well-known representative of today's Uzbek prose, escaped from work. the stagnant state surprises the involuntary reader. It is this situation in the story, in the example of different characters, such as Sadriddin, Samad, Komila, Nafisa, Lobarkhan, which artistically reveals the unique situation in the minds of young people, their dreams and thoughts about the future.

The protagonist of the work dreams of becoming a famous hafiz, that is, Sadriddin Mehrriddinov. "I'm still going to be a famous artist! I'm going to be a star! " The work begins with sentences. These seemingly simple, vernacular words are repeated several times in the language of the protagonist.

While the emotional feelings of the young people around us are fully reflected in the image of Sadriddin, the image of Nafisa reveals such qualities as kindness, confidence, indifference, and extreme simplicity. Because Sadriddin gives her flowers at a wedding. After this flower-giving ceremony, the hafiz washes it to make sure that today's success is "five", leaves it in your bedroom, and tricks Samad into coming to the house he rents.

Enthusiastic, emotionally charged works have a quick and powerful effect on the human spirit. In such works, it is not the details of the events that emerge, but the whole conclusion of the impression obtained from it. When this conclusion is based on true confession, it has a powerful effect on the soul. One of the peculiarities of the stories of Abduqayum Yuldosh is the depth of analysis. At the heart of the author's artistic interpretation is a fantasy about a man - a series of contradictions, the pain points in life, the disturbing feelings. The fate of the girl, who in the course of this story has become a man who does not know how to trust anyone in life, is even more painful, Sadriddin agrees. He will continue to believe in her. He is always aware of it, even when he is in the insane asylum. This is a testament to how simple it is. After all, being faithful to a non-mahram man is a real weakness for a girl from a remote village like Nafisa who is studying in the city.

The story also vividly depicts the courage of a dancer named Lobarkhan, who has been dancing for many years, his ability to tell the truth, and his regrets. If God allows it again, it will be clear that he will not choose the path of art. The image of Komila is embodied as a sharp girl who speaks openly about who a person is, his actions, and who is reluctant to tell the truth. In general, the play reflects the spirit and feelings of Uzbek girls. It reflects the fact that the human child should not always be given to emotions. Each character in this story has a special place in terms of their destiny, destiny, attitudes, and actions in life's anxieties. They vividly reflect the lifestyle of young people around us today.

Not only that, but the stories of Abduqayum Yuldosh "Wedding", "Tears of a Crocodile", "Bird of Heaven", "The Market in Otchopar or the Thirteenth House" are also different in the psyche of different destinies. He describes ongoing processes. This work is one of the few works that depicts the changes in the human mind in today's market economy, the renewal of society, the different colors of life and imagination. As we read them, we see that we do not know much about people, that time is fast approaching, and that human weaknesses, such as loyalty and fidelity, are diminishing.

One of the highlights of the author's work is the story of Poincaré. It tells the story of an ordinary teacher. The story is about a man whose spiritual world has dried up, who has lost his ability to think like a conscious person and to understand others, and who has lost his spirituality. The protagonist of this work is not able to use all his strength and knowledge, low self-esteem. It is this spiritually weakened worldview that leads to fear. In fact, this character (the protagonist of the story) is not always a weak, helpless person. He is sometimes very hardworking and has a good sense of humor. His hard work wins the affection of those around him. But the emptiness in the inner world, the savings, the worldview. We did not bring it in vain. In the author's story

"The Sky's the limit" you will find the same situation as in the above story. The protagonist, Ibadulla, is a hard-working, hard-working young man who was born in an ordinary steppe and dreamed of living in the city. He did not want to return to the village when all his friends finished school, and grew up to be a skilled pilot. But even this image is depressing, offending people. A little reluctance will cause him to lose the gains he has made. It's hard to achieve, but it's easy to get lost. This fact is vividly reflected in this story. The story also deals with current issues such as loyalty to the profession, love for the motherland, respect for people, responsibility for duty.

## CONCLUSION

In general, in the Uzbek stories of the independence period, the authors try to accurately depict human nature, to turn the reality of life into a literary and aesthetic principle. The bitter truths in the created works do not tire the reader, the literary skill of the creator is to clearly identify the points of reality of society and life, to transform the spiritual world of the hero, to increase the responsibility of humanity, to fill the spiritual world manifested in a number of ways, such as disclosure.

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DOI: **10.5958/2249-7137.2020.00757.0**

## QUANTUM-CHEMICAL CALCULATION OF REACTIONARY ABILITY OF LIGAND THIOSEMICARBAZONE DIMETILAMINO BENZALDEGIDE

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### ABSTRACT

*Research of a structure of complexes of transitive metals with multifunctional polidentant ligands, executed last years, have shown their perspectivity in the decision of questions at issue of coordination chemistry regarding studying of competitive coordination donors the centres in molecules heterocyclic ligands.*

**KEYWORDS:** *Semi Empirical, Quantum-Chemical Calculation, MNDO, Electronic Structures, Reactionary Ability.*

### INTRODUCTION

At present, quantum chemistry is the theoretical basis for all branches of chemistry - organic and inorganic, physical chemistry, various types of spectroscopy, etc. Quantum chemistry successfully solves many scientific problems - in conjunction with many types of spectroscopy, it is used to study the structure of matter, and study the mechanisms of chemical reactions, including on the surface. Biological and biologically active substances are studied, the useful or lethal properties of which are often associated with their atomic and electronic structure, the study of the structure of new highly promising materials, such as, for example, transition metal complexes, the dynamic properties of atoms and ions in various crystalline and molecular structures, and much more.

Today, the methods of quantum chemistry and molecular dynamics are widely used in the numerical simulation of electronic and atomic structures of complex systems of molecular, crystalline and transitional (nano) sizes [1]. This is due to the technological development of the corresponding software. Nowadays, quite a lot of modern computer systems are functioning in

the world that implement the methods of quantum chemistry and molecular dynamics, however, for a wide range of users, the most accessible use of these methods is provided by the well-known quantum-chemical and molecular-dynamic program [2] HyperChem. All molecular dynamics simulation results presented in this paper were obtained using various versions of this program [3].

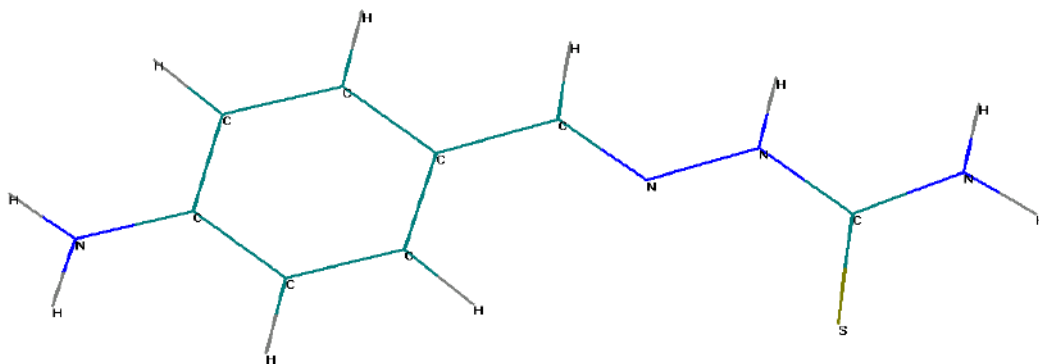
Thiosemicarbazone p-N, N-dimethylaminobenzaldehyde (TDMAB), chosen as the ligand for the synthesis of transition metal complexes, is characterized by the presence of five potential donor centers for coordination to the metal ion - nitrogen atoms and sulfur atom. In addition, an additional center is the nitrogen atom of the amino group of the aminobenzaldehyde moiety, which is in the para position to the benzene ring [4]. Each of these donor atoms is a competitive center for coordination to the complexing atom. Therefore, it was necessary to study by the quantum-chemical method of calculating the nature of the distribution of electron density and effective charges on the atoms in the synthesized ligand molecule and determine the competitive donor atom, which will subsequently be coordinated to the atom-forming agent.

### Objects and research methods

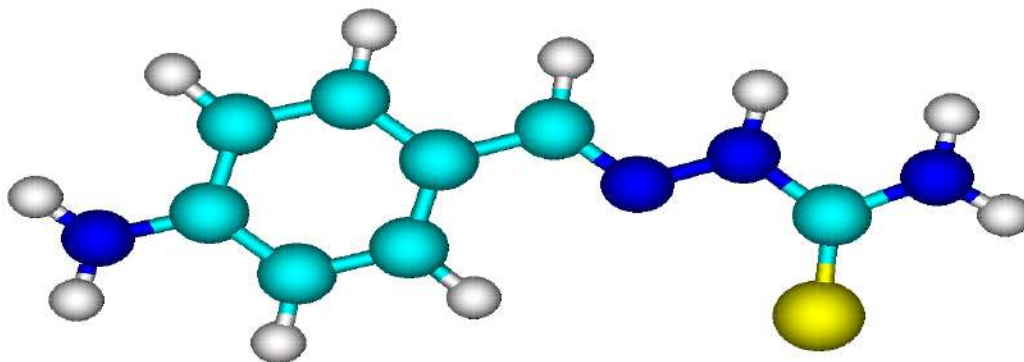
The TDMAB ligand was synthesized according to the following procedure: 0.001 mol of thiosemicarbazide and 0.001 mol of p-N, N-dimethylaminobenzaldehyde were mixed in a flask equipped with a mechanical stirrer. After 10 minutes, 10 ml of sulfuric acid was added to the reaction mixture. The mixture was heated for 1.5 hours at a temperature of 75-80 ° C with constant stirring. After the mixture was cooled to room temperature, a solution of diluted ammonia was poured. The reaction mixture was cooled, the fine crystalline precipitate formed was filtered off, washed several times with ethanol and dried in air. Yield 69%, mp 154-155 ° C.

### Results and its discussion

To solve this problem, the semi-empirical quantum-chemical method MNDO was chosen, which proved itself well in calculating the electronic structure of ligands [5]. This method allows one to calculate the electronic densities of molecular orbitals and the total energy of a molecule, as well as to perform geometric optimization of the molecule under study [6].

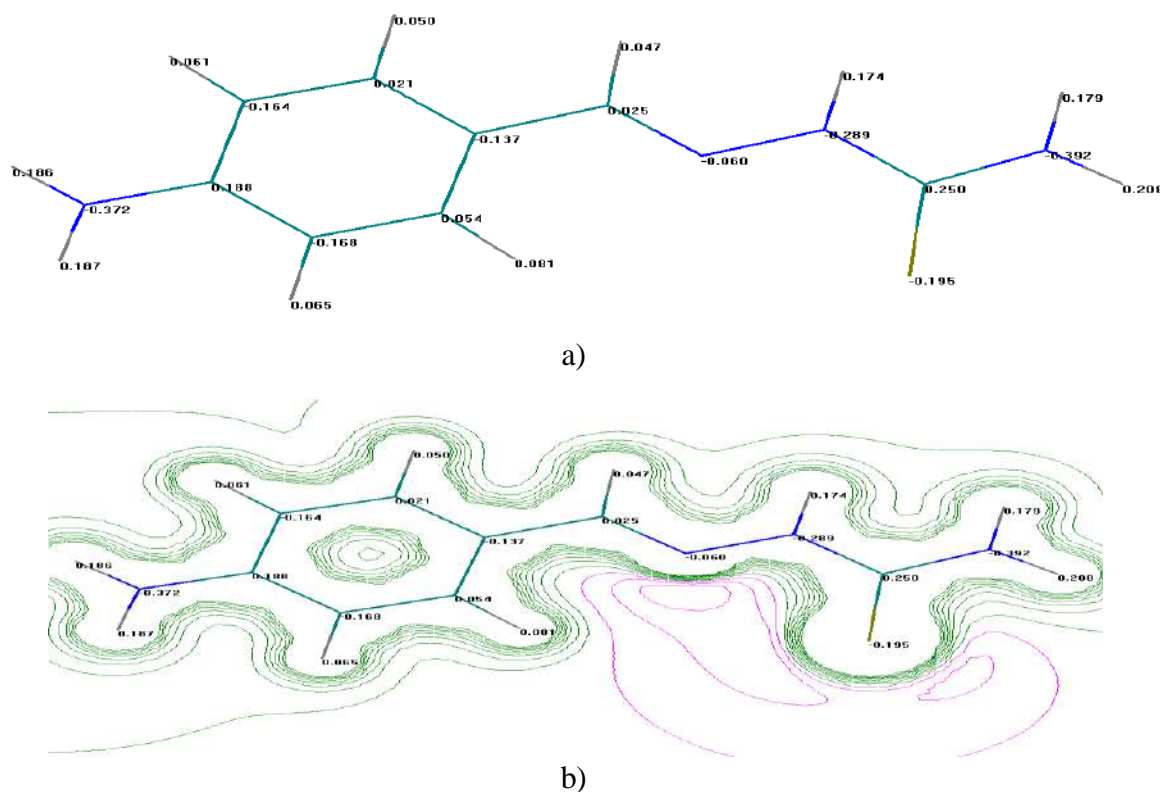






**Fig. 1. The geometric configuration of the TDMAB ligand model**

A comparison of the electronic charges in the TDMAB molecule obtained using the MNDO calculation method showed (Fig. 1) that the largest amount of negative charge in the calculated molecule is concentrated on the nitrogen atom of the azomethine part of the ligand and on the sulfur atom of the thiol part of the ligand -0.060 and -0.195, respectively. From this we can conclude that complexation with a metal ion will occur at these atoms [7]. A negative charge is also concentrated on the nitrogen atom of the amino group of the aminobenzaldehyde part of the ligand (-0.372).



**Fig. 2. Effective charges on atoms (a) and a 2D electron density distribution diagram on the HOMO (b) of the TDMAB ligand molecule**

However, a study of the distribution diagram (Fig. 2b) of the electron density of the upper occupied molecular orbitals (MO) gives an idea that the indicated charge is conjugated with the electron density of the benzene ring, which suggests that the nitrogen atom of the amino group will not be able to participate in complex formation [8]. In addition, steric factors that occur during complexation also interfere with this. In this case, a stable five-membered cycle should be formed [9].

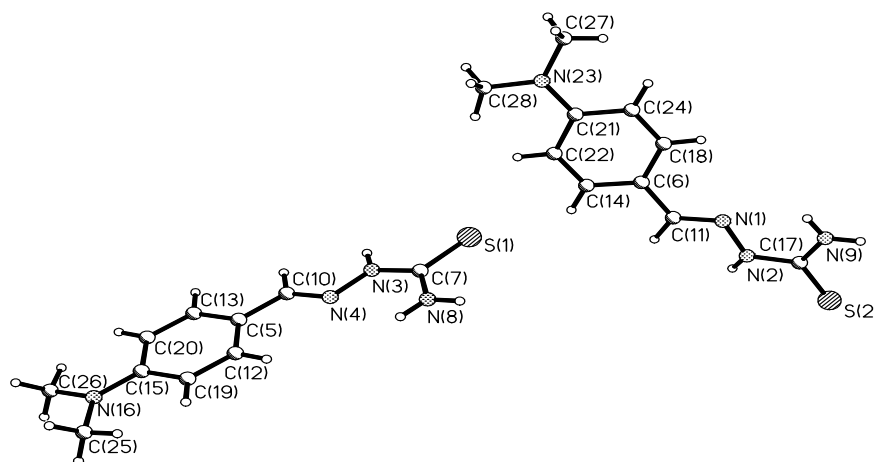
These theoretical calculations were further experimentally confirmed by studying the structure of the synthesized complex compounds of transition metal ions based on the TDMAB ligand [10].

Thus, the performed quantum chemical studies of the electronic structure and energy characteristics of the TDMAB ligand using the semiempirical quantum chemical method MNDO allow us to determine the priority binding sites of the multifunctional ligand and show that such modeling can be effectively used to study the competitive coordination of molecules containing several donor atoms and based on the calculated data, conduct directed synthesis of transition metal complex compounds [12].

To reliably establish the geometric structure, the single crystals of the synthesized ligand TDMAB were subjected to X-ray diffraction analysis. According to x-ray diffraction analysis of ligand single crystals, crystallographic characteristics corresponding to triclinic syngony were obtained. Figure 3 shows the structure of the TDMAB molecule, and Fig. 4 shows the crystal packing of the ligand.

The structure of the TDMAB ligand was deciphered by the direct method in the framework of the SHELXS-97 software package. The calculations to refine the structure were performed using the SHELXL-97 program. All non-hydrogen atoms were refined by the least squares method (in F<sup>2</sup>) in the full-matrix anisotropic approximation [11]. The positions of all hydrogen atoms are identified from the difference synthesis of electron density and refined isotropically. Molecular graphics were carried out by the XP program in SHELXTL-Plus.

Table 1 shows the bond lengths and bond angles in TDMAB. The main crystallographic parameters and characteristics of the X-ray diffraction experiment for TDMAB are presented in table 2.



**Fig. 3. The spatial structure of the ligand TDMAB**

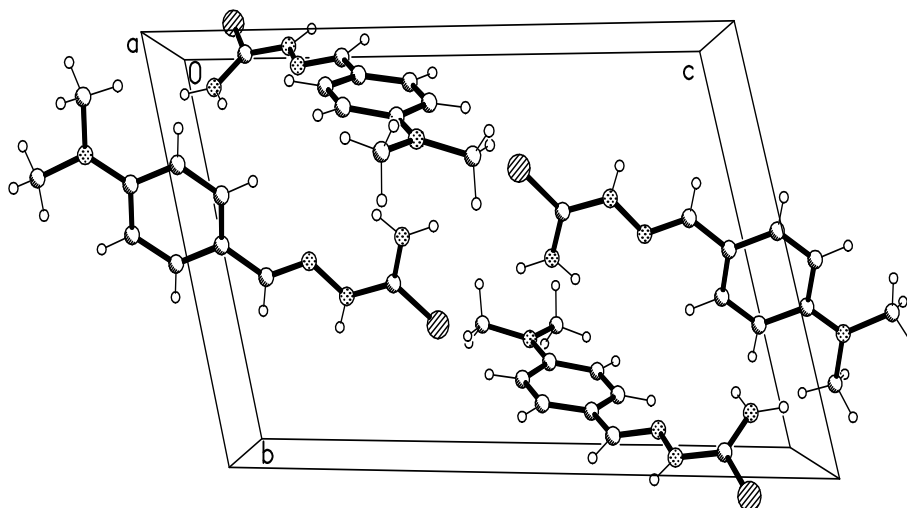


Fig. 4. Packaging molecules TDMAB

TABLE 1. THE BOND LENGTHS AND BOND ANGLES IN TDMAB

Bond	d, Å	Angle	$\omega$ , grad
S1-C7	1.690(5)	C(11)-N(1)-N(2)	116.3(4)
S2-C17	1.273(6)	C(17)-N(2)-N(1)	119.6(5)
N1-C11	1.376(5)	C(7)-N(3)-N(4)	120.0(5)
N1-N2	1.348(6)	C(10)-N(4)-N(3)	115.5(5)
N2-C17	1.338(6)	C(12)-C(5)-C(13)	116.3(5)
N3-C7	1.380(5)	C(12)-C(5)-C(10)	122.4(6)
N3-N4	1.279(6)	C(13)-C(5)-C(10)	121.3(6)
N4-C10	1.387(6)	C(18)-C(6)-C(14)	116.8(5)
C5-C12	1.389(6)	C(18)-C(6)-C(11)	122.7(6)
C5-C13	1.442(7)	C(14)-C(6)-C(11)	120.5(6)
C5-C10	1.381(7)	N(8)-C(7)-N(3)	117.0(4)
C6-C18	1.390(6)	N(8)-C(7)-S(1)	123.0(5)
C6-C14	1.440(7)	N(3)-C(7)-S(1)	120.0(5)
C6-C11	1.322(6)	N(4)-C(10)-C(5)	123.6(6)
C7-N8	1.319(6)	N(1)-C(11)-C(6)	123.4(6)
N9-C17	1.352(6)	C(19)-C(12)-C(5)	122.2(5)
C12-C19	1.361(6)	C(20)-C(13)-C(5)	122.2(5)
C13-C20	1.358(6)	C(22)-C(14)-C(6)	122.3(5)
C14-C22	1.360(6)	N(16)-C(15)-C(20)	121.8(6)
C15-N16	1.391(7)	N(16)-C(15)-C(19)	122.3(6)
C15-C20	1.412(7)	C(20)-C(15)-C(19)	115.9(5)
C15-C19	1.443(7)	C(15)-N(16)-C(25)	122.0(5)
N16-C25	1.447(7)	C(15)-N(16)-C(26)	121.4(5)
N16-C26	1.370(7)	C(25)-N(16)-C(26)	116.5(5)
C18-C24	1.372(6)	N(9)-C(17)-N(2)	116.3(4)
C21-N23	1.392(7)	N(9)-C(17)-S(2)	124.3(5)
C21-C22	1.399(7)	N(2)-C(17)-S(2)	119.4(5)

C21-C24	1.432(8)	C(24)-C(18)-C(6)	121.6(5)
N23-C27	1.449(7)	C(12)-C(19)-C(15)	121.7(5)
N23-C28		C(13)-C(20)-C(15)	121.7(5)
		N(23)-C(21)-C(22)	120.9(6)
		N(23)-C(21)-C(24)	122.3(7)
		C(22)-C(21)-C(24)	116.8(5)
		C(14)-C(22)-C(21)	121.1(5)
		C(21)-N(23)-C(27)	120.9(6)
		C(21)-N(23)-C(28)	121.4(5)
		C(27)-N(23)-C(28)	117.5(5)
		C(18)-C(24)-C(21)	121.3(5)

**TABLE 2. THE MAIN CRYSTALLOGRAPHIC PARAMETERS AND CHARACTERISTICS OF THE X-RAY DIFFRACTION EXPERIMENT FOR TDMAB**

Molecular formula	C <sub>10</sub> H <sub>14</sub> N <sub>4</sub> S
M <sub>r</sub> g/mol <sup>-1</sup>	871.44
Syngony	Triclinic
Space group	<i>P</i> -1
Z	2
<i>a</i> , Å	8.524(7)
<i>b</i> , Å	9.389(6)
<i>c</i> , Å	15.541(17)
<i>A</i>	73.78(4)
<i>B</i>	79.58(5)
<i>C</i>	82.79(6)
<i>V</i> , Å <sup>3</sup>	1170.9(18)
$\rho$ , g/cm <sup>3</sup>	1.236
Crystal size (mm)	0.75x0.40x0.25
Scanning area 2 $\theta$	3 $\leq\theta\leq$ 50.0 °
$\mu_{\text{exp}}$ (mm <sup>-1</sup> )	0.29
Reflection number	4116
Reflection number with $I > 2\sigma(I)$	3243
R <sub>1</sub> ( $I > 2\sigma(I)$ and general)	0.0519 (0.0717)
<i>wR</i> <sub>2</sub>	0.1337 (0.1517)
<i>S</i>	1.091
Differential peaks of electron density	0.29 and -0.25 e/Å <sup>3</sup>

## CONCLUSION

The quantum chemical semi-empirical MNDO method was used to study the electronic structure of the TDMAB ligand and identify preferred coordination centers in a multidentate multifunctional ligand. It was shown that a potentially pententate ligand should exhibit bidentality, coordinated by the nitrogen and sulfur atoms of the thiosemicarbazone part of the ligand, which have the most negative effective charges.

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DOI: **10.5958/2249-7137.2020.00758.2**

## **ACTION OF REACTIONS OF N - DIALKYLAMINO (BUTIN-2)-OL-1 PRODUCT**

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### **ABSTRACT**

*The article illustrates given results of the investigation on acylation reactions of N-dialkylamino-(butin-2)-ol-1 and explained process by  $A_N$  mechanism. Physic-chemical constants of the substance synthesized as well as the chemical structures of synthesized compounds by IR- and PMR methods.*

**KEYWORDS:** *Acylation, N-Dialkylamino-(Butin-2)-Ol-1, IR- And PMR Spectroscopy, 4-[N-Dietilamino-(Butin-2)]-Ol-1, Acetone, Ethanol.*

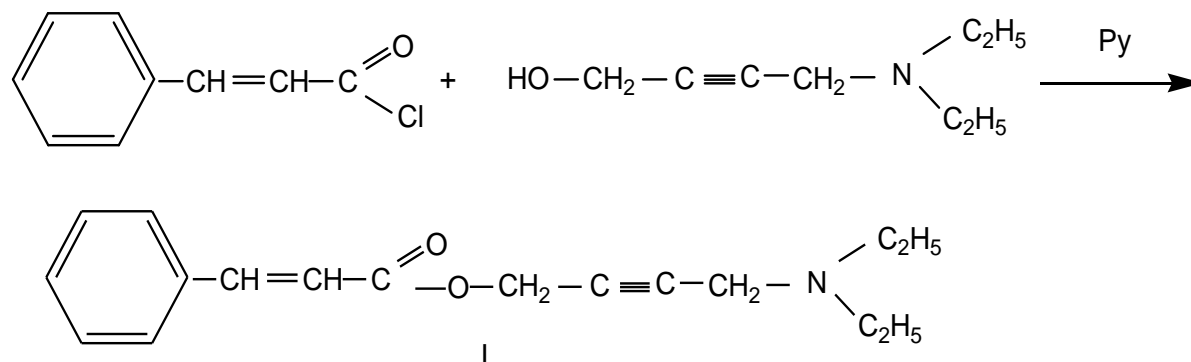
### **INTRODUCTION**

It is known that derivatives of amino acetylene esters are biologically active substances that can increase defense abilities against inflammatory, tetanus and fungus. Furthermore, they are utilized as corrosion inhibitors, antioxidants and stabilizers.

On this basis, amonibutynyl esters of unsaturated aromatic acids were synthesized and investigated in this work.



A common method is used in order to synthesize dialkylaminobutynyl esters. The following scheme is based on the effect of chloride of unsaturated benzoic acids exchanged with diethyl amino-(butin-2)-ol-1 in a pyridine or triethylamine medium.



The yield of reaction products varies from 68% to 89%. The obtained compounds were purified by column chromatography, the purity of which was analyzed by thin-layer chromatography at the level of activity  $\text{Al}_2\text{O}_3$ .

4-[N –diethylamino-butin-2] brown acid esters are highly soluble in acetone, ethanol, dioxane and other available organic solvents insoluble or insoluble in warm water 4-[N –diethylamino-butin-2] the cinnamon acid is confirmed by IR and PMR spectroscopy data corresponding to the information of physical and chemical characteristics in the literature. The physicochemical properties of the synthesized substance are depicted in the table.

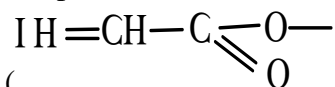
There are absorption groups in the IR spectrum that are distinguished by the valence oscillations of the triplet.  $(-\text{C}\equiv\text{C}-)$  bonds  $2142\text{ cm}^{-1}$  —  $\text{C}\begin{smallmatrix} \text{O} \\ \parallel \end{smallmatrix}-\text{O}-1733\text{ cm}^{-1}$  groups, valence oscillations of the aromatic ring- $1600\text{ cm}^{-1}$ ,  $1642\text{ cm}^{-1}$   $(-\text{C}=\text{C})$ . The PMR spectrum has the following proton signals: mu: doublet 4.58 (2H,  $-\text{CH}_2-\text{O}-$ ); 6.18 doublet ( $\text{H}-\text{CH}=\text{C}\begin{smallmatrix} \text{O} \\ \parallel \end{smallmatrix}-\text{O}-$ ), singlet 7.57 (5 H,) aromatic protons, doublet 7.47 (1H  $\text{Ar}-\text{CH}=\text{C}$ ). The data from IR and PMP spectra confirm the approximate structure of cinnamon acid obtained by amino ethers.

**TABLE 1. PHYSICOCHEMICAL PROPERTIES OF THE DRUG**

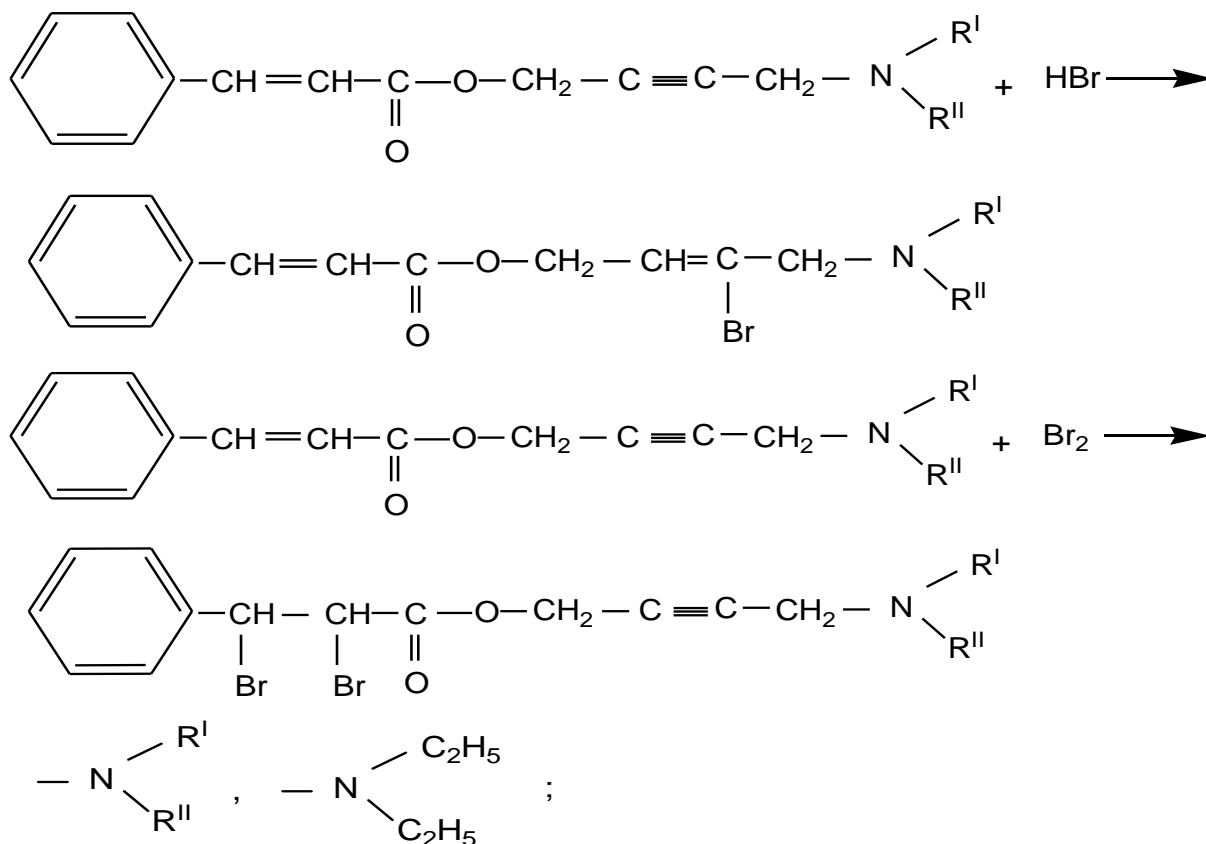
Structural formula and name	yield %	$T_{\text{pl.}} T_{\text{bo.}}$ $^{\circ}\text{C}$	$R_f$	Elemental analysis, %					
				Calculated			Identified		
				C	H	N	C	H	N
 4-N-diethylamino (butin-2)-ether of cinnamic acid.	80.1	Wax	0.86	75.27	7.49	5.16	75.07	7.56	5.01

There are absorption groups in the IR spectrum that are distinguished by the valence oscillations

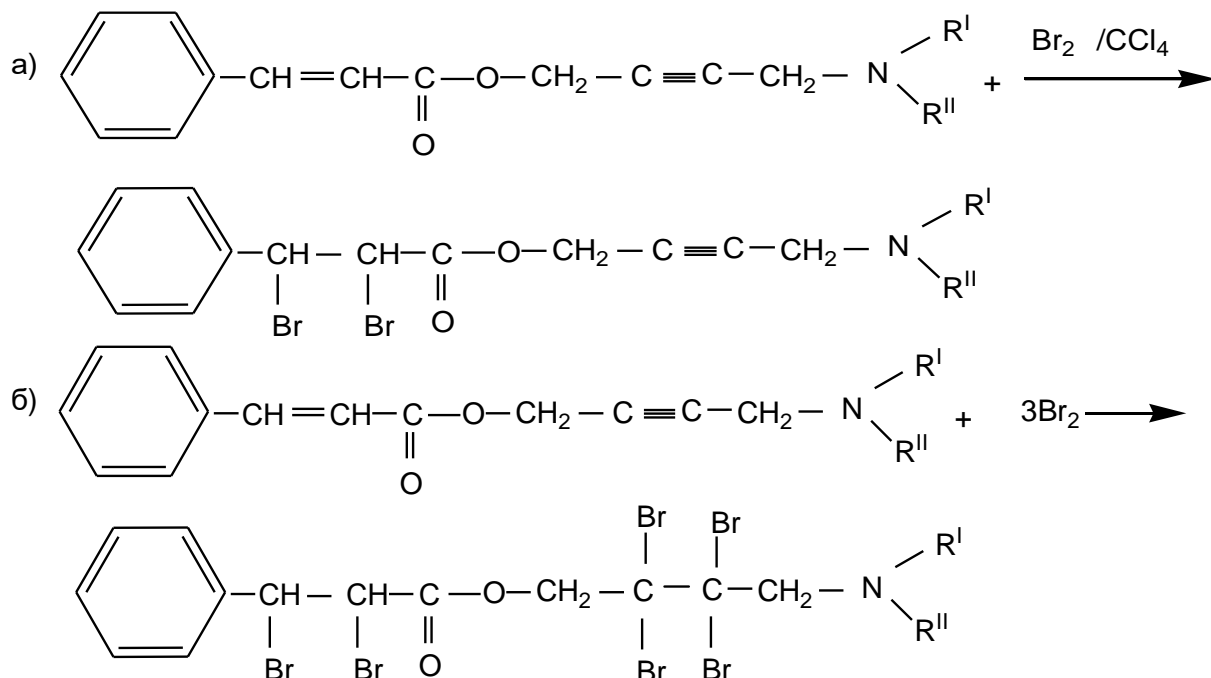
of the triplet.  $(-C\equiv C-)$  bonds  $2142\text{ cm}^{-1}$  —  $C \begin{smallmatrix} \nearrow O \\ \searrow \end{smallmatrix} — 1733\text{ cm}^{-1}$  groups, valence oscillations of the aromatic ring- $1600\text{ cm}^{-1}$ ,  $1642\text{ cm}^{-1}$   $(-C=C)$ . The PMR spectrum has the following proton



signals: mu: doublet 4.58 (2H,  $-\text{CH}_2-\text{O}-$ ); 6.18 doublet (5 H,) aromatic protons, doublet 7.47 (1H  $\text{Ar}-\text{CH}=\text{CH}-$ ). The data from IR and PMP spectra confirm the approximate structure of cinnamonic acid obtained by amino ethers. Chemical changes of cinnamic acid 4-[N-diethylamino-(butin-2-ol)]-ether were carried out by combination reactions of bromine and hydrogen bromide. Electrophilic bonding of bromine and hydrobromine to the aminoacetylene preparation is selected: bromine-double, hydrobrom-triple [5-6].

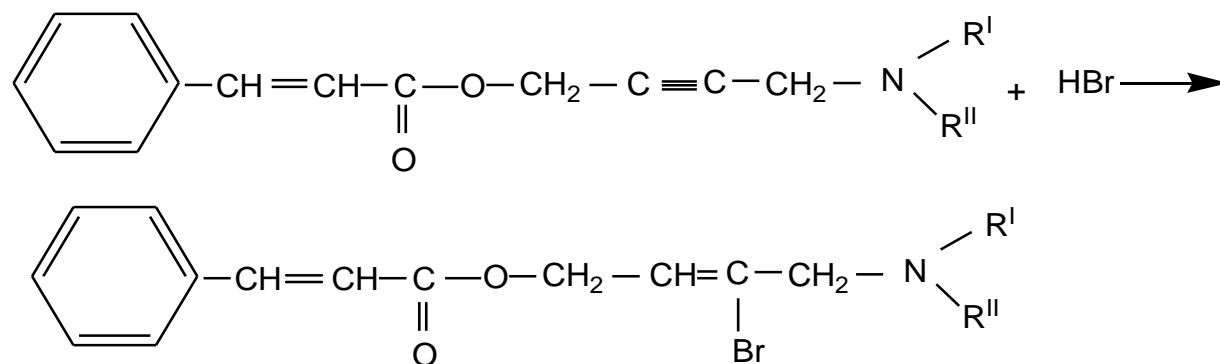


Confirming the data in the literature, we can find out that under the following scheme, the formation of bromides with high yields can go through not only the double bond, but also triple bond at the same time, the ether obtained under certain conditions and bromination of unsaturated aromatic acids are determined:



There: N (R<sub>2</sub>) secondary amines.

Comparison of IR spectra before and after bromination in the region of 1625-1660 cm<sup>-1</sup> showed that characteristic absorption line for C=C- bonding was lost. It should be noted that the brominated substance is a crystal in which the product is used as a liquid. 1,2-dibromophenylpropionic acid in the IR spectrum-[N-dialkylamino-(butin-2-il)]-ether-has no characteristic absorption line for C-bonding and for -C-1 in the CC-2220 region there is an absorption line. When analyzing the iq spectrum of the drug, there is no quality assimilation line for the -C=C- and -C-C-bonds, which allow double and triple carbon bonds of bromine or [4-N-dialkylamino-(butin)-2-yl]-cinnamic acid ether. The hydrobromination reaction is a four-chloride carbon solution is also selected under these conditions, only the carbon-triangular compound is hydrobrominated.



For instance, in the iR spectrum of cinnamic acid, there is no characteristic ansorption line for the -C bond, which confirms the hydrobromination of the drug in the mixture. The obtainedhydrobrominated product is a crystalline substance.

**Experimental part****4 [n-diethylamino -(butin-2)]-cinnamate**

14,1 g (0.1 mol) [4-N-diethylamino-(butin-2)]-ol-1 and 30 ml of pyridine were placed in a three-necked flask equipped with a stirrer, reverse coolant and dropper funnel. To cool and stir this mixture, 16,6 g (0.1 mol) of cinamic acid is added dropwise. The mixing lasted for more than half an hour, after which the mass was heated to 80°C in a water bath and diluted with water. The target product was released twice, with diethyl ether. The ether extracts were washed with water and NaHCO<sub>3</sub> solution, dried on anhydrous sodium sulfate. The solvent was lost under vacuum. Obtained from [4-N-diethylamino-(butin-2)] cinnamate, the product is difficult to distill in the copeer-like semi-liquid. Yield 21,64 g (80 % theoretical); R<sub>f</sub>=0,86 (system, petroleum ether-diethyl ether -4:6; Al<sub>2</sub>O<sub>3</sub> grade II activity).

S 75,07

N 7,45

N 5,01

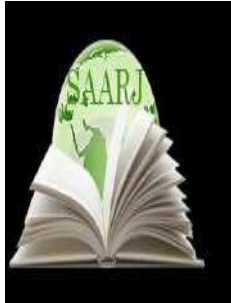
Found, %:	C 75,07	H 7,45	N 5,01
	75,03	7,56	4,96
Calculated for C <sub>17</sub> N <sub>2</sub> NO <sub>2</sub> %	C 75,27	H 7,75	N 5,16

**CONCLUSION**

The article illustrates given results of the investigation on acylation reactions of N-dialkylamino-(butin-2)-ol-1 and explained process by A<sub>N</sub> mechanism. Physico-chemical constants of the substance synthesized as well as the chemical structures of synthesized compounds by IR- and PMR methods.

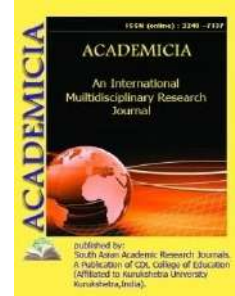
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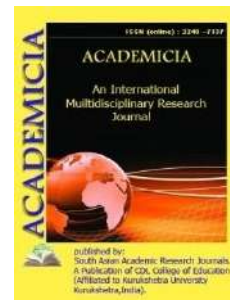
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DOI: **10.5958/2249-7137.2020.00553.4**

## BASIC REQUIREMENTS AND OPERATING MODES FOR POWER TRANSFORMERS

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### ABSTRACT

*Power transformers manufactured in the electrical engineering industry must be highly competitive in the world market in terms of reliability, economy, durability and other important aspects. The effect of the secondary coil MYuK I2w2 on the primary magnetic flux can be explained using the Lents rule. Definition of L e n t s rule: "In a closed conductive circuit (chain) connected by an alternating magnetic current, an EYuK is formed in such a direction that the current it generates and the mechanical forces associated with it are inversely proportional to the change in magnetic flux." Basic requirements for power transformers: Power transformers manufactured in the electrical engineering industry must be highly competitive in the world market in terms of reliability, economy, durability and other important aspects.*

**KEYWORDS:** *Magnetic Conductor, Coils, Load, Salt Operation And Short-Circuit Modes, Efficiency, Power Factor.*

### INTRODUCTION

Classification of transformers: Depending on the function they perform, transformers are divided into the following types: 1) power transformers;

2) Special transformers. Power transformers are divided into general-purpose and branch types, respectively.

A power transformer is a transformer that performs the function of changing (increasing or decreasing voltage) in electrical networks and equipment intended for the transmission, reception and use of electricity. This category includes three-phase transformers with a capacity of 6.3 kV • A and more, and single-phase transformers with a capacity of 5 kV • A and more. Transformers designed for connection to a power grid operating under normal conditions, or for direct supply to energy consumers that do not differ by special operating conditions, the nature of the load or

the mode of operation, are called general-purpose power transformers. Transformer motors according to the number of phases: single, three and multi-phase (branch); according to the number of coils - divided into two, three and multi-coil types.

### Methods:

If each phase of the transformer has three [high voltage (UC), medium voltage (EK) and low voltage (PK)] electrically unconnected windings, then it is called a three-phase transformer.

If the transformer has  $U_{1N} < U_{2N}$ , it is called a step-up transformer, and if  $U_{1N} > U_{2N}$  - a step-down transformer.

The reversibility of a transformer is that it can be used as a booster or a reducer, depending on which winding the transformer is fed to. Dimensions of power transformers and autotransformers depending on rated power and voltages are shown in Table 1.1.

Basic requirements for power transformers: Power transformers manufactured in the electrical engineering industry must be highly competitive in the world market in terms of reliability, economy, durability and other important aspects. Therefore, the following basic requirements are set for these transformers: a) cost-effectiveness in production and operation; b) reliability in use; c) waste does not exceed the standard; d) satisfaction of parallel connection conditions; e) not to overheat; f) allow voltage adjustment; g) the transformer must be able to withstand short-term overvoltage that occur for some reason during operation and much larger currents in a short-circuit short circuit.

#### 1.1 . Dimensions of power transformers and autotransformers

Overall numbers	Compliant with the standard set of power transformers and autotransformers Power and voltages	
	Rated power ( $S_N$ ), kV·A	Rated voltage ( $U_N$ ), kV
<b>I</b>	$S_N < 100$	$U_N \leq 35$
<b>II</b>	$100 \leq S_N < 1000$	$U_N \leq 35$
<b>III</b>	$1000 \leq S_N < 6300$	$U_N \leq 35$
<b>IV</b>	$S_N \leq 6300$	$U_N \leq 35$
<b>V</b>	$S_N < 32\,000$	$U_N \leq 110$
<b>VI</b>	$32\,000 \leq S_N < 80\,000$	$U_N \leq 330$
<b>VII</b>	$80\,000 \leq S_N < 200\,000$	$U_N \leq 330$
<b>VIII</b>	$S_N \leq 200\,000$	$U_N \leq 330$

**Nominal sizes of transformer:** Transformers are manufactured in accordance with the requirements of the standard and are designed to perform certain tasks of power conversion.

The operation of the transformer in these conditions is characterized by nominal sizes, which are indicated in the catalogs of electrical equipment and on the passport board attached to the transformer:

The total rated power of the transformer is indicated in V·A or kV·A:

a) For single-phase two coils –  $S_{1N} \leq U_{1N} \leq I_{1N}$ ; b) for three-phase two-coil –  $S_{1N} \leq U_{1N} I_{1N} = 3 U_{1N} \phi I_{1N} \phi$ .

Since the FIK in transformers is very large, the nominal powers of the primary ( $S_{1N}$ ) and secondary ( $S_{2N}$ ) windings in a two-phase transformer are approximately the same, i.e.,  $S_{1N} \approx S_{2N}$ .

Nominal voltage is the line voltage of each coil. For the rated voltage of the secondary winding,  $U_{2N} \approx U_{2(0)}$  ( $0$ ) is assumed. The rated currents of the transformer are the line values of windings 1 and 2, calculated on the power  $S_1 \approx S_2 \approx S_N$  and voltages ( $U_{1N}$  and  $U_{2N}$ ). In addition: 1) nominal frequency  $f_N$ ; 2) number of phases  $m$ ; 3) connection scheme and group of coils; 4) short-circuit voltage (%); 5) type of transformer; 6) standard number; 7) cooling method and some other information.

2. Due to the global trend towards high energy consumption, it is very important to reduce energy losses in distribution transformers, including the fleet of all electrical transformers.

Based on the technical characteristics of transformers from the world's leading manufacturers and changes in electricity prices, it was decided to develop and develop the production of energy-saving transformers TMG Kozlova new TMG12 series named OAO METZ.

These transformers have the lowest level of idle and short-term losses of all common voltage transformers in the CIS and are selected in accordance with the recommendations of the European Electrotechnical Committee (CENELEC). It also has a reduced volume adjustment. Thus, the transformers in this series are energy efficient and low noise.

Transformers manufactured by leading world manufacturers (Siemens, ABB Company) are these serial analogues.

In Western Europe, tenders for the purchase of transformers used the approach to calculate prices, taking into account the price loss during the long life of the transformer, these transformers also showed great interest in Belarus and the Russian (Moscow, Novosibirsk) enterprise.

Results:

Technical characteristics of these series transformers (serial production was mastered in 2009) - TMG12-100 / 10-U1 (HL1) TMG12-160 / 10-U1 (HL1) TMG12-250 / 10-U1 (HL1) TMG12-400/10-U1 (HL1) TMG12-630 / 10-U1 (HL1) and TMG12-1000 / 10-U1 (HL1) consumers take into account their value TMG12-1250 / 10-U1 (HL1), the relative size of the payback period TMG11 transformers at different load charts, taking into account the available electricity tariffs and tariffs, are given in the appendix.

Lower losses and noise are achieved with material placement technology, but the increase in transformer value (DSt) is thus quickly offset.

**For example, even for an average load of 0.7 days:**

- For 400 kVA power:

1. The price (about 19.6 thousand rubles, compared with a transformer TMG11) pays for itself in about 1 year.

2. Annual energy savings are 6.2 thousand kWh for 630 kVA power:



1. The difference in price (about 24.1 thousand rubles., Compared with a transformer TMG11) gives about 1.45 years.

2. Annual energy savings are 5.3 thousand kWh • for 1000 kVA voltage:

1. Price difference (about 34.9 thousand Russian rubles, TMG11 covers the cost of about 2.83 years compared to a transformer.

2. Annual energy savings of more than 3.9 thousand kWh.

Illustration -Russia sold about 400 kVA year 1200 transformers and 1900 kVA transformers 630 and 1000 transformers 1000 kVA. By purchasing TMG12 transformers instead of TMG11, the most important is almost \$ 21.4 million more than conservative estimates. It is possible to save kW / h. in.

Energy will be commensurate with the operation of more than 11 mini-facilities (365 days (260 kW mini-hydraulic capacity of full power operation per year) produces about 22.8 million kWh). However, their construction will cost about 10 x 520 thousand . U.S. \$ = \$ 5.2 million, required over the life of the service1.

1200 + 1900 to + 1000 TMG12 transformers + 1900 about 104 million.Gru + 1000 TMG11 transformers will have to pay more for 1200. ruble. (or \$ 3.6 million) more. This amount is more than 67 million annually. Ruble impact 1200+ 1900+ 1000 transformers will cover 1.55 years at the end of the payback period. Every year, during their service life (at least 25 years), they allow the national economy to save almost as much power on their products as the 10 mini-hydraulics mentioned above. And for this there are additional costs, allocation of land plots, etc. (as in the case of mini-hydro) is not required.

ese figures are more attractive with the average load of high-voltage transformers at prices that are much higher than the cost of electricity.

3. If a load (Zyu) is connected to the secondary winding of the transformer (when the switch “K” is connected in Fig. 1), under the influence of EYuK E2, a current I2 passes through this winding, creating MYuK I2w2. In addition to the opposite effect of this MYuK on the main magnetic flux, the power lines also generate a diffuse magnetic flux  $F \square 2$ , which is connected by non-magnetic paths only to these windings. The effect of the secondary coil MYuK I2w2 on the primary magnetic flux can be explained using the Lents rule.

Definition of L e n ts rule: "In a closed conductive circuit (chain) connected by an alternating magnetic current, an EYuK is formed in such a direction that the current it generates and the mechanical forces associated with it are inversely proportional to the change in magnetic flux."

Hence, if an active-inductive load is connected to the secondary winding, the reactive component I2r of the current flowing through it is reversed to the primary winding MYuK I0w1 of the transformer MYuK I2rw2, reducing the main magnetic flux F, while the active-capacitive load F1 tends to increase the magnetic flux.

A decrease in the resulting current at the active-inductive load leads to a decrease in the EYuK E1 in the primary noise. As a result, since the mains voltage  $U_1 \square U_{1N} \square \text{const}$ , the value of the current in the primary winding due to  $U_1 - E_1 = E$  increases from I0 to I1, ie until the

demagnetizing effect of the load current is fully compensated, and as a result the magnetic flux in the transformer approximately equal to the mat.

Thus, the magnetic flux  $F$  in a transformer connected to the load of the secondary winding is created by the combined action of the primary and secondary windings MYuK according to the law of total current, the geometric sum of their impact values is approximately equal to the primary winding MYuK  $I_0w_1$ :

$$I_1w_1 + I_2w_2 \approx I_0w_1. \quad (1)$$

This expression is called the MYuK equilibrium equation of the transformer. In this case:  $I_1w_1$  - MYuK, which occurs in the primary winding of the transformer to which the load is connected;  $I_2w_2$  is the MYuK formed in the secondary layer;  $I_0w_1$  is the MYuK of the salt-operated transformer primary winding.

We divide both sides of equation (1) by  $w_1$  and write the equation formed after defining  $I_2(w_2/w_1) \approx I_2'$  as follows:

$$I_1 \approx I_0 + (-I_2'). \quad (2)$$

**CONCLUSION:** This expression is the current equilibrium equation of the transformer.

From (2) the following conclusion follows: Since the current  $I_1$  of the primary winding of the transformer consists of the geometric sum of 2 currents: 1)  $I_0$  - in the primary conductor in the magnetic conductor forming MYuK  $I_0w_1$  Generates the main magnetic flux; 2)  $(-I_2')$  - due to the load current, the current in the primary winding increases to the same magnitude, and the  $(-I_2'w_1)$  MYuK generated by it in the primary winding compensates for the effect of the secondary winding MYuK  $I_2w_2$  according to Lents's rule.

To determine the maximum value of the resulting (main) magnetic flux  $F_{\max}$ , we use Ohm's law for magnetic chains:

$$\Phi_{\max} = (I_1w_1 + I_2w_2) / r_m. \quad (3)$$

This value of magnetic flux can also be determined from formula (3.3).

In this case, taking into account  $U_1 \approx E_1$  in (3.8), we obtain:

$$\Phi_{\max} \approx U_1 \approx (4,44 f w_1). \quad (4)$$

Therefore, one of the important properties of the transformer is that the voltage applied to the primary winding is  $U_1$  and its frequency  $f = \text{const}$ , the main current  $F$  in the magnetic conductor of the transformer does not depend on the value of the load connected to the secondary winding.

The equilibrium equations of EYuK and voltages for primary and secondary winding electrical circuits are represented by their acting values, respectively: In power transformers, the voltage drop across the primary winding at rated and close values of the load current ( $\Delta U_1 \approx I_1r_1 \approx I_1x_1$ ) does not exceed about 2-5 % of the rated voltage  $U_{1N}$ . Therefore, even in the mode where the load is connected to the transformer, in order to clarify the physical process, when we say  $\Delta U_1 \approx 0$ , we have  $\Delta U_1 \approx \Delta E_1$

Since the MYuK  $I_0w_1$  in the salt operation of the transformer is approximately 0,5-3,0 (i.e. very low) per cent of the MYuK  $I_1w_1$  when operating under normal load, it is possible to clarify

the physical meaning of the process if it is assumed to be  $I_0 w_1 \neq 0$  in Equation (4.1). In such a constraint, the currents in the coils, the MYuKs they generate, are directed in a mutually balanced way, i.e.  $I_2 \neq -I_1 (w_1 \neq w_2)$ , (6) from which the following ratio can be written:  $I_1 \neq I_2 \neq w_2 \neq w_1$ . (7)

It follows from (7) that the ratio of the currents in the Yuk and PK coils is inversely proportional to the ratio of the number of their windings.

Since the FIC of modern power transformers is large ( $\neq \neq 0,97 \neq 0,99$ ), the following ratios are obtained when the electric powers in the primary and secondary windings are equalized ( $I_1 U_1 \neq I_2 U_2$ ) in order to reveal the essence of the physical process for the load connected case:

$$I_1 \neq I_2 \neq U_2 \neq U_1, \quad (8)$$

That is, the currents in the transformer are inversely proportional to its voltage.

4. Given the high rate of deterioration of electrical equipment (60%) and the need for power supply predictable supply and further demand for energy transformers to increase reliability and energy saving, we advise you to choose TMG122.

**Comparative table of parameters for energy saving and environmental impact assessment of TMG11 and TMG12 series transformers:**

	Characteristics	TMG11-400 / 10-U1 (XL1)	TMG12-400/10-U1(XL1)
1	Power, kV • A	630	630
2	Salt processing power dissipation, kW	0,83	0,61
3	Short circuit power dissipation, kW	5,6	4,6
4	Noiselevel, dBA	70	61

	Characteristics	TMG11-630/10-U1(XL1)	TMG12-630/10-U1(XL1)
1	Power, kV • A	630	630
2	Salt processing power dissipation, kW	1,06	0,8
3	Short circuit power dissipation, kW	7,45	6,75
4	Noiselevel, dBA	70	61

	Characteristics	TMG11-1000/10-	TMG12-1000/10-
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		U1(XU1)	U1(XL1)
1	Power, kV • A	1000	1000
2	Salt processing power dissipation, kW	1,4	1,1
3	Short circuit power dissipation, kW	10,8	10,5
4	Noiselevel, dBA	73	64

To calculate the effect of other possible circuits leads to loss of base rolanting and short circuit. For information - every hour the loss (kW) is allocated to the transformer:

$$P = P_{xx} + \beta^2 \cdot P_{K3},$$

Where  $P_{xx}$  - operating losses, kW;  $R_{kz}$  - short circuit losses, kW;  $b$  is the load factor of the transformer.

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DOI: **10.5958/2249-7137.2020.00554.6**

## **BACK PAIN: EVIDENCE-BASED MEDICINE AND CLINICAL PRACTICE**

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### **ABSTRACT**

*Demographic risk factors for developing back pain include: age, gender, socio-economic status, and level of education. The first episode of back pain occurs more often in the third decade of life [1]. High incidence persists from the third to the sixth decade. Increased physical activity in young people may predispose to episodes of back pain.*

**KEYWORDS:** *Psychological Factors, Bone or Muscle Tissue, Neuropathic Pain Syndrome.*

### **INTRODUCTION**

Among the elderly, back pain is more often registered in women, which may be due to the greater prevalence of spinal osteoporosis. It is also important that women more often than men seek medical help, including for back pain, and more often resort to temporary work stoppages.

### **Methods and results**

Lower social status and level of education are statistically associated with higher disability in back pain. Obesity (body mass index > 30) is an independent risk factor for back pain [1]. Back pain is more common in smokers, but it is not known what increases the frequency of episodes of back pain in these cases-Smoking itself or related conditions (for example, frequent coughing).

There is evidence that certain sports (rowing and skiing) increase the incidence of back pain [1].

A significant relationship between psychological factors, such as stress, anxiety, depression, passive strategies for coping with pain, pain-related fear, and the occurrence of back pain, is shown to be independent of other factors. Psychological factors contribute more to the development of disability associated with back pain than biomechanical disorders of the spine and limb joints [3].

Back pain can be classified by duration, nature of the course, localization, the leading pathophysiological mechanism involved in its formation, and the causes that cause it.

Pain lasting less than 6 weeks is considered acute, from 6 to 12 weeks - sub acute, and more than 12 weeks - chronic. Patients with acute, sub-acute and chronic back pain differ in their prognosis for recovery and recovery, as well as in their approaches to diagnosis and treatment.

Ya.Yu. Popeliansky (1997) also proposed to distinguish the stages of the disease: exacerbation and remission (complete and incomplete); stages of exacerbation - progression, stationary stage and regression; as well as the types of disease course:

- 1) Episodic (single exacerbations of back pain during life);
- 2) Chronically recurrent with rare exacerbations (no more than one exacerbation per year and no more than 2 weeks of disability);
- 3) Chronically recurrent with frequent and/or longer exacerbations;
- 4) recurrent-progredient (no remissions and a tendency to worsen;
- 5) Permanent (chronic course with periodic deterioration).

It is usually acute, corresponding to the degree of tissue damage and the duration of the damaging factors. Nociceptive pain syndromes occur as a result of activation of nociceptors in trauma, inflammation, ischemia, and excessive tissue stretching. Examples are pain with inflammation of the joints of the spine. In the case of involvement in the pathological process of bone or muscle tissue, there is a feeling of dull, aching pain. This pain increases with movement, weakens at rest, and is usually well localized [1].

Pain that is a direct consequence of a disease or damage to the somato sensory system is called neuropathic [4]. It is often chronic, persists or appears after tissue healing, and does not have a protective function in the case of infection.

Acute neuropathic pain in the neck and back is usually associated with damage to the roots during the formation of a herniated disc. It can occur with spinal canal stenosis, spondylolisthesis, compression of spinal nerve roots by osteophytes and hypertrophied facet joints. As a rule, the pain radiates to the extremities and is accompanied by other symptoms of damage to the roots. In some cases, differential diagnosis should be made with neurons and other tumors involving spinal nerve roots. In all diagnostically questionable cases, neuroimaging is necessary. Neuropathic pain syndromes are usually accompanied by changes in surface sensitivity. It is characterized by the presence of motor disorders and changes in tendon reflexes; the formation of trophic disorders is possible. In some cases, symptoms of tension are detected.

Psychogenic back pain is usually chronic and "pure" is rare. It is extremely difficult to diagnose, because if the patient has mental disorders, it is possible that there are musculoskeletal and other neurological disorders that can cause the patient's existing symptoms.

The pain syndrome in compression radiculopathy is usually mixed. Neuropathic pain is associated with damage to the root due to its compression, edema, ischemia, and the formation of intraneural inflammation. The nociceptive mechanism participates in the formation of pain by activating nociceptors in the damaged disk and surrounding tissues containing free nerve endings (primarily in the roots and Dura mater themselves), when initiating immune inflammation in



response to damage to the disk, as well as an inflammatory reaction associated with the direct impact of enzymes contained in the disk on the surrounding tissues.

Back pain is a symptom, not a nosological form. Therefore, when classifying it, anatomical and topographical terms are often used that do not reflect the essence of the pathological process, but denote the area where pain is localized. So, local pain in the neck is designated as cervicalgia, in the thoracic spine-thoracalgia, in the lumbosacral region-lumbalgia. For pain radiating from the cervical spine to the arm, the term cervicobrachialgia is applied, to the occipital or other area of the head - cervico-cranialgia, and pain spreading from the lumbosacral region to the leg-lumboischialgia. In the literature, these terms are primarily understood as musculoskeletal pain syndromes, i.e. conditions in which the sources of pain may be muscles, joints, and ligaments. Pain associated with damage to the cervical, thoracic, lumbar or sacral roots is described as part of radiculopathy.

Despite the considerable variety of descriptions of pain by different patients, it is important to actively identify characteristics that suggest a pathophysiological mechanism underlying the formation of pain sensation. Thus, the presence of acute, clearly localized pain that quickly regresses against the background of taking analgesics, not accompanied by a change in surface sensitivity is characteristic of nociceptive (somatogenic) pain syndromes associated, for example, with damage to the joints of the spine, ligamentous apparatus and muscles. The occurrence of shooting, burning, poorly localized pain, accompanied by a change in sensitivity in the area of innervation of the damaged posterior root, is characteristic of neuropathic pain syndrome associated with compression or inflammatory radiculopathy. Often in this case, even when asking the patient, you can identify symptoms of sensitive disorders: allodynia (pain that occurs when exposed to a non-painful stimulus), paresthesia (non - painful spontaneous sensations-crawling goosebumps, etc.) and dysesthesia (unpleasant spontaneous or induced sensations). Damage to the anterior root or spinal nerve causes motor and, sometimes, vegetative disorders (changes in sweating, skin temperature, etc.).

However, even at the first examination of the patient, it is important to identify symptoms that indicate that back pain may be a symptom of a more serious, usually somatic, pathology. Thus, it is necessary to pay attention to the presence of fever, local soreness and local temperature increase in the paravertebral region, which are characteristic of infectious lesions of the spine. Its risk is increased in patients receiving immunosuppressive therapy, infusions, HIV infection and drug addiction. The presence of a tumor (primary or metastatic) may indicate a causeless decrease in body weight, a malignancy of any localization in the anamnesis, the preservation of pain at rest and at night, as well as the age of the patient over 50 years. Compression fracture of the spine is more common in cases of injuries, osteoporosis (fairly long-term use of corticosteroids and in patients older than 50 years). Inflammatory spondyloarthropathy can be suspected in the presence of concomitant uveitis and arthralgias of other localization (including in the anamnesis).

During neurological examination, it is necessary to clarify the presence and nature of motor disorders, sensory and trophic disorders, changes in tendon reflexes. When the cervical, thoracic, lumbar and sacral roots are affected, along with "positive" sensory disorders in the form of pain, alopecia, paresthesia and dysesthesia, it is necessary to identify "negative" sensory symptoms (hypesthesia, anesthesia of certain types of sensitivity: tactile, pain, temperature, vibration or

articular-muscular). Both sensitive and motor and vegetative disorders are localized in the zone of innervation of the affected root. It is extremely important to identify symptoms of damage to the roots of the horse's tail in patients with pain in the lumbar spine, which include impaired sensitivity (anesthesia) in the anogenital area and distal parts of the legs, peripheral paresis of the leg muscles, loss of Achilles reflexes and pelvic disorders in the form of lack of urge to urinate/defecate, delay or incontinence of urine and feces. Musculoskeletal pain syndromes are not characterized by any changes in the neurological status of the patient [2].

In lumbosacral syndromes the clinical significance is the determination of the angle of elevation straight leg (Laseg's symptom). Compression radiculopathy is characterized by its restriction from 30 ° to 50 °, pain radiating from the lumbar-sacral region along the posterior-outer surface of the leg to the toes and its strengthening with the back flexion of the foot and the tilt of the head forward. It should be noted that a positive Lasega symptom should not be interpreted solely as a result of "tension" of the root or nerve trunks. The most common causes of its appearance is the stretching of the posterior group of muscles of the hip and gluteal muscles, especially if they are determined by myofascial pain syndrome. In cases of pain in the buttocks and sacrum that occurs when checking the Lasega symptom, the mechanism that explains its formation can be the stretching of the capsule of the blocked sacroiliac joint and the subsequent reflex tension of the muscles of the lumbosacral region [1, 2].

## CONCLUSION

Somatic examination is aimed at excluding visceral pathology as the cause of back and limb pain. It includes the detection of causeless weight loss, fever, changes in skin color, palpation of the abdominal and pelvic organs, auscultation of the heart and lungs. Patients with pain in the pelvic and sacral region you need to conduct a rectal examination to rule out gynecologic or urologic pathology. In all cases of suspicion of a visceral source of pain, the patient should be referred for consultation to the appropriate specialist (urologist, proctologist, gynecologist, cardiologist).

In the vast majority of cases, acute and chronic back pain is a "benign" condition, and most patients do not need to conduct additional instrumental studies. However, the presence of severe neurological and somatic disorders may require urgent paraclinical examination.

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DOI: **10.5958/2249-7137.2020.00555.8**

## SYNTHESIS OF ESSENTIAL OILS BASED ON LOCAL RAW MATERIALS

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### ABSTRACT

*Essential oil raw materials are one of the types of medicinal, food and technical raw materials. Sources of raw materials of natural origin are also living organisms. Their biological diversity includes at least 2 million species of Pro - and eukaryotes. However, currently, according to various estimates, only about 35,000-70,000 species are used by humans. Moreover, the main share is made up of higher plants. For example, among 300 thousand species of world flora, only 3000 plants are used in folk medicine in Uzbekistan.*

**KEYWORDS:** *Biological Activity, National Experience, Synthesize, Chemical*

### INTRODUCTION

A number of countries use cyan bacteria (blue-green algae) biomass from prokaryotes. Flat spirulina-an object of mass culture is widely used in the production of biologically active food additives. In addition to antibiotics, actinomycetaceae produce some enzymes and vitamins. Many representatives of true gram-positive bacteria are used for the production of antibiotics, a number of enzymes, etc.

Evernia lichens are used to produce aromatic products like resinoids, such as the "oak moss" resinoid. "Oak moss" refers to a low-tonnage type of raw material. The production of resinoid in the world is constantly decreasing. In particular, in Russia, compared to the end of the 20th century, it has decreased three times. The reason for this is that the resources of the lichen in the available areas were quickly exhausted. Due to the growing demand for this natural product, there is an increasing interest in alternative sources of its production, namely with the use of biotechnologies.

In this regard, raw materials obtained by biotechnological methods in Uzbekistan (by culturing cells, tissues and organs) are becoming increasingly important. Substances produced by plant and animal cells are used in medicine, the perfume industry, crop production and other industries. Among them are alkaloids, terpenoids, glycosides, polyphenols, polysaccharides, essential oils, pigments, anti-carcinogens (ptotecin, harringtonin), peptides (phytovirus inhibitors). Currently, in different countries, about one hundred species of plants are used in the biosynthetic industry to produce economically important substances.

Currently, more than 20 thousand plant species have already been studied for their phytoncidal and aromatic properties. Species that actively secrete aroma-forming biologically active compounds, stimulate or inhibit the development of beneficial and harmful micro-organisms, etc. have been identified. However, scientific and technological progress has become not only the cause of many environmental problems of humanity, but also an incentive for the development of a whole range of technologies that can solve or eliminate these problems.

**Methods and results:** Biotechnological raw materials are an unconventional source of flavor-forming compounds. Specific features of essential oil plants, their complex and diverse chemical composition, largely depend not only on the taxonomic affiliation, but also on the areas of their cultivation, terms and methods of cleaning, drying and storage of raw materials. The possibility of practical use of new species can be established by comprehensive research. It should be noted that additional studies, it would seem, fully understood and long used ether-containing plants, sometimes able to identify new aspects of their biological activity.

The identification of promising sources of complex raw materials includes the following aspects: the search for new useful organisms based on screening studies, as well as national experience and foreign production; the study of the dynamics of accumulation of active substances in ontogenesis, that is, depending on the phase of development and age of the organism; the cultivation of introduced species and the development of recommendations for the rational use of raw materials; conducting biotechnological research both to obtain biomass and biologically active compounds from particularly valuable or promising species, and to obtain and reproduce new forms; solving the problem of integrated use of the producer or raw materials based on resource-saving technologies; developing raw material quality indicators necessary for inclusion in the relevant regulatory documentation; improving applied methodological issues.

Among the studied representatives of the Kingdom of Bacteria, types Firmicutes, Proteobacteria, Actinobacteria, 4 main groups of microorganisms can be identified, depending on the direction of the smell of the synthesized class of compounds. The first group includes rod-shaped bacteria of the types Firmicutes and Actinobacteria, which are producers of pyrazines that cause the smell of fried food. The second group includes gram-positive globular and rod-shaped bacteria of the Firmicutes type, of the order Lactobacillales, which are able to synthesize ketones, esters, aldehydes, and protozoan acyloins that have an oily-creamy smell. The third group consists of more diverse in relation to the taxonomic position of microorganisms that produce alcohols and esters with a fruit flavor (table 1). Streptomycetes that synthesize geosmin and a number of other substances that have an earthy smell make up the last, fourth, group of producers.

Kind of microorganisms	Taxonomic position	Synthesized volatile compounds	
<i>Clostridium acetobutlicum</i>	Bacteria, Firmicutes, Clostridiales, Clostridiaceae	butylbutyrate	fruit, pineapple
<i>Erwinia carotovora</i> (syn. <i>Erwinia arrocepitae</i> , <i>Pectobacterium carotovorum</i> )	Bacteria, Proteobacteria, Enterobacteriales, Enterobacteriaceae	aliphatic esters, 3-methylbutyl acetate, isobutyl acetate, methionol, methionol acetate, Isobutanol, 2-phenyl-ethanol, tryptophol	banana
<i>Pseudomonas aeruginosa</i>	Bacteria, Proteobacteria, Pseudomonadales, Pseudomonada-ceae	2-aminoacyl-a none	like grapes, sweet, fragrant, like Jasmine
<i>Pseudomonas fragi</i>	Bacteria, Proteobacteria, Pseudomonadales, Pseudomonada-ceae	ethylbutyrate, ethyliso-valerate, ethyl-3-methylbutyrate, ethylhexanoate, ethylcrotonate, ethyl-2-methylhexanoate	pineapple, fruit, strawberry
<i>Scenedesmus incrassatulus</i>	Plantae, Chlorophyta, Chlorophyceae, Scenedesmaceae	isoprenylated, fitol, ferragina, benzalconium, butandiol	flower balsamic

It should be noted that for the industrial isolation of volatile aromatic compounds, the lowest value is represented by microorganisms belonging to the second group, since these substances determine the organoleptic characteristics of fermented milk products. Therefore, their extraction can reduce the quality of the final product. But finding out the ways and mechanisms of synthesis of compounds with an oily-creamy smell and the influence of external conditions on these processes is important for improving the production of dairy products in order to improve their organoleptic properties [2]. As for the third group of bacteria, as a rule, the fruit flavor is provided by the synthesis of 2-5 components (*Erwinia carotovora*), the production of which is not difficult by chemical means and provides a higher yield.

Microalgae are also of particular interest for obtaining essential oils. Comparative analysis of cultures of blue-green (cyanobacteria), green and red algae belonging to the genera *Calothrix*, *Cylindrospermum*, *Anabaena*, *Nostoc*, *Spirulina*, *Chlorella*, *Cyanidium*, showed that the amount of volatile aromatic substances synthesized by them is at the level of 3 mg per liter of culture fluid [3]. However, the use of biomass of *Chlorella vulgaris*, *Spirulina platensis* and other



microalgae is promising for obtaining alcohol extracts of the type of oak moss resinoid, which is part of perfumes as a smell fixator, as well as an independent pigmented aromatic origin.

In addition, many micromycetes are able to synthesize such fragrant substances with a fruit smell, which belong not only to the class of esters, as in the case of bacteria, but also to chemically more complex compounds – lactones. Despite the fact that lactones are also produced by the chemical industry, the use of microorganisms has a number of advantages over chemical synthesis. This applies to obtaining optically active compounds. *Trichoderma viride* is able to generate a strong coconut flavor when growing on a simple nutrient medium. The pleasant smell is mainly due to the synthesis of 6-pentyl-2-pyrone in the amount of 170 mg per liter of culture liquid. The chemical synthesis of this compound requires 7 steps. Peach flavor can be obtained by using the culture of *Sporobolomyces odoratus*, the producer of 4-decalactone

Fungi, mostly basidiomycetes, are producers of volatile scented substances with a "mushroom" smell, which is caused by aliphatic 8-carbon compounds (for example, 1-octen-1-ol, 1-octen-3-one, 1-octen-3-ol, 3-octanol), some pyrazines and pyrroles. Thus, in deep cultivation, they can be used in food production to produce natural flavorings with a mushroom smell [2].

The species of the genera *Ceratocystis*, *Trichoderma*, *Eremothecium*, *Pichia*, and *Saccharomyces* are of the greatest interest for obtaining essential oil [52, 56, 59]. The level of accumulation of flavor-forming compounds synthesized by fungi varies significantly from hundreds of micrograms (*C. populina*) to hundreds of milligrams (*C. variispora*, *C. moniliformis*, *E. asbyi*, *T. viride* in a liter of culture liquid [2]. Moreover, the best indicators for the maximum level of accumulation of flavor-forming compounds by the time of fermentation were found in Ascomycetes *Ceratocystis* sp., *Eremothecium* sp. For Example, *C. variispora* is able to synthesize up to 1 g of essential oil per liter of culture liquid on day 5 of cultivation, while basidiomycete cultures: *Bjerkander aadusta* – 30 mg on day 24, *Lepista irina* – 3-81 mg on day 28, *Lentinus lepideus* – 100 mg on week 15.

Thus, representatives of the microcosm are able to synthesize a wide range of chemical compounds that have different directions of smell: woody, fruit, floral, buttery-creamy, earthy, etc. The established variety of aroma-forming microorganisms emphasizes their important role as alternative sources of essential oils and individual volatile scented compounds. At the same time, it indicates the need for further chemosystematics study of biobjects, as well as the development and implementation of their biotechnologies in the industrial production of natural aromatic products.

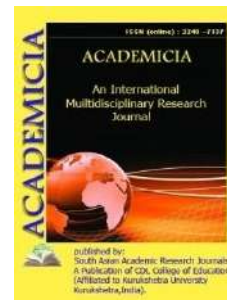
**CONCLUSION:** However, the biotechnology of rose essential oil that meets international standards has not yet been developed. It was found that the oil content in the rose cell culture is much lower than in intact petals, and the composition of extracted oils differs from the rose oil of plants [2]. In the 80-90-ies of the last century, the possibility of obtaining natural scented substances using microbial cultures was shown in Uzbekistan. Among the studied representatives of the microcosm, we can distinguish a group of producers of alcohols and esters with the smell of roses, including different taxa of organisms.

Scientific and technical justification of technologies in Uzbekistan for microbial synthesis of aroma products using new types of essential oil biotechnological raw materials suggests that potential consumers of oil can be small, medium and large enterprises of the perfume and cosmetic, pharmaceutical and food industries.



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DOI: **10.5958/2249-7137.2020.00556.X**

## METHODS OF USING INFORMATION TECHNOLOGIES IN THE FORMATION OF STUDENTS ' KNOWLEDGE AND SKILLS

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### ABSTRACT

*Radical changes taking place in all spheres of public life in our country, including the transition to market regulation of economic relations, make it necessary to correct the social order of education as a whole. The process of adapting this order in the leading components of educational activities puts forward new and actualizes existing problems related to improving the quality of training of graduates of various educational institutions, since the future is determined by the development of the intellectual potential of society.*

**KEYWORDS:** *Technology Of Learning, Educational Institutions, The Development Of A New Personality*

### INTRODUCTION

In a number of documents, as well as in the materials of numerous studies, priority directions for the development of the modern education system are clearly formulated, one of which is the development of an applied theory of learning, which, in our opinion, can be the technology of learning.

**Methods and results:** Scientific and technological progress, information and computer revolutions, the formation of the industry of ideas and knowledge, the development of new technologies, and the economic crisis in the country dictate new tasks for education. More and more, the basis of training is activity, the ability to rebuild it, and finally personal qualities that determine not only the professional characteristics of a person, but also the way of life, the level of his culture, and intellectual development. This means that pedagogical technologies should focus not so much on the transfer of knowledge, but on the formation of personal qualities of students.

The works of these and other authors allow us to conclude that there is a lack of conceptual development of the theory of using the latest information technologies in the educational process, which does not correspond to the objective need of practice to realize the training, developing and educating potential of modern information and communication technologies in training. It follows that the need to develop psychological and pedagogical foundations for designing the educational process based on the latest computer technologies for training economists is predetermined by a number of contradictions:

- The contradiction between the existing views on the learning process and modern social requirements for professional educational development of society in the conditions of the qualitative revolution;
- Between the increased requirements for economic specialists and the unsolved problem of achieving a guaranteed level of quality of knowledge of graduates of relevant educational institutions;
- Between the current systems of education, this forms a fragmented consciousness, and the new model of sustainable development of mankind;
- Between the rapid growth of information technologies and the real training of specialists in their use.

Today, we need not just educated people, but individuals who are intellectually developed, progressive-minded, oriented in complex problems, which understand and take into account the laws of development of society and the environment. But, according to psychologists, the formation of personality is possible only in the process of activity. So it is the educational activity that can serve as the basis for the development of a new personality. The task of the teacher is to design such educational activities that would make it possible to reveal and realize the potential of each student.

To achieve the goal of the study and test the hypothesis, it was necessary to solve the following tasks:

1. Analyze the psychological and pedagogical literature on the problem and identify the leading trends and principles of formation of readiness of students of economic profile for professional activity based on information technology.
2. to Develop the qualification structure of the personal potential, to determine the ways of forming the most important qualities of the student's personality and to develop a model for preparing students of economic profile to use computer technologies in practical activities.
3. Based on the developed model, design a pedagogical technology for the formation of professionally important skills in the use of computer telecommunications for graduates.
4. Conduct experimental testing of the designed training technology and determine the conditions for its didactic effectiveness.

Methodological basis of research is the dialectical method of cognition as the basis of scientific pedagogy; statements of philosophy on intrinsic value of knowledge; the concept of entity activities, which transforms personality, develops its capacity; the theory of systemic-integrated and personal - activity approaches to the study of pedagogical phenomena; ideas about the

formation of personality, the formation of professional communication theory and practice; education and human.

Research methods are based on theoretical and practical approaches: the study of philosophical and psychological-pedagogical literature, the study of mass and advanced experience, analysis and synthesis of theoretical generalization of research results, modeling of didactic theory, comparison and interpretation of new facts and specific manifestations of the object of research, abstraction, questioning, testing, observation, pedagogical experiment and statistical methods of data processing.

As a result of the research:

- developed a pedagogical system for developing the skills of using information computer technologies for students as part of the professional training of economic specialists;
- developed a four-level model for the formation of professionally important abilities and identified structural and functional components of the system of using computer technologies for students of orientation for the development of abilities;
- an analytical model of criteria for students ' readiness to use computer technologies based on the block-component structure of personal potential has been developed. This model represents a transition from the usual descriptive structures expressed by a set of socially significant qualities to a complete and compact form of the integral scale of its study;
- on the basis of the developed model, a divergent-modular technology of end-to-end design has been created, which provides for a consistent, systematic, continuous formation of abilities to use information technologies in the economy, as well as the transformation of these abilities into practical readiness for use in future professional activities.

The theoretical significance of the study is that:

- 1) a mechanism has been developed for the formation of a professionally significant quality of a provayderism-as a personal potential that expresses a specialist's readiness to implement information technologies in professional activities;
- 2) An algorithm for designing divergent-modular learning technologies for the cycle of information disciplines has been developed.

Prepared and published a methodological guide for teachers on the subject of «Informatics and programming", guidelines on the use of computer technology and information technology for teachers of secondary professional educational institutions on the practice of "Solving economic problems on a PC". Modular courses on subjects have been developed: " Informatics and programming", " Introduction to ACS»; module block "MS-DOS Operating system" with a set of laboratory and practical works, tests for Express control, selected by the Department of education of Togliatti for implementation in the educational process

The reliability and validity of the research results achieved by the logical structure of scientific research activities; an integrated methodology adequate to the subject and objectives of the research: conducting pedagogical research in unity with practical activities and orientation to it; the comparison of study results with results of other authors; the representativeness of the sample

(30%), wide use of methods of mathematical statistics and many years of personal experience of the researcher.

The main pedagogical conditions of the work are: the implementation in the educational process of the developed model the use of information technology College for the formation of professionally significant qualities of students, taking into account the dynamics of the labor market requirements and demands of the individual, and based on the extensive and intensive use of computer and telecommunication means into the teaching process; the ranking of activities in which the use of computer means of teaching must be appropriate and acceptable; requirements for initial computer training of students that ensure the personal development of a specialist.

The proposed methodology of independent work of students with the use of information technologies that affect the formation of professionally significant qualities of the student's personality and ensure high quality of training of future specialists by increasing the effectiveness of practical classes as a result of independent work of students is experimentally tested. This allows you to increase the volume of practical professional training due to an adequate selection of information technologies.

The methodological basis of the research is the dialectical-materialistic theory of knowledge, psychology of professionalism, pedagogical psychology, optimization of the educational process, pedagogy of cooperation, theory of problem learning, and private methods.

The novelty of the research is that a model of using information technologies in the educational process for the formation of professionally significant qualities of students has been developed. The role and responsibilities of the teacher and student when performing independent work based on the use of information technologies are identified.

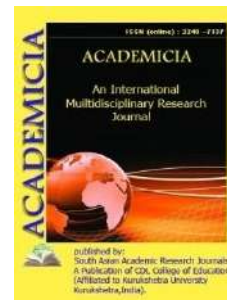
**CONCLUSION:** The scientific research consists in the fact that it substantiates a multi-level continuous system of development of skills of using information computer technologies as an integral part of professional training of specialists in the formation of information literacy; a three-level model for the formation of professionally important abilities was developed and the structural and functional components of the information technology use system for students were identified. An analytical model of criteria for the formation of information literacy and readiness of students to use information technologies based on a block-component structure of personal potential was developed. , continuous development of information literacy as follows: information literacy work; information literacy techniques; information literacy Junior engineer, ability to apply information technology in production and its transformation into a practical willingness to use in future professional activities.

The theoretical significance of the research lies in the fact that the developed algorithm for designing cascading technology for improving the qualification level of teachers in the field of information technology can be used to improve the quality of education in all educational institutions.

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DOI: **10.5958/2249-7137.2020.00557.1**

## APPLICATION OF BIONIC OR PLASTIC ARCHITECTURAL STYLES IN ARCHITECTURE OF UZBEKISTAN AND OTHER COUNTRIES

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### ABSTRACT

*Bionic, or organic architecture is addressed to a person, the internal space of such a building has a positive effect on the well-being, mood of a person, reveals his creative abilities. In modern large cities, there is an aggressive visual environment, which is created by the same type of rectangular buildings with smooth surfaces, with monotonous gray shades. This environment suppresses a person with its monotony. The architecture of bionic structures, on the contrary, is diverse, it lacks straight lines and angles, and it is a natural extension of nature itself [2].*

**KEYWORDS:** *Construction, Stylistic Repetition, Special Breathable Plastic Material, Extensive Experience*

### INTRODUCTION

The very concept of bionics arose in the early twentieth century. Educational literature on architecture defines bionics as a science on the border between technology and biology, solving problems of an engineering nature, based on the analysis of the life and structure of organisms. This is based on the biological relationship between humans and wildlife [3]. A clear example of the bionic style can be considered the idea of an aircraft with mobile wings like birds, belonging to Leonardo da Vinci. The founder of the use of natural forms in construction was Antonio Gaudi [4].

A bio architect from Mexico named Javier Senosian, looking at nature from an engineering angle, strives for a stylistic repetition of organic forms in the structures of his buildings. The main principle of bionic architecture is that the functional space should be a continuation of the laws of nature.

The bionic building, more like a snail shell, opened to the world in 2006 in the city of Naucalpan de Juarez. The house literally breathes its streamlining, and the furniture protruding from the walls is framed by live plants. If you climb the stairs, you can look at the street through the colored inserts of a huge window. The further you go, the more likely you will believe that the shell of a Nautilus is a fairly convenient structure to live in [5].

Structural systems of living organisms are formed on the principle of saving materials and ensuring the reliability of the structure in Uzbekistan. A typical example of this trend is the complete analogy between modern high-rise structures and the stems of cereals, which, as we know, are able to withstand heavy loads and do not break under the weight of the inflorescence. Morphological studies have shown that their structure is similar to the design of modern high-rise factory pipes - both structures are hollow. Sclerenchyma strands of the stem play the role of the longitudinal reinforcement.

When building a pile Foundation, it is planned to use an aluminum "accordion", which is based on the ground and barely buried in it, where the "root system" of the building during construction will increase as the height increases in Tashkent. The outside of the tower will be covered with a special breathable plastic material that mimics the skin or bark of a tree and minimizes the vibrations of the upper floors.

Studying bionic principles applied to modern architecture and materials, M. R. Server and H. Pioz came to the conclusion that there are no structures made of homogeneous materials in nature. In this regard, if you look at a tree more closely, for example, you will find that it does not consist of a single monolith and changes as it grows. The outer layers are denser than the inner ones. The branches of the earth have a different structure than the upper ones, and the root system is constantly changing. According to the authors of the project, the mechanism of growth of the structure, or, more precisely, the climb, was borrowed by them from the cypress, a tree that has exceptional, if not unique properties of stability and strength. Despite the fact that the root system of the cypress is only 500 mm deep, it is incredibly branched and resembles a sponge in its structure. With each new millimeter of the trunk, a new root process appears, moving slightly away from the existing one. The foliage of the cypress consists of small scaly membranes, through which the wind of any force passes.

Bionic urbanism, represented by the names of these architects, stands out today as an independent part of architectural bionics, since it operates with the features of using the laws of nature not only in the field of urban planning, but also in broader areas of spatial and territorial development of Uzbekistan, because the construction of buildings within the framework of certain bionic concepts allows not only to create harmony with the environment, but also, in fact, to open a new quality of life.

As a natural consequence, it is the bionic approach in architecture that is currently one of the most popular architectural trends in the world, based on the most organic and natural conditions for human life.

There are many examples of bionic architecture in the world architecture. For example:

- The Eiffel tower in Paris (repeats the shape of the tibia);
- The swallow's nest stadium in Beijing (the external metal structure follows the shape of a bird's nest);

- Aqua skyscraper in Chicago (looks like a stream of falling water, and the shape of the building resembles the folded structure of calcareous deposits on the banks of the Great Lakes);
- Residential building "Nautilus" or "shell" in Naucalpan (its design is taken from a natural structure-a clam shell)
- Opera house in Sydney (mimics the opening of Lotus petals on the water);
- Swimming complex in Beijing (the facade design consists of "water bubbles", repeats the crystal lattice and allows you to accumulate solar energy used for the needs of the building);
- National Opera house in Beijing (simulates a drop of water);
- London city hall in the shape of an egg and etc.

Bionic architecture, on the other hand, is an extension of nature. It is likely that its role will increase in the future.

In our opinion, it is promising to build both private homes and public buildings in the bionic style.

For example, in Crimea, you could build a cafe that has the shape of a whale swimming in a large aquarium. In the open mouth of the whale is the entrance to the cafe. The building has a metal frame.

The modern construction market offers architects and designers a wide range of materials, which is regularly updated with more and more new quality types of construction products. A special place among them is taken by glass.

Glass has a rich history and extensive experience in construction. In the Arsenal of a modern architect, glass is one of the main building materials. At the dawn of the new architecture, glass-the material of the industrial age-was chosen to embody bold architectural ideas in structures that influenced its subsequent development. [1]

Over the past two centuries, glass has acquired unique qualities that have allowed it to become a leading building material - both eco-friendly and practical. Technical progress in the glass industry led to the invention of sheet glass at the end of the XVII century, the appearance of which completely changed the attitude to its usual properties.

On stationary buildings, translucent facades were used for the first time in the world in the Soviet Union, where the era of constructivism flourished at that time, including in architecture.

Soviet constructivist architects saw as their main task the denial of historical continuity in Uzbekistan, the rejection of decorative elements of classical styles and the use of a functional scheme as the basis of spatial composition. Architects of the heyday of constructivism in the Uzbekistan also believed that expressiveness is not in the decor, but in the dynamics of simple structures, verticals and horizontals of the structure. The leading material used in constructivist architecture, along with concrete and metal, was glass.

In the ideas of Soviet modernists and constructivists, glass was primarily an expression of the concept of freedom: free from unnecessary details of the facade, free planning-a universal space. At the beginning of the twentieth century, frame metal structures appeared in construction, which

allowed freeing the tectonics of the wall from its main function – the carrier, and then the masters of that time immediately adopted this idea. [2]

The use of glass in the architecture of such buildings was most often limited to the use of window and balcony structures in the grid, or the glazing of loggias on the facades of buildings. The problem of aesthetic diversity of residential buildings in this case was not solved, as well as social and architectural and artistic issues of forming a comfortable home in the unfavorable conditions of large industrial cities were overlooked.

In the era of constructivism in the Uzbekistan, most often multi-storey residential buildings were interpreted only as a certain sum of individual cells-apartments, and not a complex, multifunctional, forming the environment and fabric of the building structure, which it has always been and will be.

Only the rejection of mass-produced, standard housing and a return to its specific design and construction, taking into account regional specifics, will allow us to make a real step into the future – to urban housing architecture, in which the synthesis of targeting and industrial methods of construction will give the necessary aesthetic harmony – and individual buildings, and residential development as a whole.

Modern architecture of glass shells has stepped far ahead and is no longer limited to the brevity and simplicity of forms. It has passed the stage of strict straight planes and volumes. Today, this is a variety of buildings with different color solutions, characterized by an unusual solution of translucent building structures. The expressiveness and aesthetics of translucent facades are emphasized by additional structural elements – solar panels, sun protection devices, natural ventilation supply valves. A peculiar night effect makes these buildings a decoration of night streets. It is created by additional internal lighting. Buildings with glass walls look spectacular both day and night. In modern urban development, they, in addition to a great visual effect, create a specific unique appearance of any city of Uzbekistan.

Glass allows you to create unique buildings and structures that have no analogues in the world history of architecture.

Positive results of architects' experiments with glass led to an increasing use of this material in architecture, which allowed us to speak about the appearance of a new material in the Tashkent and Samarkand of architects in terms of its qualities and potential.

Modern architectural glass is a unique building and finishing material, which, despite its fragility, is strong, chemically resistant, and most importantly-gives a huge variety of architectural and design solutions, new opportunities for expressing the tectonic structure of an architectural object in Uzbekistan.

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DOI: **10.5958/2249-7137.2020.00558.3**

## THE HISTOLOGICAL STRUCTURE OF SKIN OF KARAKALPAK SURA SHEEP

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### ABSTRACT

*This article presents the results of a study of the histological structure of the skin of Karakul sheep belonging to the Karakalpak type of different colors. The results of studies of skin thickness different colors of karakul lambs, as well as quantitative parameters of its layers, and the results of the analysis revealed significant differences between in the skins colors "Polatsur" and "uryuk-gul". The number of follicles ( $1\text{mm}^2$ ) are significantly greater in animals coloring*



*"shamchirak" "cancer-gul" ( $74,6 \pm 2,8$ ), less coloring including lambs to Amar ( $61,8 \pm 3,1$ ), the colors of uryuk-gul and pulata-sur, respectively- $56,4 \pm 3,4$  and  $69,4 \pm 2,9$ . Based on the research, conclusions were drawn during the selection of the Karakalpak type of sheep, staining of suras take into account the histological structure of the skin.*

**KEYWORDS:** *Breeds Of Karakalpak Types, Multi-Colored, Skin Thickness, Density, Follicle Diameter, Depth Of Location, Sebaceous And Sweat Glands.*

## INTRODUCTION

The structure and function of the skin are closely related to the state of the whole organism, the conditions of keeping and feeding the animal.

The skin, performing various important functions of the body, is at the same time an indicator of the constitutional strength of the animal. A histological examination of the skin, which determines the quality of smushka and wool, as well as an indicator of the type of animal constitutions, has theoretical and practical interest, especially the unique Karakalpaksura.

Research histologically second skin structure and its relation to the quality of coat in different breeds of sheep have been carried out [ 4 ; S.34-37], and others.

The peculiarities of the skin structure of Karakul sheep, depending on the different types of drying, are devoted to the work of many researchers [ 2 ; S.113-138], [ 1 ; P.24], and others.

To develop questions of the formation of the karakul curl, it is necessary to study the laws of development and structure of the skin of karakul lambs, its connection with the quality of karakul. The papers [ 4 ; S. 29-31 ] .

[5 ; S.34-36]; established a difference in the thickness of the skin of Karakul sheep of different constitutional types. In her opinion, the transition of sheep from a delicate constitution to a rough one is associated with an increase in skin thickness. Weak skin development is observed in sheep of a gentle type, very strong development in gross and medium in sheep of a strong type of constitution.

**RESEARCH METHODS:** Skin samples for histological studies were taken in the sacral region of 3 lambs of different colors of the Karakalpaksura. In these skin samples, preparation and analysis histological preparations were performed as described in [3 ; S.3-32]. On vertical sections, the thickness of the skin and its layer, the depth, the location and structure, the thickness of the hair follicles, the diameter of their bulbs were determined; in longitudinal sections, the density, the location of the hair follicles, the thickness of the hair fibers formed by various follicles, the characteristics of the follicle groups.

The obtained digital material was processed by methods of variation statistics [6 ; C.7-45].

**Main part.** The results of studies, measurements of the total thickness of the skin and its individual layers (epidermis, pilar and reticular layers) in lambs of valuable colors of Karakul sheep of the Karakalpak breed type are shown in table-1.

Table analysis-1. showed that the total skin thickness of the lambs of the coloring of the pulat- sur was less than that of the peers of the color of shamchirak- gul by 355.3 microns., apricot-gul by 482.1 microns., and the colors of kamar (red) by 145.3 microns .

**TABLE - 1. THE THICKNESS OF THE SKIN AND ITS LAYERS IN LAMBS OF VARIOUS COLORS OF THE KARAKALPAKSURA (N= 5)**

Colors	Total skin thickness		Epidermis		Pilar layer		Reticular layer	
	X $\pm$ Sx	Cv %	X $\pm$ Sx	Cv %	X $\pm$ Sx	Cv %	X $\pm$ Sx	Cv %
Shamchirakgul	2214,9 $\pm$ 28,1	100	22,6 $\pm$ 0,81	1,12	1675,1 $\pm$ 48,07	75,6	517,2 $\pm$ 25,40	23,3
Uryukgul	2341,7 $\pm$ 30,4	100	23,1 $\pm$ 0,77	0,98	1756,8 $\pm$ 51,43	75,02	561,8 $\pm$ 31,91	24,0
Pulat Sur	1859,6 $\pm$ 24,7	100	20,6 $\pm$ 0,69	1,00	1424,5 $\pm$ 86,45	76,6	414,5 $\pm$ 27,28	22,4
Kamar (red)	2004,9 $\pm$ 26,9	100	21,4 $\pm$ 0,84	1,06	1497,3 $\pm$ 62,75	74,6	486,2 $\pm$ 29,46	24,34

The thickness of the epidermal layer in the lambs of the coloring of the pulat- sur is 1.1% of the total thickness of the skin, while this color index of the Uryuk-gul is 0.98, the shamchirak- gul and kamar are 1.09% and 1.06%, respectively.

Most thin, the number of the examined animals proved piyarny layer lambs coloring Qamar 74.6% of the total thickness of the skin, in coloring Pulat-sur- 76.6%, and the animals colors uryuk-gul and shamchirak -gul this indicator occupies intermediate position, respectively - 75.0% and 75.6%.

The results of the study allowed us to determine significant differences, according to the actual data of the absolute indices of skin thickness, only between animal colors of pulatas- sur and uryuk-gul (P<0.01).

An analysis of the differences and similar features of the skin and hairline in animals of the studied colors of the Karakalpak surah (table -2) shows that the number of follicles (per 1 mm<sup>2</sup>) is significantly higher among the animals of the shamchirak- gul color (74,6 $\pm$ 2,8), less among lambs of Kamar color (61,8 $\pm$ 3,1), colors of Uuryuk-gul and Pulaty- sur, respectively - 56,4 $\pm$ 3,4 and 69,4 $\pm$ 2,9 (P <0.05).

**TABLE -2 THE DENSITY OF HAIR FOLLICLES IN LAMBS OF VARIOUS COLORS OF THE KARAKALPAKSURA. (N = 5)**

Colors	The total number of follicles per 1mm <sup>2</sup>		PF		Wf		ST	
	X $\pm$ Sx	Cv %	X $\pm$ Sx	Cv %	X $\pm$ Sx	Cv %	X $\pm$ Sx	Cv %
Shamchirakgul	74,6 $\pm$ 2,8	100	26,6 $\pm$ 0,64	35,6	42,9 $\pm$ 1,09	57,5	5,1 $\pm$ 0,31	74,6 $\pm$ 2,8

Uuryukgul	56,4 ± 3,4	100	21,3 ± 0,97	37,7	30,3 ± 1,81	53,7	4,8 ± 0,24	56,4 ± 3,4
Pulat Sur	69,4 ± 2,9	100	28,0 ± 0,57	40,3	37,5 ± 1,78	54,0	3,9 ± 0,18	69,4 ± 2,9
Camar (red)	61,8 ± 3,1	100	25,6 ± 0,78	41,4	31,8 ± 1,93	51,4	4,4 ± 0,22	61,8 ± 3,1

The revealed pattern is preserved by primary (PF), secondary (VF), and embryonic follicles (PF). In all cases, the difference was significant (  $P < 0.05$ ). It should be noted that the indicators of the number of PF, VF and ZF in different colors are not the same. Primary follicles (PF) are more densely located at Kamar-41.4% of the total number of follicles (OKF), and among shamchirak-gul, they are significantly less by -5.6%.

The opposite picture is observed in the number of secondary follicles (WF), these indicators are 51.4% and 57.5%, this trend is also observed in the embryonic follicles (WF). (  $P < 0.01$ ).

According to the number of PF, VF and ZF, the colors of Uuryuk-gul and Pulaty- sur took an intermediate position between the colors of Shamchirak- gul and Kamar .

The identified features, in terms of the total number of follicles and their elements, in our opinion, can serve as evaluation criteria for each color, characterizing the location and content of follicles.

**TABLE -3 DIAMETER OF FOLLICLES AND SKIN FIBERS IN LAMBS OF VARIOUS COLORS ( MM ), ( N = 5)**

Colors	PF	PV	Wf	BB	The ratio of the diameter of the PF to the diameter of the WF
	X ± Sx	X ± Sx	X ± Sx	X ± Sx	
Shamchirakgul	108,7 ± 1,6	59,3 ± 10	55,6 ± 1,3	22,8 ± 0,4	1,83
Uuryukgul	121,6 ± 1,9	62,4 ± 1,2	59,2 ± 1,4	23,5 ± 0,5	2,05
Pulat Sur	92,5 ± 1,3	55,1 ± 0,7	60,4 ± 1,5	21,7 ± 0,3	1,53
Camar (red)	102,5 ± 1,2	56,8 ± 0,9	52,5 ± 1,1	23,2 ± 0,5	1,95

The diameter of various follicles and fibers (table-3) in the skin of lambs of the studied colors did not have significant differences. Only the diameter of the secondary fibers, the color of the apricot-gul by a significant amount (  $P < 0.05$ ) differed from these indicators in the skin of lambs of the color of the pulat- sur.

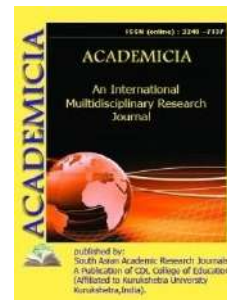
## FINDINGS

Relatively thick skin at birth were lambs (Mutton) color apricot-gul and the finest lambs coloring Polat -sur and Prospect of intermediate position had colors shamch and cancer -gul and Kamar Various th variation. These differences must be taken into account in the selection and production of valuable flies from the Karakalpaksura.

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DOI: **10.5958/2249-7137.2020.00559.5**

## **ECONOMIC COMPETENCE IN THE MANAGEMENT OF VOCATIONAL EDUCATION INSTITUTIONS AND EFFICIENT USE OF FINANCIAL RESOURCES**

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### **ABSTRACT**

*The article describes the content of the concept of economic competence, economic efficiency and internal and external efficiency of the use of financial resources. Also, issues of development of economic competence of senior staff of professional educational institutions in the process of professional development were considered. The issues of ensuring economic stability of the system institutions, effective use of financial resources were analyzed.*

**KEYWORDS:** *Economic Competence, Financial Resources, Economic Efficiency, Professional Education, Professional Development.*

### **I. INTRODUCTION**

Consistent work is being done to reform the education system in our country through the training of highly qualified personnel in accordance with the requirements of the labor market, the introduction of international standards for assessing the quality of education, the creation of effective mechanisms for implementing innovative scientific achievements. In particular, in order to improve the professional education system on the basis of advanced foreign experience, to prepare qualified and competitive personnel for the labor market, as well as to attract employers to this process, a new network of professional educational institutions in harmony with the international standard classifier levels of education was established<sup>1</sup>. Expenditures on operation, maintenance, strengthening of material and technical base and training of vocational education institutions will be covered by extra-budgetary funds of the relevant ministries, agencies, government orders, tuition fees and other sources not prohibited by law.

These changes in the field of vocational education require the development of economic competence, increasing the need for executives who can offer new modern thinking in the system, support innovation, offer differentiated educational programs in a growing competitive market of educational services.

## II.LITERATURE REVIEW

N.A Muslimov identified the essence of the concept of competence by manifesting it as a set of personal qualities and the basic requirements of the professional field. "Competence is characterized by the acquisition by a student of knowledge, skills and abilities necessary for the implementation of professional activities of personal and social significance and the ability to apply them in professional activities"<sup>2</sup>.

Professional competence is the integrative integrity of knowledge, skills and skills that provide professional activity, it is a person's ability to realize his competence in practice. Since the implementation of competencies occurs in the process of performing a variety of activities to solve theoretical and practical problems, the structure of competences, in addition to activity (procedural) knowledge, skills and skills, also includes motivational and emotional-volitional spheres. An important component of competencies is experience - integration into a single whole of individual actions, methods and methods of solving problems mastered by man.<sup>3</sup>

The economic competence of the senior staff of Professional educational institutions is considered the competence of the organization of their professional competence, and our scientific research is aimed at the study of economic competence. Issues related to "economic competence" and its components have been studied in many scientific studies and conclusions have been formulated to a certain extent. Including:

E.N. Xamatnurova<sup>4</sup> In her research, Khamatnurova considers the concept of economic competence as a result of the acquisition of economic knowledge and skills, the formation of economically important qualities of the individual, the formation of economic thinking and behavior, and the ability to engage in socio-economic relations. explained the individual components.

E.E.Ovakimyan<sup>5</sup> defined the concept of economic competence as a set of economic knowledge, skills that allow to make economically based decisions in different social situations, and on the basis of scientific research included the following components in the economic competence of higher education students: cognitive, emotional-value, activity-creative.

O.N.Tkacheva<sup>6</sup> economic competence is defined as: Economic competence is an integrative quality of a person, which determines the nature and quality of the relationship between man and the economic environment and is characterized by a high level of relevant knowledge and skills formed in relation to the economy, its objects, tools and results. , characterized by a set of cognitive, functional, and personal components.

The issue of economic competence of the head of an educational institution has been scientifically studied by many scholars as an important factor. As an example: E.A.Varkina<sup>7</sup> in her scientific work, it was described as "economic competence is an integral quality of an individual, characterized by a set of special competences (marketing, entrepreneurship, document - legal) and also reflects the acquired economic knowledge, skills and experience and



the ability to apply certain methods of activity, ensuring the activities of an educational institution on the basis of constant personal development, regulated by priorities

I.I.Juklines<sup>8</sup> in her scientific work, she analyzed the economic competence of the head of an educational institution: "economic competence of the head of an educational institution is a description of personal qualities, consisting of a system of competences, the mobilization of efforts to make rational economic decisions on the basis of knowledge, skills, work experience and the level of readiness of the leader to solve.

### III. MATERIAL AND METHOD

Economic competency in turn, on the basis of mastering new economic knowledge, skills and advanced experience, serves to fully demonstrate the capabilities of the educational institution leader in simple and complex economic conditions and, as a result, to increase the efficiency of the use of financial resources of professional educational institutions.

Increasing the effectiveness of the use of financial resources is not a new problem and has been studied for a long time by scientists. But in this case, we believe that in the study and solution of this problem, further development of perfectionism should be made to assess the effectiveness of the use of financial resources of educational institutions. Some of the following questions arising as a result of the analysis also suggest that the problem needs to be investigated:

-when assessing the effectiveness of the use of financial resources of professional educational institutions, can we use the generally accepted methodology to evaluate economic efficiency?

-is it necessary to assess how effectively the financial resources of professional educational institutions are being used?

-how can they assess the effectiveness of the use of financial resources through the final results of their activities and through what indicators?

-who might be interested in the analysis of these indicators?

In the glossary of terms and concepts related to economics<sup>9</sup> economic efficiency is defined as the maximum satisfaction of society's unlimited demand for goods and services through the efficient use of limited resources. That is, economic efficiency is the efficiency of an activity, process, or operation that is determined by the ratio of results to costs.

In the field of Professional education, it is possible to distinguish external and internal directions of determining the effectiveness of the use of financial resources. External efficiency is an indicator determined by the agreed funding conditions of vocational education with other sectors of the economy and the consequences that result from the provision of educational services. The reason why this efficiency is called "external" is that it is defined by the consequences that occur outside the field of vocational education (e.g., meeting the needs of the labor market). The real indicators of the implementation of educational services, their compliance with the commitments made on higher education - is a measure of external effectiveness.

Analyzing the results of educational and financial and economic activities of Professional educational institutions, assessing the effectiveness of their use of financial resources, draw the conclusion that it is somewhat problematic. The main task of Professional educational institutions is the preparation of qualified and competitive personnel for the labor market and the

wide involvement of employers in this process. A certain amount of budgetary funds were allocated by the state to professional educational institutions for the training of qualified and competitive personnel. Therefore, when talking about the effectiveness of the use of financial resources of a professional educational institution, it is first of all implied the effective use of government-allocated funds for the training of qualified personnel.

The internal efficiency of the use of financial resources in the provision of educational services is associated with the solution of internal problems of the professional educational institution, increasing the economic profitability of the financed, invested funds. (e.g., increasing the number of graduates depending on the level of qualification or reducing the overall cost per student).

Two main mechanisms are used to increase external and internal efficiency: management and economic. The management mechanism is based on the availability of effective financial management tools. The economic mechanism is based on reducing the cost of educational services and involves the rational use of financial resources to ensure quantitative and qualitative indicators. Criteria for effective financial management in an educational institution may include: increasing the flexibility of using financial resources to achieve the desired results, establishing control over the effectiveness of the financial board, conducting active activities to attract and develop extra-budgetary funds and conducting marketing research, accounting organization of accounting and reporting in accordance with the requirements, ensuring the transparency of financial flows, minimizing cash flows.

While in the conditions of digitization of the economy requires rapid processing, analysis of economic data, finding solutions to them and a creative approach to these processes, it is also important to develop the skills of educational system management personnel to use digital technologies in the economic sphere.

#### IV. RESULTS AND DISCUSSIONS

Our country pays great attention to the active transition and development of the digital economy. Financial reports by Professional educational institutions are based on automated software, all primary financial documents of the institution: wages and equated payments, commodity material reserves, fixed assets, services and payment documents are carried out in the form of electronic documents, through electronic digital signature. Also, the organization of public procurement is carried out through the information and communication technologies through the software and hardware of a special information portal. These aspects create additional requirements for the economic competence of managers of vocational education institutions and require the development of theoretical knowledge and practical skills necessary for integration into the digital economic system.

Description of the "information-analysis" competence in the structural characteristics of the economic competence of the head of an educational institution.

**Type:** special competence;

**Scope of objects of reality:** issues of economic efficiency of the enterprise, electronic financial activity;

**Social and personal significance:** ensuring the economic sustainability of the educational institution, accurate assessment of financial risks in advance, economic thinking;

A set of knowledge about the system of objects of reality	Skills set	A set of personal qualities, directions of value
-correct implementation of organizational changes; -knowing Business Process Modeling and review; -knowing of quantitative and qualitative methods of Information Analysis; -knowing the basics of financial management of an organization; -knowing the investment climate; -knowing risk management; -knowing the stages and methods of forecasting	-to accurately assess the impact of the external environment; -to be able to analyze the economic situation of the organizational system; -to be able to use software tools for processing economic information; -to be able to analyze quantitative and qualitative economic information; -to be able to analyze the economic potential of management decisions; -ability to forecast economic growth	-to understand the role of quality analysis of information in management decision making; -to know the role of change, restructuring and adaptation of business processes for effective management; -to represent the external environment of the organization as dominant factor influencing organizational system; -recognize the importance of consumer opinion and focus on its comprehensive study and consideration;

From this point of view, In addition to the opinion of E.A.Varkina on special competents that make up the economic competence of the heads of educational institutions, we have identified in the following composition the competents that make up the economic competence of the employees of the professional education system, these are the competents of "marketing-entrepreneurship", "legal" and "information-analysis". This type of special competence offered is defined according to the scope of the objects used, their social and personal significance, the totality of knowledge about the system of objects of application, the set of skills, the set of personal qualities necessary for manifestation.

The Institute of pedagogical Innovations, Management and retraining of professional education and professional development conducted questionnaires on assessment of the level of economic competence of the leading personnel within the framework of the relevant educational modules, in groups of directors of professional colleges, in the courses of professional development, and conducted experimental tests.

In the questionnaire, questions were based on the components of "economic and legal activity organization competency" and "marketing and entrepreneurial competency", which constitute the economic competency of the management personnel, and the management staff were given the opportunity to evaluate their economic competency on their own.

The promotion of independent self-personal and professional development motivations of management and pedagogical personnel of professional educational institutions through the introduction into practice of direct and indirect forms of professional development on the basis of principles of mutually complementing each other, as well as providing high scientific and methodological level of the educational process, on the basis of qualification requirements,

curriculum and, Regular updating of skills and skills is the goal of continuous professional development processes.

As the tasks of continuous professional development processes, we can cite the following:

implementation of continuous updating of professional knowledge, skills and skills of management and pedagogical personnel of professional educational institutions, increasing professional training in accordance with modern requirements;

ensure full implementation and monitoring of indirect forms of professional development directly and indirectly related to professional activity;

independent selection and mastering of forms of continuous professional development of management and pedagogical personnel of professional educational institutions, based on scientific and pedagogical potential, aimed at satisfying their professional needs;

improvement of qualification requirements for the quality of management and training of pedagogical personnel by ensuring the integration of education, science and production.

The effective organization of professional development processes in the formation of economic competence of management personnel of Professional educational institutions is also considered important, the following aspects are considered positive:

-to formulate the need of management personnel at the personal level for the study of economic knowledge in the development of economic competence;

- development of economic competencetirishga-oriented educational programs, organization on the basis of an andrologic modular system and system of independent educational modules.

-implementation of economic competency monitoring.

Through the need for knowledge, we understand the need to develop the knowledge, skills, qualifications and personal qualities necessary to solve the existing professional problems.

In the organization of qualification improvement processes, there are three types of requirements-need for Education: full-fledged demand - need is realized, hidden demand - need is not realized, negative demand-need is eliminated.

Although the presence of motivation for learning is recognized as a characteristic feature of older educators, it also confirms the existence of certain problems that negatively affect their desire to improve their skills.

In most cases, motivational readiness depends on psychological reasons: doubts and uncertainty about one's abilities, unwillingness to demonstrate competency at an unsatisfactory level, recognition of mistakes, discomfort in the role of "educator", fear of new knowledge, the desire to preserve "status quo". Therefore, understanding, the creation of an atmosphere of cooperation in most cases will ensure a positive attitude of leaders to the formation of their economic competence.

Pre-emerging misconceptions and personal experience sometimes do not allow to find the right solution. One of the ways out of this situation is an external evaluation. Leaders are evaluated by fellow listeners and educator in the qualification course from the outside. Accordingly, the

creation of a reliable environment has helped to formulate the self-development tirishga motivational preparation of the leader.

The modular system of implementation of androgenic educational programs in the development of economic competence implies a number of conditions:

- to understand the objectives of all subjects of the educational process, to organize the development of economic competence in their interaction in the system of professional development;
- change the role of the educational subject: from the teacher (providing professional relevant information) to the tutor (organizer of the educational activity of the adult educator);
- build a training cycle of economic problematic situations that arise in the practical activities of listeners;
- problematic-ability to choose methods of active interaction

Socio-economic changes, the modernization of professional education and the development of economic competence of management staff of professional educational institutions in various forms of professional development in the conditions of the digital economy are an important issue. Economic competency, in turn, serves to fully demonstrate the capabilities of the leader in simple and complex economic conditions, as well as the effective use and management of financial resources on the basis of mastering new economic knowledge, skills and advanced experience.

## V. CONCLUSION

Therefore, in the conditions of today's socio-economic changes, in the processes of professional development, we consider it worthwhile to focus on the following areas in the development of economic competence of the system management personnel aimed at ensuring financial independence and economic efficiency of professional education system institutions:

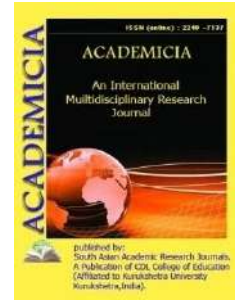
- professional education system based on seminars and trainings on economic activities of management personnel, webinars, conferences on economic problems of management, acquisition of independent economic knowledge, Organization of short-term training courses to ensure continuity of professional development;
- support the innovative activities of the management staff of the professional education system, ensuring the motivation of their creative thinking;
- to adapt the content of training programs and related modules directly in the courses of professional development to the educational needs and requirements that arise as a result of the Real economic activities of the system management personnel;
- wide introduction of educational processes based on the results of scientific research, as well as andrologic, which includes problematic, keys stadi, elements of project methods;
- professional education system management personnel in various forms of professional development processes, the development of motivation for active acquisition of competences that make up the structure of economic competence;
- development and implementation of special training courses aimed at the development of economic competence of management staff of professional education system is considered important.

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DOI: 10.5958/2249-7137.2020.00718.1

## TO STUDY SCHOLARS AND UNDERGRADUATES PERSPECTIVE REGARDING LEVEL OF ENTREPRENEURIAL INTENTION OF THE MANAGEMENT UNDERGRADUATES IN THE UNIVERSITY OF JAFFNA, SRI LANKA

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### ABSTRACT

**Purpose:** To examine the level of entrepreneurial intention among management undergraduates in the University of Jaffna, Sri Lanka. **Design/Methodology/Approach:** Qualitative approach was utilized in this study, especially three final year students (one male & two female students) and three scholars in the entrepreneurship academic field (Two male senior lecturers & one female senior lecture) from the Faculty of Management Studies and Commerce were interviewed by the researcher with the help of the structured questions. Separate questions for students and scholars who are involved in the entrepreneurial field were prepared by the researcher. **Findings:** Based on the qualitative study, the entrepreneurial intention level of the management undergraduates are in the weakest level. There are so many barriers for the lowest level of intention, such as problems in the financial assistance, lack of infrastructure facilities, lack of technological facilities, lack of awareness in the entrepreneurial field, lack of support from governmental and nongovernmental organizations in the Jaffna district, cultural burdens, lack of research focus in the entrepreneurial field etc. **Practical Implications:** Based on the findings from qualitative approach, we recommend to the government, non government organization, financial institutions, educators, and policy makers to provide the financial, marketing, social, technological infrastructures to the management undergraduates to enhance the entrepreneurial intention level.

**KEYWORDS:** Entrepreneurial Intention, Management Undergraduates.

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## INTRODUCTION

Entrepreneurship has evolved as an important force in global economic growth (McStay, 2008). Entrepreneurship as an academic discipline is still considered relatively new although its origin can be traced back to the seventeenth century, when economist Richard Cantillon (as cited in McStay, 2008) coined the term „entrepreneur“. The literal definition of this French term is „to undertake“ or „go between“ referring to the position an individual assumed when pursuing an opportunity. A person took on the associated risk but did not necessarily provide the capital – they were the „go between“. Entrepreneurship studies have been influenced by the economics, psychology, sociology and strategic management literatures providing established theoretical frameworks and Methodological tools (Gustafsson, 2004). This multi-disciplinary approach is not surprising given the complexity of the phenomenon entrepreneurship. Chandler and Lyon (2001) saw the multi disciplinary approach to entrepreneurship in a positive light suggesting this is one of the strengths of the field of entrepreneurship as it considers and borrows frameworks and methodologies from other legitimate social sciences.

The world needs graduates who are innovative, dynamic, smart, daring, efficient, determined, modern and employable or in one word, Entrepreneurial. Making graduates more employable is a global challenge and universities around the world are becoming more entrepreneurial to face this challenge. The UK has been developing 'Entrepreneurial Universities' by embedding Entrepreneurship in to all areas of graduate education. Sri Lanka also has explored that how to create an entrepreneurial culture within its state universities (National Entrepreneurship Week, Sri Lanka, 2008). Today entrepreneurship has become a commonly taught subject in universities. Some of the universities in the world offer courses in entrepreneurship, and many business or management schools offer major field of academic programs in entrepreneurship beside traditional business or management areas such as finance, accounting, marketing, human resource management and basic management (Ahmad, Baharun & Rahaman, 2004). Therefore it is important to find out the level of entrepreneurial intention among management undergraduates. Such understanding or finding will help to government officials, educators, potential entrepreneurs and policy makers in Jaffna district, to improve the graduate entrepreneurship and hence reduce graduate unemployment in Sri Lanka.

## STATEMENT OF THE PROBLEM

Entrepreneurship is a worldwide phenomenon with economic growth across the globe positively impacted by the emergence of new and innovative business start-ups. These new small businesses play a significant role in job creation, influencing politicians to recognize and support entrepreneurial start-up activity due to its positive contribution to the economy. Therefore the entrepreneurship is the key factor for economic development (McStay, 2008). Public, private and nongovernmental organizations are taking various measures to promote entrepreneurship in different countries like China, India, Sri Lanka, United Kingdom and United States. World class universities and colleagues have implemented various Postgraduate, Undergraduate and Diploma courses on small business management and entrepreneurship (Plant and Ren, 2010; Nishantha, 2008). In a developing country like Sri Lanka, the role of entrepreneurship development is more important than that in developed countries so far as the creation of self employment opportunities and reduction of unemployment situations are

concerned (Nishantha, 2008). The rate of unemployment among high schools and university graduates remains proportionally higher than the rate for less-educated workers in Sri Lanka. And providing employment opportunities for all graduates is a crucial issue for the Sri Lankan government of today (Ummah, 2009). One of the ways to solve the graduate unemployment is the graduate entrepreneurship. Graduate entrepreneurship is a process taken by a graduate to start a business in terms of an individual career orientation (Olufunso, 2010).

Especially in Sri Lanka, Undergraduates from University of Kelaniya, University of Colombo, University of Sri Jayawardenapura, South Eastern University of Sri Lanka, and Eastern University of Sri Lanka have been tested on the concept of entrepreneurial intention (Ummah, 2009). But undergraduates from University of Jaffna have not been yet tested on the concept of entrepreneurial intention. Therefore, it is important, to empirically examine the level of entrepreneurial intention among management undergraduates. Such understanding or finding will help to government officials, educators, potential entrepreneurs and policy makers in Jaffna district, to improve the graduate entrepreneurship and hence reduce graduate unemployment in Jaffna district, Sri Lanka.

## REVIEW OF LITERATURE

IN the Asian context, Studies in China, Malaysia, Sri Lanka & Pakistan have been focused in this chapter. In China, Moy and Luk (2008) have followed the study on exploring the career choice intent of Chinese graduates by extending a psychologically based model of new-venture creation that encompasses people, process and choice. This integrative model helps to understand the intricacy of entrepreneurial career choice intent in developed as well as in developing economies. The study showed that Gender and parental role had a positive effect on career choice intent, with entrepreneurial self-efficacy significantly and partially mediated their relationship. Entrepreneurial alertness was found to moderate the relationship between some self-efficacy sub items and career choice intent. Furthermore, they suggested that Training on improving the responsiveness and alertness to entrepreneurial opportunities will help foster an entrepreneurial culture among graduates.

In the Malaysian perspective, Akmaliah and Hisyamuddin (2009) concluded that Malaysian secondary school students were favorable towards becoming self-employed but they don't have enough confidence to be an entrepreneur which is reflected by low correlation value between attitudes and self-employment intentions. The students have a high perception regarding the attitudes towards self-employment but they still have low perception on entrepreneurial self-efficacy and interest. This may indicate that secondary school students prefer other career since they perceived entrepreneurship is not an interesting profession. This is because the implementation of entrepreneurship education in academic secondary school is not enough to make entrepreneurship as a favorite profession among students. They also concluded that subjective norm and community support has a profound influence towards entrepreneurship as a career choice, which means that the more favorable the attitude and the subjective norm with respect to becoming self-employed the stronger the individual intention to become self-employed and the more positive community support received by the student the higher will be their entrepreneurial intention. Finally, students with positive self-efficacy and entrepreneurial interest will also have stronger intention to be self-employed. Furthermore they suggested that Students should be exposed to educational system which emphasized on developing

entrepreneurial skills and knowledge. Entrepreneurial education should highlight on perceived feasibility in order to create interest in becoming entrepreneur ; Policy makers should develop youth enterprise program as part of entrepreneurship education intervention Program ; Training should be given to entrepreneurship teachers to improve their teaching approaches; Specific intervention program need to be done to improve entrepreneurial self-efficacy and entrepreneurial Interest ; Entrepreneurship educators and government should team up in promoting and producing a good image of entrepreneurship as a career.

In the SriLankan context, Nishantha (2008) has followed the study on exploring the relationship existing between personality traits and socio-demographic background of business management undergraduates toward an entrepreneurial career (self employment intention).The respondents were assessed on three personality traits (risk taking propensity, internal locus of control and need for achievement), and three socio-demographic factors which are related to their personal background (Parents' occupation, gender and previous self employment experience). The results revealed that there is a significant relationship between personality traits and entrepreneurial attitude. At the same time, male students have more entrepreneurial motivation than female students. However, the contribution of other background factors (parents' occupations and self employment experience) for developing entrepreneurial intention among the business students is relatively low. Furthermore, N ishantha suggested that educators, policy makers, and others wishing to enhance entrepreneurial activity should focus first on developing selected personality characteristics among the potential entrepreneurs.

In contrast, Thrikawala (2011) concluded that the entrepreneurship is not very much preferred by the academics who are studying in different field and education levels in SriLanka. The study revealed that field of study, education level, gender and family business experience are significantly affect the intention in starting one's own business while the financial ability of the undergraduates' family is not related to their business interest. Furthermore, Thrikawala recommended to promote entrepreneurship and awareness of entrepreneurial opportunities among university students by conducting conferences, workshops and seminars. And he also suggested that it is important to upgrade the curriculums of the universities which will offer exposure for the students in small business such as discussing more real world cases at the class. Then it will increase the intention of undergraduates to start their own business.

In Pakistan, Mushtaq, Hunjra, N iazi, Rehman and Azam (2011) examined to determine the entrepreneurial intention among those young of students who attended course on management and entrepreneurship . Ajzen's intention model was used to achieve the objective of the study. The findings proved that higher education grooms young graduates and prepared them for new venture creation and further confirmed that young graduates are more willing to form new businesses after gaining the relevant business and entrepreneurship education. And also they found that networking (Close family, friends & colleagues) and new venture creation are positively and significantly correlated. The networking helps young graduates to access information and other required assets to start their own business. The higher the rate of networking among students the greater will be the chance of new venture creation because they acquire whatever is necessary to start new business. Finally, they concluded that all variables, included in the study, play a vital role in new venturing and are significantly correlated to each other. Networking support, entrepreneurial capability, self- independence and self-reliance are also positively and significantly correlated with intention to venture creation.

In the European context, Leroy, Maes, Sels, Debrulle and Meuleman (2009) have conducted the study on gender effects on entrepreneurial intention among Belgian undergraduates. They suggested that important gender differences in the factors that shape entrepreneurial intentions. There seem to be important distinctions in the defining features of entrepreneurship of men versus women. Men seem to prefer entrepreneurship as a means of getting ahead and see financial restraints and creativity as important practical considerations in their decision to become an entrepreneur. Women seem to prefer entrepreneurship as a means of getting organized and see personal capabilities and know-how as important practical consideration in their decision to become an entrepreneur. Furthermore, women are more inclined to comply with social pressures than their male counterparts. Further they suggested that different variables may be important to understand what motivates or drives performance of male versus female entrepreneurs. As women value entrepreneurship more as a means of getting organized, outcomes such as work-family interference, personal health and perceived autonomy are more important indicators to evaluate their performance. This broadens the definition of entrepreneurial success to include the non-financial gains of being an entrepreneur. In turn, this raises important issues for the practice of stimulating entrepreneurial intentions. Men and women are to be treated as different target groups in raising entrepreneurial intentions. Stimulating female entrepreneurship may require offering different career reasons and training different competencies than those typically associated with male-dominated entrepreneurship. When both male and female career reasons and competencies are stimulated, the defining features of entrepreneurship may evolve over time to include both male and female aspects.

In the African context, Maalu, Nzuve and Magutu (2010) have investigated the reasons for the creation of new enterprises and the entrepreneurial characteristics of those individuals responsible for the emergence of new firms in Nairobi. They pointed that The goals in entrepreneurial ability are influenced by factors such as: maximum utilization of own skills and talents; full control of own future; achievement of what one values personally; being “my own boss”; the freedom/opportunity to make own decisions; the opportunity to learn new things; financial security; performing challenging and exciting work; having peace of mind with a peaceful and stress-free life; allocation of enough free time for family, hobbies, leisure, and other interests; an opportunity to extend one's range of abilities, a goal to accumulate wealth; desire to live an adventurous and exciting life; the goal to start own business, striving for an idea to own business, an ultimate goal to be self employed and the wish to become an influential person to the future. Further they noted that the perception of individuals or students as entrepreneurs can be characterized with six perceptions: Believe that entrepreneurship is positively related to well being of the individual (Aspiration, comfortable running own business, life style, commitment, entrepreneurship as a source of wealth and prosperity of the individual). Secondly, believe that there exist challenges in entrepreneurship (Financial challenges, high levels of education, luck, no support institutions or mentors, and skills deficiency). Thirdly, a belief in own destiny and being ready for change. Fourthly, believe about risk in entrepreneurship (financial failures). Fifthly, personal traits in entrepreneurship. Lastly, a belief that it is easy in becoming an entrepreneur.

In the Cross Cultural Perspective, Plant and Ren (2010) compared the intentionality of students in graduate business programs in the United States and China toward becoming entrepreneurs. The findings have shown that although there is no significant difference in the two groups as a



whole, there are subtle differences within the populations. First, males in China have a significantly higher intention toward self-employment than females. Second, entrepreneurial intentionality is stronger in the U.S. group than the China group for those who have had prior self-employment experience and when their background includes a family history of self-employment. However, when there is no history of family self-employment, the Chinese showed greater intentionality toward entrepreneurship. When considering the motivational dimension of entrepreneurial intentionality, there was a correlation between heightened perceived behavioral control levels and higher entrepreneurial intentionality. The findings also showed that there is a positive relationship between intrinsic challenge characteristic and entrepreneurial intent and a negative relationship with enjoyment. For extrinsic motivation, a positive relationship is found between the compensation characteristic and entrepreneurial intent, while the outward characteristic is negatively correlated. In conclusion, They stated that each economy is generating a group of entrepreneurs and that their intentionality is very similar. However, there are still cultural and environmental aspects to the decision-making process in each location. Further longitudinal research is needed to see how the intentionality changes over time as Chinese regulations and society change to permit more self determination, while those based in the United States already have the opportunity to move away from corporate employment and create their own businesses in the future.

Fitzsimmons and Douglas (2005) have approached the study on entrepreneurial attitudes and entrepreneurial intentions among students following master of business administration programs in India, China, Thailand and Australia. They indicated that entrepreneurial attitudes influence an individual's assessment of career attractiveness. Entrepreneurial attitudes and to some extent human abilities were also found to be associated with an individual's entrepreneurial intentions. Cross-cultural differences were also found in entrepreneurial attitudes and entrepreneurial intentions. The relative importance of entrepreneurial attitudes in career decisions was generally consistent across the four countries in the study, with ownership, income, independence, and risk being significant in explaining variance in career decisions. As expected, individuals desired more ownership, income, independence and less risk in choosing a career. Cross-cultural differences were also apparent on the emphasis that each sample placed on entrepreneurial attitudes. The Chinese and Thai samples were found to place the most emphasis on income while the Australian sample placed the least emphasis on income in their career decisions. This might indicate the relative importance on income in these countries if a reasonable quality of life is to be obtained. Australians with a higher per-capita income might well be expected to place less emphasis on income attitude in career decisions. Emphasis on independence was significant for all countries in the study with the Chinese placing the most emphasis on this attitude followed by Indians, Thais and Australians respectively. Risk was significantly related to career decisions for all countries in the study with Australians and Chinese being the most risk averse. In the cross country comparisons, only the differences between the Indians and Thais were found to be significant with the Indians being less risk averse than the Thais. In conclusion Fitzsimmons and Douglas pointed that entrepreneurial attitudes to ownership, income, independence, and risk and work effort are likely to be significant in explaining an individual's entrepreneurial intentions. And Cross-cultural differences were found in the emphasis individuals made on each of these attitudes.



**METHODOLOGY****DATA SOURCES**

Primary data was used for this study. It was collected through the structured Interviews.

**RESEARCH DESIGN**

Qualitative study was used to focus on in-depth explanations. Especially three final year students (one male & two female students) and three scholars in the entrepreneurship academic field (Two male senior lecturers & one female senior lecture) from the Faculty of Management Studies and Commerce were interviewed by the researcher with the help of the structured questions. Separate questions for students and scholars who are involved in the entrepreneurial field were prepared by the researcher. When researcher selected the interview respondents, researcher has used the Judgmental Sampling. Researcher has the four year real experience with respondents. Therefore he has ability to judge the proper respondents.

**SCHOLARS' PERSPECTIVE OF ENTREPRENEURIAL INTENTION**

Prof.T. Velnamby, Dean, Faculty of Management studies & Commerce, University of Jaffna stated that entrepreneurship is the process of using private initiative to transform a business concept into a new venture or to grow and diversify an existing venture or enterprise with high growth potential. Entrepreneurs identify an innovation to seize an opportunity, mobilize money and management skills, and take calculated risks to open markets for new products, processes and services.

Further he stated that it is abundantly clear that entrepreneurship is important for economic growth, productivity, innovation and employment, and many countries have made entrepreneurship an explicit policy priority. As globalization reshapes the international economic landscape and technological change creates greater uncertainty in the world economy, entrepreneurship is believed to offer ways to help to meet new economic, social and environmental challenges. Entrepreneurship has gained additional attention in the current economic crisis, as it is widely viewed as a key aspect of economic dynamism. Economic crises are historically times of industrial renewal, or creative destruction, as less efficient firms fail while more efficient ones emerge and expand. New business models and new technologies, particularly those leading to cost reduction, often emerge in downturns.

He also pointed that combination of knowledge base and business experience is the foundation to produce the successful entrepreneurs. In the Jaffna district, entrepreneurs have the lack of business knowledge to emerge as most successful entrepreneurs in the national and international level. Knowledge gap should be fulfilled by the management undergraduates, because they have the tremendous business knowledge and business core competency in the fields of marketing, finance, accounting & human resource management in the systematic manner. But they have the lack of practical skills in the entrepreneurship field, due to that, most of the management undergraduates generally prefer the government and private sector jobs in the market after their graduation. And also there are some barriers or obstacles to the management undergraduates especially in the Jaffna district such as lack of financial assistance, negative attitude of Jaffna people towards entrepreneur as a job title, lack of creativity idea, and lack of risk taking ability. Further, He suggested that management undergraduates should be motivated by the government official, non government organization and financial intermediaries to give the financial

assistance, marketing infrastructure, other infrastructure like information technology, advising or consultancy services to enhance the intention level towards entrepreneurship.

Dr. B. Nimalathan, Senior Lecturer, Department of Accounting, Faculty of Management Studies and Commerce, University of Jaffna has noted that entrepreneurship has been widely recognized as a potent factor in economic development. The concept of entrepreneurship is decorated by various attributes like innovation, organization building ability, gap filling function, input completing etc. The persons with these qualities are required to initiate and sustain the process of industrialization. Therefore, efforts are to be directed towards the search and development of such entrepreneurial talents. The fact that entrepreneurial ability is a cultivate asset, supply of which can be generated and enhanced through the education, training and opportune economic climate, has forced the attention of policy makers and planners towards entrepreneurship as the desirable and manageable route to economic development. It is widely acknowledged that entrepreneurship is critical to the development of the knowledge based economy.

Further he stated that management undergraduates in the university of Jaffna have the weakest level of entrepreneurial intention, due to that, government officials, non government organizations, policy makers and planners towards entrepreneurship should focus on the entrepreneurial intention level of the management undergraduates through the strong financial aided, consultancy services, research development in the entrepreneurship, changing the study syllabus of management undergraduates towards the practical oriented concept or linked with industrial training. Further he stated that entrepreneurship can be considered as specialization unit in the management studies to enhance both skill and knowledge in the entrepreneurship field. Because entrepreneurship is getting prominence in schools, colleges, and universities across the world. Today's globalized world of advanced technology and hyper competition has made entrepreneurship necessary and relevant.

Mrs.S.Shanmugathas, Senior Lecturer, Department of Marketing, Faculty of Management Studies and Commerce, University of Jaffna has pointed that entrepreneurship is commonly referred as the process of developing and bringing to the market a new product, and thus the way in which innovation are brought to the market. In nutshell, entrepreneurship is defined as an ability to be a self starter in the enthusiastic way. Further she pointed that in the individualized

perspective, there are so many advantages from the entrepreneurial field to the individual such as work freedom, flexible, decentralization decision making, stress free. And also, there are some pros in the entrepreneurship field in the social & economic perspective, such as better foundation for gross domestic production contribution, province or district wise development, better level in the standard of living, reducing the gender imbalances.

She noted that, the level of entrepreneurial intention among management undergraduates are in the lowest level, further she and her team conducted the survey on the "employability of the graduates", they focused on the graduates (Output of Faculty of Management Studies & Commerce, University of Jaffna from the period 2005 to 2010. According to the study the entrepreneurial intention level of the management graduates is in the low level. Because management graduates have lack of skill (practical knowledge towards the entrepreneurship). But they have the theoretical knowledge in the entrepreneurship field in the systematic manner. Especially, management undergraduates have to face many barriers or obstacles like cultural

barriers ( Jaffna people have the negative attitude towards entrepreneurship) , high documentation procedures & legal conditions to establish the new firms, lack of financial assistance, lack of proper role model, lack of academic wise motivation, lack of awareness, lack of entrepreneurial development organization in Jaffna district, lack of marketing opportunities because low price products are available in the market from local and international markets.

She suggested the educators, policy makers, government officials, non government organization to enhance the entrepreneurial intention level of the management undergraduates through the skill development program, research conference on the entrepreneurial development, industrial training, and risk taking capacity development.

### **UNDERGRADUATES' PERSPECTIVE OF ENTREPRENEURIAL INTENTION**

Mr.P.Navichanthiran, Final year management studies student, University of Jaffna, has focused the entrepreneurship as the innovative risk taking ability, further he pointed that entrepreneurship is the multi- faceted concept and has evolved to include: self employment, small business, new ventures from scratch, new ventures within the organization, entrepreneurial management, an enterprising attitude (self knowledge and leadership skills), social entrepreneurship (not- for-profit) and so on.

He also pointed that entrepreneurs should have some important characteristics as need for independence, need for achievement, internal locus of control; ability to live with uncertainty and take measured risks, opportunity seeking, innovative, self confident, proactive rather than reactive, and self motivated. Furthermore he stated that entrepreneurial intention level of the management undergraduates are in the poorest level, and also they have to face more complex situation like lack of finance, consultancy service, academic support, parents support and also government and non government support to emerge as a successful entrepreneur in the island and international level.

He suggested that educators, authorized officials in the higher education to change the curriculum of the management studies as the practical and research based. In which industrial training and research focus should be the most fundamental ones to enhance the tremendous base for entrepreneurial intention among management undergraduates. Further he suggested the government officials, nongovernmental firms, policy makers to enhance the entrepreneurial intention among the undergraduates through the proper training program, skill development, financial assistance, and consultancy services on the entrepreneurial development.

Miss. Rathivathany Thuraisingam, Final year management studies student, University of Jaffna has stated that the combination of skills, aptitudes, and attitudes within individuals resulting in new ideas, innovations, and the ability to turn opportunities into reality through the creation of new ventures, the best entrepreneurs invent new ways to live, work, and achieve. Successful entrepreneurship blends independence and collaboration, vision and action, the individual and the community. Further she stated that entrepreneurial activities provide the tremendous advantages to the individual perspective, such as personal satisfaction, own boss, social status, personal recognition, and self employment. And also entrepreneurial activities provide the advantages to the social & economic perspectives, such as resource utilization, social development, community development, job creation, creative idea generation etc.

Further she pointed that, management undergraduates have the lowest level of intention level towards entrepreneurship. And also undergraduates perceive generally there are so many barriers behind the entrepreneurship field like negative perception towards entrepreneur especially women entrepreneur, discouragement, lack of self confidence, lack of risk taking ability, family problems, financial problems, uncertainties in the business environment ( political, economical, technological, & social ).

Furthermore, she suggested that, entrepreneurship education and training in the study syllabus will lead to the better level of entrepreneurial intention among management undergraduates. Entrepreneurship education should be a collection of formalized teaching that informs, trains, and educates anyone interested in participating in socioeconomic development through a project to promote entrepreneurship awareness, business creation, or small business development.

She interestingly shared the valuable statement from she learned as “we cannot ensure that entrepreneurship training would create a bill gates or any other successful entrepreneur that you know of, as a physics professor would not be able to guarantee you an Albert Einstein, but give us a student / course attendant with an orientation towards business and we can improve the performance of such an individual”

Miss. Sivathanusiya Sivaraja, Final year management studies student, University of Jaffna has approached the entrepreneurship as the problem solving strategy to the unemployment level in SriLanka. The unemployment among graduates is part of the overall unemployment problem in SriLanka. This is one of the most pressing issues in SriLanka today. It is the high rate of unemployment among educated young persons. This high rate of unemployment is the product of an outdated education system that has created a mismatch between academic training and employment opportunities. The unemployment among graduates is not a new phenomenon and it has been with us since 1970’s. This is not entirely a SriLanka problem either by any means and it can be seen even in developed countries. In developed countries, university graduates can be absorbed into their socio economic system and more and more opportunities are created ever year when their economics grow faster than many developing countries.

Further she stated that unemployment has historically been a very sensitive issue in SriLanka. This is due to the fact that high levels of unemployment have predominantly been concentrated among educated youth and the rate escalates with higher levels of education. Therefore entrepreneurship is the concept that should be well known among young people of today, as it is one of the major solutions of the unemployment problem. And by enabling youth to acquire these skills they will not only benefit themselves but people around them too. Promoting entrepreneurship skills is seen as way out of educated unemployment. Because entrepreneurship is involved in the set of skills, knowledge, attitudes, and values that can generally improve the employability of youth. Some of the entrepreneurship skills that need to be developed by the youth population are fluency in English, knowledge in IT, presentation, and public speaking skills, and social skills.

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## CONCLUSION AND RECOMMENDATION

As we move forward into the 21<sup>st</sup> century it is important to reflect on the great contributions that entrepreneurs have made to the well being of our people and the wealth of our economy. Entrepreneurs occupy a central in a market economy. For it's the entrepreneurs who serve as the spark plug in the economy's engine, activating and stimulating all economic activity. Due to that we have focused on the study about the entrepreneurial intention among management undergraduates in University of Jaffna.

Based on the qualitative approach, the entrepreneurial intention level among management undergraduates are in the weakest level. There are so many barriers behind the lowest level of intention towards entrepreneurship, such as lack of financial assistance, discouragement from parents, & social, lack of self confidence, lack of risk taking ability, family problems, financial problems, uncertainties in the business environment (political, economical, technological, & social ) etc. Based on the findings of qualitative approach, we recommend to the government, non government organisation, financial institutions, educators, and policy makers to provide the financial, marketing, social, technological infrastructures to the management undergraduates to enhance the entrepreneurial intention level.

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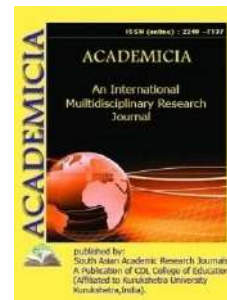
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DOI: **10.5958/2249-7137.2020.00684.9**

## **NIOBIUM CLUSTERS: MECHANISM OF COMBINATORIAL SYNTHESIS OF SPRAYED METAL CLUSTER $Nb_nO_m^-$**

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### **ABSTRACT**

*In the present work, we studied the dependences of the yield intensities of cluster ions ( $Nb_nO_m^-$ ) on the oxygen pressure in the bombardment chamber. An attempt was made, based on the analysis of experimental data, to substantiate that the formation, excitation, and molecular decay of atomized metal cluster ions  $Nb_nO_m^-$  underlie the model of the mechanism of combinatorial synthesis. In this case, the cluster ion acquires translational and internal energy (vibrational and rotational), sufficient for reverse decay, similar to how it occurs during the formation of complex ions in bimolecular gas-phase reactions.*

**KEYWORDS:** *Cluster Fragmentation, Monomolecular Reactions, Kinetic Energy Of Fragmentation Ions, Ion-Atom Collisions, Dissociation, Decay Directions, Dissociation Energy.*

### **INTRODUCTION**

At the present stage of technology development, Secondary-ion mass spectrometry (SIMS) stands out with its peculiar features. First of all, it should be noted that the presence of such a powerful device as a microprobe analyzer allows you to study materials with different stoichiometry. SIMS [10, 2015;13, 1990] makes it possible to conduct - experimental work at the highest level. At the same time it will be possible, conducts - masses and energy analysis. Another feature of this installation is the short formation time of the spray products. For a very short time of the order of (10-15-10-12) seconds, the formation and decomposition of the spray products simultaneously occur. The development of modern nanotechnology has significantly stimulated interest in effective methods for producing cluster particles of various stoichiometries and the study of their fundamental properties [1, 2008]. Ion sputtering [2, 1993; 3, 2006] has a number of advantages over other methods of cluster generation, since it allows the selection of the sputtered material and the type of bombarding ions to obtain clusters that are difficult to



synthesize using other methods, and a high proportion of charged and excited particles provides significant research convenience, because no additional funds are required for their excitation and ionization. At the same time, despite the unique capabilities of this method, the nature of the processes underlying the formation of clusters during the sputtering process is still not clear even at a qualitative level. Existing models of cluster formation during sputtering have a common basis - the idea of a cascade of collisions generated by a primary ion (or atom) in the crystal lattice of a solid [4, 1984]. However, the answers to the question of how and in what quality the atoms forming the cluster leave the surface can be different [5, 1974; 7, 1971]. As was shown in our previous works [8, 1984; 11]. All existing mechanisms and models of cluster formation do not take into account the monomolecular fragmentation of sputtered clusters and the significant transformation of the mass and energy spectra of cluster ions from the moment of their formation to the moment of registration at the detector, i.e. constructed without taking into account the relaxation of the internal energy of the sputtered clusters after emission. In a number of our works [9, 2012], the mechanism of combinatorial synthesis of  $\text{Si}_n\text{O}_{-2n+1}$  and  $\text{Nb}_n\text{O}_m^-$  molecular clusters was presented upon recombination of ions, atoms, and molecules independently atomized in individual cascades over the surface, according to which clusters are formed by sequential addition of Si, O, SiO and  $\text{SiO}_2$  as well as Nb, NbO, and  $\text{NbO}_2$  (monomers) to the active anions  $\text{O}^-$ ,  $\text{Si}^-$ , and  $\text{Nb}^+$  as a result of pairwise collisions in various combinations between them [10, 2015; 11].

## THE MAIN FINDINGS AND RESULTS

In this paper, based on an analysis of experimental data and taking into account our previous works [9, 2012; 10, 2015; 12, 2017; 14, 2013; 15, 2014], it is proved that the formation, excitation, and molecular decay of atomized metal cluster ions  $\text{Nb}_n\text{O}_m^-$  are the basis of the model of the mechanism of combinatorial synthesis [9, 2012]. In this case, the cluster ion acquires translational and internal energy (vibrational and rotational), sufficient for reverse decay, similar to how it occurs during the formation of complex ions in bimolecular gas-phase reactions.

Studies of the dependences of the emission of negatively charged  $\text{Nb}_n\text{O}_m^-$  niobium oxide clusters ( $n = 1-5$ ) indicate an increase in their yields with increasing oxygen pressure near the surface. At the maximum pressure  $P = 5 \cdot 10^{-3}$  Pa, the mass distribution of  $\text{Nb}_n\text{O}_m^-$  has the form described by us earlier in [14, 2013; 15, 2014]. It is characterized by a non-monotonic change in the output intensities in each cluster series  $n$  with an increase in the number of oxygen atoms  $m$  (Fig. 1.1).

The  $\text{NbO}_3^-$  cluster has the highest intensity in the mass spectrum; emission of the  $\text{NbO}_4^-$  cluster is also observed, the yield of which is two orders of magnitude lower than that of  $\text{NbO}_3^-$ . As with  $\text{V}_n\text{O}_m^-$  clusters, abnormally high yields of  $\text{Nb}_n\text{O}_m^-$  ions with a certain ratio of Nb to O atoms can be observed in each cluster series. Moreover, clusters with a small O to Nb ratio are poorly represented or absent. According to [16, 1990], the structures of the  $\text{Nb}_3\text{O}_7$ ,  $\text{Nb}_4\text{O}_9$ ,  $\text{Nb}_4\text{O}_{10}$  and  $\text{Nb}_5\text{O}_{12}$  clusters are the most stable for neutral niobium oxide clusters. Indeed, in our mass spectrum of negative ions, clusters with a given stoichiometry are characterized by intense yields. At the same time, in our case, the peaks of the  $\text{Nb}_3\text{O}_8^-$  and  $\text{Nb}_5\text{O}_{13}^-$  clusters with one additional oxygen atom are more intense.

A study of the fragmentation processes of the selected atomized  $\text{Nb}_n\text{O}_m^-$  clusters (Table 1.1) indicates that  $\text{NbO}_2$ ,  $\text{NbO}_3$  and  $\text{Nb}_2\text{O}_5$  along with O and  $\text{O}_2$  are the most likely neutral fragments



during decays, and, accordingly, can be considered as building blocks of  $\text{Nb}_n\text{O}_m^-$  clusters in accordance with [16, 1990].

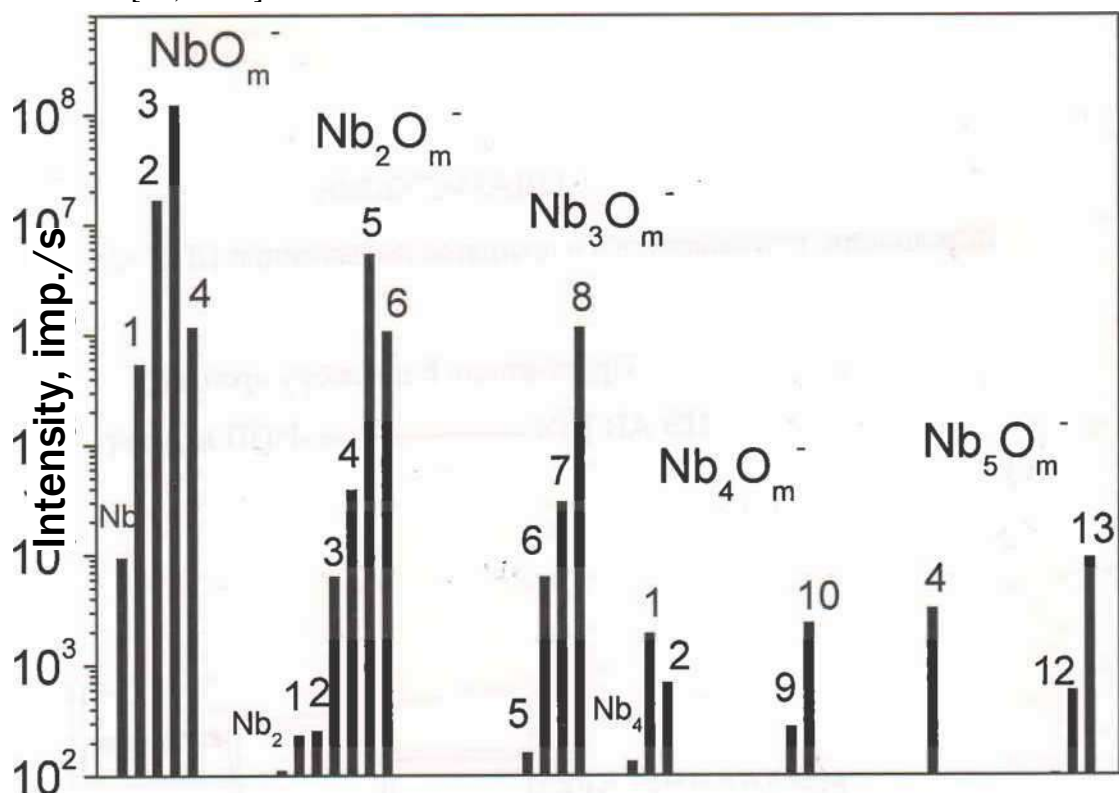


Fig.1.1. Intensity diagrams of  $\text{Nb}_n\text{O}_m^-$  clusters as a function of cluster series  $n$  during the bombardment of the niobium surface by  $\text{Xe}^+$  ions with an energy of 18.5 kV and pressure  $\text{O}_2$  in the bombardment chamber  $P=5 \cdot 10^{-3} \text{ Pa}$  [14, 2013; 15, 2014].

The formation of  $\text{Nb}_n\text{O}_m^-$  clusters can occur in accordance with [9, 2012] by sequentially attaching these structural elements in different sequences. In the process of sputtering, atomic Nb-ions are emitted from the surface, as well as neutral O,  $\text{O}_2$ , NbO,  $\text{NbO}_2$  and others. Thus, similarly to vanadium oxide clusters, the formation of a cluster ion  $\text{NbO}^-$  occurs in the reactions:



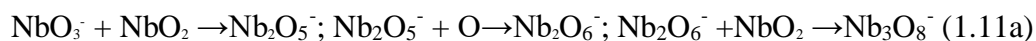
For the  $\text{NbO}_2^-$ -cluster, the main ones are the synthesis reactions:



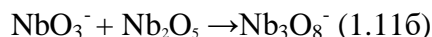
Similarly, the formation of  $\text{NbO}_3^-$  occurs in the main reaction:



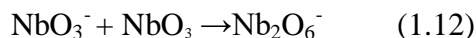
The complete chain of formation, for example, of an  $\text{Nb}_3\text{O}_8^-$  cluster can be represented, proceeding from the data of Table 1.1, as follows. First, the successive formation of  $\text{NbO}^-$ ,  $\text{NbO}_2^-$  and  $\text{NbO}_3^-$  clusters occurs in reactions (1.8) - (1.10). Further reactions take place:



In this case, the formation of  $\text{Nb}_3\text{O}_8^-$  in the parallel channel also occurs



In turn, the synthesis of  $\text{Nb}_2\text{O}_6^-$ , from which  $\text{Nb}_3\text{O}_8^-$  is formed at the final stage of the process (1.11a), is also observed in a parallel reaction:



On the other hand, the  $\text{Nb}_3\text{O}_8^-$  cluster itself serves as the basis for the formation of the  $\text{Nb}_4\text{O}_{10}$ -cluster:



Thus, the set of channels for fragmentation of  $\text{Nb}_n\text{O}_m^-$  clusters indicates their formation in parallel running chains of combinatorial synthesis reactions in accordance with the mechanism [9, 2012].

TABLE 1.1

Material Ion	Channel decay	Neutral fragment	Zone S <sub>2</sub> , P(%)	ZoneSi,P(%)
$\text{NbO}_2^-$	$\text{NbO}_2^- \rightarrow \text{NbO}^- + \text{O}$	<b>O</b>	<b>4,5-10<sup>-5</sup></b>	<b>5-10<sup>-4</sup></b>
$\text{NbO}_3^-$	$\text{NbO}_3^- \rightarrow \text{NbO}_2^- + \text{O}$	<b>O</b>	<b>3-10<sup>-4</sup></b>	<b>8-10<sup>-3</sup></b>
$\text{NbO}_4^-$	$\text{NbO}_4^- \rightarrow \text{NbO}_2^- + \text{O}_2$	$\text{O}_2$	<b>2-10<sup>-4</sup></b>	<b>3-10<sup>-3</sup></b>
	$\text{NbO}_4^- \rightarrow \text{NbO}_3^- + \text{O}$	<b>O</b>	<b>0,22</b>	<b>4,34</b>
$\text{Nb}_2\text{O}_5^-$	$\text{Nb}_2\text{O}_5^- \rightarrow \text{NbO}_3^- + \text{NbO}_2$	$\text{NbO}_2$	<b>1,3.10<sup>-2</sup></b>	<b>0,6</b>
$\text{Nb}_2\text{O}_6^-$	$\text{Nb}_2\text{O}_6^- \rightarrow \text{NbO}_3^- + \text{NbO}_3$	$\text{NbO}_3$	<b>1.10<sup>-2</sup></b>	<b>0,3</b>
	$\text{Nb}_2\text{O}_6^- \rightarrow \text{Nb}_2\text{O}_5^- + \text{O}$	<b>O</b>	<b>0,4</b>	<b>7</b>
$\text{Nb}_3\text{O}_8^-$	$\text{Nb}_3\text{O}_8^- \rightarrow \text{NbO}_3^- + \text{Nb}_2\text{O}_5$	$\text{Nb}_2\text{O}_5$	<b>1 .10<sup>-2</sup></b>	<b>0,2</b>
	$\text{Nb}_3\text{O}_8^- \rightarrow \text{Nb}_2\text{O}_6^- + \text{NbO}_2$	<b>NbO<sub>2</sub></b>	<b>4. 10<sup>-3</sup></b>	<b>0,15</b>
$\text{Nb}_4\text{O}_{10}^-$	$\text{Nb}_4\text{O}_{10}^- \rightarrow \text{Nb}_3\text{O}_8^- + \text{NbO}_2$	$\text{NbO}_2$	0,1	
$\text{Nb}_5\text{O}_{13}^-$	$\text{Nb}_5\text{O}_{13}^- \rightarrow \text{Nb}_3\text{O}_8^- + \text{Nb}_2\text{O}_5$	$\text{Nb}_2\text{O}_5$	<b>0,6</b>	

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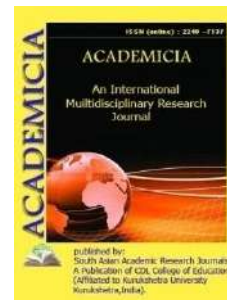
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DOI: **10.5958/2249-7137.2020.00685.0**

## ISHCHANTEPA - A LARGE SETTLEMENT OF CENTRAL SOGHD

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### ABSTRACT

*A unique building culture was formed in Soghd and its neighboring territories towards the Early Medieval Period, which needs to be studied as a part of the heritage of monumental architecture of the Ancient East. The article is devoted to one such constructions in Central Soghd. Archaeological excavations on the Ishchantepa Site were conducted in 1988. It is located near the unique Afrasiab Site. Some parts of several rooms were uncovered during the archaeological investigations. Studying the materials from the rooms of Ishchantepa one can date them to 5th-8th centuries.*

**KEYWORDS:** *Sogdian, Ishchantepa, Talli-Barzu, Lyoss, Raw Clay, Raw Bricks, Baked Bricks, Stone, Antisecical, Slab, Pottery Containers.*

### INTRODUCTION

It is known that the Early Medieval architects continued the ancient traditions of building the fortresses and at the same time contributed with innovations, which were not revealed earlier. The Early Medieval builders having a great experience in using various building materials tried to increase the strength of the fortresses. Consequently the article pays attention to the usage of building materials in fortification of the Early Medieval Period.

### MATERIALS AND METHODS

Ishchanepa village, Urgut district, Samarkand region, on the right side of the Yangiariq canal with a view of 44x24m in height and 4.90m in height. At the highest part of the monument excavations were conducted and as a result three rooms were opened. The dimensions of these rooms are 7.2-7.7x2.3-2.5 m, their walls are raised from flat blocks, the width of the material is 1.2-1.3 m, and the preserved height is 1-1.3 m. The entrance to the first room is in the western part of the entrance, and the second door is to the south, and the entrance to the second room is

connected to the first room. The door width is 0.9-1 m. Outside the southern wall of the first room, the stairs burst out. Four quarries were identified on this slab. The rope is composed of a set of walls along the wall, with one of them being folded downwards, with a tag attached upwards and stacked with straw mud. Such items are not specifically designed for them, and the ash remains in their interior.

In order to study the stratigraphic layers of the Ishchantepa monument, a shaft was found to be 1,8x1,5 m in the north-western part of Room 3. This canyon has been excavated from the upper site of the monument to the mainland, 5 m deep. The matrix layer consists of a yellowish, medium density density layer.

The first building period. The first construction period identified in the chafer is connected to the raw clay platform and to the built-in blocked wall. During this period, the foundation, the aluminum bed, was flattened, and built on a plain platform. This special platform is located at a height of 1.4 meters across all sides of the ceiling, with crude bricks on the platform. On the platform was laid a set of stone, which was recorded on all sides of the slab. In the south and east of the slab on the rock beds there is a large block and its storage height is 0.7 m. A pale ash layer is found on the raw clay wall. The material of the first construction period consists mainly of samples of ceramics - pieces of raw materials, pans, pots, cakes and bowls, according to their analysis that dates are in the V-VI centuries in the Afrosiab, Jartepa monuments [1, Fig.1,34; 2, Fig.66,5] and also in Northwestern Patriarchate, by the V-VI centuries [3, Fig.4,12].

Second Construction Period. On the eastern edge of the stratigraphic slate, the second wall of the building was opened and its storage height was 0.3 m (2-1 m). This special wall is made of flaming gray layers with soil. On the south side of the shrub, the ash layer is covered with soil. Ceramic items dating to this era include thick-walled pots, boilers and pots, which are located in Afrosiyob [4, Fig.4,14; Fig.69,6]. and Gardani Gissar in the Upper Zarafshan oasis [8, Fig.2,4]. According to the researchers' research, such vessels will turn into VII-VIII centuries.

The third construction period was recorded between 1 stratigraphic slab. During this construction, the walls of the bedrock were formed on the eastern side of the slopes and all layers of the shaft were flattened by a wall. Gray layer occurs on the floor of the room. Among existing gray layers, material and cultural items are found in clay potshards, pans and gloves.

According to the scientific analysis of these ceramic items, pottery samples are widely used in the cultural layers of the Afrosiab monument dating to the second half of the eighth century [4, Fig.70, 57-52].

According to the analysis of ceramic vessels obtained from stratigraphic surveys of Ishchantepa monument, 60% of the material of the first construction era was made by the influence of nomadic tribes of Syrdarya on the influence of "Pagan culture".

Lyoss is soft, lush, and has an orange color of 40-60% in color or light gray. It is one of the most important binding tools used in construction, which is widely used in the preparation of mud blocks for masonry walls, for making bricks, for decoration on premises and for dipping the floors [5,p.113].

As in the early Middle Ages, during the first construction of the Ishchantepa monument, the building floor was flattened, and built on a paved platform. By using this method, the building

has been stretched to the ground, flattened, and a smooth distribution of seismic forces across the platform during the earthquake.

The pillar of the building is 1.4 m long, and there are crude bricks between them. This method is an action aimed at accelerating the drying process [6,p.112]. Raw clay has a rocky pavement on the platform and has a block over it.

The researchers have provided a comprehensive overview of the structure and architectural solutions of one of the most important constructive components of the construction. According to him, these hinges have increased the defensive capacity[10, p.100;11, p.143] and did not expose the walls to violent firearms and appeared on the high platform [7,p.100;11, p.143] and also preserved the walls of the building from earthquakes of different natural disasters.

As you know, during the earthquake seismic waves spread across the epicenter. The vertical components of the waves strike the bottom of the structure from the top to the bottom. Horizontally, the seismic waves strike the foundation of the building and try to push the foundation out of the ground.

The walls are covered with wood for seismic insulation, often with reeds and stones. These beds have the potential to dramatically reduce vertical and horizontal seismic forces along the wall during the earthquake. Archeological excavations were conducted by E.Byrkova and T. Lebedeva in the 80's of the last century at the Kizlartepa Monument in the northeast corner of the ancient Afrosiab city, and six monuments of construction were discovered. We can see that middle-sized rock beds were made under the special wall of the R-3, the first medieval fourth building cycle. The Talli-Barzu monument was covered with bricks on a platform-level wall [8,p.8-9]. According to Jabborov's ethnographic data, at the beginning of the 20th century, houses were built on a flat ground without foundation, sometimes a stone or a couple of roofs, groundwater was laid on nearby and salty saline soils, or the wall was dug up[9, p.250]. Stone roofs of Ishchantepa monument dating to the early Middle Ages are based on the walls of Ishonchepa, Khalkobat, Karabulak, Urgut district, the basement of the walls of the kitchen and courtyard walls, and stone roofs used in the roof of the towns, and Nazarov Abduvali, a resident of Khalkabad, the sole purpose of which is to wipe the floor above the building or its cylinder.

In addition to increasing the earthquake resistance of anchored rocks in the monument, it also allows the premises to be used to prevent moisture from moist and polished.

Based on the results of the archeological researches, we can conclude that the findings of the research in Ishchanepa revealed that the monument was built in three periods of construction and was constructed in accordance with the anti-symmetrical and non-wet refinement rules. The tandir, built separately, says that the monument belongs to any patriarchal family.

## CONCLUSIONS

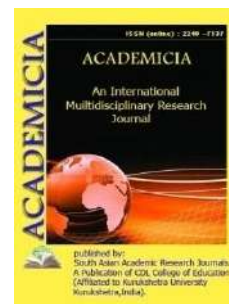
So that, in the early Middle Ages Sogd was one of the advanced cultural centres in Central Asia. One of numerous elements of such progress is the building culture of premises. In building culture of premises there is an original tradition of structures of each element of a complex.

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DOI: **10.5958/2249-7137.2020.00686.2**

## **ELECTIONS ARE AN IMPORTANT MECHANISM FOR FORMING A PROFESSIONAL POLITICAL ELITE**

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### **ABSTRACT**

*The article discusses the importance of elections as an important mechanism for the formation of a professional political elite, the principles of scientific development of the legal framework of the electoral process, the basics of application, the basic principles of legislation, analysis and research. Thus, it can be said that in the struggle for power of political forces and individuals in society, the institution of elections serves as the main democratic weapon. According to the author, "democracy means only one thing - the ability to accept or reject those who govern us." Shumpeter, who interprets democracy as just a political method, essentially sees it as exactly the same thing as competitive elections.*

**KEYWORDS:** *Political Elite Elections, Electoral Process, Democracy, Power, Political Life, Political Role, Civil Society, Parliament.*

### **INTRODUCTION**

After the independent Republic of Uzbekistan chose the path of democratic development, there was a need to form a government in a legal, democratic way. Therefore, the Constitution of the country stipulates that "the people are the only source of state power." <sup>1</sup>As a result, free elections have become one of the main principles of the constitutional order of Uzbekistan. It should be noted that the will of the people participating in the elections is a priority in the decision-making of civil society, the formation of the rule of law. Thus, elections are an important political process that allows the people to play their political role as a source of state power. However, voters can freely express their will only if the democratic principles of suffrage are strictly observed. It is difficult to imagine the political life of developed countries today without elections. It is through elections that state power and local representative bodies are formed,

high-ranking state officials are elected, in other words, representatives of the country's political elite are elected, political leaders are educated, and political figures are trained. Thus, it can be said that in the struggle for power of political forces and individuals in society, the institution of elections serves as the main democratic weapon. It should also be borne in mind that elections can lead to a change in public policy, the outcome of which in many ways will determine the future development of the state. This means that in the context of civil society and the rule of law, elections are not only a manifestation of democracy, but also a necessary condition for it. The Universal Declaration of Human Rights, adopted by the UN General Assembly on December 10, 1948, contains the following democratic principle: "Everyone has the right to participate in the governance of his country, directly or through freely elected representatives. The will of the people must be the basis of the authority of government: this will must be expressed on the basis of universal and equal suffrage in secret or in other equally important respects."<sup>2</sup>

Some theorists interpret elections as a process that constitutes the essence of democracy. For example, Joseph Shumpeter describes democracy in his writings as an "institutional mechanism," a way of holding public office through a competitive struggle to win the votes of society. According to the author, "democracy means only one thing - the ability to accept or reject those who govern us." Shumpeter, who interprets democracy as just a political method, essentially sees it as exactly the same thing as competitive elections. Although democracy is interpreted somewhat narrowly in such an approach, it cannot be denied that the degree to which a political system is democratic largely depends on the norms and mechanisms of elections. It should be noted that the people's government, which is the cornerstone of democracy, has conditioned the formation of state power in our country through free and democratic elections, based on the will of the people. As a result, all elections held in Uzbekistan to date - presidential, parliamentary and local elections - have been organized on the basis of the will of the people, in accordance with democratic norms and standards.

### **The main part.**

In the public mind, the term "election" is used in the media in two different senses: on election day and in the sense of a holistic electoral process. As for the different interpretations of the term "election", some dictionaries describe this process as follows: "Elections are the process of democratic election of deputies, officials, members of the governing bodies of a party or organization by voting."<sup>3</sup>

According to another definition, "elections" refers to the process of forming a government agency or delegating power to an official, which is done by voting and requires two or more candidates to run for each mandate.<sup>4</sup> Hence, the existence and competition of alternative candidates and alternative political forces is accepted as a basic condition of elections. The list of positions and positions to be formed through elections varies from country to country, covering all levels of government - central and local. For example, according to the Constitution of the Republic of Uzbekistan, deputies of the President of the Republic of Uzbekistan, the Legislative Chamber and the Jogorku Kenesh of the Republic of Karakalpakstan, as well as representative bodies of state power of regions, districts and cities are formed on the basis of elections.<sup>5</sup>

Elections serve a number of functions as a prerequisite for democratic development:

- Filling the corps of politicians. In democracies, elections are a major source of political recruitment. The process will look like this: parties will nominate their candidates, and politicians will seek to get more votes by demonstrating their abilities and stating their goals during the election campaign.
- Ensuring representation. If elections are conducted in accordance with the principles of transparency and competition, they will serve as a channel for conveying the demands of society to the system of government. In this process, the people determine their representatives and give them a mandate that gives them the right to exercise the sovereignty of the people. So, legally, elections are a process by which the people delegate the right to exercise their power to their representatives - the President, deputies, and other elected officials.
- Formation of political elite. Elections are an important means of getting people into the political elite, rising to senior positions, bringing political leaders to the forefront, or removing them from the political scene. As a result of the elections, the composition of the ruling and opposition elites will change, the status and level of influence of political parties will be determined. Elections also appear as a factor in strengthening the capacity of the political elite, as it allows the selection of candidates for the post, the selection of the most deserving of them.

Doctor of Political Sciences M.Kirgizbaev writes: "Elections in different countries have a number of common features of the nature of democratic elections based on mutual opposition: mutual trust between different political forces, respect for the traditional rules of forming the ruling elite through free democratic elections. Elections in the societies of developed countries are a real mechanism for the formation of a political elite"<sup>6</sup>

- Legitimization of the political system. The electoral process always serves to legitimize the political system, political order, individual political institutions (President, Parliament, etc.) in the eyes of members of society. Indeed, the participation of citizens in a political process, such as voting, means that they agree with the functioning of this political system, that they have accepted the existing form of government, and that political stability in society is maintained.
- The task of aggregation and articulation of the interests of the population.

During the elections, people will have the opportunity to understand their interests. Candidates seeking to get more votes from the electorate in elections pay more attention to the problems of the population than at other times. This creates a favorable environment for citizens to understand their interests at the same time.

On election platforms, the interests of the people are articulated, that is, these interests, views, desires are brought into the form of a clear program, ready to implement in life. This means that each party will determine its supporters through elections, who will vote for it, who will support its ideas and programs - all of which will be able to see in practice. So, everything will be known during the election. It is only through the election results that it becomes clear which party is able to convince whom of their ideas, who represents their interests, as well as who follows them, who expresses confidence."

- The task of establishing public control over the institutions of power. Elections are an important mechanism for establishing control over power. Because during the elections, people express their attitude to the activities of state power, update the composition of power structures. The election will also result in the formation of a governing body, the parliament, and the influence

of the political opposition. "Elections, organized and conducted on the basis of democratic principles, ensure the active participation of citizens in the formation and functioning of state bodies in the country. Properly organized democratic elections result in the formation of state bodies in the interests of citizens and society. In addition, elections are a way not only to organize the structures of power, to elect their representatives to them, but also to establish control over public authorities. As a result of the elections, the will, mood, attitude of the members of the society to the policy pursued are determined, and the diversity of opinions is revealed. Representatives who do not justify the trust, who do not realize the interests of the electorate by their actions, will not get enough votes in the next elections. That is control. "7

- Expanding the scope of citizen dialogue with government institutions. During the election process, candidates meet with voters, listen to their views, and make appropriate changes to their election platforms. Therefore, the elections serve to strengthen the relationship between the government and the citizens. Pre-election meetings have a serious impact on the nature of relations between officials and citizens, people's confidence in the government, their participation in politics.

- Mobilization of voters in the process of resolving issues of national importance. It should not be forgotten that elections are a specific form of governing public affairs. During the election campaign, candidates, political parties introduce people to their programs and call on them to support a specific political goal, suggest ways to implement these programs and mobilize the population and public opinion to address issues that are important for the whole country.

- Influence on the political socialization of the population, political consciousness and political culture of the people. In the election process, citizens learn political values, practices, norms. At the same time, the flow of information in the political sphere will increase, political-analytical activities and propaganda will intensify, conflicting political views will emerge, and alternative ways to solve this or that problem will be proposed. When choosing this or that candidate or party, voters perceive themselves to some extent as a member or supporter of a political force. All this serves to raise people's political awareness and activism.

- Renewal and reform of public life. Elections provide an institutional, legitimate renewal of the life of the state and society. Elections provide an opportunity for various political forces to develop new tools, methods and techniques for solving problems in society. Elections also lead to the emergence of new ideas that serve the development of society, and the abolition of ineffective programs. It is during the elections that the parties put forward their main and priority views, ideas on how to improve life, how to implement reforms, how to build the future of an independent state called Uzbekistan.

It is obvious that the most important and priority task of elections is to realize the will and interests of citizens, to ensure the presence of people's representatives in government structures and the formation of an effective government. An important aspect of the issue is that elections can perform the above-mentioned tasks only in a democratic environment, if the elections are organized on the basis of democratic criteria. From this we can conclude that the concepts of democracy and elections always go hand in hand, they are intertwined. Elections mean democracy. Democracy means elections.

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## RESULTS AND DISCUSSIONS

In this regard, specific principles for the organization of elections on the basis of democratic norms have been developed. These include:

- Organization of free elections. According to this principle, any political, administrative, social, economic, psychological or informational pressure on voters, election process activists, candidates or election organizers is prohibited.
- Availability of alternative candidates in the elections. "The term election itself means to select only one of several people," he said. If there are no alternative candidates, voters can only vote for one candidate. In that case, it is not considered an election. Therefore, the participation of alternative candidates in the election determines the democratic nature of the election.
- Competitive organization of elections. Candidates should present their programs to voters during the election process, pointing out and criticizing the shortcomings of their opponents' election programs. Only then can voters vote for the party or individual candidate they prefer.
- Periodicity and duration of elections. Elections shall have a certain periodicity, the periodicity of which shall be determined by the term of office of the elected bodies and persons. The application of this principle allows for the constant updating of the composition of elected bodies by expressing confidence or distrust in elected officials.
- Equal opportunities for political parties and candidates. Each political party or candidate must have the same amount of material and information resources as their opponents during the election campaign.

## CONCLUSION

It is important to note that through elections, people empower people they trust and believe they are capable of governing the country. This means that the elections will form a professional elite, consisting of people who have won the trust of the people, are interested in the development of the state, have leadership skills.

In conclusion, in the formation of the political elite in the form of the Parliament of the Republic of Uzbekistan, the people of Uzbekistan act as a source of power, the will of the people is paramount. Through elections, state and local authorities are formed, and the head of our state, the President, is elected.

In other words, a certain part of the country's political elite will be selected through elections, political leaders will be educated, and political forces will be strengthened. In this regard, the elections in Uzbekistan have become an important tool for deputies and senators to be part of the political elite, to gain a foothold in the political arena. After all, it is on the basis of elections that the composition of the elite in parliament will change.

The most deserving candidates were chosen because all the presidential elections held in Uzbekistan so far, the elections to the Oliy Majlis and the elections to local representative bodies were organized in accordance with democratic norms and standards. These include the organization of free elections, ie no pressure on voters, electors or election organizers, the participation of alternative candidates, the organization of elections on a competitive basis, the observance of statutory norms on the periodicity and regularity of elections, equal opportunities



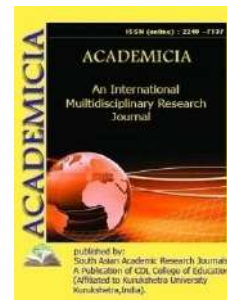
for political parties and candidates. which, in turn, was seen as a factor in increasing the capacity of the political elite formed through elections.

In addition, it should be noted that the elections served to legitimize the activities of the parliamentary institution, the institution of the presidency, local councils, and ensured the maintenance of political stability in society. The professional political elite formed through elections is distinguished by reforming the country, advancing new methods and means of solving problems in society, and implementing new ideas that serve the development of society.

In short, the practice of Uzbekistan serves as a shining example of the fact that elections are an effective mechanism for the formation of a professional political elite.

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DOI: **10.5958/2249-7137.2020.00687.4**

## JARGAN IN UZBEK LANGUAGE AND ITS STUDY

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### ABSTRACT

*The article describes jargon belonging to a limited vocabulary and their role in enriching the Uzbek language. There is also a discussion of the study of jargon in Uzbek linguistics, its social status, its types, and the special role of jargon in the text of fiction. When we look at world linguistics, most languages have such a "language" that this "language" may not be exactly the same in different languages in terms of meaning and form. A dictionary of jargons has not been compiled, and even explanations of some of the concepts that unite around jargon are not given in full and in detail. Since jargon is a sociolect, its sociolinguistic aspects are somewhat obscure, but not exhaustive. After all, language is one of the dimensions of development. The tongue should not be molded or chained. It is constantly evolving and growing.*

**KEYWORDS:** *The Concept of "Jargon" In Science, the Social Status Of Jargons, Artistic Jargons, Modern Jargons.*

### INTRODUCTION

Language is seen as a strong link between nation and society, and it is the cornerstone of society's development. For thousands of years, humanity has been trying to preserve the purity and beauty of language. But as long as there is inter-linguistic integration, this will continue. Language cannot be imagined without growth and action: it becomes a dead language.

Since language is a social phenomenon, the social strata play a special role in the growth and development of language. When we look at world linguistics, most languages have such a "language" that this "language" may not be exactly the same in different languages in terms of meaning and form. This can be made clearer by the fact that social groups vary from country to country, or by the differences in language structure. We recognize this "language" by the term jargon.

Jargon is a French word, an artificial "language" specific to a social group that others do not understand. With the help of jargons it is possible to understand which social group people belong to. Although jargon is part of a limited vocabulary, we find that it is widely used in dialogue and fiction.

Jargons are constantly interacting with other lexical units. One of the hallmarks of jargon is keeping conversations a secret. Accordingly, the way in which jargons are created often does not correspond to the word-formation system of the language. They are artificial, conditional words.

According to V. Dal's dictionary, "jargon" is a term borrowed from the French language and is translated as "speech", "communication", "pronunciation", "local speech". This commentary emphasizes the difference between jargon and coded language, and there is no ambiguity in the meaning of the term [2, 1986]. So jargon is a simple way of speaking. Why, then, do we combine them under a separate term and study them separately from the words used in ordinary speech? Finding the answer to this question is the basis of our research.

In O.S. Akhmanova's dictionary of linguistic terms, the word slang is jargon, *lingo, cant, French jargon*; is derived from the German words *Rotwelsch, ucn, jerga*. The scholar evaluates jargon not as a separate word, but as a language used in oral speech in order to distinguish it from a community of language speakers by a separate social group, and it is used in bourgeois jargon, military jargon, jargon of thieves, nobles jargon, office jargon, sailor jargon, athlete jargon, school jargon, class jargon, mixed jargon [1, 1966].

Ojegov S.I. also defines jargon accordingly and treats it as a special speech with a conditional character [4].

## THE MAIN FINDINGS AND RESULTS

Although jargon is a well-studied field in Uzbek linguistics, it has not yet been definitively clarified. A dictionary of jargons has not been compiled, and even explanations of some of the concepts that unite around jargon are not given in full and in detail. Since jargon is a sociolect, its sociolinguistic aspects are somewhat obscure, but not exhaustive. This topic is being studied by young linguists and we are sure that it will come to an agreement.

Along with the jargon in the Uzbek language, the term "argo" is widely used, and it's no secret that now the term "sleng" from the English language is actively used in the youth language. Their distinctive features and the fact that the areas of application are different, led to the fact that these terms have grown from one root to the present day, forming separate concepts. We will dwell on more detailed information and examples of Jargon. Jargons are often formed by changing the sound side of words in the language, by breaking, mastering words from other languages and giving meaning to existing words in the language.

The 2-volume explanatory dictionary of the Uzbek language defines the jargon as follows.

Jargon [r. fr.]. A specific language of a social or professional group that differs from a literary language in terms of words and phrases appropriate to the tastes and requirements of that group. [9; 274]

The 5-volume explanatory dictionary of the Uzbek language defines the jargon as follows.

Jargon [fr. jargon — a word belonging to a particular group]. The only words and phrases specific to any social or professional group that they understand and differ from literary language are jargon.

Azim Hodjiev's "Explanatory Dictionary of Linguistic Terms" also mentions the term jargon and defines it as follows:

Jargon (fran. Jargon). Words and phrases used by members of a group to differentiate themselves from others. For example, *novcha* (vodka), *red* (wine) - typical of the speech of drinkers; my cousin (policeman, inspector) - in the speech of the drivers. [5; 39]

In the work "Stylistics of the Uzbek language" by S.Sultansaidova and O.Sharipova the jargons are described as follows:

Jargon is a French word meaning broken language.

Jargons are special words and phrases created by a social group to express their goals. Their most important feature is that in a conversation, the speaker shows that he is superior to others, emphasizing this. For example: *Bu kishinishonioliyshonolibkelibdilar* (This man brought the badge of high glory). *DadamOllohningdargohigamaqtuletdilar* (My father praised Allah). [6:48]

Another description is given in the work of M.Iminov, T.Numanov, D.Babokhanova "Problems of Uzbek language methodology":

Jargons (French jargon) are in fact typical of the speech of the "upper class" and are "class dialects" that are used in a narrow sense, they are incomprehensible to the public and foreign to the vernacular [7:42].

Jargons can be divided into two groups according to their origin in a group or class:

- a) Professional jargons;
- b) Social jargons

Professional jargon includes special words and phrases used by professionals. The emergence of such jargons is usually associated with the specialization of production, the generality of labor, and sometimes the culture of life.

Professional jargon differs from social jargon in that it is mispronounced and sometimes has a character.

Social jargon is also called *abdal* language in Uzbek. In ancient times, magicians and potters used idioms that could be understood only by them in order to hide their intentions from the public.

In general, the characteristics of jargon are as follows:

1. Jargon is a different, very narrow group of things and events that have a name in literary language.
2. Jargons always have an expressive stylistic color.

3. Most jargons are transient, temporary, and then gradually either completely forgotten, or because of the emotional - stylistic coloring, they can go from simple to colloquial, from it to general, that is, to unrestrained lexical.

Jargon groups come in many forms:

1. Group jargon in the language of drinkers, depending on their interests and habits:

— *Oqidanmiyoqizilidanmi, xo'jayin?* (from white or red, boss?)

— *O'ldirsa ham qizilio'ldirsin.* (if this kills, let red one does it) (“Shaytanat”)

By red (*qizili*) and (*oqi*) white, we mean wine and vodka.

2. Jargons for groups of people by age and gender.

For example, jargons used in women's speech:

-*O'zimbilmayman, qachono'tlabqo'yganimni.* (I don't know when I grazed) (“Sharqyulduzi”).

- *Nima ham qilaredim, shundankeyinsayohatchiayollargaqo'shildim.* (Whatever I did, I then joined the women travelers) (“Sharqyulduzi”).

In the examples given, the phrase *o'tlabqo'ymoq* (to graze) is used to mean to become pregnant, and the word *sayohatchi* (traveler) is used to mean to go astray.

In this case, the hat is a surplus of money.

In the works of art, jargons in two languages are observed.

1. Literary jargons:

a) The expression of the period in historical works is used as an individualization of the speech of a particular group;

b) Synovial jargons are used in many historical works to give the color of the period, to individualize the speech of historical persons.

2. Modern jargon.

In some literary works, jargon informs the hero about which group he represents, while in some it helps to open his mental state.

Certainly, jargons appear within a group or class, but they do not last long. As soon as a group or organized gang disappears, the jargon words become obsolete. Some become fluent in literary language.

Jargon words are most often used when two members of the same group speak to each other. That's why they are artificial words.

The source of jargon is mainly words and artificial words that are difficult to determine which language is unique after the word has been completely changed.

Words from other languages are also a source of jargon. For example:

A man is a brave man, a goat in the sense of a traitor.

## CONCLUSION

It is well known that changes in society also lead to changes in the structure and quality of language. If there is a single step in the development of a society, then there is definitely a growth in the history of language. Interlingual integration also plays a special role in changing

and enriching the language structure. The renewal of the consciousness and thinking of the members of the society, the increase in the number of social groups is the guarantee of the expansion and longevity of the jargon we have taken as an object.

Jargons are basically the language of a particular circle, and the words used in it are words that indicate that this circle is superior to other circles and, conversely, that other circles are below this circle. We can even find two different jargons in the same circle. That is, the jargon used by the upper class in relation to the lower class, and the jargon used by the lower class to name and glorify their masters. Observations and examples are a clear example of this.

Jargons increase or decrease in proportion to the thinking and behavior of social groups. This does not mean that we should go to the idea of jargon as a “temporary speech phenomenon”. It should be noted that most of the obsolete words in our glossary were used at a certain time and are now obsolete.

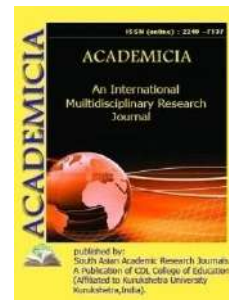
Jargons play a special role in the text of fiction. With its help, the events of the work can be described more convincingly, or the language of the protagonists can be individualized. In some works of art, jargon tells the protagonist which group he belongs to, while others help to reveal his mental state.

Linguistic standardization is a multifaceted process in which common words are terminated within a specific occupation or jargon, deviate from the basic standardized position, or vice versa - a specific profession or jargon. The meaning of the terms encompassing lands is expanding and they can become public property. After all, language is one of the dimensions of development. The tongue should not be molded or chained. It is constantly evolving and growing.

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DOI: **10.5958/2249-7137.2020.00688.6**

## CLASSIFICATION OF VERBS EXPRESSING THE MENTAL STATE OF A PERSON IN THE COMPOSITIONS OF ODIL YAKUBOV

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### ABSTRACT

*The article deals with the relationship between language and thought, the expression of this connection in the speech of the work of art, in which the factors that lead to the actualization of language units. The expression of the hero's mental state is analyzed on the examples of the works "Treasure of Ulugbek", "Conscience" by O. Yokubov.*

**KEYWORDS:** *Language, Thinking, Their Relationship, The Language Of The Work Of Art As One Of The Manifestations Of Creative Thinking.*

### INTRODUCTION

M. Yuldashev, who studied the literary text from a linguistic and poetic point of view, says in his scientific work: it is nothing more than equating an artificial language (such as Esperanto) with a definite national image or national-spiritual ground, equating it with a conditional "language" created to regulate traffic. However, people also express different feelings through language, such as feelings and experiences, amazement and wonder, the presence in the heart, which do not always mean purely communicative goals. [1: 164].

The modern Uzbek language is distinguished by its richness of expressively painted words and its orientation to silence in giving thought. Where there is expressiveness and silence, the mental state of the person who expresses it is reflected in itself. In his works, Odil Yakubov is a skillful writer who knows how to use such expressively painted and silent words in his place, and who convincingly reflected the period, ideology, how much he could have a strong influence on the fate of people, the cause of great changes.

Odil Yakubov, with his sharp pen and drawing skills, embodies historical figures with artistic authenticity and power, transforms real people into very impressive artistic images. In describing the spirit of the time and the inner psyche of the heroes, he uses phonetic, lexical, as well as

morphological means so effectively that the reader who reads his works laughs with the heroes, cries with the heroes.

## THE MAIN FINDINGS AND RESULTS

Verbs that express the state of mind have a special place in the expression of the inner psyche of man [2; 34]. G. Kushkarova distinguishes the following types of verbs that reflect the state of mind, formed on the basis of imitation of the sound in German. 1) verbs that give the mood of the speaker in the process of speech communication; 2) verbs based on the expression of emotions in the sound [3; 59]. Such verbs can be found in the Uzbek language, including in the novels of O. Yakubov. For examples: *“Tilla” soʻzini eshitgan chol ijirgʻanib gapirdivayuzini burishtirdi... Mirza Abdullatif ijirgʻanib gapirdi.* (Odil Yoqubov *“Treasure of Ulugbek”* p. 85). The *ijirgʻanib* verbs in these texts provide information about the mental state of the speaker during speech.

The language of the work of art has an anthropocentric essence as one of the manifestations of creative thinking. The collaboration of language and thought creates new artistic expressions, revealing both the potential of the individual and the infinite possibilities of language [4; 802-803].

In the following examples, the fact that the action reflected in the verbs is associated with sounds helped to reveal the state of mind of a person:

*Mirzo Ulugʻbek bugap larni xoʻrsinib ilanaytdi.* (*“Treasure of Ulugbek”* p. 38) *Nigoraning chiyyillab gapirishi Sarkorning asabigategardi.* (A rebellious slave. p. 31) *Ota holsizlanib oʻtirib qoldi, yanatelefonjiringladi. Bu safar Ivan bilantishini gʻijirlatib soʻzlashdi.* (A rebellious slave. P. 32)

It turns out that some verbs in the Uzbek language, which are formed on the basis of words that mimic the sound and the situation, also serve to express the state of mind of a person.

*Bir tomoni movlonoga ham qiyin, u hibsga tushgan dastlabki kunlari qattiq yotib qoldi, kechalari olovday yonib alahlab chiqar, yomon tushlar koʻrib uvvos tortib uygʻonib ketar, koʻzlariga allanimalar koʻrinib qorongʻu burchakka tiqilib olar va bir nimalar deb pichirlar edi.* (Treasure of Ulugbek p. 118). In this case, the verb to whisper from the word imitating *pichir-pichir* sounds is formed, which reflects the state of temptation in the text. Or:

- *Bundan chiqdi, shu bitta... isqirt piyanistani deb, sassiq qoʻngʻizday hamma joyda sasib, yosh avlodni yoʻldan urib yurgan bir igʻvogarni deb shuncha odam, oliy maʼlumotli ikki yosh juvonmarg boʻp ketaveradimi?*

- *Ie? – dedi Proxor, goʻdakning koʻzlariday maʼsum koʻzlarini pirpiratib.* – *Oʻlgan odamni piyanista deb, qabih bir jinoyatni bosdi-bosdi qilib yubormoqchimiz hali?..* (Conscience. P. 231).

... *Ali qushchining asabiypirpiragan lablarigakinoyalitabassumyugurdi.* (p. 228).

In these texts, too, the inner state of mind of a person is revealed through a verb made of the word imitation.

It turns out that the fact that the action reflected in the verbs in the above texts is associated with sounds and situations, helped to reveal the inner world of man more vividly.

Mental state verbs are verbs that are part of the semantic structure of state verbs and mainly represent a specific process that takes place in a person and is related to his psyche. Mood verbs express a person's mental activity, state of mind. These include *o'ng'aysizlanmoq* (to be uncomfortable), *qo'rqmoq* (to afraid of), *ajablanmoq* (to be excited), *zavqlanmoq* (to enjoy), *xursandbo'lmoq* (to be happy), *xafalanmoq* (to be sad of), *achchiqlanmoq* (to get angry), *yumshamoq* (to be calm), *g'azablanmoq* (to be in a bad temper), *taajjublanmoq* (to be surprised), *ikkilanmoq* to hesitate, *jiddiylashmoq* (to become serious), *shodlanmoq* (to be happy), *xo'rsinmoq* (to sigh), *siqilmoq* (to be depressed), *shavqlanmoq* (to be delighted), *xo'mraymoq* (to be gloomy), *maftunqilmoq* (to be appealed), *masxaralanmoq* (to tease), *masrurlanmoq* (to enjoy), *xunobqilmoq* (to mock), *ishonmoq* (to believe), *ma'yuslanmoq* (to become sad), *mag'rurlanmoq* (to be proud of) and others.

These conscious or mood verbs express positive and negative emotional states such as pleasant and unpleasant feelings that occur in a person, peace and relaxation, excitement and frustration, courage and hesitation, joy and anger, fear and joy differs from other lexical-semantic group conditional verbs. Mental verbs with an archetype of "state" and an integral semantic of "psyche" are divided into two groups according to the way they express a particular relationship:

#### Positive verbs and negative verbs

Situational verbs that express a person's positive or negative attitude are especially important in terms of their degree of influence and strength. Words belonging to such a semantic group are characterized by both message (message) and expressiveness, and in some cases, effectiveness is superior to the logical expression of message (message). Compare:

Behavioral verbs that express a positive attitude: They include *quvonmoq* (to be happy), *shodlanmoq* (to enjoy), *sevinmoq* (to be in a good temper), *suyunmoq* (to be delighted), *yayramoq* (to enjoy oneself), *zavqlanmoq* (to be enthusiastic), *maroqlanmoq* (to get enjoyed), *xursandbo'lmoq* (to be happy), *lazzatlanmoq* (to take pleasure), *shavqlanmoq* (to be delighted), *faxrlanmoq* (to be proud of), *masrurlanmoq* (to enjoy), *rohatolmoq* (to take delight), *rohatlanmoq* (to enjoy), *kayflanmoq* (to get intoxicated), *yengillashmoq* (to become softened), *tinchlanmoq* (to be calm), *tinchimoq* (to be calm), *xotirjamlanmoq* (to be calm), *xotirjam tortmoq* (to be sooth), *yuragijoyigatushmoq* (to take a heart into peace), *yuragijizillamoq* (to bet depressed), *ruhlanmoq* (to get inspired), *ko'ngliko'tarilmoq* (to be happy), *ko'ngliyumshamoq* (to become soften), *maftunbo'lmoq* (to get appealed), *mahliyobo'lmoq* (to get attracted), *kayfinisurmoq* (to get drunk), *suymoq* (to love) and others.

Such verbs play a key role in expressing the mental state of the protagonist in all of Odil Yakubov's novels. For example:

*Otaningso'ngiso'zlaridan Sarkornihoyatdaxursandbo'ldi. Axir besh-oltioydan beri uyqusidahalovatyo'q. (A rebellious slave).*

*Mirzo Ulug'bekah volidan xabartopgach, Ali anchaxotirjam tortdi... (Treasure of Ulugbek).*

*Qalbini yorug' nurchulg'abolgan Malikulsharob, maynibirsipqorishdabo'shatib, kosaniqo'yarkan:*

*- Ooo! – buhayotqanchalarlazzatli! – dedivayanachol bilan bo'lgan voqeanieslab quvondi... (Ancient World)*

*Qalbida ilk muhabbatg`unchalaripaydobo`lganHaydaronasininggaplaridansevindi. Ko`zoldigaLatofatningnurbilanyug`rilgantiniqyuzikeldi-yu, chuqurxo`rsindi. U ich-ichidanshodlanardi. (Conscience).*

*Ziyodaxonningnoz-ishvasiSarkornibefarqqoldirmasdi. U qizningyoqimlisuhbatidandoimrohatlanardi... (A rebellious slave) and others.*

If we look at the texts from the novels of OdilYakubov, we can see a number of verbs that express a negative attitude in expressing the psyche of the heroes. Mental mood verbs that express such a negative attitude: they include *xafalanmoq* (to be sad), *xafalashmoq* (to be offended), *jahllanmoq* (to be annoyed), *g`azablanmoq* (to be angry), *yuragiog`rimoq* (to be broken), *ma`yuslanmoq* (to be sad), *kibrlanmoq* (to be arrogant), *qo`rqmoq* (to be afraid of), *xunobichiqmoq* (to get angry), *kayfiuchmoq* (to get surprised (negative)), *bag`ri kabob bo`lmoq* (to bury on fire), *ko`nglixijilbo`lmoq* (to get worried), *xitbo`lmoq* (to get concerned), *ishqoriozmoq* (to be sad), *ichiachimoq* (to be in common feeling), *jigarisuvbo`lmoq* (to get heartbreak), *zardobyutmoq* (to swallow sorrow), *zardasitutmoq* (to get serious), *zil-zambilbo`lmoq* (to be broken), *ichdanzilketmoq*, *yuragizirillamoq* (to be broken), *bepichoqso`ymoq* (to cut without knife), *xo`rsinmoq* (to sigh), *siqilmoq* (to get depressed), *yuragizirqillamoq* (heart to be broken), *ko`nglichokmoq* (to get depressed), *umidsizlanmoq* (to lose hope), *mulzambo`lmoq* (to freeze), *xomushlanmoq* (to be sad), *uyatlibo`lmoq* (to be ashamed of)and others.

*Latofatyoshto`lako`zlaribilanHaydargamo`ltirabqaradi, so`ngyuziniuningko`ksigayashirib, o`ksib-o`ksibyig`labyubordi. (Conscience).*

*Otaqo`zihovlidato`xtamay, to`g`riuygakirdi. Uningketidankirgan Haydardadasiningvajohatiniko`ribqo`rqibketdi:rangioppoqoqarib, sochlarito`zg`ibketganOtaqo`zishishaniderazadanzimistonboqqaqarabotdi. Haydarningvujudidanilondaysovuqbirvahimao`rmalabo`tdi. (Conscience).*

*... Ibn Sino go`yobumudhishvoqeo` ttizyilmuqaddamemas, hozirro`yberganday, yuragitinimsizbezillabuzoqyotdi...*

*...Sultonbebohdaryodayko`pirib-toshganbuolomonniko`rib, birdaqiqahushidanayrilib, garangbo`libqoldi. So`ng, Mozorikalongqabristoniningqo`rg`onigako`zitushdi-yu, dahshatichidabaqiribiyubordi...*

*Malikulsharobsekinboshiniko`tarib, qulog`ini ding qildi. Ammo bubaloijahannamdanhechqandaysaschiqmadi. Malikulsharobsiqilibketdi,atrofgaqaramoqchibo`lib, burilganedi, oyoqlariostidagibirto`nkagaqoqilib, yuztubanyiqildi...(Ancient World)*

*Yotavba! Qo`ydayyuvoshbuodamningvajohatishudarajadao`zgaribqoldiki, Sarkorhattohozirmilitsiyasinichaqirib, "opketinglarbuodamnitegishlijoylaringga!" deb yuboradimi, deb seskanibketdi. (A rebellious slave).*

Based on the analysis of the given texts, it can be said that the writer clearly described the psyche of the protagonists, using in their place the verbs that express a negative attitude.

By dividing state verbs into positive and negative verbs, it also covers additional aspects such as their different semantic subtleties, methodological application, and degree of influence.

Conscious (state) verbs are characterized by the expression of emotional states that are specific to a person. In the Uzbek language, the formation of mood verbs is based on the names that express the inner feelings of a person, the qualities associated with the psyche. For example, we can make the following mental verbs from the noun phrase that describes the human state of suffering: *azoblamoq* (to torment), *azoblanmoq*, *azobchekmoq*, *azobbermoq*, *azobko'rmoq* (to suffer). These words form a paradigmatic line. The text has its own stylistic meanings. To understand this better, let's look at the following: *azob* (torment), *alam* (pain), *nafrat* (detestation), *ranj* (offence), *afsus* (regret), *araz* (quarrel), *sog'inch* (beredom), *sarosima* (distracted), *istehzo* (irony), *ozor* (hurt), *zulm* (offence), *kayf* (intoxication), *tashvish* (anxiety), *istihola* (constraint), *xayol* (fantasy), *xavf* (denger), *zavq* (enjoyment), *jabr* (oppression), *jahl* (spite), *taajjub* (astonishment), *faxr* (proud), *xavotir* (threat), *vahima* (denger), *umid* (hope), *jafo* (devotion), *shavq* (delight), *lazzat* (pleasure), *kibr* (arrogance), nouns that express a person's mental state, such as crying; *zor* (sobbing), *zo'r* (best), *tinch* (calm), *tund*, *xotirjam* (calm), *mag'rur* (proud), *tajang* (hot-tempered), *vahshiy* (wild), *ma'yus* (doleful), *nolon* (improper), *ruhsiz* (hopeless), *notinch* (restless) state (conscious) verbs, adjectives and nouns.

*Otaqo'ziqiziningbo'g'ilib-bo'g'ilibiyig'laganidan, uninghaqsizxo'rlanganidanazoblandi.*  
(Conscience.P. 198)

*Ibn Sinoni tanimay, unga yomon muomala qilganidan o'z-o'zidan uyalib, bir necha kun ma'yuslanib yurdi.*(Ancient World).

State verbs made up of conscious attributes: *shodlanmoq* (to enjoy), *masrurlanmoq* (to be proud of), *umidsizlanmoq* (to get hopeless), *injiqlashmoq* (to be capricious), *notinchlanmoq* (to get restless), *xafalanmoq* (to be angry), *xotirjamlanmoq* (to get calm), *dili g'ashlanmoq* (to feel badness), *munqlanmoq* (to mourn), *xomushlanmoq* (to be sad), *tundlanmoq* (to darken (heart)), *achchiqlanmoq* (to bet angry), *bezovtalanmoq* (to be uneasy), *betoqatlanmoq* (to be impatient), *betoqat bo'lmoq* (to be impatient), *bejolanmoq* (to be fulfilled), *begonasiramoq* (to feel strange), *bezor bo'lmoq* (qilmoq) (to bother), *dili g'ashlanmoq* (for one's heart to be in grief), *yovuzlashmoq* (to become ferocious), *yuvvosh tortmoq* (to pull a halter), *yuvvoshlanmoq* (yuvvoshlanmoq), *ilojsizlanmoq* (to become out of luck), *ma'yuslanmoq* (to become bright), *majburlamoq* (to force to), *masrurlanmoq* (to rejoice), *zoriqmoq*, *zorlanmoq* (to force), *zo'riqmoq*, *zo'rlamoq* (to compel), *zo'raymoq* (to become stronger), *injiqlashmoq* (to become thin), *inoqlashmoq* (to become close to each other), *notinchlanmoq* (to get restless), *nolon bo'lmoq*, *kayfsizlanmoq* (to become dispirited), *yengillashmoq* (ko'chma ma'noda), *yengillanmoq* (ko'chma) (to become relaxed), *umidsizlanmoq* (to get hopeless), *xafalanmoq*, *xafa bo'lmoq*, *xafa qilmoq* (to be upset), *xorlammoq*, *xor bo'lmoq* (qilmoq) (to despise), *xomushlanmoq*, *mulzam bo'lmoq*, *mulzam qilmoq*, *xotirjamlanmoq*, *xotirjam bo'lmoq* (to become calm), *xomushlanmoq*, *xomush tortmoq*, *munqlanmoq* (kam qo'llanadi), *manzur qilmoq* (etmoq) (to be upset), *maza qilmoq* (to enjoy), *mazax qilmoq*, *mazaxlanmoq* (to tease), *mag'rurlanmoq* (to be proud of), *muloyimlashmoq*, *toqatsizlanmoq* (to be impatient), *terslanmoq*, *tersaymoq* (to become inverted), *to'zimsizlanmoq* (kam qo'llanadi), *shodlanmoq* (to become happy), *tajang bo'lmoq*, *tjanglan(lash)moq* (to be anxious), *tinchlanmoq* (to become calm), *tinchsizlanmoq* (to get impatient), *tinchimoq* (to calm down), *tundlan(lash)moq*, *xitlanmoq*, *xijolat bo'lmoq* (tortmoq, chekmoq) (to be embarrassed), *zadalanmoq*, *vahshiydashmoq* (to be wild), *vazminlashmoq* (ko'chma) (to get calm), *takabburlanmoq* (to be arrogant), *ruhsizlanmoq* (discourage), *sarg'aymoq*, *telbalanmoq* (to go crazy), *jiddiydashmoq* (to become serious),



g'ashlanmoq (get angry), qiynalmoq (to suffer), garangsiramoq (to become fool), yomonlamoq (to slander), sergaklanmoq (sergaklanmoq), dadillanmoq (to be encouraged), o'ng'aysizlanmoq (to be uncomfortable) and others.

*U kechaginabo`libo` tganuchrashuvniqayta – qaytaeslab shodlanar, qizningma` yustortibqolganko` zlariniko`zoldigakeltirarkan, o`shavaqtungataskinbermaganidanxijolattortib, notinchlanmoqdaedi.*( Conscience). In the given text, some of the mental state verbs formed from the attributes of the mood were involved and expressed various senses inherent in man.

## CONCLUSION

Language is the product of spiritual activity is seen in verses of the Qur'an. When Allah Almighty straightened Adam's body and entered the soul: "and he taught Adam all the names" (Surat al-Baqara, verse 31). This means that the so-called invaluable blessing of Allah Taala makes the consciousness of Adam jo into his heart. Then he turned to the Angels and said, if you know, tell me the name of these things. They replied that they, pure Human fee, have no knowledge other than teaching yourself. Then the creator asked the man to name them. Adam said the name of all of them one by one (Surat al-Baqara, verses 3122) [5;17].

Whether OdilYakubov created a historical or a modern image, he was able to illuminate the mental state of man through linguistic means.

Verbs that describe a state of mind are related to the psyche and mainly refer to the psyche of a person. If we look at the classification of mental state verbs in terms of construction, we see that 85% of it is made up of horses and psychic-related attributes that are related to a person's mental state.

The human heart cannot be reached. Because, as the mind and consciousness of a person grows and changes over time, so does his heart.

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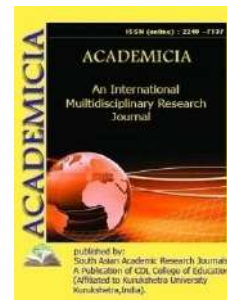
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DOI: **10.5958/2249-7137.2020.00689.8**

## THE RELEVANCE OF THE ASSESSMENT OF MANAGEMENT COMPETENCIES OF EXECUTIVES

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### ABSTRACT

*This article provides a scientific analysis of the competencies of the individual, the process of its formation and development, the composition of management competencies of executives and methods of its evaluation. The scientific and theoretical significance of the assessment of the competencies of management staff is revealed.*

**KEYWORDS:** Competence, Management, Manager, Evaluation, Efficiency, Manager Competence, Quality.

### INTRODUCTION

Labor activity in any field requires specialized knowledge and skills. Areas of activity that cannot be done without special training and require skills are expanding. In this regard, the issue of a person's readiness and inclination to a certain type of work in a particular field is one of the most pressing issues of scientific research.

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## LITERATURE REVIEW

Before analyzing the literature, it is expedient to scientifically interpret the terms “competence” and “competent” in expressing the structure of a professional person. The main difference between these two concepts is that if competence is a quality or attribute of a person, then competency is a practical manifestation of that quality or attribute. If we refer to the existing definitions, we can see the picture below.

Competence is the interdependence of personal characteristics, knowledge, skills, abilities, methods of activity that reflect the requirements of professional activity[1].

Competence is the possession of a circle of issues in which a person has knowledge, experience, which allows to judge something, determining the capabilities, abilities, and skills of a person in a certain field of activity. The concept of “competent” is used to assess the level of a person’s qualifications in certain issues, problems, but not in professional activities in general[2].

Competence is the desire and ability of an individual to realize his potential in order to work effectively in the professional and social spheres, in which a person feels the high social significance of the result of activity as a personal responsibility and cares about improving the result [3]. If we compare these two definitions, we can see the following relationship between them. First of all, competencies are formed on the basis of professional requirements, and then a person is able to apply these competencies in practice, competence.

Richard Boyatzis, one of the founders of the concept of authority, defines competence as a key trait that allows an individual to perform his or her duties at a high level [4].

In all competency studies, it is recognized that professional competence is naturally a complex structural structure and includes specific features of professional activity. In addition, the interrelation of competencies with the standards of professional criteria adopted in the organization is considered as the object of analysis of compatibility with the life of the organization. Therefore, when we talk about this or that authority, we mean the cultural and organizational activities of the enterprise [5].

According to T.Yu. Bazarov, when we talk about the competence and competent of the employee, it means the ability to perform a particular job at the required level (for example, negotiations or analysis of financial results). Competence is a set of personal qualities, abilities, skills, and motivational traits that can successfully accomplish the tasks set by a particular person or company. Based on this definition, the authority of employees is interpreted as a means of exercising organizational powers [6].

To date, a number of types of competencies have been differentiated as a result of the acceleration of research on the competency approach. Below we focus on these types of competencies and their application to management practice. In particular, according to B.I. Beshpalov, general and special competencies differ according to their most general characteristics. General competence refers to the criteria adopted as a single standard for all employees within the organization. Specific competencies are defined in standards of criteria that are expected for a particular competency, a particular type of activity, or that category of employees. When referring to the management activities of the manager, his position in the staff of the organization and a high level of knowledge of the work of each department and specialist under his authority is his general competence, while the manager's responsibility in matters of management - special

competencies. It can be seen that the competencies of these two groups, both of which have separate developments, are the main condition that characterizes the professionalism of the leader, their compatibility and the balance between them [7].

In order to carry out management activities, general managers need to have specialized knowledge and apply it in daily activities. The requirements for the professional competence of a modern leader can be divided into two groups. The first includes the knowledge and skills to conduct professional work in management. These include: speed and decision-making based on uncertain situations; be aware of all issues related to the development of the industry in which the enterprise operates: research, technology, competitive situation, the dynamics of demand for products; ability to manage resources, plan and forecast the activities of the enterprise, to improve management efficiency; modern information technology, communication and communication skills.

The second group of requirements is related to the ability of senior managers to work with people and self-manage. A leader must have the quality of earning the trust and respect of others. This can be achieved through the following personal qualities: high sense of responsibility and commitment to their work; honesty in relationships and trust in partners; to be able to express and persuade their opinions clearly; to treat everyone with respect, regardless of their position in the organization; to be able to quickly regain their physical and mental strength, to criticize their activities [8].

The higher the personal efficiency, the more a person expects results from their activities. According to A. Bandura's concept of personal effectiveness, depending on how a person evaluates his effectiveness, his activities can be carried out in a wide or narrow range, with different efforts to overcome obstacles, solve professional problems with perseverance and perseverance. People who realize their personal effectiveness spend more energy on solving complex tasks than people who do not believe in themselves [9].

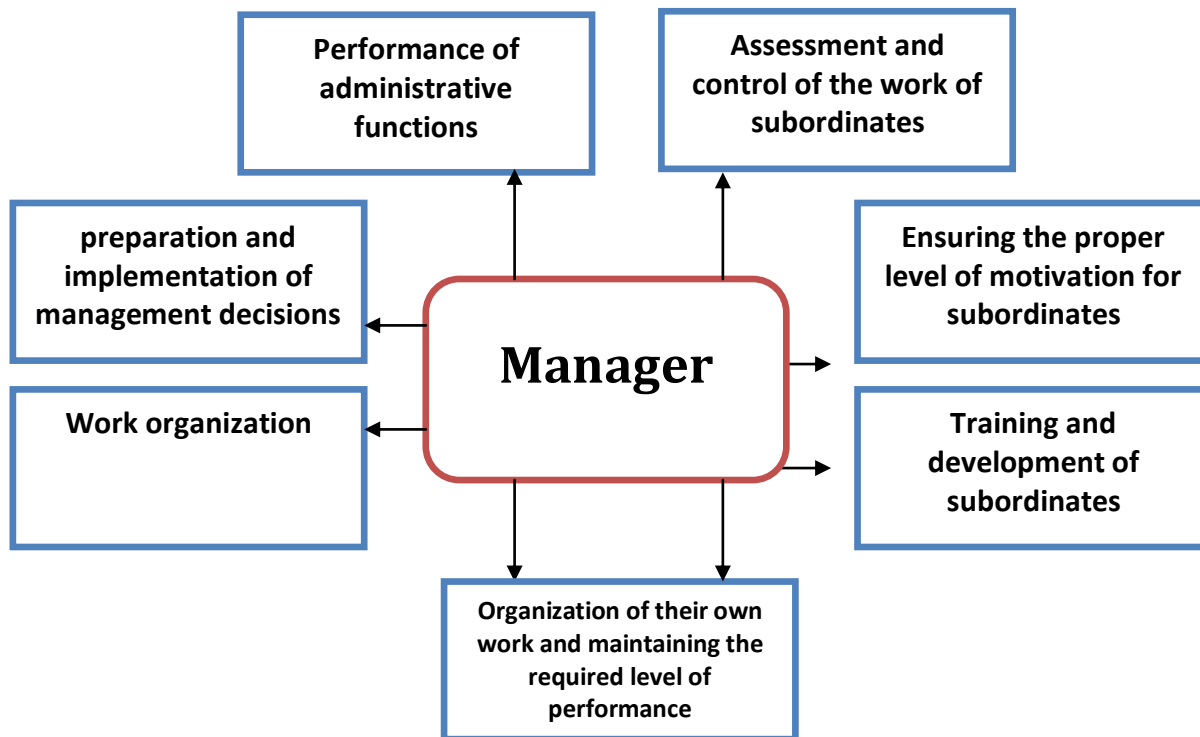
## RESULTS AND DISCUSSIONS

In modern conditions, managerial activity requires the manager to have the following competencies:

1. The ability to control yourself;
2. The ability to be a leader, take the necessary risks;
3. Permanent personal growth;
4. Effective problem solving;
5. Inventiveness and ability to innovate;
6. High ability to influence others;
7. The use of modern management approaches;
8. The ability to lead;
9. The ability to train, develop and motivate subordinates;
10. The ability to form and develop effective working groups.

If the leader wants to be successful, then he must have managerial competencies that would help him in the field of management. In figure 1, you can consider all areas of competence of the leader.

Gradually developing and expanding capitalization in domestic enterprises, it becomes clear that the main link in the enterprise is the manager. None other than the manager makes a large number of decisions every day, and is also responsible for the well-executed work of structural units [10].



**Figure 1. The areas of competence of the leader**

The features of this structure should be taken into account when working on the creation of competencies that ensure effective operation at the enterprise and organizational level. It should be noted that today almost every field and profession has its own powers. For example, in Russian savings banks, the following powers were used in the assessment of department heads:

- Management of customers' orientation System
- Leadership responsibilities;
- Systematic thinking;
- Businessman ability;
- Communication leadership;
- Team management;
- Performance management [11].

Employee evaluation is also reflected in the financial results of management, which ensures that the lives of enterprises operate in a certain system. In 2000, Jacques Nasser, CEO of "Ford Motors" in Detroit (USA), certified 18,000 employees at the company's plants around the world. According to the results of the certification, each employee was given the appropriate category:

"A" (high), "V" (medium) or "C" (low). Category "A" included 10% of employees, 80% received category "B" and the remaining 10% received category "C". In 2002, another attestation was conducted and this time the evaluation conditions were somewhat relaxed. As a result, 5% of employees fell into category "C", 85% fell into category "B" and 10% in category "A". The results of the assessment were used as follows: Employees in the "C" category will not receive a monthly increase and will not receive bonuses. In addition, an employee who falls into the "C" category for two years in a row may not be promoted or may be fired. Such comprehensive assessment measures by Jacques Nasser are interpreted as a reform in the management of Ford Motors and are highlighted as an event to restructure the entire corporate culture. The main purpose of the event was to create a team of young employees who will quickly respond to modern market demands and promote new technologies, breaking the traditions formed over decades in the company [12].

There are always two main situations to consider when evaluating leaders. The first case stems from the purpose of direct evaluation and is more focused on getting information on the suitability of a candidate for a new position. The second case is aimed at creating an effective managerial model, which in part stems from the desire of the management of each enterprise. As enterprise-wide assessment of managers becomes a constant tradition, such a desire becomes more pronounced and takes the form of a perceived normative form. Sometimes organizations use the services of specialized researchers to create such a normative model. The experience of creating professiograms can be an example of this.

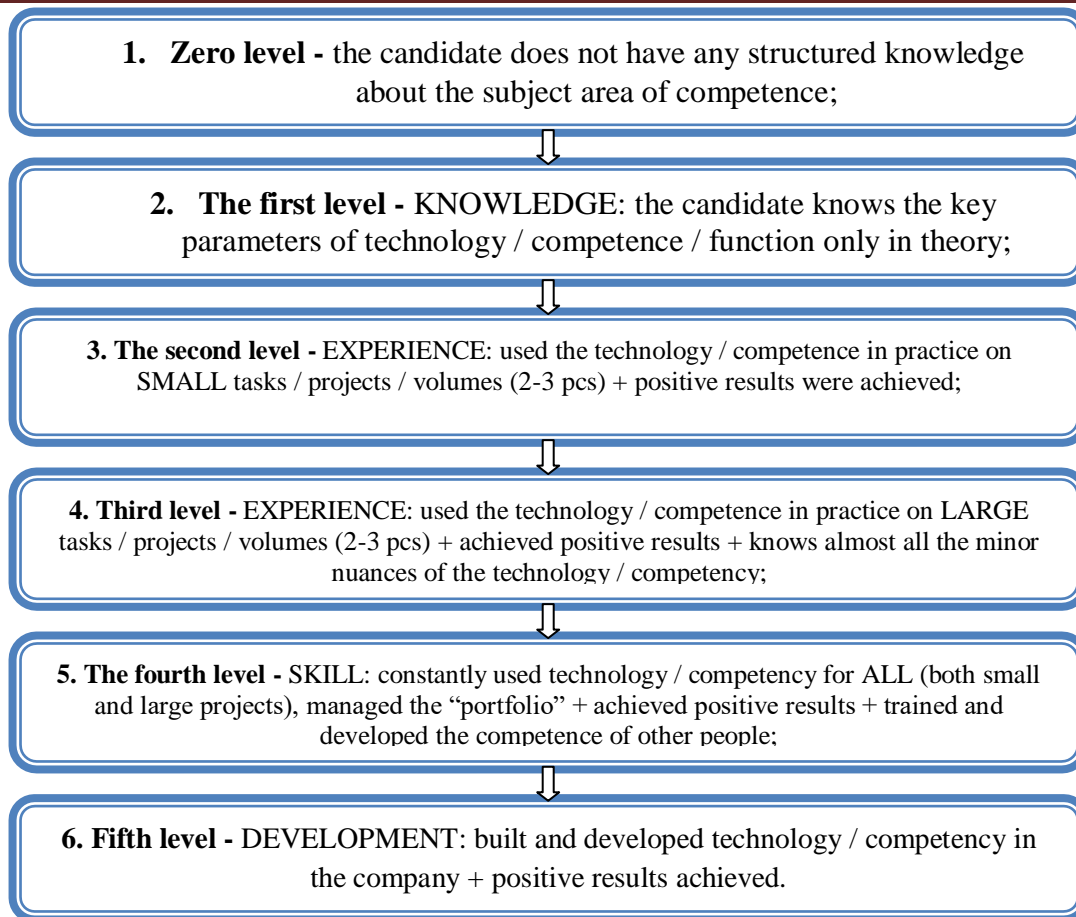
A key feature in creating a normative model of an effective leader is that there is almost always a search for legitimate differences between distinguishing an effective leader from an ineffective one. In such approaches, the question of where to look for differences between the two categories of leaders is different, and the focus is on the following aspects: personality ability, character traits, leadership style, motivational characteristics, experience in management. As noted above, there are three main approaches to which aspect to focus on: functional, personal, and situational. Based on this methodological position, an effective leadership model is created [13].

At the organizational level, the technology of assessing the professional skills of employees has its own order and has the following stages:

- ❖ the first stage - identification and registration of the order, selection of executors;
- ❖ preparatory stage - development of criteria and standards of competence;
- ❖ research phase - assessment of existing competencies, implementation of basic practical work on the project;
- ❖ the final step is to prepare a report on the results of the assessment of professional competencies and submit it to management [14].

A description of the levels reflecting the degree of ownership of the managerial competency by the applicant will be identical for all competencies:





**2-Figure. Typical Levels of Management Competencies[15].**

Levels can be used not only for evaluation when hiring, but also for building grades for existing employees. Depending on the position, the requirements for the level of competencies change: the higher the position, the stricter the requirements.

The peculiarity of professional competence assessment technology is that based on the results of such assessment, the organization's specialists realize their professional skills. As a result, the formation of an active attitude towards the professional model and the implementation of clear planning measures for professional and personal perfection are expected. During the assessment process, the specialist can decide on the level of development of their skills and abilities and the opportunity to develop them, and project their professional future.

Speaking about the methods of evaluation of civil service management, it is planned to perform the following stages, consisting of 5 main sets of measures and the tasks arising from them:

1. Development of a set of competencies specific to the heads of different categories of civil servants, the procedure for their evaluation and the development of measures for the reserve of candidates.
2. Evaluate and select candidates for the reserve.
3. Monitoring the training of reserve candidates.

4. Evaluate the candidate before appointment.

5. Expert discussion of results and preparation of reports [16].

One of the main indicators of the effectiveness of diagnostic methods is the validity coefficient, which is determined on the basis of the correlation between any criteria between the diagnostic assessment and professional achievement. The higher the validity of the method, the more clearly the effectiveness of the leader's activity is expressed. In Table 1- below, the validity of the leader identity study methods is given in the form of percentage stands.

Personnel Assessment Centers, Assessment Center.	70 - 80 %
Expert evaluation.	70 %
Occupational tests.	60%
General ability tests.	50 - 60 %
Biographical tests.	40%
Personality tests.	40%
Interview	30 %
Recommendations	20%

**Table 1. Effectiveness of personality study methods [17].**

In the process of evaluating managers, the objectivity of evaluation becomes the most important principle, and in fulfilling such a requirement, it is necessary to rely on three main tasks.

1. Define the criteria for assessing the professional and personal qualities of the leader and on this basis to create generalized factors, ie competencies.

2. The use of methods that represent quantitative indicators of the competencies to be studied.

3. Selection of the most optimal evaluation process [18].

The following is some important information about the evaluation measures used in the practice of a number of large companies. These data, on the one hand, testify to the diversity of staff evaluations, and on the other hand, prove once again that these measures have an impact on staff professional development.

S.Laykov, Personnel Manager of BAT Russia, distinguishes the following aspects in personnel assessment: The first direction - Performance Appraisal and Career Enhancement - is designed to assess managers. The second direction - Success Through Effective Performance - is used to evaluate employees of the marketing and sales department and employees of the administrative department (not managers). The third direction - Performance Appraisal System - focuses on the assessment of personnel engaged in production, and also applies to drivers, kitchen workers, etc. [19].

Clive Fletcher argues that staff evaluation should serve staff development by enhancing his or her competence. Therefore, certification is primarily a tool for staff development.

The main objectives of personnel certification are:

1. Information (providing the necessary information to the staff of the company).

2. Create a backup for promotion.

3. Identify those who need vocational training (development of vocational training programs, staff training and retraining).
4. Administrative (basis for personnel decisions: promotion, demotion, replacement, dismissal).
5. Improving communication (mutual understanding, interaction and joint activities, the relationship between manager and employee).
6. Incentives for labor [20].

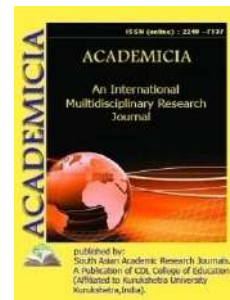
## CONCLUSION

In a competency-based assessment process, the manager was assessed at the maximum level required to manage that area. For example, Boris Rezapov, manager of Smith Kline Beecham Consumer Healthcare, an expert in evaluation based on this method, describes the process of conducting such an evaluation method as follows: For example, let one of the indicators of such management be "labor efficiency". This indicator includes the following competencies: planning, decision making, quality orientation, motivation for success, communication and knowledge of business and organization. For each of the powers listed above, the leader receives a score from 0 to 4. It is not possible to get a score of 0 because such a leader is considered absolutely unworthy of his position. 1 rating is satisfactory, but not enough for the job. Assessment 2 is called the initial level of competency development and is minimal for labor. A grade of 3 is a strong level of competency development, a grade of 4 is a level of leadership, and such a leader is a leading employee of his company. "[21]. Working with competencies allows one to move away from subjective assessments defined as "good" and "bad" and provides a basis for relying on clear criteria of work.

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DOI: **10.5958/2249-7137.2020.00690.4**

## EDUCATION SYSTEM OF IRAN: HISTORY, DEVELOPMENT STAGE AND FEATURES

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### ABSTRACT

*In this article, the author, based on an analysis of a number of sources, tried to reveal the features of the education system of Iran, which has its own history of development in the region, its historical stages and features. The author tried to objectively analyze the reforms and modernization carried out at different periods in the education system of Iran, mainly using foreign sources. The 1979 revolution plays a very important role in the life of Iran. Therefore, the article compares the education system for two periods: pre-revolutionary and post-revolutionary periods. An attempt was made to identify and show the results obtained using various tables. The education system was divided into primary school, secondary, vocational and postgraduate degrees. The reforms carried out at each stage were briefly, but substantively covered. Conclusions were made by analyzing the results of the reforms. The features of the education system in Iran were identified and the prospects for their use in the context of Uzbekistan were examined. With an emphasis on gender processes in the education system, the strengths and weaknesses of the two-tier school system were identified. Efforts were made to explain the post-revolutionary changes in the country, the Islamization of the education system and its impact on the quality of education. In conclusion, the results obtained as a result of the analysis were systematized and sorted. Suggestions were made about what aspects of the education system of Iran, can be implemented in practice and in the education system of Uzbekistan. When writing an article, the author sought to develop and substantiate his/her conclusions using methods such as comparative analysis and the use of statistical data.*

**KEYWORDS:** Islamic Republic Of Iran, Education System, Revolution, Pahlavi Dynasty, Islamization, Gender Equality, NODET Organization, Modernization, Islamic Scholars (Ulama).

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## INTRODUCTION

Today, the study of the education system of other countries, their history and stages of development, the analysis of their features remains relevant for several reasons. For example, the experience of the Iran can be used to develop, strengthen, expand the education system of Uzbekistan, to prevent mistakes and shortcomings. Given the current period of development and modernization of the education system of the Republic of Uzbekistan at all stages, the analysis of other countries' experience is even more important. Iran is one of the most advanced and fastest growing countries in the Middle East in many fields: medicine, economics, social sciences, exact and natural sciences, art and cinema. Given the constant movement and innovation in the world of technologies used in education, it is important to anticipate and analyze the current state of the Iranian education system and the possibilities for its future development. Iran is a very literate society compared to other countries with high literacy rates by regional standards and similar levels of development. The adult literacy rate in 2013 was 84.6 percent, compared to 85 percent in the world and 78 percent in neighboring Arab countries. Despite international sanctions in almost all fields of research over the past 30 years, Iran is an example of a country that has made great strides in its development through education and upbringing. The number of students in Iran increased from 100,000 in 1979 to 2 million in 2006.<sup>1</sup> In terms of the rate of growth in the number of scientific publications, Iranian science has developed faster than any other country in the world, with only 736 publications in 1996, 600,000 in 2008 and Iran becoming one of the world leaders in scientific development.<sup>2</sup>

In this article the author analyses the way of development of the education system of Iran from its history to the present day, trying to reveal its specific advantages and disadvantages, as well as the process of modernization and its results.

When writing this article, such methods as comparative analysis, systematization and objectivity were used. The author tried to follow historical, chronological sequence in data analysis.

### Education system of Iran in XIX-XX centuries

There is no secret that historically Iran has been a highly developed region. The huge empires that existed in the region at that time contributed greatly to the development of education. As a result, the foundation stone of today's Iran were laid. Without stopping at the long history of this country, we decided to start analysis from the last two centuries.

The Hajar Dynasty, which ruled Iran from 1795 to 1925, made an important contribution to the development of pedagogical thought in the region. The modern model of education was first introduced to Persia in the 19th century by European and American religious institutions. Until the early twentieth century, dozens of foreign schools in Tehran and provincial cities were founded by Christian missionaries, Jewish philanthropists and teachers from other parts of the world. For a long time, foreign schools and schools for religious minorities have provided quality education to thousands of Persians from upper and middle classes. However, the level of general education in the country lagged far behind that of European countries and was mainly provided by schools and madrasas. Literacy rates were low due to the lack of schools and public funding for education.

Some Hajar rulers, such as Nosiriddin and Muzafariddin, tried to reform the education system. Indeed, Nosiriddin's attempts to turn Iran into a European civilization failed because of the



conservative views of the majority of the population who believed in the clergy. However, thanks to his efforts, a French school was established in Tehran to teach history, geography, chemistry and medicine in accordance with the European programme. The last rulers of the Hajar dynasty were fluent in French. They suggested modernizing the education of Iran in line with the "liberal" and "modern" thinking of Western intellectuals.

It is well known that before thinking about reforms and modernization in the education system of Iran, it is necessary to mention the power and influence of Islamic clergy in this period. Despite the reformist policy, none of the Iranian cities dared to openly oppose the clergy, as conservative ideas were still popular among people accustomed to the traditional way of life.

Confirming the prestige of Islamic clergy or rejecting the reformist project was important for strengthening state power among the population. The Iranian writer S. Hedoyat explains this as follows: "The decree of the scribes was considered more powerful than the decree of the king. If the king was forced to oppose their policies, the people would overthrow the monarchy".<sup>3</sup> This idea clearly reflects the state of time and the prestige of religious figures.

The author's analysis shows that the influence of religious scholars has become an integral part of Iran's life, which dates back to antiquity and continues to this day. Their place has only strengthened over the years, becoming a kind of positive and sometimes negative part of traditional Iranian life.

Although the clergy opposed the policy of intellectual reform, liberal politicians recognized the importance of reconciliation with the clergy because of their honorary status and authority. So they even added priests to the constitutional movement.

According to literary analysis, the modern system of secular education emerged in Iran in the 1920s and 1930s, after the Pahlavi Dynasty (1925-1979) came to power. During this period, the influence of religious institutions was minimized and the Government took control of all schools. Attempts have been made to separate secular affairs from religion.

Under Reza Shah Pahlavi (1925-1941), Iran was united, modern technology and industry began to develop more rapidly, and the first steps were taken to build a secular society. The government sought to suppress religious resistance and expand educational opportunities. The budget of the Ministry of Education was doubled in 1927; education expenditure rose from 10.4 million rial to 20.8 million rial, representing 4 percent of public expenditure in 1926 and 195 million rial in 1941. Shah Mohammed Reza Pahlavi believed it was his father who influenced his decisions in Iranian educational policy. "Reza Shah did more than just set up Iranian educational institutions, train teachers and improve their skills abroad. He has changed the spirit and philosophy of our education system. And in his opinion and belief, education should first of all instill patriotism in children."<sup>4</sup>

In the 30s of the 20th century education was centralized in Iran. A free and modern school system was established, Tehran University was established, and women's education was encouraged. During this period, women's educational opportunities have increased. The proportion of women in primary schools increased from 21 percent of students in 1926/27 to 38 percent in 1976/77 and to 44 percent in 1986/87. In secondary schools it increased from 5.7% to 35 and 40% respectively, while in universities it increased from almost zero to 28 and 29% (Table 1).<sup>5</sup>

	1926/27 years (On the eve of the Pahlavi Dynasty.)	1976/77 years (on the eve of the revolution)	1986/87 years (post-revolutionary)
Primary schools	21%	38%	44%
Secondary schools	5,7%	35%	40%
Universities	0%	28%	29%

Shah Mohammed Reza Pehlevi undoubtedly wanted to improve the education system in Iran. The number of primary and secondary schools had increased, and curricula and school programmes had been radically modernized. Higher education has also changed - new universities have been established, private and public colleges have expanded. In 1972, thanks to Iran's success, the Corps of Enlightenment in the Elimination of Illiteracy received the international award of UNESCO N.K. Krupskaya.<sup>6</sup> Even before the revolution, many positive changes continued to take place in the education system. An undeniable achievement in the modernization of Iran was the educational policy pursued in the framework of the "White Revolution"<sup>7</sup>. It actually allowed Iran to move from the Middle Ages to the new century.

During the first 10 years of the "White Revolution", the Iranian administration was very proud of the "Army of Knowledge", a group of more than 70,000 young people who went to the outskirts of Iran to educate the population. E. Abrahamyan, one of the leading American Iranian scientists, in his article briefly described what the Iranian education system was like in 1953 (when the Shah was in power) and 1977 (on the eve of the Islamic Revolution). Table 2.

**TABLE #2. EDUCATION GROWTH (INSTITUTIONS AND STUDENTS)<sup>8</sup>**

	1926/27 years (On the eve of the Pahlavi Dynasty)	1976/77 years (on the eve of the revolution)
Universities (students)	4 (14500)	16 (154 315)
Technical colleges (students)	36 (2538)	800 (227 507)
High schools (scholars)	527 (121 772)	1741 (741 000)
Secondary schools (scholars)	5956 (746 473)	23 476 (4 078 000)

As can be seen from this table, the changes that have taken place in the education system of Iran can be called a real achievement. However, due to the shah's modernization and orientation towards the education system, although the education system in Iran was significantly improved politically, it created serious problems for officials: students (as well as young university graduates) played an active role in overthrowing the shah. The participation of students and intellectuals in the overthrow of the monarchy in Iran was no less than that of Islamic scholars.

In our view, the way of modernization of the education system of Iran is very exemplary, which clearly shows the work done and shortcomings. Having studied them, one will be able to assess the reforms launched today in Uzbekistan.

### **The impact of the revolution on education system of Iran.**

The history of formation in the Islamic Republic can be divided into two phases: from the revolution to the end of the war between Iran and Iraq in 1988 (revolutionary period), the period in which Islamic ideology dominated, and the subsequent period of formation.

The transformation of the system into a secular and theocratic system has significantly restored the education system in Iran. Unlike the modernization of education proclaimed by his son, Shah Mohammed Reza Pahlevi, Reza Shah began to "cleanse" the Khomeini formation from Western influence. This period can be considered as a modernization status compared to the previous modernization period. Because many pre-revolutionary changes have been reversed.

The most important change since the 1979 revolution has been the "Islamization" of the education system. Special education for children has been introduced. In 1980, the Monitoring Committee of the Institute of Islamic Values in Education was established. Teaching materials based on Islamic principles were introduced in primary school within six months after the revolution. From the very beginning of Islamization, the government has tried to find a balance between striving for cultural and spiritual independence from the West and striving to succeed as a modern nation in competition with the West.

The leaders of the revolution called it a "cultural and ideological revolution", a "value revolution" aimed at replacing secular and Western aspects of life with a new and independent religious and political order. Education was seen as one of the main means of achieving this ideal. Thus, the goal was to create a new Muslim with Islamic and revolutionary values.

But despite this, the educational work continued. To ensure equal educational opportunities for different groups and regions, in the mid-1970s the Government introduced free education as well as free meals for primary school students. As a result, total public expenditure on education increased from 23 billion rials in 1970 to 260 billion rials in 1976. In the post-revolutionary period, statistics continued to grow, accounting for 22.4% of total expenditures in 1990, while the share of GDP declined to 4.1%.

The revolution hindered the development of preschool education in Iran. Officials helped raise young children at home, and several state kindergartens were closed. Teacher training centres have also been closed and private kindergartens have had to struggle to continue this work. Religious control and religious lessons were introduced, and short chapters of the Koran were included in the curriculum. However, this situation was not for long. Since then, religious control and education have been restored. The number of kindergartens has also increased. However, various changes have led to a decline in the education level of the population.

According to the 1986 census, less than 2 percent of preschoolers aged three to six years were in kindergarten. It was a very sad situation. However, the problem gradually began to disappear. In 1992, about 14% (252,000 people) took a preparatory course. A new curriculum was adopted in 1989 and partially implemented in primary schools since 1992. If it is fully implemented, all children in the preparatory programme between the ages of five and seven will be enrolled in preschools. Lack of attention to preschool programmes affects the slow progress in educating

children at the next secondary level. A similar situation was observed in Uzbekistan. The low enrolment rate of kindergarten children has led to their slow growth in secondary school. However, there are more positive developments in this direction.

**Changes in secondary education.** After the revolution, the new Government took some steps to change the curriculum. First, the school curriculum and textbooks were changed. The main focus was on religious topics. For example, Arabic in schools and the Koran had been reintroduced.

Time for religious education (formal and practical)<sup>9</sup>

	Before the revolution (1975)	After the revolution (formal) (2005)	After the revolution (practical) (2005)
Primary class	7%	17%	24%
Secondary class	5,5%	11%	26%
Total	6,4%	12,7%	25%

This table shows the growth of religious education in schools after the Islamic Revolution, but does not take into account religious subjects that exist in other disciplines (Persian, Arabic, history, literature, sociology, etc.). Topics related to Islam can be observed not only in religious, but also in many humanitarian and even technical subjects in the form of metaphors and simple texts. With this in mind, we can get a higher level of religious education in Iranian schools.

Indeed, another important issue in post-revolutionary education in Iran was the change of textbooks in schools. Analysis of Iranian textbooks shows that religious subjects account for 38 percent of lessons. Analyzing the drawings in Iranian textbooks, S. Paiwandi discovered that most of them belonged to political and religious figures of the 20th century. According to Islamic tradition, images of prophets and imams are prohibited, but images of saints can be found in textbooks. The textbooks also deal with military topics and "martyrs of Islam" who sacrificed themselves. Most of these photographs show "martyrs" who died during the Iran-Iraq war. The use of images is aimed at strengthening the patriotic spirit of students.

Our analysis also shows that there are differences in the level of intellect between the urban and rural populations of the country, as well as between different regions of the country. Today, these disparities are being gradually bridged with increased access to education in rural areas and the establishment of training centres to train qualified personnel.

**Changes in secondary special education.** It is known from history that the Soviet Union provided great assistance to Iran in organizing professional training. It founded vocational schools in complex and new sectors of Iran: metallurgy, engineering, mining and other specialties. In total, more than a dozen training centres for skilled workers and technicians have been established with the help of the Soviet Union. This situation has served as a basis for the development of technical sciences in Iran. Today, the Russian Federation continues to cooperate with Iran in various fields.

Iran has had a National Organization for the Development of Talents (NODET) since 1976, which includes dozens of Iranian schools. This programme is aimed at developing talented students and bringing together the country's "golden generation".

Admission to NODET schools is based on competitive and national entrance examinations. Every year thousands of students apply for admission to schools, of which less than 1 percent are selected from 99 secondary schools and 98 high schools in the country. Students only have two admissions options. The first chance is in grade 5 primary school and the second chance is in grade 9. If a pupil in 5th grade, he or she takes the exam again in 9th grade to make sure that he or she has the right to continue in school. Each entry exam consists of two tests designed to measure not only the participants' knowledge, but also their intelligence and talent. If students are found to be competitive, they will take the first test, which will allow them to take the second test.

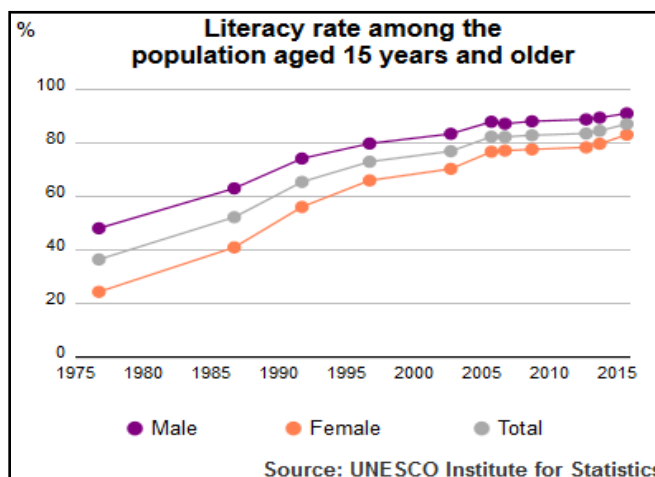
In order to take the entrance exam, all participants shall score at least 20 points (out of 20). In 2006, 87,561 boys and 83,596 girls were admitted from 56 cities. Statistics show that NODET graduates usually get higher education at the postgraduate level. In other words, they were able to choose very talented young people and lay the foundation for them to become mature professionals in the future. In this regard, useful aspects for Uzbekistan's education system can be obtained.

### Gender equality in education.

In Iran, although boys and girls study separately during the school year, the difference in programmes appears when they are 14 years old. This difference does not apply to the teaching of subjects. For example, girls continue to learn everyday skills: sewing, cooking, childcare. Boys, on the other hand, are beginning to learn the basics of technology, electronics and other sciences that are useful to everyone. In high school, boys work one day a week. For example, the school administration sends them to a special factory on a contract basis and at the end of the year the head of the enterprise marks the boy for work. Teenagers are not paid for this job, but their parents can pay for their son to work at a prestigious company. The purpose of this internship is to provide the boy with at least one specialty before graduation, to gain practical skills and to prepare them for independent life in society.

In Uzbekistan it is also possible to learn to apply this practice, as it will help young people to master not only theoretical but also practical skills.

The following graph shows the growth line in literacy for boys and girls between the ages of 15 and from 1975 to 2015. Apparently, Iran has managed to narrow the literacy gap between men and women. It is clear that in the future men and women in Iran will be equally literate. Today, the literacy rate for population aged 15-24 years is 98% (2015). That's a very good indicator.



Over the past two decades, the Islamic Republic of Iran has developed and implemented its own social and ideological projects on improving peace and human life for countries that claim to be true regional and global centres.<sup>10</sup> These projects include the education system too.

## CONCLUSION

As a result of the analysis, the author has come to several final conclusions. During the period under review, the school curriculum in Iran does not encourage students to think globally and develop alternative views. Standardization of education is not conducive to the expansion of population world view and the formation of a creative component. In Iran all students, regardless of the region, study the same textbook, but the difference between central Iran and the provinces is significant. Creative subjects (painting, calligraphy) do not receive much attention in schools and are considered as a supplement to the basic course. The fear of admitting women to promising technical professions limits the opportunities not only for women, but also for the State as a whole, as this leads to a shortage of qualified personnel.

At the same time, the changes taking place are of great importance. In particular, current reforms aim to prevent gender inequality and promote women in all areas. There is a gradual increase in the number of secular subjects in education, attracting foreign specialists, sending students abroad to study. Especially in the exact and natural sciences, Iran has a high position in the region. Not to mention the fact that the country has been living under economic sanctions for many years, the economy is recovering.

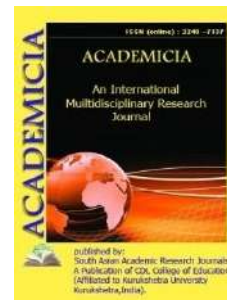
For the education system of Uzbekistan, some educational reforms of Iran can be implemented, including: teaching girls to the subjects they need for daily life and paying special attention to the shop classes for boys. In addition, internships for schoolchildren to acquire skills in various enterprises and production associations are also very useful. Analysis and in-depth study of experience and achievements, drawbacks and mistakes of other countries are of great importance for the future development of our country.

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DOI: **10.5958/2249-7137.2020.00760.0**

## VIRTUAL EDUCATION THROUGH SWAYAM: AN ANALYSIS OF STAKEHOLDERS' PERSPECTIVES IN WEST BENGAL.

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### ABSTRACT

*In present day most of the students from primary to university level are using computer and internet. Most of the students of higher education basically followed and using internet, e-learning, e-book for their study more than book. So, like western country in India, education sector especially higher education going towards virtually. Virtual university' is the out- come and consequence of a new technological revolution. The present day ICT (Information & communication Technology) expanded at every corners of the world. So we have tried to follow the quotation of Elliot Masie- "we need to bring learning to people instead of people to learning". So it is very important to masses for achieving education without spending more money, much time and without going anywhere. So some of them think that it should be introduced in all institution and create awareness among teachers, because they will encourage students and others. Therefore it would be helped to spread education quickly among masses in anytime, anywhere basis. It would be also helpful for them who have not much time to spend in schools and colleges for achieving education from remote area. But most of the students like to adopt it and want to know about it , but there are less encouragement, weak infrastructure, unknowingness, tendency to far away from online activity, lack of trained faculty (in technological perspective) etc. And so on. So in Bolpur SWAYAM programmes success is still zero. But it would be increase if govt. takes some proper decision to make India as knowledge house.*

**KEYWORDS:** E-Learning, E-Book, Unknowingness, Tendency

## INTRODUCTION

Education is challenging for the most populous countries like India. Indian Education is class room oriented. Providing quality education in class rooms is not indeed in India because of poor infrastructure and question mark in quality of teachers, overcrowding, high teacher student ratio, lesser morality among teachers, poor monitoring system in government schools are the major problem in the current Indian formal education system, but there is exception also.

In this time virtual education (**Virtual education is completely based on electronic device or gadgets and internet connectivity include asynchronous or synchronous modes of delivery**) appears to be a panacea for the knowledge seekers who remain on the flip side and those who afford to have higher knowledge using the modern technology. Virtual university' is the outcome and consequence of a new technological revolution. The present day **ICT** (Information & communication Technology) expanded at every corners of the world.

Twenty first century is the age of technological innovation and web evolutionary age. All the fields of our society often related with technology. Education also includes its features for to cope the global objectives. Now India is no more backdated in web technology or internet world. Also we can say that this is the most innovation age of android and 4G (4<sup>th</sup> generation). So we are connected with each other through online. Now we can see a tendency of young generation as well as most of common people lean towards the virtual world. Students, teachers and most of the people of our country are related to virtual world/ technology. In present day most of the students from primary to university level are using computer and internet. Most of the students of higher education basically followed and using internet, e-learning, e-book for their study more than book. So, like western country in India, education sector especially higher education going towards virtually. Therefore many university and education related corporation have been started online course. Educational institutions were also repeatedly challenged to adjust the educational experiences of students to their increasingly digital lifestyles.

**MOOCs**, where one of the two O's means "open", that is, "tuition free of charge", so the financial stability is a core agenda for its sustainability in the future. Major providers of MOOCs in USA, such as Khan Academy, Coursera or Udacity, HOME project (**Higher Education Online: MOOCs in the European Way**), ECO project (**E-learning Communication and Open Data**), EMMA project (**European Multiple MOOC Agregator**) platform representing the first MOOCs initiative across Europe.

**HISTORY OF MOOCs:** In 2008 by Dave Cormier was first introduced the term Massive Open Online Courses (MOOCs). CCK08: Connectivism and Connective Knowledge, a massive open online course (MOOC) with over 2200 students that was created by George Siemens and Stephen Downes, is generally considered by many as the MOOC which started the revolution in online education (Lowe, 2014, p. X).

**MOOCs IN INDIA:** India is now going to be digital. Honorable Prime Minister Shri **Narendra Modi's** vision for 'Digital India', is also initiated by Ministry of Human Resource Development to providing digital online education platform – SWAYAM for the promotion of MOOCs. So for the success of MOOCs MHRD launched **SWAYAM**, (**Study Webs of Active –Learning for Young Aspiring Minds**) an integrated web platform for online education. The soft launch of "SWAYAM MOOCs" Platform was held on **15th August, 2016** and after completion of first

phase of the Project, the Platform has been declared “go live” from. 16th November, 2016 (mhrd, n.d.).

### WHAT IS SWAYAM?

**SWAYAM, (Study Webs of Active –Learning for Young Aspiring Minds)** is a One-stop web and mobile based interactive e-content for all courses from High School to University level; High quality learning experience using multimedia on anytime, anywhere basis. The main purpose to designed **SWAYAM** is to achieve the three cardinal principal of education viz., **access, equity and quality.**

The courses hosted on SWAYAM are 4 quadrants modes- a. **Video lecture**, b. **pecially prepared reading materials**, c. **Self-assessment**, and d. **An online discussion forum for clearing the doubts.**

**SWAYAM** is expected to have in excess of 2000 courses from various streams of education disciplines.

### The Benefits of Virtual Education through SWAYAM:

However, it has its own merits and demerits, for it leaves a big question unsolved, that is, the sustainability. Virtual education has significant advantages for students, educators, and educational institutions.

1. Students who are unable to attend traditional schools due to health and others barriers often find full-time online or virtual education to be an effective answer.
2. Who need opportunities to continue their education to accumulate additional credits to progress to the next grade, or to accumulate credits for graduation find virtual education provides options that work effectively for them.
3. Students who need to combine virtual education with traditional in-school enrolment because of family, employment, or health are also well served by new virtual options.
4. Virtual education is a highly promising route for an expanded and accelerate their educational progress, earn college-level credit, or who may want to take supplemental courses that are not offered at their institution.
5. Virtual education is also helping students in more remote geographical locations who want and need the opportunities that are more readily available to urban and suburban students.
6. Additionally, 21st century students learning preferences, the virtual education model provides a viable option for students who may simply perform better in an online learning environment.

### THE FUTURE OF VIRTUAL EDUCATION THROUGH SWAYAM:

The future learning environment is expected to be dominated by virtual learning modules where each and every house hold will have learning room with interactive boards and learner can sit back relaxed at home and acquire knowledge of his/her choice. Of course, it will be an adventure on the part of middle income group houses and lower income group houses to own such learning environment because of high cost and lesser space availability. As the virtual learning is likely to get detached from real life situations traditional learning method continues to hold away over the

other systems of learning. Judicious blending of both traditional and virtual learning would create the constructive and creative learning environment.

**SIGNIFICANCE OF THE STUDY:** Many slogans are given by government of India for various good schemes such as “education to everyone”, “education for all” etc. But all slogans and schemes do not solved the problems to provide quality and affordable education for citizen, which can be accessible on anytime, anywhere basis. To remember this government has started SWAYAM MOOCs platform for educational purpose to the masses. So we have tried to follow the quotation of Elliot Masie- “we need to bring learning to people instead of people to learning”. So it is very important to masses for achieving education without spending more money, much time and without going anywhere. Also it is very important for them who have physical disabilities or transportation issues; they may find that they are also able to succeed in life through virtual education without the burden of getting to a physical location for schooling. This is also help those who are hesitated to social interaction in the field of formal education pattern- like teen pregnant women, those who getting raped and pother victimizes also. There is a vast flexibility for learning within his/her environment and own pace. To remember these problems and modern technological innovation which provide much more facilities to human being at a time and in beneath the one umbrella. So I think in this perspectives my research topic titled “Virtual Education through SWAYAM: An Analysis of Stakeholders Perspectives in West Bengal” is significant.

**RATIONALE OF THE STUDY:** How much successful SWAYAM in West Bengal have? How many problems have? How it would be more successful in future? – is the main aim or rationale of the study.

**RESEARCH GAP:** SWAYAM launched for provide virtual education, but how it would be work in Indian context? And how much facility need for those who are interested to taken education from this platform, who are provider, who are stakeholders? How much possibilities have? And how much problem be faced etc. There are lot of problem and lot of need for successful of this programme. I want to analyse and criticise the problem and need facilities in West Bengal for SWAYAM. Because SWAYAM and its stakeholders of West Bengal is not analyse before in any book, journal and article.

#### **STATEMENT OF THE PROBLEM:**

**Virtual Education through SWAYAM: An Analysis Of Stakeholders ‘Perspectives In West Bengal**

#### **OPERATIONAL DEFINITION OF THE TERM USED:**

- **Virtual Education:** These are modes of distance education that includes asynchronous or synchronous modes of delivery that may be web based or via internet which increase the pedagogical Knowledge and cognition of learners and based on the principle of active pedagogy offered by an educational organization where by anyone can gain credits in the particular area of interest and eligible or fulfil minimum criteria.
- **SWAYAM:** Study Web of Active Learning for Young Aspiring Mind. Launched by MHRD in 15<sup>th</sup> August 2016 for provide quality and affordable education to all.
- **Stakeholders:** Those who are human resources (teachers, students) of SWAYAM.

**OBJECTIVE OF THE STUDY:**

1. To know the awareness about SWAYAM among the stakeholders.
2. To know the status of SWAYAM in West Bengal.
3. To examine the feasibility of SWAYAM in West Bengal.
4. To examine the views of stakeholders of SWAYAM on its-
  - A. Application
  - B. Practicability
  - C. Barriers
  - D. Cost-Effectiveness.
  - E. Effectiveness.

**RESEARCH QUESTION:**

1. What is the level of awareness on SWAYAM among its stakeholders?
2. What is the status of SWAYAM in West Bengal?
3. How much feasibility have in West Bengal?
4. What are the views of stakeholders about SWAYAM?
5. How much practicability, barriers, cost effectiveness and effectiveness till available or not in West Bengal?
6. How far its application be successful?

**DELIMITATION:**

1. The present study will be delimited to only a sub-division of Birbhum district of West Bengal viz. Bolpur.
2. The present study will be delimited to only 4 schools and 2 colleges of mentioned districts.
3. Research will be conducted on about 200 students and 50 teachers of Bolpur sub division.

**RESEARCH DESIGN AND METHODOLOGY**

**METHODOLOGY:** The methodology adopted was qualitative analysis and survey method. To analyse the awareness, feasibility, status and views of stakeholders about SWAYAM a checklist on awareness and interview questionnaire on feasibility, status and views of stakeholders prepared by the investigator. Interview was used for analyzing the feasibility, status and views of stakeholder's teachers regarding the significance of virtual educational perspectives. Answers and reflections of teachers and students were used to know the perspectives on virtual education through SWAYAM in Bolpur. Here researcher used **Descriptive Survey methods**.

**POPULATION:** Here populations is **teachers and students of Colleges and schools**.

**SAMPLE:** A sample is a small representative of a huge populations. Here researcher used **purposive sampling technique**.



**TOOLS:** Here researcher used **check list, observation and questionnaire** as tools.

**TECHNIQUES:** A three point rating scale having (15+20) =35 items for students of class student's tenth standard to under graduate & post graduate students and teachers/lecturers/ass. Prof. from Bolpur subdivision (**4 schools, 2 colleges and some B.Ed. /M.Ed. students of Vinaya Bhavana**) have taken for the study. The distribution of items against the awareness of SWAYAM, MOOCs and virtual education.

### ANALYSIS & FINDINGS

#### *AWARENESS OF STAKEHOLDERS ABOUT SWAYAM, MOOCs AND VIRTUAL EDUCATION.*

##### **Awareness of students about SWAYAM, MOOCs and virtual education.**

It is evident from survey that 30.56% students of Bolpur sub-division are aware about SWAYAM, where 50.4% are not aware and 19.03% students are unknown about it.

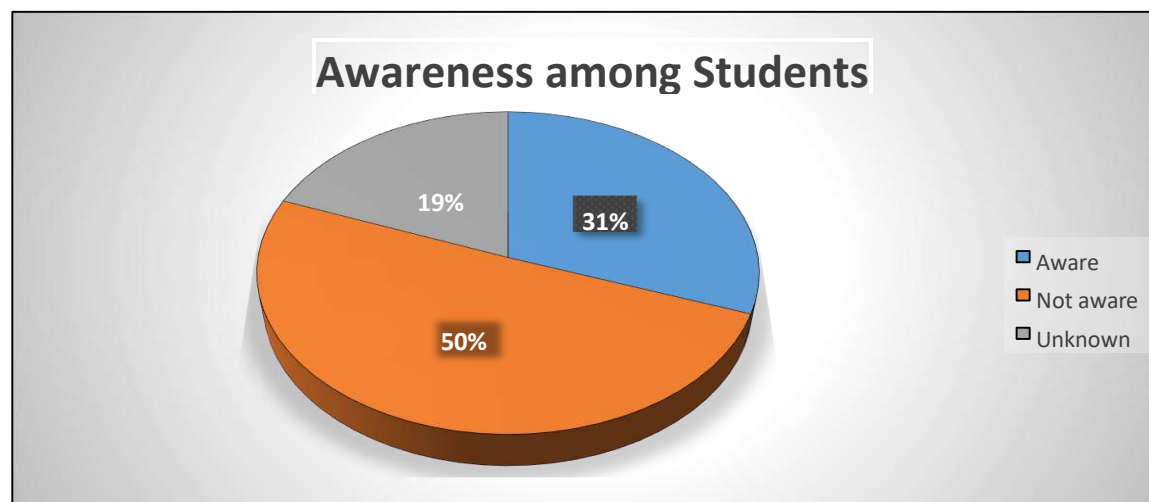


Fig: 1 Awareness among Students.

##### **Awareness of teachers about SWAYAM, MOOCs and virtual education**

It is evident from table -2 that 27.5% teachers of Bolpur sub-division are aware about SWAYAM, where 47.1% are not aware and 24.6% teachers are unknown about it.

## Awareness among Teachers

☐ Aware  
☐ Not aware  
☐ Unknown

**Fig: 2 Awareness among Teachers.**

Bolpur sub division area is an urban place in Birbhum district of West Bengal, but as Birbhum is a backward district among other district in comparatively, Bolpur also has been bought its characteristics. In Bolpur sub division area where I have worked for my research in four schools and two colleges, it is simple that most of the students in schools and colleges came from comparatively undated environment in technological and innovation point. So we have seen that 50% of students and 47% of teachers are not aware about SWAYAM, also they not any idea about what is SWAYAM? What is the work of SWAYAM? Why it launched? Etc. There is a lacuna of utilization of ICT in synchronous way and also a lack of engagement and motivation for both students and teachers. They also unknown about SWAYAMPARBHA, a DTH channel which broadcasted through EDUSAT only for educational purpose. Some teachers are also narrow minded, think that there is no practical base and face to face interaction. So it seemed to them unwanted and also they have an allergy in technology.

### STATUS OF SWAYAM IN WEST BENGAL.

The status of SWAYAM in West Bengal as well as in Bolpur is not so remarkable. Especially in Bolpur sub- division areas schools and colleges are very poor in perspectives of providing technological facilities to their students. They are unknown about the purpose of SWAYAM so they are very casual and they are not much more interested. Enrollment status in Bolpur is completely nil, though B.Ed. & D.Ed. courses for in-service teacher has started through SWAYAM, but they are not aware about this.

**FEASIBILITY OF SWAYAM IN BOLPUR SUB- DIVISION:** In Bolpur sub-division area, students are used cellular networked and they have got minimum speed in 4G about 84 kbps and maximum speed up to 1mbps. But their schools and colleges could not provide internet facilities for their students, but in case of colleges authority had not provided internet facilities with computer except in library for few time to accessing catalogue and some documents. But if there is no ICT lab with internet facilities where a number of students are to be allowed to accessing computer with internet connectivity at a time, there is not possible to accessing SWAYAM. Most of them are efficient to accessing computer, so they would be also efficient to access SWAYAM. But they do not used because the lack of encourage, awareness and not understand its need and

importance. Though most of the teachers' of Bolpur sub-division are used cellular network for internet connectivity and some of them are used broadband. So they got minimum speed in 4G about 512 kbps and maximum 1mbps and in broadband 10mbps and also in Bolpur college library provide 10 mbps speed. But in schools except headmaster/principal other teachers' cannot get computer. But in colleges all teaching faculty used computer provided by colleges except some part time teaching staff. .

SWAYAM online platform is only accessible through android/windows mobile and laptop/computer with internet connectivity. So if one want to enroll, to know about various courses, to know which course is deserve for him/her, for check academic calendar and so many, only possible through internet connection via mobile/computer and also need proper knowledge for computer and internet surfing. It is the minimum requirement for accessing SWAYAM. But all students and teachers of respective schools and colleges have not proper knowledge about computer surfing and internet activity as well as virtual reality and also they get low speed in internet connection, which are the most common barriers for them to access SWAYAM. Though some students individually are able to access, but their schools and colleges do not encourage them. So there is a lack of proper environment which bring SWAYAM feasible to Bolpur.

### VIEWS OF STAKEHOLDERS

Though the teachers of Bolpur sub division area's schools and colleges not aware about SWAYAM and not have proper knowledge about SWAYAM but most of them see it in positive perspective. So some of them think that it should be introduced in all institution and create awareness among teachers, because they will encourage students and others. Therefore it would be helped to spread education quickly among masses in anytime, anywhere basis. It would be also helpful for them who have not much time to spend in schools and colleges for achieving education from remote area. it is a good step in our country, because in our country many of us do not go to school for several problem. So they think it will create an openness among masses. But some of them think that face to face learning is better than online education- it is also true. On other hand some of them think that no need of SWAYAM because exist system is sufficient. It is very shameful that most of the teachers are unknown about virtual education and SWAYAM MOOCs platform. They are also unknown about its helpful purpose and how it would be help the learners as well as drop-out and others to achieve degree without giving much time, attaining class. But there are some barriers also that could be the one of the causes for its low success. Language, less encourage etc.

It is also very low cost, so anyone could take courses from SWAYAM and complete their degree it also help them those who want to boost up their educational achievement and degree to take courses simultaneously along with job or study in formal education system.

### CONCLUSION

The research revealed that in Bolpur sub-division, there are various lacuna in the field of virtual education through SWAYAM NOOCs platform. Most of the students and teachers though they know about the need of virtual education but they are not aware about SWAYAM MOOCs platform. If they have the proper knowledge about computer accessing and internet surfing, but they are not enrolled in any courses through SWAYAM, because there are lack of awareness and encourageness. If they know its facilities and fruitfulness, they may show their interest in this interactive system. Though there are some barriers such as language, adoptability, resources,

cost, accessibility but bit could be overcome only by encouraging. Because all of them among students and teachers used either android/windows mobile or computer/laptop, and they are able to access those device and have knowledge about internet surfing, and if it is low cost, not bound within a time zone or classroom, and it is available in all-over India, it would be become a mass platform for education, if we see it in positive way.

### MAJOR FINDINGS - ADVANTAGES:

- SWAYAM MOOCs is very helpful for those who are want to learn without time zone and locality restrictions.
- It gives opportunity to access the latest learning resources and most up-to-date developments in the subject area.
- There are some problems such as infrastructure facilities and the unavailability of skilled staff when attempting to implement concepts.
- The survey results indicated that learning through SWAYAM MOOCs has to engage in professional development activities. There was a strong indication that the use of SWAYAM MOOC concepts in the higher education sector will benefit for professionals as well as students.
- 'Live-interactive' digital learning empowers the learners to receive excellence, quality education anytime and anywhere basis. It may be career and technical education or project-based learning, it gives learners a more interactive platform for learning and assessment.
- Students have the liberty to choose their courses from the list of different courses.

A

- Students with regular schooling or open schooling. If students chose to take
- Virtual education gives students an opportunity to plan their future course of action and fast track their careers
- Audio visual aids, interactive, educational simulations help to understand the concepts and theories in better way.
- The students gain knowledge from masters of the subjects from world class institutes which is something they have always desired.
- They also benefit by learning from eminent academicians as well as experts on the relevant, practical and must know aspects. It enabling the students to gain comprehensive and specialised knowledge.
- This also gives them an opportunity to ask questions and have multiple responses shared on real-time basis
- It will empower these students to get quality education, anytime and anywhere.
- It will enable them to save time, by having more freedom to move at their own pace as well as help them save money by avoiding "hidden costs" of education, like transportation fees etc.

- 
- It will assist working students to not limit their work schedule, helping them to not lose on wages that they can potentially earn.
  - With the flexibility of online courses, students can conserve more hours and more money, enabling them to learn with a purpose.
  - Here “tuition is free students only need to pay a nominal fee for the examination.
  - It provides resource support to teacher and to learner also if teacher is not available or learner missed the class.
  - It encourages both teacher and learner in many ways such as chat, hangout, telephonically and discussion over the web.
  - As India is multilingual country, so it provides an opportunity to create and disseminate the courses in as many as language. A learner can take the course of its choice of language and the same resource can be translated in different language.
  - To help to prepare for e exam.
  - All students, from regular school or from the open board can complete their education if they have failed or stopped their education due to some reason The On-Demand Examination can be taken on any 5 days of the week and the Saturdays are reserved for practical tests.
  - Learner can instantly see his/ her progress during the course.

### **CHALLENGES:**

**The research carries out these following challenges and problems as -**

- SWAYAM MOOCs for school education has the infrastructural problem.
- We found that one of the primary challenges in virtual education is to develop a sense of community in the online environment. To establish such a community, need to promoting social presence, interaction, and collaboration.
- Lack of awareness.
- Lack of Understanding its fruitfulness.
- Basic knowledge about utilization of ICT.
- Lack of trained instructor.
- This is yet another problem which the user faces. As the entire course is offered online, both faculty and students have to rely on multimedia content. Not every student has the access to such multimedia and engages to it entirely.
- Examination/Assessment: Currently Multiple choice based questions are the only possible way to assess the progress of learner.

### **RECOMMENDATION:**

Researcher recommended some fruitful way which revealed during research are following.

- It should be launched in every part of the country for providing quality education under an umbrella for masses.
- Awareness programme, workshop, seminar should be start for encouraging and to know.
- In every schools and colleges ICT should be introduced with its latest version.
- Proper infrastructure should be installed.
- Teacher should encourage and provide proper information about its various aspects to their students,
- Computer literacy mission and facilities should be begins in every schools and colleges in proper ratio.
- ICT lab, video conferencing room, projector and other accommodation should be need for getting proper facilities for SWAYAM MOOCs in schools and colleges for simultaneously achieve degree with their study. It is recommended only for regular student.
- Internet facilities should be feasible in affordable price for all.
- Initial all facilities and proper arrangements should be provide to make it mass educational platform.
- To promote this there should be need encourage for further research.

SWAYAM MOOCs will provide quality education in India, where good teacher in government sector is a matter of concern. Still many students don't have access to schools, especially girls for distance of schools and colleges from house, transportation problem, physical problem, socio-religious problem etc. and so on and those having access, crying for good education. We are struggling to reform the teacher education system, who we believe to enhance education scenario. The sociological, geographical and political barriers in education can be overlooked by making MOOCs as parallel to regular school education. But in Bolpur sub-division there are lots of problem to bring a current of SWAYAM. Because this is a comparatively backward city and most of the students and teachers are not aware about its facilities, so they have an allergy to adopt it. But most of the students like to adopt it and want to know about it , but there are less encouragement, weak infrastructure, unknowingness, tendency to far away from online activity, lack of trained faculty (in technological perspective0 etc. And so on. So in Bolpur SWAYAM programmes success is still zero. But it would be increase if govt. take some proper decision to make India as knowledge house.

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DOI: **10.5958/2249-7137.2020.00560.1**

## **PEDAGOGICAL ATTITUDE AND ITS ROLE IN THE FORMATION AND DEVELOPMENT OF PROFESSIONAL CONSCIOUSNESS OF THE FUTURE TEACHER**

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### **ABSTRACT**

*According to the scientist's concept, personal meaning is a product of reflection of the world by a specific subject, which is formed in its individual activity and expressed in its (the subject's) attitude to the phenomena perceived by the subject [1]. If goal formation is impossible in the present objective conditions and no link of the subject's activity that is adequate to the motive can be realized, then "this motive remains only potential-existing in the form of readiness, in the form of an attitude»*

**KEYWORDS:** *Individual And Its Activities Appear, Observation Of The Manifestations, A Teaching Profession*

### **INTRODUCTION**

Professional attitudes are manifested in real life as psychological neoplasms of professional activity, which are included in the self-organization of psychological systems.

One of the most significant types of professional attitudes discussed is the pedagogical attitude, which is of interest for studying it as a psychological phenomenon from the point of view of complex system determination.

In teachers with active-positive attitudes, the adequacy of perception of psychological characteristics of children was 89%, while among teachers with neutral indifferent and covertly negative attitudes, only 19% adequately perceive them.

**Methods and results:** These facts allow us to make the assumption that professional attitudes do not exist in isolation from the value components of the professional image of the world. Professional attitudes not only make it easier for a person to perform their direct duties, but also

in certain cases can act as psychological barriers to professionalization, personal growth and self-realization.

To work with teachers in a humanistic paradigm by reshaping their attitudes: In the "Freedom of teachers", he identified three basic setup of a teacher training aimed at mastering the meanings as elements of personal experience ("meaningful learning"):

- Set to "true" and "openness" - openness to the teacher their thoughts and feelings and the ability to openly broadcast their students;
- Installation on "acceptance", "trust", that is, the "acceptance" that provides rapprochement, mutual understanding.
- Installation on "empathic understanding" - the teacher's vision of the inner world and actions of the student as if through his eyes.

Thus, the theoretical analysis allows us to conclude that pedagogical attitudes, first, are able to arise and develop only when certain needs and favorable conditions for the development of the individual and its activities appear; second, they have their own content and dynamic characteristics; third, they exist various ways of forming positive attitudes of the subject of activity, activating personal meaning that encourages the subject to be ready to act in a certain way.

According to our ideas, the pedagogical attitude is the basic mechanism of professional consciousness of the future teacher, which directs professional pedagogical activity, ensures a stable purposeful nature of its flow and expresses the degree of readiness for its implementation. The pedagogical attitude expresses the internal (positive) tendency of the individual in relation to the profession, to people, to children. It is selectively able to be both a guiding and facilitating professional activity factor of the subject. It manifests a peculiar psychic orientation of the mind, observation of the manifestations of feelings, mind and character of a person, his behavior. The readiness of the future teacher to perform pedagogical activities is determined by a qualitatively different level of formation of the pedagogical attitude in the structure of the personality.

The implementation of the pedagogical attitude as a mechanism is carried out through semantic and target attitudes, which are identified most clearly in the uncertain situations given to a person, where he is given the opportunity to choose the most specific ways to respond. It can be assumed that since the uncertain situation is relevant to the projection of various attitudes, then in these conditions, the actualization of the semantic attitude that is realized in the choice of teaching profession and pedagogical activity will occur. This is due to the fact that by the time of admission to a pedagogical University, applicants find themselves in a unique situation, since they choose a profession in which they have already accumulated significant experience in social and psychological interaction with teachers of different types.

The result of this process is the emerging value orientations associated with the teacher's profession, reference ideas and concepts about it, which, in the end, leads not only to professional self-determination of students and their choice of this type of activity, but also to the appearance of new formations that can be attributed to the beginnings of professional self-consciousness. The formation of semantic pedagogical attitudes in the subject may indicate a high level of development of his professional and pedagogical consciousness.

Without claiming to be complete representations of the essence of the pedagogical installation as a psychological mechanism of professional-pedagogical consciousness, we will try to distinguish its distinctive properties.

First, this mechanism allows you to identify the internal motivational plan of actions and actions performed by people. Pedagogical attitude as a type of semantic attitude is actualized by the motive of professional activity and is a form of expression of personal meaning in the form of mood, readiness for professional and pedagogical activity in General.

Secondly, using the mechanism of pedagogical installation, it is possible to determine the direction of a person's actions, and, consequently, the degree of development of his professional consciousness. Depending on the stage of the professional path, the pedagogical attitude may have different content; however, it is always experienced as a positive attitude of the individual to the profession, as a desire to work in these conditions and in this specialty, as a desire for optimal performance of professional activities.

Third, the degree of readiness of the future teacher to perform pedagogical activities is determined by a qualitatively different level of formation of the pedagogical attitude in the structure of the personality, which is reflected in professional self-determination. The pedagogical attitude is formed in the process of mastering experience, interacting with the identification mechanism.

The author emphasizes that with the help of identification, students develop a subjective position in teaching activities based on the example of teachers, University teachers, their fellow interns, parents, and the best teachers. Thus, in the phenomena of identification, we can see the origins of the formation of pedagogical consciousness. The identification mechanism acts as a prerequisite for the formation of attitudes to the teaching profession, which is expressed in the motives for choosing a teaching profession. At the same time, it should be noted that the true motives for choosing a teaching profession, which are the basis of professional orientation, may not always be realized by the students themselves.

This issue is significant for two main reasons. First, at present, the main trend in the field of quality assurance of higher education is shifting the center of gravity from external quality control procedures of the educational process and its results based on national certification and accreditation systems to internal evaluation (self-examination) of higher education institutions based on certain quality management models.

In this regard, the main criterion for assessing the quality of knowledge at the University is not their volume, but the readiness of the graduate to constantly study, improve professional skills, the ability to implement the acquired skills in professional practice, and readiness for self-education. In General, this approach corresponds to the ideas about the key competencies of the individual that are formed in the process of professional education of future specialists at the University. There are not enough unified assessment methods and parameters developed. However, it is obvious that the recognition of the importance of the subjective component of the educational process of the University requires taking into account the adequacy of preparation for evaluation activities of all subjects involved in it. This will allow us to fully consider the University as an assessment space for the quality of education. For this purpose, it is important to consider the phenomenon of installation.

Being a reflection of the subjective (internal) and objective (external), as well as being an integral state of the subject, the installation appears as a mediated link, a "principle of connection" between its individual States, functions, elements (in the intrasubjective sphere), and between these latter and the transsubjective reality. The installation contains not only a causal (an incentive to activity, a need), but also a goal-like moment in the form of a General undeveloped model of future activity, which in a peculiar way reflects its final result.

In other words, an attitude as a modification of an integral individual, determined by subjective (internal - actual need, past experience in its broad sense, features of this individual) and objective (external - specific situation) factors, reflects not only the present and past, but also the future.

One of the most important characteristics of the personality in the theory of attitude is its responsibility, through which a person becomes above his needs, acting as a subject of will. The meaning of motivation is to find an activity that corresponds to the main, fixed in the course of life, attitude of the individual. The goal preparation period is divided into two stages: a) choice, which is recognized by the intellect and is based on the personal values of the subject; b) motivation, which is recognized by the voluntary process. Volitional behavior is the ability of a person to subordinate their activity not only to personal values, but also to objective necessity.

Conclusion: The installation is created not only by a need and not only by an objective situation, but also by the combination of them, i.e. the meeting of an actual need and an objective situation. In activity theory, the element of meeting a need with its subject is considered as one of the most important moments in the formation of behavior. The meeting of a need with an object is an extraordinary act of objectifying a need - filling it with content that is drawn from the surrounding world. This translates the need to a psychological level.

Describing the relationship between installations of different levels, certain relationships are formed between them. Installations at one level can switch to installations at another level if there are changes in the structure of the activity. Thus, the installation is seen as a hierarchical mechanism for stabilizing activity.

The doctrine of the installation justifies the validity of its use as a psychological mechanism for the appropriate activity of the individual within the optimal organization of the educational space of the University. This, in turn, leads us to the conclusion that the creation of appropriate attitudes among the subjects of the educational space of the University (students, teachers) is the most important psychological mechanism for the impact of evaluation on improving the quality of education. This mechanism is provided by regular informing of subjects of the educational space about the current level of competence based on the results of evaluation activities.

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DOI: **10.5958/2249-7137.2020.00561.3**

## A LOOK AT THE CREATIVE HERITAGE OF MIRSODIQ TADJIEV

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### ABSTRACT

*This article is dedicated to the creative heritage of the Honored Artist of Uzbekistan, composer Mirsodiq Tadjiev, and covers the main musical works of the composer. Because of the different styles of composition revival and the advantage of a traditional style within them as if finding proof. These are mainly melody processing, nagma make-up (arrangement), imitation and copying the focus is on the front. In 1965, after graduating with a three-piece string quartet, a variation for piano, a concert for piano and symphony orchestra and a diploma work, he entered the composition department of the Tashkent State Conservatory.*

**KEYWORDS:** *Composer, Creativity, Musical Work, Poem, Symphony, Score, Mirsodiq Tojiev.*

### INTRODUCTION

The musical heritage of the Uzbek people, which has its roots in ancient times, is still heard today. He combines folk and folklore as well as songs and instruments developed in terms of melody structure - epics and maqom music. Heroic and heroic-lyrical epics also play an important role. The genre of musical instruments, which is associated with Uzbek musical instruments and methods of musical practice and performance, is also characterized by great diversity and richness. Uzbek musical folklore, like any other folk art, is the dream of mehatkas. their hopes, their lives and morals, are embodied as an expression of the struggle for social and national liberation. The diversity of themes of Uzbek folk music, the richness of genres and the diversity of its place in life are connected with this. The genres of Uzbek songs and instrumental music have their own function and role in life.

The last quarter of a century is a unique period in folk music it has been. The revival of this period in composition test. Because of the different styles of composition revival and the advantage of a traditional style within them as if finding proof. These are mainly melody processing, nagma make-up (arrangement), imitation and copying the focus is on the front. For

classical music restoration and reconsideration of attention, popular music the influx of culture and the rise of imitation, to them obedience and indulgence have paid off.

As a result, the ancient traditions of Uzbek composition, the teacher-student the validity of the lessons, the compositionality formed throughout history his creativity and education found expression in practice. At the time of independence, all these historical processes, stages of performance practice, style of composition, opportunities for in-depth study of the direction and activities of the representatives being created.

These opportunities are introduced into the educational process, develops the spiritual world of young people in this regard. In the future the development of our national musical heritage, the creativity of composers maturity is in line with the values and traditions of our people it is unlikely to thrive if irrigated with the required aspects. Practical mastering of the educational process with historical lessons is the demand of the time. Traditional and modern the results of the approach will no doubt be effective. However composition, art history, musicology and instrumental performance and the need for composing should be taken into account.

Our main goal is our spiritual wealth, the classics musicians, in tones the spiritual world of our nation The representatives who have expressed, through centuries of history, enriching its specific musical traditions from generation to generation to know the history and way of development of the composer's work and to him honoring the scientific and creative heritage of generations who have contributed. It is time to build on these traditions in your future creative work modern and universal aspects of creativity in the field to take into account.

Honored Artist of Uzbekistan, associate professor, composer Mirsodiq Tadjiev was born on March 25, 1944 in Tashkent in a peasant family. He was interested in music from an early age and learned to play the drums from the famous dutarist Abdusamat Ilyasov in the ensemble of musicians formed in high school. After graduating from high school, Tadjiev will continue his studies at the Hamza Music School. There he studied composition with composers Albert Malakhov and Rumil Vildanov. In 1965, after graduating with a three-piece string quartet, a variation for piano, a concert for piano and symphony orchestra and a diploma work, he entered the composition department of the Tashkent State Conservatory. At the conservatory he studied first in the class of composer R.Vildanov, and then in the class of F.Yanov-Yanovsky.

Mirsodiq Tadjiev participated in the competition of young composers for the first time in 1969 with his symphonic poem "Poet's Love", which was a great success and he received a diploma. In addition to his studies, he began teaching at the Children's Music School and the Hamza Music School.

In 1970, M. Tojiev presented to the final state exam the 2nd symphony-ballet based on the epic "Aigul and Bakhtiyor" by Hamid Olimjon. After successfully graduating from the university, in 1972-74 he began teaching at the Department of Music Theory of the Conservatory. In 1973-79 he worked in the ensembles "Gozal" and "Shodlik" of the Uzbek State Philharmonic named after M. Qori-Yakubov, and later as the artistic director of the philharmonic. Since 1979 he has been working at the composition department of the conservatory.

In 1982-85 he was the secretary of the Board of the Union of Composers of Uzbekistan, in 1985-87 he was the first secretary. Despite such a responsible work, paying special attention to his creative work, he studied the works of not only Uzbek, but also classical and contemporary,

foreign composers, enjoying the works of great composers of the twentieth century, such as S. Prokofev, A. Khachaturyan. makes In particular, the symphonic works of the great composer of the XX century D. Shostakovich showed a blessed influence on the formation of the style of the young Uzbek composer. In particular, M. Tojiev under the influence of the works of D. Shostakovich tried to create national symphonic works, and as a result managed to create 20 (the last unfinished) national symphonies.

Well-known musicologist, Doctor of Arts, Professor Tukhtasin Gafurbekov, comparing the symphonies of composer Mirsodiq Tadjiev, compared his works with foreign composers and said that it is one of the highest peaks in the annals of Uzbek musical culture of the twentieth century.

I was a neighbor of him for ten years in the Yangiabad district of Tashkent. I learned about the creation of some of his works, in particular, almost half of his symphonies, how they were received by colleagues and the general public, even at the Uzbek Music Days in Bulgaria. or at the 3rd International Asian Music Tribune, Samarkand Symposium concerts, I have witnessed applause from far and near foreign experts.

When I was sometimes asked to give scores by D. Shostakovich or I. Stravinsky, B. Bartok, or V. Lyutoslavsky, I saw that the relatively young composer had undergone arduous creative research day and night on some scenes in his symphonies. More precisely, I have personally heard that the necessary sounds on the piano are found again and again in his melodic rhythms ...”- recalls T. Gafurbekov.

In it, the author's personality, worldview, inner feelings and common human feelings are expressed. Some of these symphonies are abbreviated by title: 2nd Symphony-Ballet “Aigul and Bakhtiyor” (1970), 4th Symphony “Memory of My Father” (1975), 5th Symphony to the famous conductor, People's Artist of Uzbekistan, Professor Zohid Haqnazarov (1976), the 15th, 16th, 17th Symphony-Trilogy “The Milky Way” 1- “Archipelago Gulag”, 2- “Cry of the Spirits”, 3- “The Milky Way” (1991-92) In 1995, the last 19th symphony "Heroism" dedicated to the independence of our country was created. 7, 8, 12 and 18 of his symphonies were written for chamber symphony orchestra (1978-83-93). There are also two preludes for chamber ensemble, sonatina, suite, cello and piano "Elegy", "Song" for flute and piano, sonatina for trumpet and piano, string quartet, "Piano Trio" and others.

In addition, the composer performed the overture "Shodiyona" for the ensemble "Gozal" in 1972, three overtures for the orchestra of Uzbek folk instruments, concerto with piano, 10 Oriental rhapsodes for dust in 1979-91, "Yor-yora" for a cappella choir ( S.Karimov's words, 1974), "We are from Uzbekistan" (G.Gulam's words, 1974), vocal-choreographic suite, 1977 "Uzbekistan" (words by B.Boykobilov), poems for solo and symphony orchestra, choir and for the symphony orchestra “Friendship” (1981), “Pakhtakor” (1982), Romances: “In the candle of separation” (Uygun sozi), “Old men and old women” (H. Sharipov), “Where are you, dear child” musical comedies, The opera "Silver" (based on the novel "Last Days" by A. Kadyri), music for the performance "Mowgli" for the Republican Children's Theater.

It is known that in 1960-70, within the current CIS, modern academic music developed using such tools as sonorics, aleatorics, serial techniques. The founders were G.A. Kancheli, S.I.Nasidze, A.R.Terteryan, E.Mansuryan, M.M.Skorik, V.V.Silvestrov, P.Dambis, B.V.Kutavichyus, V.Tormis, MM Tojiev, FH Bakhor, T. Shahidi, Ch. Nurimov. But even though

the new research of these brilliant artists was not immediately welcomed at that time, over time, the work they started paid off, and the national music culture became even richer through these trends.

Mirsodiq Tadjiev was awarded the honorary title of "Honored Artist of Uzbekistan" in 1981 for his contribution to the development of modern professional music in Uzbekistan.

In short, the creative heritage of the composer Mirsodiq Tadjiev has left an indelible mark on modern Uzbek musical culture. In particular, his symphonies have found their place in our Uzbek national heritage.

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DOI: **10.5958/2249-7137.2020.00562.5**

## TYOLOGICAL FEATURES AND IMAGE SYSTEMS OF ELSA TRIOLETT'S NOVELS

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### ABSTRACT

*This article is about typological features and the figurative system of novels by the famous French writer Elsa Triolet. This context covers the novels "Good evening, Teresa," "The White Horse", "Great-Never," "Listen-Look."*

**KEYWORDS:** *Typological Features, Figurative System, Structure, Novel, Work, Main Character, Plot.*

### INTRODUCTION

"The path of my destiny runs parallel to the road of history," said Elsa Triolet. The same can be said about the hero of the listen-and-see novels and his twin novel "Great Never". In addition, here the main themes are death, lies and falsification of history, the inability to tell the historical truth - sad and vital topics with a "Russian accent".



The genre - stylistic originality of the novel by E. Triolet is analyzed, which allows us to understand the stylistics of her writing, an integral part of which is the tale form, epistolary form, memoir form, directly or indirectly reflecting the unity of the author's original relationship to the subject. The characters of E. Triolet create that intimate atmosphere, which is both worldly and vitally close to the feelings, thoughts, and hopes of readers. The heroes of E. Triolet are designed in such a way that they could, in turn, design "their" reader; in other words, encourage him to hypothetically imagine his future.

Leo Tolstoy, examining the figurative structure of a work of art, remarked: "The most important thing in a work of art is that it has something like a focus, that is to say, something that the rays converge to or emanate from. In addition, this focus should be inaccessible to a full explanation of words. That is why a good work of art is important, because its main content in its entirety can be expressed only by it"<sup>1</sup>. Such a focus that encourages readers to participate personally in the fate of the heroes of the novel by the famous French writer Elsa Triolett is the internal structure of the image.

Articles by the French researchers of Elsa Triolett's work abound with readers' feedback on her novels, which invariably emphasizes that the reader identifies with the characters.<sup>2</sup> Yes, indeed, the characters of E. Triolet create an intimate atmosphere that is both lives-like and vitally close to experiences, thoughts, hopes of readers. The heroes of E. Triolet are designed in such a way that they could, in turn, design "their" reader; in other words, induce him to hypothetically imagine his future. Although the reader's statements mainly concerned such works by E. Triolet as "Personne ne m'aime" ("Nobody Loves Me") and "Soul", the correct observations contained in them can be extended to literally all the novels of the writer. It is symptomatic that episodic faces in the novelist are strongly attracted by the main characters, the influence that constructs their behavior and actions. This is observed even in those works whose central hero has been physically "behind the scenes" for a long time, for example, in the novel "The Great Never" and "Luna Park".

The novel by E. Triolet begins with the character, but not with the "surroundings". This approach is opposed to the Balzac tradition.

In Balzac, as you know, the appearance of the characters is preceded by a detailed exposition (a description of the Voke guesthouse in the novel Father Goriot, a description of Papa Grande's house in the novel Eugene Grande, a description of the gambling house in Shagreen Skin, etc.).

What distinguishes the heroes of E. Triolet from Balzac's is the complete indifference of most of her characters to money, which, however, does not mean the lack of interest of the writer in the problem of wealth and poverty. You can refer to the last pages of the novel "Good evening, Teresa", whose hero dies in incredible poverty. The characters of the novel "Meeting Foreigners" also know what poverty is. And yet, E. Triolet very rarely mercantile and thirst for profit determined the individual and social behavior of the hero. So, Michelle Vigo from The White Horse does not experience suffering in the transition from wealth to poverty and does not feel delight in the transition from poverty to wealth. The same can be said about Anna Faward from the novel "Good evening, Teresa", Madeleine from "The Great Never", Clarissa from the

novel "The Intrigues of Fate" (The Diary of the Selfish). Heroes of E. Triolet do not have a passion for money. They are worried about problems of a different order. In this regard, Elsa Triolet was reproached for the fact that, for example, in the novel "Intrigues", the heroes show a certain indifference towards specific problems of existence and real difficulties.

### Main part

The authors of such criticisms took into account only the superficial thematic layer of the works of E. Triolet and did not take into account their internal content, "background", and subtext. The author's intentions and perspective are revealed by a thorough study of the subtext of each novel. This prospect has been already outlined in the novel *Good evening, Teresa*, and it is also in the novel *Roses on credit*. Martina Denel thinks about money more than once. You could even say that for this she lives. However, from one page to another, according to the purposeful will of the author's intention, Martin turns into a miserable monster and at the same time into a sad sacrifice of her time - the nylon age; she lacks the strength to resist. According to the writer's concept, Martina Denel is a failure because individualism of the Nylon Age gives rise to individualism, individualism to loneliness, and loneliness to misfortune.

The heroes of Elsa Triolet, while remaining closely connected with their environment, at the same time takes advantage of some special arrangement, allowing them to be freer from the prejudices and mercantilism that their novel companions are often occupied. Maybe that is why these "free heroes" seem farsighted, and their companions are shortsighted or even blind. This feature of the leading character in Triolet's novels is associated with the professions that the writer chooses for them. Among the heroes are rarely found people who own mass professions. The structure of the figurative system in Elsa Triolet's novels is the opposite of "mass production". This, if I may say so, is "piece goods". Zhenya Borghez is a great actress, Clarissa Duvall is a singer, Alexis is an artist, Levka is a sculptor, Natalie creates illustrated series of drawings for newspapers, Regi is a writer.

The scene in E. Triolet's novels often takes the form of a labyrinth, but the writer uses the labyrinths for quite specific purposes: in the novel "Good evening, Teresa," for example, the characters are in the labyrinth of cellars where they wander for hours without finding a way out of them. Getting into the "black network of corridors", the hero, as it were, makes a "journey" to loneliness. Many metaphors of this kind are saturated with many works of Elsa Triolet.

In the novel "Good evening, Teresa" the author quotes Pushkin's "A habit from above has been given to us, it is a substitute for happiness". The deep meaning of these words is found in the fates of the female characters of E. Triolet, who are better than men, feel the character and tonality of the world in which they live. The writer, as you know, does not recognize feminism: she is in solidarity with the content of the aphorism of Louis Aragon that "a woman is the future of a man". The heroes of E. Triolet - Clarissa Duval or Madeleine Lalande are isolated from all types of patronage and from all forms of paternalism. They are actively fighting against the traps that stand in their way; they seek to disperse the darkness that puts pressure on their individual fate. However, the feeling of loneliness does not leave them. The possibilities of misfortune are endless, says the narrator in the novel "Good evening, Theresa" and Clarissa Duval repeats after her, like an echo, that no one can know exactly what happiness is, and everyone knows

misfortune. In Elsa Triolet's novel, loneliness appears multifaceted. This is loneliness from nostalgia in people torn from their roots ("A Date of Aliens"), loneliness generated by old age ("Nightingale trails off at dawn"), loneliness from unrequited feelings ("Nobody loves me").

Elsa Triolet usually extends the theme of love to the general theme of human relations. An-Marie and Martin, in the end, break out of the maze of loneliness to find the desired truth, and they find this truth on the paths of the relationship of their personal destiny with the realities of being. These realities in the form of historical events seem to penetrate the novel gradually, as the characters' life and everyday experiences are improved and strengthened. However, the words "historical events" as applied to the work of E. Triolet seem to be of little significance, since for the writer there is no retreat back in time. The novel and the time of the novel are at the same level as the moving story. Elsa Triolet is constantly moving at the time when history becomes politics: the struggle against fascism in the novel "Good Evening, Teresa" (1938), the Munich Prelude to surrender in the novel "The White Horse" (1941-1942), Resistance in a book ready to become the novel, "For damage to cloth, a fine of 200 francs" (1943), a threat looming over democracy in the novel "Armed Ghosts" (1946).

In accordance with the structure of the imaginative system of Elsa Triolet's works, the end of the novel does not necessarily mean the end of someone's personal destiny. She is wary of suggesting synthesizing curves in the plot-compositional system. Moreover, even the recognition clearly recognized in each work of the influence of the role of historical events of our time on the individual fate is not the ultimate goal of the writer. She is mainly interested in the question of what tomorrow will consist of. She wonders why in our era, violence and murder coexist with the latest discoveries in the field of science. "Our century fluctuates between the past and the future, between stone and nylon: the past holds us tenaciously, the future beckons - this is how it has been going on for centuries," the writer says in a word from the author in "Roses on credit."<sup>3</sup> This idea varies in different ways. In addition, in the novels "Soul", "Great never" and in other works of Elsa Triolet.

The future of mankind is of keen interest to E. Triolet. About him, the writer often asks herself questions before they become practical problems. The hero of the novel "White Horse" concludes his thoughts about modern man in a self-critical formula, the meaning of which is this: you cannot dream without starting to dream.

Many researchers of Elsa Triolet's figurative system of novels, not without reason, claim that her works are, in a sense, autobiographical. This, of course, is not about the milestones of personal biography embodied in the novels, but about the author's mood, attitude and worldview; E. Triolet's subjective attitude, personal attitude, known from a number of her publicist speeches, are projected onto the entire gallery of the main characters, their anxiety, their anguish, their thoughts about the present, about the future, their thoughts and finds. It was this feature of the internal structure of the image that allowed the writer to justifiably claim that "Michelle Vigo is me, Antonin Blond is me, all these Theresa and An-Marie are me."

We can say that Elsa Triolet coexist in two forms of the structure of the figurative system - it is event and non-event, plot and non-plot. At the same time, the writer's distinctive feature is the

hypertrophy of the non-eventual origin, coming from a strong confessional-lyrical stream that permeates her novels, most of which combine the features of the lyrical-romantic and epic portrayals of life, in which the narrator plays a special role. Elsa Triolet owns the art of telling a story. The story may be implausible, but by no means commonplace. This story is dramatic and human.

On the first page of the novel "The Great Never" (1965), the dead man speaks with the reader, rather he speaks to himself, recalling moments from what was his life. This dead man's name is RégieLaland, he is about 40 years old. His frank confessions are quite exciting and make him want to know everything about this person. So during his life, a modest university history teacher and part-time writer, author of detective works, after his death becomes a great Catholic thinker "with the traits of a genius". Interpreters of his legacy appear who seek to canonize the master. However, Madeleine, the wife of Régie Lalande, whom he married even when she was his student, wants to protect his memory and his work from misinterpretations. In this endeavor, it is not so much morality that directs her.

It has been written about the characteristics of the characters in the novels of Elsa Triolet. Therefore, the French critic Jean Henrique claims that the heroes of Triolet are "broken": they are estranged from themselves, because they are constantly in search of their second "I", which seems to be inside them. Love, writes Jacques Henrique, is a pathetic attempt to cure this disease of "freedom of loneliness". Love and freedom are two forces that are able to contradict each other so actively"- so aphoristic Jacques Henrik determines the state of mind of the characters of the writer.

The novel "The Great Never" (1965) is both a psychological study, philosophical reflection and a parabola. The first critics of the novel, in their overwhelming majority, did not notice the originality of this work, which, as it seemed to them, started with many excesses impoverishing the topic. However, the presence of these "excesses" - this is the peculiar poetics of the novel by Elsa Triolet. In the context of the whole work, they are actively "working" on its super task. Each part and every moment, any apparent deviations from the topic, according to the writer herself, are the connective tissue of the seams - and this fabric sometimes holds better than the main fabric. "And can we not see in the seeming excess of the novel - in the biography of Louis II the parabola of fate of RégieLalande, maybe the parabola of fate of every artist," Elsa Triolet reflects in his commentary on the novel - is not the artist a monarch who wants to build a theatrical decoration of life, believe in her and live inside her? Life is tragic because it is fragile and full of chance. Therefore, it is subject to the inexorable movement of time. A work of art is no less tragic, but for some time it ignores the running of time. It helps to wrest a spear from death". The novel "The Great Never" is, in the opinion of its author, "a statement of eternal presence". The writer, as it were, says to death: "Never, never in life!"

In the fact that in the novel it seems a priori incoherent, careless, the a posteriori discovers "golden placers" of imagery and vivid display of scenes and characters, masterful use of colloquial resources. Behind the trivial improvisation lies a carefully crafted montage. The novel "The Great Never" begins with the death of one who becomes the protagonist of the whole book. Dressed in his blue drap suit, the deceased tells in full detail about his funeral and, most

importantly, about the life that preceded them. The dead man's monologue is here not only a technique that allows you to predetermine the composition of the novel, but also a way to express the author's philosophy of space and time.

After RegieLanland died and he was buried, he, nevertheless, continues to exist and in Madeleine's life takes up more space than when he was alive. The same thing happens with connoisseurs of his creative heritage. Historians enthusiastically discuss the works of RegieLalanda. However, during his lifetime, the same historians treated Regie's ideas and work as something eccentric and bizarre. Now the points put forward by the hero are lively debated, even a "school" of young historians arises, working in the direction indicated by him. His works become an occasion for colloquia and an excuse for congresses. Even Bernard, who inherited RegieLalande's place in Madeleine's heart, becomes even more faithful to the dead man's teachings, and the widow herself begins to practice the cult of her husband, discovering for herself the person whom, as she had thought before, she had recognized quite well in eight years of living together. RegieLaland, an ordinary person during his lifetime, turns into a great man, about whom the French Academy regrets that he did not include him in his august ranks. On the last page of the book, we see how Madeline, in company with some minister, unveils a monument to RegieLalanda, a monument that looks like a "giant exotic tree".

In the novel, however, the main thing is not intrigue, which seems to be pulled by the hair. This book is a reflection on space and time, on art that overcomes them in earthly terms (*ars longa - vita brevis*. Life is short - art is eternal). The author's philosophy of space and time dictated the composition of the novel, which by the nature of the combined parts can be called musical: Time, Fate, Chance, Death. "Great never" is not conceived as the story of a certain character; "The novel is dedicated to the transformation of an abstract thing - truth," - said later E. Triolet.

This is primarily a philosophical narrative: "Time is external to the ticking of the clock, and loneliness is the destiny of everyone. It is not time that passes, but we ourselves." Time passes. It runs at the rate of sixty seconds per minute. The heroes of the novel propose to take for a unit of time not such a calculus, but the heart beats. The duration and discontinuity of time, eternity, the different nature of time, variations on the theme of space and time permeate the entire book. By transporting philosophy to everyday and life circumstances, the novelist shows Madeleine that love changes by the will of intermittent and passing time. A brief blinding passed, and now she herself no longer loved Regiei. Then there was Bernard. Man is dual - *homo duplex*. In addition, the truth is dual. We see how from one chapter to another the image of RegieLalanda is enriched with strokes. At first, he seems to us the way Madeleine took him, then the way his old friend understood him, then the way many researchers imagined him: he is multifaceted and contradictory.

"Memory, from the point of view of E. Triolet, "preserves only the distorted reflections of the image of a departed person who will soon die, these are the facts that make up his biography."<sup>4</sup>

This thesis is confirmed not only by the fate of the protagonist of the novel, but also by other characters, including historical ones, such as Goethe, Chaplin, and Picasso. As already shown above, E. Triolet uses the reception of mirrors. Each character appears in the perception of



different people. Truth becomes relative. The same fact may receive different lighting depending on the angle of view from which it is viewed.

“The meeting of a young coot named Heinrich Heine and a famous old man named Goethe is a fact of Heine’s biography and is indifferent in terms of Goethe’s biography.” Therefore, according to E. Triolet, “an autobiography is misleading with great art and with more cunning than a biography”<sup>5</sup>. Memory and Imagination are the same in nature. Elsa Triolet sets out on the pages of her novel two options for meeting Chaplin and Picasso.

One option is through the eyes of Chaplin, and the other through the eyes of Aragon. One of them is more accurate than the other, but the writer concludes, “All witnesses are false witnesses”.<sup>6</sup> The fact is that witnesses, from the point of view of the writer, are always witnesses of the external side and external circumstances. Only the author of the novel penetrates the essence of things and events. The biography of a person under his pen captures the basic features of human existence, has its own logic and can be predicted. The artist is able to recreate any detail hidden in the biography. “For the historian,” admits RegieiLaland, “I had a too miserable state of mind: like many other people, I do not believe in the possibility of historical truth.”<sup>7</sup> Reghi thought that “the historian has only one advantage: it is that over time he can consider some facts in the light of the events that followed them and which appear to be derived from these facts.”

“Great never” Andre Wurmors called “Einstein's” novel, located in the Euclidean dimensions.”<sup>8</sup> E. Triolet seeks for the novel a way that matches our time, which is the time of “cinema, space, Picasso, relativity”. Madeline proclaims: “I stand for false credibility.”<sup>9</sup> The writer in the commentary on the novel explains that she would like to “see how the novel goes beyond its iron framework, from what constitutes our unity of time, place and action.” One only art can satisfy this requirement. “Thanks to its slow motion, art returns the passing time to us in its own rhythm, it distinguishes the essential from the secondary and gives reality a more accurate image, better than the one that is accurate: this image is better and more true,” these words of Andre Wurmors convey an underlying meaning the philosophy of the novel by Elsa Triolet.<sup>10</sup>

The stylistics of “The Great Never” is peculiar: the writer improvises, verbose, recreates art, the naive verbosity of a primitive person. When you read the phrase of the teacher, it seems that you hear what tone she pronounces. “Such an art to describe is equivalent to the art of speaking,” said literary critic Marcel Cornu about the writer's skill. Her style goes beyond the framework of the lexical-syntactic features that usually close him. E. Trioletwrote, “Style is not clothing, but the skin of a novel.”

The intragenre feature of the book is expressed in the fact that for many pages the author “forgets” about his hero Madeleine, about her late husband RegieiLalande, turning the novel into a philosophical essay; the novel, as it were, is obsessed with the Bergsonian understanding of the category of time, the Einstein theory of relativity. At the same time, the novel is trying to escape from this bondage. With influxes, the writer returns to depicting the fate of the ill-fated widow, who was “dependent” on the ghost tyrannizing her husband. In the end, she will marry an avant-garde sculptor who erects a monument to the late Regis Lalande in the form of a moving and



sparkling statue, “such that the entire UNESCO organization would faint”, remarks French critic Andre Teri.<sup>11</sup> About this, but the true story reflects not only the vicissitudes of Madeleine's drama. The main thing for the writer in this novel is the philosophy of life and the philosophy of art. It is a circumstance that makes the author break the traditional genre framework of the novel. This is not only about the posthumous existence of RegieLalanda. The deep content of the novel is a criticism of history. This is also a revelation of the writer about her work. Ultimately, this is a search for what today's novel could be. “Time does not transform, does not evolve, we transform, evolve, and we blame it on time, which is not worth it here ... Time is just the activity of space,” we read in the novel.

The novel "The Great Never" requires different levels of reading, because it contains a detective story, and psychological research, and elements of the genre of confession, and philosophical reflection, and a kind of parable.

... RegieLaland became a famous person, everyone is trying to appropriate him and at the same time betray him. He became the object of shameless interpretations and delusional interpretations. Even his widow, incorrect in recollection of him, but faithful to his memory, which is gradually embracing the desire to restore Laland's original appearance, sometimes has to be discouraged by the discoveries that she makes. The intrigue that captivates while reading induces reflection on the history and mechanisms of its falsification.

When they want to observe only the consequences, they risk missing the main thing, leaving untouched the movement that these effects produce, their specific connection with reality. Art, faced with the problems of time, art, as a means of realizing the thirst for eternity living in the human soul - such is the “underwater” theme of “The Great Never.” E. Triolet's thoughts on this subject are constantly present in the novel, giving it an epic breadth.

To reveal the essence of the genre - stylistic originality of the novel "The Great Never", as well as the other novels of E. Triolet, helps L. Tolstoy's reflection: “People,” wrote L. Tolstoy, “are not sensitive to art, they often think that a work of art It is one, because the same people act in it, because everything is built on the same eyeball or the life of one person is described. ... It only seems like this to a superficial observer: the cement that binds any work of art into one and therefore creates the illusion of reflecting life is not a unity of persons and relationships, but a unity of the author's original moral attitude to the subject. ”

The analysis of the genre - stylistic originality of the novel by E. Triolet allows us to understand the stylistics of her writing, an integral part of which is the tale form, epistolary form, memoir form, directly or indirectly reflecting the unity of the author's original relationship to the subject.

In the novel “Listen-Look” (1967) - the continuation of the story of Madeleine, the main character of “The Great Never”, is given. The author reiterates that Madeleine's husband, RegieLalande, had just died, that he was a historian. And immediately after his death, “corpse eaters” pounced on his work in order to give him such an interpretation that Madeleine considered to be false (it's known that Elsa Triolett herself “got involved in the history of Mayakovsky's biography” in an attempt to restore the poet's original appearance). She had other

keys to deciphering her husband's work, in particular, the key to understanding his "police novels," which she alone takes seriously, since she sees a deep subtext in them. And the husband whom she ceased to love, again becomes alive and interesting for a young widow.

Often, French critics wondered: who is the main character of the novel - Regie or Madeleine? You can answer this way: Madeleine is in the visible center of the novel, and Regie is on the periphery; Regie does not act as a character in the novel, while Madeline is a living character. Moreover, in the listen-to-look novel Madeleine and her existence becomes the plot of the novel.

Madeline follows the logic of her fate. She completely goes into the life story of her husband, becomes the shadow of the deceased.

Escaping society, it turns into an intellectual tramp, trying to find something in common only with a person who lives, like her, on the "periphery of life" - this is a young man leading a nomadic life who dies in a car accident.

In the novel "Listen, take a look" there is no storyline of its own; it is entirely borrowed from the previous novel. The ideological focus of the novel is the image of Madeleine, a captive of her obsession.

The name of the novel is symbolic. The author's intention can be expressed in the following words: listen to the noise of our century, the history of our time (we have in mind the problem of falsification of history - here we also feel the "Russian accent", if you take into account the interest - the painful attitude of Elsa Triolet to the history of the USSR, which was distorted by the dictates of dogma).

In the image of Madeleine, there are features of autobiography. Let us take as an example only one topic, to which E. Triolet constantly returns - the theme of exile. Exile as a symbol in the broadest sense of the word occurs at every turn of E. Triolet's work: public exile (novel "Inspector of Ruins"), geographical exile (novel "Date of Aliens"); sentimental exile-journey (the novel "An-Marie"); exile, which can be called metaphysical ("Great never" and "Listen-look"). Heroes and heroes-exiles - those who live on the edge of society, those who do not feel well in human clothing.

It is they who excite E. Triolet: after all, the writer herself called the exile, even if this "exile" was without any compulsion. You can highlight the most diverse shades of this topic throughout the work of Elsa Triolet. A peculiar writing technique in "Listen-have a look". The author turns to graphic illustration, showing photographs, prints, reproductions of paintings. One hundred and thirty photographs reproducing paintings, sculptures, views of Paris, groups of people and cars, accompany the novel. This is done to shade the word, or to replace it when it is not expressive enough - a technique designed for extremely emotional perception.

The title of the novel "Ecoutezvoir" ("Listen - have a look") combines the verb "listen" (écouter) with the verb "see" ("voir"). Seeing and hearing is not the same thing. No one ever sees what he or she have never heard of. Others are the opposite - they need to see in order to really hear. E. Triolet's text and image are interconnected.

The writer describes loud and clanking cars scurrying past the windows of Madeleine's house, the house recognized by the hero as the only place for which to live. Madeline, however, does not withstand such a loud sound neighborhood, she takes to flight. In order to prevent the reader from doubting the logic of the cause-and-effect motives of Madeline's act, the writer places a photograph of the "rattling" machine, taken in a threatening perspective. This image organically flows into the plot of the novel; sociological problems and problems of urbanization merge into one whole in the dynamics of the novel.

So, Madeleine Lalande, the one that we already know from the novel "The Great Never", is abandoned, alone, isolated from the world, it is "free". However, there is also a "necessity": it is necessary to protect the memory and truth concerning her husband, whose death opened her eyes to the fact that her husband was the only human being she loved. In this aspiration, she encounters the world, like a bird on the rods of her cage. Present and past intertwine in her mind. Madeline "falls out of her time."

The psychological state of Madeleine is transmitted by means of an internal monologue. "What is this dimension within which we are locked and from which we cannot escape, no matter what we take? What image does time create in the future? Who knows, maybe art has always been an attempt to record what is happening and draw a connection between the day past and the day ahead, a connection less fragile than memory? Is this monument to RegieLaland, created by Frederic Destin, changing with the change of light, renewed hourly during the day, is not a symbol of the fact that it does not cease to die and be reborn? "

Elsa Triolet's novels "Listen, see" and "Great never" are closely related. This is a kind of dilogy. "The path of my destiny runs parallel to the road of history," said Elsa Triolet. The same can be said about the hero of the listen-and-see novels and his twin novel Great Never. Moreover, here and there the main themes are death, lies and falsification of history, the inability to tell the historical truth - sad and vital topics with a "Russian accent". The widow of Madeleine lives in order to restore the true meaning of what was written by her late husband, despite the fact that the "mighty of this world" are trying to rewrite his works in his own way. Madeline has lost her game, at least for the time being.

E. Triolet has a tendency to cyclization. Cyclization is accomplished, as a rule, not by the decay of the whole, but by combining individual works under a common "heading", thematic cycles predominate. Their internal dynamics is the movement of a theme, an idea. Due to the conceptual integrity, its cycles are a complex of parts closely intertwined, such as, for example, the novel "The Great Never" and the novel "Listen-Look", although the parts are also significant as independent works.

This remark applies equally to more quantitatively significant cycles, and to the whole complex of novels of the writer, combined into a single cycle under a hypothetical common title. However, each of E. Triolet's novels gets the true meaning only in the context of the whole. Its most unpretentious readers follow the plot, the more sophisticated ones are concerned about characters and conflicts, well-read people catch individual words and expressions, the music ear revels in rhythm, and only the writers who truly understand the creative method comprehend the

meaning revealed to them gradually when they combine separate works under general section. Repetitions and keynotes, coupled with abundant synonymous series, romantic and lyrical digressions, create a feeling of a certain musical mood, attracting the reader to compositional reversals, to movement in a circle.

Each new work by E. Triolet expands the genre framework. Inside this expansion, the process of crystallization of the novel takes place - a study that incorporates various genre modifications of the novel.

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DOI: **10.5958/2249-7137.2020.00563.7**

## REQUIREMENTS TO THE ENVIRONMENT FOR TRAINING FUTURE TEACHERS OF COMPUTER SCIENCE IN THE CONTEXT OF INFORMATIZATION OF EDUCATION

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### ABSTRACT

*The article discusses the informational competencies of a future computer science teacher for the development of his technological thinking, the ability to analyze and design information in pedagogical activities, general pedagogical, special knowledge and skills. Today, along with the goals and objectives of education, the function of the teacher is also changing. It is changing from an “educator” to a “knowledge disseminator”, an organizer of a student's cognitive activity (to some extent independent) in an information-educational environment equipped with new ICT tools.*

**KEYWORDS:** *Information Competence, Competency Approach, Practice-Oriented Approach, System-Action Approach, Person-Centered Approach.*

### INTRODUCTION

Nowadays, the concept of the market of educational services has been established in the society, according to which alternative education, home schooling; alternation of training and rest, taking into account the individual psycho-physiological characteristics of the student; use of the Internet and modern educational technologies in teaching; focusing on the learner's acquisition of professional knowledge and skills. Accordingly, in the current conditions of the market of educational services, in the training of computer science teachers, along with increasing their professional competence, it is necessary to pay great attention to the methodological support of the educational process.

In the context of the introduction of information and communication technologies (ICT), the content of cognitive activity of future computer science teachers undergoes certain changes, so

the content of its constructive, gnostic, project, organizational, communicative conditions is of particular importance. Below we will focus on the main requirements for the training of future teachers of computer science in pedagogical higher education institutions.

### **Main part**

According to the methodology of teaching computer science, in recent years, certain requirements have been put forward to make appropriate changes to a number of conditions and tools:

- ◆ The concept of environment and the methodological significance of teaching in the professional training of computer science teachers;
- ◆ Integration of the main components of the methodical system of computer science education at school with cognitive activity;
- ◆ Knowledge of the programs and textbooks developed in this area, the basic technology of teaching computer science;
- ◆ Knowledge of the definition of educational standard and its meaning, knowledge of the content of computer science standard;
- ◆ mastering the methods of teaching school course questions and specific topics;
- ◆ be able to purposefully assess the integrity of methodological methods and choose to use the program support of the course;
- ◆ Knowledge of the principles of a hierarchical approach to the teaching of computer science in the upper grades, mastering the professional methods of computer science courses;
- ◆ be able to plan the educational process of computer science, adequate choice of organizational forms and methods for the content of the study material;
- ◆ know the types of control and evaluation of learning outcomes, be able to develop and apply testing tools;
- ◆ objective assessment of students' knowledge and skills, improvement of methods of teaching computer science based on the results of control.

The information-educational environment is focused on the individual student and is based on the principle of creating an integrated learning environment. In achieving new goals and achievements in education, it is necessary to create the necessary conditions for the multidimensional movement of the learner in the learning environment and to provide optimal conditions for it. At the same time, the education system focuses on the development of the individual, so it is necessary to develop in the learner the formation of basic competencies, abilities and skills, as well as motivation in relation to learning. It is in this context that ICT tools can be used effectively in education. Because the use of these tools provides all the opportunities for the implementation of tasks such as flexibility, interactivity, expanding the range of learning activities. Today, along with the goals and objectives of education, the function of the teacher is also changing. It is changing from an “educator” to a “knowledge disseminator”, an organizer of a student's cognitive activity (to some extent independent) in an information-educational environment equipped with new ICT tools. In such an environment, the main task of the teacher



is to provide students with the opportunity to learn independently, and in the learning process takes place a subject-subject relationship based on "teacher-student" cooperation. While all this requires the use of ICT tools in the educational process, it imposes new tasks on the teacher training system. In addition to educating students, the teacher is required to work with ICT in the context of an improved curriculum, to acquire new competencies in their professional activities, to find their place in the educational process. This requires changes in the methodological content of training of future teachers, psychological-pedagogical and pedagogical (didactic) training. In short, a comprehensive approach to improving the content of computer science teacher training.

At the current stage of development of society, there is an expansion of the content of information and communication technologies, an increase in the volume of information, the emergence of high technologies that are a determining factor in economics, politics, science and education. Accordingly, the mastery of new techniques by educators means not only the introduction of new information technologies, but also the ability to use them competently in their pedagogical work. The American scientist M., who made a great contribution to the development of the theory and practice of education. Sh. According to Knowles [4; P. 118], the main task of higher education is to train highly competent professionals, to develop personnel who can use their knowledge in any situation, whose main competence is "lifelong learning".

The essence of scientific and methodological approaches in the formation of information competence of future teachers of computer science is as follows [2,3,5]:

- Competent approach - develops in students independent thinking, active citizenship, initiative, rational use of media resources in their work, healthy competition and tolerance, and the development of spiritual, moral, physical and mental qualities, including the protection of goodness, place in a rapidly changing, complex world. altruism, understanding of worldly problems, making the right decisions, acquiring the necessary life skills, a sense of responsibility for their own actions, decisions, realization of personal potential, receiving and distinguishing information, serves to expand the abstract, creative, logical imagination ;

- practice-oriented approach - an approach that combines the process of teaching computer science with practice, the use of real-life examples, facts on the subject, the ability of teachers to apply their knowledge in practice in different life situations;

- systemic-functional approach - helps to explain the phenomenon in the educational process, to find its causes, to identify gaps in knowledge about the object of his choice, to identify disparities, to define research tasks, to predict the shortcomings of this definition by interpolation and extrapolation. It is also convenient for the teacher to make subjective assumptions about the boundaries, components, functions of the education system, the features of its organization and development. It influences the teacher's independent creative activity and ensures that the quality of education is reached to the next level. This is because the explanatory function of the system-action approach is to identify factors that are stable, substantive, and non-random. This, in turn, allows the educator to identify future tasks that need to be completed. A systemic approach also has the potential to ensure operational efficiency, which can be seen as a task of improving the systemic approach in the education system;

- In determining the indicators of readiness for the implementation of a person-centered approach, it is necessary to take into account 3 areas: personality, activity and reflexive. Training

as a person is pedagogical thinking (gnostic, ie mental abilities - the ability to distinguish scientific information, the correct application of scientific knowledge in practice, the competent solution of pedagogical tasks); setting pedagogical goals (organizational skills - skills to create optimal conditions for teaching and repetition, choosing the right forms of training, proper time allocation, providing the learning process with the necessary inventory equipment; organizing their work, planning and conducting any activities (mornings, literary evenings and others); pedagogical orientation (communicative skills: the ability to present information in a universal form for a particular category of students, to adjust the methods and techniques of providing information depending on the situation, the ability to persuade someone, "teacher-teacher", "teacher-parent", Literate professional communication at the level of "teacher-manager", "teacher-child"; creation of a positive psychological microclimate in the children's community, etc.). Professional training: pedagogical tact (project skills in intellectual work: removing simple standards and decision-making techniques; seek; above this and that which is self-evident to see; cover the main dependencies of common problems; be able to clearly see several different ways of making a decision and choose the most effective one imaginable; ideological productivity; design of the child's individual developmental learning process, innovative curriculum, program, own activities, etc.). Reflexive training: pedagogical reflection (reflexive abilities include 3 types of sensitivity: object perception: the teacher's special sensitivity to how the real reality resonates in children, to what extent children's interests and needs are reflected, to "meet the requirements of the pedagogical system"; sense of norm and tact are manifested in a special sensitivity to the measure of changes in the child's personality and activities under the influence of various pedagogical means of influence, what changes are taking place in general, whether they are positive or negative, on what signs they can be talked about; critical and responsive to the learning process). The above indicates that in the implementation of a person-centered approach, the development of the whole subject of the educational process should be carried out, not the separate development of the child and the educator. The system of meanings is manifested as indicators of the development of the whole subject: the system of personal meanings in the mind of the child, the personal, vital content and spiritual structure of the educator.

-heuristic approach - develops an optimized thinking, consisting of a research-based learning process, which is a teaching system that helps to develop ingenuity, activism in the teaching system by asking guiding questions.

A teacher's information competence means that he or she has technological thinking, the ability to analyze and design information in the pedagogical service, and the ability to prognostic and reflexive. In addition, information competence plays an integrative role, in a sense, by requiring teachers to have an information and technological culture, in which they develop general pedagogical, specific knowledge and skills. It should be noted that the term "information competence" is often interpreted as "the use of information and computer technology." PV Bepalov describes information competence as "an integral characteristic of a person, the acquisition of motivational knowledge, the ability to use educational and professional activities and computer thinking with the help of computer technology" [1; 47-p.].

## CONCLUSION

The formation of information competence in future computer science teachers will be important in their future professional careers. The student has a systematic and complete understanding of

information competence, knowledge of its structure, substantiation of the established norms, registration of stages and functions of formation, purposeful and effective organization of the educational process in educational activities. allows for the purposeful and systematic development of learning and their information-based thinking in future pedagogical activities.

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DOI: **10.5958/2249-7137.2020.00564.9**

## FEATURES OF PUBLIC-PRIVATE PARTNERSHIP IN E-GOVERNMENT

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### ABSTRACT

*The main features of public-private partnership will be considered. It develops the main tasks of public-private cooperation, the specifics of the development of cooperation, the reduction of public functions and changes in their structure, the transfer of some of their functions to the quality of interests and their further implementation.*

**KEYWORDS:** *Project, Finance, Ownership Commerce, Public Management, G2B Model, Soft Ware.*

### INTRODUCTION

As a result of the development of the ideas of "New Public Management" and "Good Governance" based on the concept of public outsourcing and the development of private entrepreneurship, public-private partnership emerges as a mechanism of interaction between the state and private business and non-profit organizations. The application of the rules of communication systems and relations of partners of the state structure (stakeholders) in public-private partnership is complemented by the following features.

Cooperation is seen as competition between government and commerce in one market or another. Based on the principles of interaction of cooperation agents, the goals and objectives of a joint program or project are developed and implemented in the future.

Unlike a short-term outsourcing system and interconnection, a public-private partnership involves participants in a relationship working together on a program or project that lasts for years or decades.

The agreement on the allocation of funds for the implementation of the joint solution of the issue states that there are great freedoms in the activities of internal cooperation in relation to the deadlines set for the solution of goals and objectives. Developing goals is a common process for

all collaborators. Over time, due to the development of new approaches to solving the problem, the obligations and connections of the parties may be defined and changed.

In determining the sources and cost, in order to achieve the purpose of the project in this case, the parties concerned are interested not only in the financial merger, but also in the merger of human, informational and intellectual resources. State involvement in funding is aimed at controlling future outcomes.

Risk management is the main goal of public-private partnership. Partners together face various risks (financial, organizational, external, etc.). The advantage of public-private partnerships is that they can address the spread of risk in open and informal discussions.

In case of failure to receive dividends, the issues of mutual division of responsibilities shall be agreed upon. The parties must be prepared in case of failure to achieve the planned project results. Due to this relationship, it is expedient to have a structure of arbitration functions applicable to the relations of participants in public-private partnerships.

The main task of public-private partnership is to create a mechanism for the transfer of knowledge and potential of the commercial sector employee to the state structure in innovation.

### **Main part**

The main criterion for evaluating the results of public-private partnership is the collective advantage of the results achieved. Public-private partnerships include an appropriate approach to setting new goals, networking with partners, and rapid adaptation of participants to technological and managerial changes. One of the peculiarities of the development of public-private partnership is the reduction of public functions and changes in their structure. The task of the state is not to ensure the public interest, but to increase the quality of the interest by delegating part of its responsibilities to others.

Among a number of government agencies and other stakeholders, there are tools for infrastructure development and the provision of public services electronically. In particular: Project; Build; Finance; Ownership (Own); Operational Management; Management (Manage); Transfer (Transfer).

The main features of public-private partnership include:

- formal communication, coordinating the interaction;
- A system and network of informal communication between partner structures, reducing the formal boundaries of government agencies;
- The success of each of the participants in the cooperation project.

Public-private partnership is directly related to the public administration system of the country. In the United Kingdom, Partnerships UK has been established as a potential center for public-private partnerships. This organization provides practical assistance to all stakeholders interested in public-private partnerships. The share of the management system in the general public sector is 49%, and in the private sector is 51%.

The main tasks of the organization:

- application of complex projects by the state order;

- development of procurement and investment policy;
- investment in projects and companies;
- Improving the model of project implementation in the public sector.

The organization also assists in innovative projects - assesses risks, seeks cooperation, assesses investment growth, assists in coordinating stakeholders. The organization provides free consultations.

- In order to manage public-private partnerships, The Partnerships Victoria has been established in Victoria to assess the cost of public funds, taking into account the needs of society.
- It is expedient to consider the development of the national e-government system as a set of several projects. In particular, the optimization of the system of public services, coordination of relations between society and the state, the development of industries based on information and communication technologies. An important factor of service is information and communication technologies.
- The development of e-government is associated with the reform of the administrative management system, which will change the attitude to the capabilities and requirements of all stakeholders who use and create government services. The introduction of e-government requires a change in the regulatory framework, the development of strategies and programs, the effective use of information technology in the administrative management system.
- The circumstances that led the class of stakeholders to unite in e-government projects are as follows:
  - Needs of government agencies:
    - lack of resources (knowledge, innovation, staff, finance);
    - risk partnership with external partners;
    - Acquisition and practical application of innovative products;
    - Improving the position of the team;
    - to increase the efficiency of management staff, to accumulate a large amount of financial savings due to the achievements of the project and the budget-funded system.

Needs in the commercial sector:

- expansion of the market for development and sale of products;
- increase work efficiency, create new jobs;
- establishment of long-term cooperation;
- financial gain.

Needs of non-profit organizations:

- achieving recognition of the organization;
- meeting the personal needs of stakeholders;



- not only to meet their own needs and requirements (income), but also to achieve social efficiency (outcome).

**TABLE-1**

№	E-government services
1.	Strategy and information policy
2.	Standards, boundaries and regulatory framework
3.	Data, information exchange, information management, technology
4.	Quality, efficiency, cost, risk, change management, innovation
5.	BEK – office system
6.	Soft ware
7.	Technological infrastructure

The involvement of commerce in government information technology projects is not limited to the development and implementation of software and hardware. Commercial organizations play an important role in the management of information technology projects, the application of information technology standards. Public-private partnerships ensure the introduction of knowledge, innovation and information and communication technologies in the commercial and public sectors.

The effectiveness of public-private partnership is reflected in the ongoing administrative reforms to increase transparency in government, accountability of public authorities, reduce bureaucratic barriers, and establish a mechanism for communication with the population.

In e-government, the following requirements are met in public-private partnership:

- two or more partners (one of them is from the state structure);
- formal mutual agreements on the responsibilities and obligations of partners;
- the purpose of the general activity or project aimed at the development, provision and implementation of public services or functions;
- mutual formal and informal distribution of benefits and resources between partners.

There are three types of public-private partnerships for e-government:

- horizontal and vertical within the organization;
- at the discretion of public-private partnership (transferring certain management functions to non-governmental structures, while maintaining the mechanism of state control, ensuring the public interest);
- State-non-governmental commercial organizations will move from the system of contracts to the development of joint strategies, information policy, e-government programs, but the responsibility for quality and efficiency, evaluation, program development will remain the responsibility of each.

E-government projects also fall into three categories:

- provision of a specific type of e-government services to citizens or businesses;

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- providing citizens and organizations with access to many electronic services and information resources (through e-government portals);
- support and reengineering of public administration processes (quality of information use, change of work and information flow, increase of labor efficiency and integration of resources).

India, the United States, Canada, the United Kingdom, and Singapore are among the countries that are distinguished by the laws and culture, financial capabilities, and the role of the state in society that apply the above requirements and processes.

The problem of creating an effective regional information system is related to filling the public administration system with accurate and up-to-date information. Public-private partnership projects approve the requirements for data storage, the responsibility of the parties for the provision of information and the mechanism of communication, the possibility of ownership and commercial activity are determined in the interests of both parties. The success of the exchange of information is reflected in the fact that the state has a quality and reliable service.

The creation of a single electronic information environment and an electronic worker made it possible to monitor the flow of information between regions. India's largest company, TCS, has the right to sell intellectual scientific development and software in any foreign market. Public-private partnerships have made it possible for civil servants to address issues related to information technology, such as a complex internal electronic document management system and budget planning. This, in turn, requires civil servants to be trained to operate on the basis of experience and new principles. Public-private partnerships lead to the creation of an environment of trust between partners, attracting as many users of all lower and middle links as possible.

There is a network of operators in the US state of Indiana (Access Indiana Information Network (AIIN)) based on commercial technologies between citizens and organizations and the government. The legislature and the judiciary also operate in this information network. The e-service is free of charge, except for the issuance of licenses, license plates, driver's licenses. The accumulated financial fund is distributed equally between the government and the operator and is spent on the development of the network. Access Indiana was created at the initiative of the government to provide citizens with easy access to public information resources. Transparency, openness to appeal, expected results are monitored by implementing the monitoring technology of the partner organization, the analysis of the needs of citizens, a number of hardware and software in accordance with the information policy and requirements.

The government of Singapore operates the Ge Biz public procurement system. The public procurement system consists of three components: customer, product supplier and customer applications, payment system. Ge We ensure transparency in public procurement. Today, the information technology company NIT is an organization that supports the maintenance of the state partnership portal. Ge We are based on the occupancy order appraiser, the customer, the financing specialist cell. When a product supplier is selected, it is offered to deliver the product to the specified address in a timely manner, electronic payment is made through the Ge Biz system. The Singapore government has commercialized intellectual property as a product and resolved the issue of selling it to other countries. NIT has the right to offer, customize and track the product to the customer. The secret of success is the correct organization of the organization's

logical-commercial processes in procurement, the correct distribution of responsibilities: the government ensures compliance of the process system with generally accepted standards and laws, and NIT undertakes all technical support: from hardware to software selection. The government left the oversight functions to the partner. An important aspect is the quality of service provided by the product supplier under contractual agreements. Failure to meet the quality requirements will result in large fines.

Ontario Business Connect (OBC) - a commercial service has been launched in the Canadian province of Ontario. In recent years, business enthusiasm has waned due to the high degree of coordination of regional clerical activity in the province. The fact that different organizations are responsible for different services of commerce has complicated the tasks of the OVS. Due to this, the OVS acts as a coordinator in improving the services provided by the state for commerce (tax, trade registration, licensing, labor protection).

The hierarchical structure is characterized by: high-level government managers programs (determines game rules, information policy, expected results), manages distributors - keeps account of transactions as a mediator between the state and the market representative, maintains a commercial company register, provides protected transactions to other market participants. Major wholesalers provide hardware and software to retail markets. This in turn makes the OVS service convenient and easy for the end customer. In the multi-level structure of such an appeal to the Ontario government, certain difficulties arise for the user. For example, the slow pace of decision-making and development at a high bureaucratic level does not satisfy commercial agents who are accustomed to "low" high speeds.

At the same time, under the terms of public-private partnership, the OVS cannot make independent changes to policies, processes, and processes that are mutually exclusive without the support of a mid-level business partner. Thus, services within the organization are carried out on their own with the advice and support of a business partner. But, of course, the market mechanism will be followed, the benefit of each participant will increase in the process of distribution of trade partners, from wholesale to final customer service. However, the issue of increasing openness and transparency in OVS activities has not been fully resolved. In order to achieve a high level of informed management in the G2B model, it is necessary to change the architecture of interactions between partners.

An online government system operating on a secure platform has been introduced in Bremen, Germany. The Bremen government has hired GmbH & CoKG as a private partner, whose role is to serve as an e-service operator for the city, responding to transactions, payment mechanisms and electronic digital signatures.

Bremen Online Service (BOS) has allocated resources to modernize information systems and develop new software applications in such a way as to provide a high level of service to a wide range of stakeholders in the first place. For partners: tax service - advice, construction issues - architects, car registration. For business: public procurement, car registration, car dealers, manufacturers. For citizens: education, entertainment (e-tickets), relocation and relocation. The mayor privatized inefficient functions, but left the police, the judiciary, and funding, which were

considered important. Sparkasse Bremen local bank, Deutsche Telecom provider infrastructure, and several IT companies specializing in hardware and software are participating as private partners for the BOS platform. Such organizations are working to introduce electronic digital signatures and new solutions to increase the efficiency of companies such as electricity sales, public transport, postal, health insurance. Representatives of the city administration, university professors, representatives of the banking sector, IT infrastructure integration consultants and payment system staff were involved in this work. Competitions have been announced for the development and implementation of projects. Interested companies, private partners can also participate in the project at will. Such projects are also supported by politicians. Because it enhances the city's position as an innovation hub in a mass addition. The share of public-private partners participating in the project is as follows: city administration - 50.1%; telecom - 15%; bank - 15%; banking software company - 5%; consulting service company - 10%; design department of the city administration - 4.9%; transport company - 2.5%; local telecommunications provider company - 2.5%. Typically, a company has two directors. A representative of the government responsible for e-government and a consultant who prepares the concept.

In conclusion, the creation of public-private partnerships, on the one hand, is a factor in the implementation and sustainability of complex public IT projects, on the other hand - there is no generalized proposal on the form of public-private partnership. Each time, depending on the readiness of the project initiator, decisions on funding, project construction, regulatory boundaries, the composition of participants and their relationship model depending on the level of development of the IT industry, the distribution of new solutions in the form of intellectual property rights and new collaboration achievements conclusions are drawn.

## CONCLUSION AND SUGGESTIONS

The greatest achievement of a public-private partnership project in e-government is the expansion of its scope, as well as the participation of all stakeholders at all stages - increasing the level of team acceptance of project results.

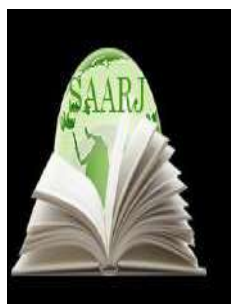
The issues to be addressed in terms of developing public-private partnerships in e-government projects include:

- Taking into account the needs of the public and assessing the importance of the project;
- Defining the boundaries of the implementation of each scheme under the project;
- identification and elimination of regulatory barriers to the development of public-private partnership;
- Assessment of project risk in general matters of the project implemented in public administration;
- development of effective mechanisms for scaling project results;
- identify and increase the willingness of civil servants to manage all stages of cooperation projects.

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DOI: **10.5958/2249-7137.2020.00565.0**

## PROVISION SYSTEM OF PRIMARY SCHOOL PUPILS 'LEARNING ACTIVITY

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### ABSTRACT

*The article describes the development of the cognitive sphere primary school students. It touches on a number of psychological problems, related to elementary education in a modern educational environment. The psychological characteristics of students are indicated, which must be taken into account when building an effective educational process, which is important for maintaining and development of cognitive activity of primary schoolchildren.*

**KEYWORDS:** *Primary School Age, Cognitive Sphere, Cognitive Functions, Educational Motivation, Modern Educational Environment*

### INTRODUCTION

The period of primary school age is the time of active development of the cognitive activity of the child, its arbitrariness. Cognitive sphere of the younger schoolboy has a number of features. Enough remember that at 6 years old the child becomes a student of an educational organization in order to anticipate changes in the development of his cognitive sphere. Change of leading activity, habitual daily routine, emergence of a new significant adult in the face of the teacher, all these factors should be considered as determining the development cognitive activity. This period is most favorable for the assimilation of knowledge, skills.

Educational activities impose serious requirements on the mental development of the child and in contributes to the development of it the will. Horizon of a primary school student expands through dating times personal disciplines, curiosity aimed at cognition the surrounding world. Usually, the cognitive interests of younger students are still unstable. In grades 1-2 children prefer to learn as much as possible but more about the world of animals, plants, and only 3-4 mu of the classes they are interested in the history, social phenomena, people. At the same time, of course, there are individual differences in the development of cognitive interests. For example,



gifted children are resistant and breadth of interests that is manifested in their passion for different and sometimes unrelated objects or lasting hobbies what that particular object for several years. Note, however, that is not always innate curiosity of children turns into curiosity and even more takes on the character of cognitive needs, providing the child a love of learning. To achieve this quality required for effective learning in General, to build a culture of knowledge Jr. Student may methods about productive learning. One of these methods based on independent creative activity, is the research. Child is born with a need for knowledge, activity in research of the world. In the future, the research position greatly facilitates the life of the student, as it forms an important personal quality - independence in the search for information and decision-making.

At primary school age, the child enthusiastically studies the things that interest him, takes pleasure in experimenting, learns to ask questions and produce hypotheses. To develop cognitive thinking schoolboy should do the process learning intense, fun, emotionally saturated. Supporting the child's initiative in studying the objects of surrounding reality, increasing interest and the joy of self-discovery are the guiding lines of the student's research activity. The development of cognitive activity of a primary school student largely depends on what cognitive strategies he uses, and those in turn, they reveal the features of his individual knowledge, as well as the relationship of internal and external action plans. Within the educational process, cognitive strategies include: memorizing vocabulary or foreign words, forming a concept, putting forward a hypothesis, building a proof, etc. These strategies are formed on the basis of a combination of intellectual operations of cognitive functions (attention, acceptance, representation, thinking, memory, fantasy) The use of cognitive strategies becomes possible when mastering metacognition, when children begin to realize the features own cognitively active and use this knowledge for effective training. It is difficult for a first grader to analyze his own educational activity, since his fur is still poorly formed basics of reflection and thought operations. Third grader having the experience of cognitive activity, has information about what error it often does; aware that in order to successfully to learn, you need to have a good memory and sustained attention. In addition, training activities forms in children interdisciplinary skills that give them the tool of knowledge, the ability to organize their own activities and choose to use for yourself cognitive strategies. Sometimes cognitive styles of the student and teachers are not the same, the education system often aims at a consistent presentation of the material, each time fixing traveled. In this case individual cognitive style a child can be based on a holistic perception of the training material from general to specific, etc. the Teacher it is important to understand features own cognitive style and style of the child in order to increase the efficiency of educational activity of the latter.

As a rule, the first graders with love to learn, but at the present stage of development of school system children are constantly experiencing the pressure of increasingly complex every year educational games. Its proposed requirements do not always correlate with the real 6 age features of children that sometimes can lead to lower academic achievement and academic motivation. These circumstances negatively affect the development of cognitive activity because the level of complexity of the studied the material is often correlated with a higher level of school anxiety, especially in situations of control of knowledge by the teacher, when there was the neck of the student stress may block the learning process. These problems often occur in children with so called special needs, which are becoming more and more. These children overactive or sluggish, anxious, relaxed. However, other students can demonstrate such behaviors, mainly in the period

of adaptation, when the child's body is reconstructed under the new requirements, and teachers need to be especially attentive to those children who show symptoms adjustment. GEF aims to solve the problem of quality of children learning educational material through the mastery of universal training actions the ability to independently master new knowledge and skills, including organizing this process. One of the targets primary education, as stated in the Requirements to results of mastering basic educational program is the development of the ability to learn. It acts as the first step to self-education and self-education, namely the development of broad cognitive interests, initiative and intellectual curiosity, motivation learning and creativity; formation of ability to learn and the ability to organize their activities (planning, monitoring, evaluation).

Modern people every day forced to show the search activity. It isolates problems, questions, compares, classified, analyzes data and makes conclusions. An existing set knowledge and practices is not enough. Valuable becomes the knowledge itself, but finding ways to obtain and work with him. Teaching methods can be described as "cognitive, affective, and physical." [10] Appropriate language learning strategies result in increased levels of knowledge and increased self-confidence. [6]

Therefore, the system education interested in the development of the OOD, and the teacher who is not just a translator training material, as researcher, able to organize independent research practice of students. And this teacher should be the media research culture, to master research skills and ability to develop in the child a research position that is extremely difficult, since the latter acquire awareness and self-regulation only by the end of primary school. It is important to understand that the level of development of cognitive sphere of student Junior is the result of the formation of cognitive functions in preschool childhood when the child is in the form of a game gets ideas about the incentives of the different modalities: auditory, visual, tactile. If sensor systems not been given due attention in the period of early childhood can to see the fragmentation of the sphere of perception. In the end, having difficulty in learning, there is a very common syndrome deficit attention and hyperactivity. To solve this problem can, for example, having the child's desire to move, to burn off excess energy. You can train him shooting at a target, ball games, table tennis. These classes among other things, develop fine motor skills. The child also needs to learn a new shells playgrounds: climbing rope, transition at the rope bridge, the passage of maze. 1st grade you need frequent alternation of activities, a reasonable combination of mental and physical activity. In elementary school, you can often to see that the child is sitting at a desk half turned back or often unfolds, with curiosity studying what do his peers. Teacher in a hurry to make a point to fidget, however, the child can demonstrate involvement in the educational process and easy to answer questions teachers regarding the studied of the material. In such a situation is about to analyze the channels of perception, through which the student receives information. If the leading channel supports audio, the absorption information will be more effective when activation of the hearing, and not sight. Therefore, the "auditory learners" need to hear the teacher, and the visual information that is on the Board will have a lesser effect. In the Junior school age intensive develop all properties attention, which is primarily associated with increased mental activity. The development of arbitrariness attention has its own specifics. A seven year old child is still difficult long-term focus on homework, but school system learning inevitably trains this skill. It manifests itself in the need to learn those subjects which in the moment not interested in the child, but are important for training.

In the end children often do not perform tasks on time, losing the pace can make a lot of mistakes carelessness. Only 3<sup>rd</sup> class attention can be maintained continuously throughout the lesson. Usually the teacher provides support to students constantly controlling their actions – requests to look at the Board, open the tutorial on a particular page, etc. a Clear policy ensures the development of self-control and self-regulation of attention. A child can get involved in the content of the problem, if it is included in interesting the types of activities, ranging from review of educational cartoon or video to self-research practices. Psychological researches the attention capacity of younger students testify to his failure. Teachers in primary school often turn to a psychologist complaining about the inattention of their charges. Perhaps never before this the problem was not so acute after all the level of development of the school curriculum is constantly rising and, therefore, the teaching load increases several times. Of course, it's not may not affect the characteristics of the attention of younger students. While at standard age indicators in the early school years, attention becomes arbitrary and selective. Perhaps the reason for the low level of care lies in the lack of balance processes study and rest. In the Junior school age activities, rich in information, should not belong, and breaks involving active rest (physical workout), should be frequent. The development of attention is closely associated with academic motivation, positive attitude primary school children to study [3].

The trend of recent years force us to reconsider educational technologies, because many children 9-10 years there is not only a lack of desire to learn, but a negative attitude towards school. The reasons for this often lie in the fact that the teacher is difficult to captivate educational material to modern students, who have absorbed various kind electronic devices or computer games. In the Junior school age is intensive formation techniques remember, which again is associated with the intensification of training activities. It would be logical to assume that connection with the development of speech and thinking to the end of primary school period the child needs to master meaningful memorization. However this is not always as the amount of school material is constantly growing and learning strategies are mainly aimed at learning the rules. 1-2 classes when memorizing verbal information marked tendency of children to play it close to the text that is perceived as evidence of a well-intentioned home work. However, this is based on rote, without understanding the content. Productivity memory Junior students increases in the constant training and greatly depends on the methods of remembering, from teachers and selected education programs. To 10 years children able to think over what the methods they used to remember, but themselves to invent these methods are still not able to. The peculiarities of memory younger students sometimes are reasons of failure part students. Inability to overcome the difficulties with memorization of the material sometimes leads to the abandonment of active the thought of work. Students begin mechanically memorize the material without understanding and not unable to answer a single question. More one workaround is the execution of a new job the same way performed prior. In addition, students with enough time twisted memory when verbal response, use the prompts, try to copy off mates etc.

Against primary school children, advocates that the process of reproduction of knowledge is often inhibited stress factors, control governmental test works, tests, etc. so it is important to shape the child, not the memory of the scholar or scientist, and memory thinker. Of course, extensive knowledge demonstrate its cultural level, Outlook and awareness, but the handling of various blocks of material, the ability to choose from the flow of meaningful information, rating it on a different basis reflects the ability to think and this is about the development of intellectual

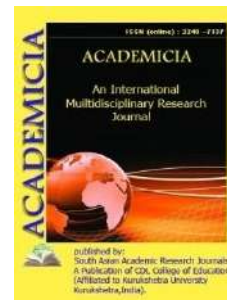
functions. Thus, arbitrary memory becomes learning activities of the child. Due to the quality remembering, he makes less mistakes in the learning tasks, especially learning foreign languages when memory processes play a key role in learning. Currently, the education policies of the state focused on the development of Information school, the classrooms with computers, smart boards, projectors and other technical means. Children compared with adults easier to master the skills PC, now is even the preschool child. In General, this kind of activity activities significantly develops thinking and the ability to work with information resources, and make cognitive motivation. But it is necessary to teach the child to understand and realize goals application of these products, their dosage, leaving a place in the educational space for others forms of development of knowledge. In the formulation of educational objectives Junior the student is able to choose the most effective ways of its decision depending on specific conditions, to evaluate the results of their own activities, to determine the reasons for low or high impact, exercise the initial form of the reflexive thinking [1].

This skill is extremely it is important for the formation of learning skills and learning, as allows the child to find the reasons for mistakes made, in the future will enable them to avoid. In the Junior school age, in connection with active mental students, begins to develop a system of scientific concepts, knowledge become more differentiated. Clarification of concepts is due to the enrichment vocabulary and inclusion in the lexicon of terms. Note that the path formation of conceptual thinking depends on which system learning got child. Gradually he learns of reflection begins to evaluate the products of their activities, to see prospects of development. If you support desire of the child to mental activity, to teach him the ability to see problems and ask questions that are already in adolescence he will be able to avoid a range of learning difficulties association with the handling of complex abstract concepts and understanding the essence of physical phenomena. The period of younger school age is the time when actively developing a child's imagination. It lots of draws, sculpts, performs applies and crafts. Creativity supported in the school environment when class work children are introduced class work children are introduced with quelling, and wood burning, etc., in the graphic arts class learn to work with batik, etc. it is unselfish passion for creative activity that is a normative indicator, Junior school age can often to engage in the difficult relationship with the normatively of schooling. The problem is that in addition to the development of the imagination is necessary to teach a child art models, create crafts, or of an application using so-called action method by pattern. Of course, without samples it is impossible to do, because in order to build a culture of thinking, to develop the Outlook of the children, first we need to assign the knowledge of the benchmark. For example, receiving a task to develop the imagination and when required decorate with patterns of blank squares first graders are sometimes unable to perform it because they have no sufficient information about different the types of patterns. Pupils of 3-4 classes a good job with this task as it is based on already the in-memory samples and standards. However, studies show that the activities modeled entails a reduction in the level of creative abilities; Junior student gets used to the standard the implementation of the action "all". At apparently, the optimal solution of this problem lies in understanding the importance of teacher time development of creative potential of the child support initiative unique creative products and implementation of the educational process tasks on the development of imagination and creative thinking. The problem of development of imagination in primary school age also associated with the development of symbolic function thinking.

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DOI: **10.5958/2249-7137.2020.00567.4**

## THE EFFECT OF WINTER WHEAT APPLIED COMPOST AND MUNG BEAN AS A SECOND CROP ON SOIL PRODUCTIVITY

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### ABSTRACT

*The article gives information about importance of mineral fertilizers and composts in the application of semi-rotten black cattle manure and compost in different doses of the recommended rate of mineral fertilizers  $N_{200} P_{140} K_{100}$  kg/ha for winter wheat, as well as increasing the amount of nutrients in the soil. Application of 10-20 t/ha compost in addition to the norm of mineral fertilizers  $N_{200} R_{140} K_{100}$  kg/ha in winter wheat increased the amount of humus in the soil by 0,018-0,034 %, total nitrogen by 0,003-0,005 %, total phosphorus by 0,005-0,011 %, the cultivation of mung bean as a repeat crop after winter wheat resulted in a 0,007-0,013 % higher humus content, a 0,005-0,009 % higher total nitrogen content, and a 0,008-0,011 % higher total phosphorus content in the soil compared to non-replanted treatments.*

**KEYWORDS:** Soil Fertility, Humus, Nitrogen, Phosphorus, Potassium, Manure, Chicken Manure, Phosphogypsum, Rice Chips, Wood Chips, Compost, Mineral Fertilizers, Wheat Sorghum, Secondary Crops, Mung Bean.

### INTRODUCTION

Regular high yields of agricultural crops and increase of labor productivity depend on soil fertility and agricultural culture. Soil fertility is the natural property of a plant to be able to meet its demand for nutrients and soil moisture to the maximum during the entire growing season. The



more fertile the soil, the more the plant is saturated with nutrients and moisture, the higher the yield.

Soil fertility varies depending on the farming culture. The higher the farming culture, the higher the soil fertility, the higher the yield from the crops. Neglect of the soil and the use of non-modern methods of farming lead to the disintegration of soil fertility, the quantity and quality of crops.

**The degree to which the problem has been studied.** After the harvest of winter wheat, when legumes are grown as a secondary crop, it is possible to get two grains a year, on the other hand, it increases soil fertility and reduces weeds in the fields [1].

In typical gray soils in Tashkent region, short-rotation (1: 1, 2: 1) rotational cropping systems resulted in the introduction of triticale from intermediate crops as a result of accumulation of 9-10 tons of organic residue per hectare in the soil and humus content in the soil by 0,020-0,035 %. gross nitrogen was found to increase by 0,018–0,022 per cent [7].

1: 2 of alternate sowing, winter wheat + repeat crop (shade) + intermediate crop (oats + green peas + rye): cotton: nutrients in the root system and root residues left in the soil as a result of repeated legumes and intermediate crops in the cotton system due to the return of 121.3 kg/ha of nitrogen, 44.7 kg/ha of phosphorus and 119.0 kg/ha of potassium elements in the soil during one rotation (3 years), humus in the 0-30 sm layer of soil increased by 0,014-0,037 % of the initial amount, total nitrogen was found to increase by 0,015–0,025 per cent, and total phosphorus by 0,010–0,015 per cent [6].

In order to maintain and increase the fertility of light gray soils, short-term alternating sowing 1: 1, winter wheat + repeated crop-shade: in the cotton system, the norm of mineral fertilizers in winter wheat N-180, P<sub>2</sub>O<sub>5</sub>-125, K<sub>2</sub>O-90 kg/ha + 15 t / The amount of humus in the soil in the layers of 0-30 and 30-50 sm is 1,100-0,950 percent, nitrogen, if the norm of mineral fertilizers N-150, R<sub>2</sub>O<sub>5</sub>-100, K<sub>2</sub>O-75 kg/ha is applied in cotton, applying organic-mineral compost and soybeans as a secondary crop 0.115-0,090 per cent, phosphorus 0.196-0.176 per cent and potassium 1.68-1.59 per cent. Found to be as high as 0,005 percent [8].

**Research conditions and methods.** Mineral fertilizers in winter wheat in our study N<sub>200</sub> P<sub>140</sub> K<sub>100</sub> kg/ha and in addition to these mineral fertilizers, 10, 20 t/ha of black manure and compost were used.

The research was conducted in 2011-2015 in the fields of the experimental plot of the Tashkent State Agrarian University. The soil of the experimental field is a typical gray, which has been irrigated for a long time, the mechanical composition is sandy, the groundwater is located at a depth of 15-18 meters.

From mineral fertilizers, ammonium nitrate (N 33-34 %), superphos (N 5-6 %, P<sub>2</sub>O<sub>5</sub>-32 %) and potassium chloride (K<sub>2</sub>O-60 %) fertilizers were used. In the preparation of compost, rice and wood chips were taken in the ratio of 25 percent, manure-25 percent, chicken manure-35 percent, phosphogypsum-15 percent, mixed and stored in piles of 2 meters in height for 4 months, covered with a 10 sm layer of soil. According to the experimental system, compost and black manure were applied under the autumn plow before sowing winter wheat.

Placement, calculations and observations of field experiments were carried out on the basis of "Methods of conducting field experiments", "Methods of field experiments", "Methodology of State Testing of Crops", soil and plant analyzes "Methods of agrochemical analysis of soil and plants" [2, 3, 4, 5].

**Research results.** In our research, it was found that the application of compost and semi-rotten cattle manure in different amounts under autumn plowing before planting in the care of winter wheat affected the amount of nutrients in the soil.

In order to determine the initial agrochemical composition of the soil of the experimental field, soil samples were taken for analysis from 5 points diagonally from 0-30 and 30-50 sm layers of soil before the experiment.

According to the data obtained, the humus content in the 0-30 sm soil layer of the studied field was 0.925 %, the total nitrogen content was 0,093 % and the total phosphorus content was 0.133 %. In the subsoil 30-50 sm layer, the humus content was 0.782 %, the total nitrogen content was 0,080 %, and the total phosphorus content was in the range of 0.110 %. According to the data obtained on the mobile forms of nutrients, the amount of nitrate nitrogen in the topsoil (0-30 sm) layer is 14.6 mg/kg, in the subsoil (30-50 sm) layer is 11.2 mg/kg, the amount of mobile phosphorus is 0 It was found that 26.3 mg/kg in the -30 sm layer and 21.0 mg/kg in the 30-50 sm layer. The amount of exchangeable potassium was 260 mg/kg in the 0-30 sm layer of soil and 230 mg/kg in the 30-50 sm layer.

It can be seen that the typical gray soils of the experimental plot of the Tashkent State Agrarian University were very low in nitrogen, low in phosphorus and moderately supplied with exchangeable potassium.

According to the data obtained at the end of the winter wheat application period, the amount of humus in the soil in the 0-30 sm layer was 0.922 %, the total nitrogen content was 0,091 % and the total phosphorus content was 0.130 % in the control treatment where the norm of mineral fertilizers  $N_{200} R_{140} K_{100}$  kg/ha was applied. was found to have reached In addition to the norm of mineral fertilizers in winter wheat, the application of semi-decomposed black manure and compost in different amounts had a positive effect on the amount of nutrients in the soil. In Treatment 2, where 10 t/ha of semi-rotted black manure was applied under autumn plowing before sowing of winter wheat, the amount of humus in the soil increased by 0,013 %, total nitrogen by 0,001 %, and total phosphorus by 0,003 %, in addition to mineral fertilizers. In the treatment where 20 t/ha of manure was applied, it was found that these values increased by 0,027, 0,004, 0,008 %, respectively.

Recommended in winter wheat  $N_{200} P_{140} K_{100}$  In treatment 4, where 10 t/ha of compost was applied in addition to the norm of mineral fertilizers per kg/ha, the amount of humus in the soil increased by 0,018 %, the total nitrogen content increased by 0,003 %, the total phosphorus content increased by 0,005 %. in treatment 5 where compost was applied, it was found that these values increased by 0,034, 0,005, 0,011 percent, respectively.

According to the data obtained on the mobile forms of nutrients in the soil, mineral fertilizers in winter wheat  $N_{200} P_{140} K_{100}$  kg/ha In the control treatment, the amount of  $N-NO_3$  in the soil in the 0-30 sm layer was 13.9 mg/kg, the amount of  $P_2O_5$  was 25.1 mg/kg, and the amount of  $K_2O$  was 255 mg/kg, the recommended mineral in winter wheat In addition to the fertilizer standard, 10

t/ha of semi-rotten black cow manure was applied. In treatment 2, the amount of N-NO<sub>3</sub> in the soil was 16.4 mg/kg in 0-30 sm layer, the amount of P<sub>2</sub>O<sub>5</sub> was 28.4 mg/kg, and the amount of K<sub>2</sub>O was 268 mg/kg. formed. In addition to the norms of mineral fertilizers, 20 t/ha of black manure was applied. In treatment 3, the amount of N-NO<sub>3</sub> in the soil in the 0-30 sm layer was 18.3 mg/kg, the amount of P<sub>2</sub>O<sub>5</sub> was 29.6 mg/kg, and the amount of K<sub>2</sub>O was 275 mg/kg. formed.

In addition to the recommended N<sub>200</sub> R<sub>140</sub> K<sub>100</sub> kg/ha mineral fertilizer standards for winter wheat, the amount of N-NO<sub>3</sub> in the soil was 17.0 mg/kg in a 0-30 sm layer, and the amount of P<sub>2</sub>O<sub>5</sub> was 29.0 mg/kg in 10 t/ha compost. The amount of K<sub>2</sub>O was 270 mg/kg, while in treatment 5, where 20 t/ha of compost was applied, the amount of N-NO<sub>3</sub> in the soil was 19.0 mg/kg in the 0-30 sm layer, the amount of P<sub>2</sub>O<sub>5</sub> was 30.1 mg/kg, and the amount of K<sub>2</sub>O while 280 mg/kg.

In our research, after the harvest of winter wheat, the types of fertilizers used in winter wheat and the effect of repeated crops on the amount of nutrients in the soil were studied.

According to the study, by the end of the growing season of mung bean grown as a second crop, the amount of humus in the soil in the 0-30 sm layer was 0.923 %, while in the 1st treatment of repeated sowing in the background applied mineral fertilizers N<sub>200</sub> R<sub>140</sub> K<sub>100</sub> kg/ha. amount was 0,089 percent and the total phosphorus content was 0.128 percent. In this treatment, compared to the initial figure before sowing of winter wheat, the amount of humus decreased by 0,002 %, total nitrogen by 0,004 %, and total phosphorus by 0,005 %. In treatment 2, which was grown as a secondary crop on the background of mineral fertilizers N<sub>200</sub> R<sub>140</sub> K<sub>100</sub> kg/ha in winter wheat, the humus content in the soil in the 0-30 sm layer was 0.936 %, total nitrogen content was 0,096 % and total phosphorus content was 0.139 %. In this treatment, it was found that the amount of humus increased by 0,013 %, total nitrogen by 0,003 % and total phosphorus by 0,009 % compared to the initial figure before sowing of winter wheat (Table 1).

**TABLE 1 NORMS OF LOCAL AND MINERAL FERTILIZERS APPLIED IN WINTER WHEAT AND THE EFFECT OF REPEATED SOWING ON THE AMOUNT OF NUTRIENTS IN THE SOIL**

№	Norms of local and mineral fertilizers used in winter wheat	Norms of mineral fertilizers applied in repeated cropping, kg/ha	Norms of mineral fertilizers applied to cotton, kg/ha	Soil layer, sm	General form of nutrients, %			Moving nutrients forms, mg/kg		
					humus	nitrogen	phosphorus	N-NO <sub>3</sub>	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
1	N <sub>200</sub> P <sub>140</sub> K <sub>100</sub> кг/га	Not planted	N <sub>200</sub> P <sub>140</sub> K <sub>100</sub>	0-30	0,923	0,089	0,128	12,9	24,8	252
				30-50	0,779	0,078	0,107	10,1	19,9	220
2	N <sub>200</sub> P <sub>140</sub> K <sub>100</sub> кг/га	N <sub>30</sub> P <sub>90</sub> K <sub>60</sub>	N <sub>200</sub> P <sub>140</sub> K <sub>100</sub>	0-30	0,936	0,096	0,139	15,3	28,2	266
				30-50	0,787	0,083	0,114	11,8	20,4	234
3	N <sub>200</sub> P <sub>140</sub>	Not planted	N <sub>200</sub> P <sub>140</sub>	0-30	0,940	0,09	0,137	16,9	28,6	270

	K <sub>100</sub> кг/га + 10 т/га manure		K <sub>100</sub>			5				
				30- 50	0,787	0,08 4	0,114	12,8	22,3	239
4		N <sub>30</sub> P <sub>90</sub> K <sub>60</sub>	N <sub>200</sub> P <sub>140</sub> K <sub>100</sub>	0-30	0,951	0,10 1	0,146	18,4	29,5	274
				30- 50	0,789	0,08 6	0,119	13,2	20,5	240
5	N <sub>200</sub> P <sub>140</sub> K <sub>100</sub> кг/га + 20 т/га manure	Not planted	N <sub>200</sub> P <sub>140</sub> K <sub>100</sub>	0-30	0,954	0,09 9	0,143	19,0	30,4	278
				30- 50	0,791	0,08 6	0,119	13,6	24,1	245
6		N <sub>30</sub> P <sub>90</sub> K <sub>60</sub>	N <sub>200</sub> P <sub>140</sub> K <sub>100</sub>	0-30	0,966	0,10 6	0,151	20,1	31,5	286
				30- 50	0,798	0,09 0	0,120	14,0	24,9	248
7	N <sub>200</sub> P <sub>140</sub> K <sub>100</sub> кг/га + 10 т/га compost	Not planted	N <sub>200</sub> P <sub>140</sub> K <sub>100</sub>	0-30	0,946	0,09 8	0,140	17,6	29,6	273
				30- 50	0,789	0,08 5	0,115	13,1	23,4	240
8		N <sub>30</sub> P <sub>90</sub> K <sub>60</sub>	N <sub>200</sub> P <sub>140</sub> K <sub>100</sub>	0-30	0,956	0,10 3	0,148	19,0	30,0	276
				30- 50	0,791	0,08 7	0,120	13,6	20,9	243
9	N <sub>200</sub> P <sub>140</sub> K <sub>100</sub> кг/га + 20 т/га compost	Not planted	N <sub>200</sub> P <sub>140</sub> K <sub>100</sub>	0-30	0,963	0,10 0	0,146	19,8	30,8	283
				30- 50	0,794	0,08 8	0,121	14,5	24,7	252
10		N <sub>30</sub> P <sub>90</sub> K <sub>60</sub>	N <sub>200</sub> P <sub>140</sub> K <sub>100</sub>	0-30	0,970	0,10 9	0,154	20,7	32,0	289
				30- 50	0,800	0,09 2	0,121	15,0	25,2	250

The highest nutrient content in the soil was observed in treatment 10, which was grown as a secondary crop in the background of mineral fertilizers N<sub>200</sub> R<sub>140</sub> K<sub>100</sub>kg/ha + 20 t/ha compost in winter wheat, the amount of humus in the soil in the 0-30 sm layer was 0.970 %, total nitrogen. The amount was 0.109 percent and the total phosphorus content was 0.154 percent. This, in turn, ensured that the amount of nutrients in the soil was 0,045 % higher than the initial values before sowing of winter wheat, the total amount of nitrogen was 0,016 %, and the total amount of phosphorus was 0,024 %. Against this background, in the 9th treatment, which was not replanted after winter wheat, the amount of humus in the soil in the 0-30 sm layer was 0.963 %, the total nitrogen content was 0.100 %, and the total phosphorus content was 0.146 %.

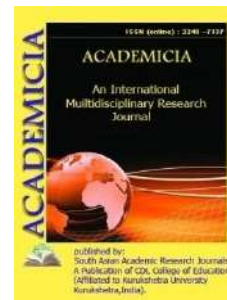
In winter wheat, the norm of mineral fertilizers N<sub>200</sub> R<sub>140</sub> K<sub>100</sub> kg/ha + 20 t/ha of manure was used as a secondary crop in the 6th treatment. In the 5th treatment, which was not replanted after

winter wheat, the amount of humus in the soil in the 0-30 sm layer was 0.954 %, the total nitrogen content was 0,099 %, and the total phosphorus content was 0.143 %.

Conclusions. Based on the above data, it can be concluded that in addition to the recommended norm of mineral fertilizers  $N_{200} R_{140} K_{100}$  kg/ha in winter wheat, the use of black manure and compost has served to increase the amount of nutrients in the soil, albeit partially. while the amount of humus in the soil was 0,007-0,013 % higher, the total amount of nitrogen was 0,005-0,009 % higher, and the total amount of phosphorus was 0,008-0,011 % higher than in the non-replanted treatments.

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DOI: 10.5958/2249-7137.2020.00761.2

## FEDERALISM IN INDIA: ASYMMETRIC IN NATURE

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### ABSTRACT

*In spite of the fact that "federalism" is sandwiched in comparative politics. Efforts to study about federalism constitute a part of relative legislative issues i.e. comparative politics or political establishments since federalism isn't just cross-national but a multifaceted i.e. cross-cultural research as well. While the study of federalism has in numerous regards stretched to an advanced stage today, but nevertheless there remains a disturbing absence of arrangement with regards to the exact connotation of the concept. This study analysed basically, some issues and challenges in the concept of federalism in distinctive kind as a system of government in different states and nations of the world. The main objective of this work, however, has been to bring to attention the current new trends in federalism more specifically about the asymmetric nature of the Indian federalism and discover new patterns in federalism as observed by different researchers in different fields in connection to federalism. It isn't an attempt to give a complete scientific account in any case, but this paper would be dealing with some of the issues which would be essential in order to define the real concept of federalism in India. Moreover an attempt has been made to uncover, some of the essential ambiguities in the working of the federalism governance in the present political setting. Additionally, this article to a great extent is an attempt to express our hopeful worry over the capability of the standard of cooperative federalism in Indian conditions instead of a negation of it being the most ideal elective.*

**KEYWORDS:** Federalism, Asymmetric Federalism, Indian Federal System



## 1. INTRODUCTION:

K.C. Wheare defined federalism as *"the method of dividing powers so that the general and regional governments are each within a sphere co-ordinate and independent."*<sup>1</sup>

Federalism is a type of government in which the sovereign power of political power is segregated between different units. This type of government is additionally called an "alliance" or a "federal state" in the regular speech. These units are Centre, states and Panchayats or the municipalities. The centre likewise is called union. Framed by the Constitution of 1950, Indian federalism serves the second biggest populace on the planet, containing an unparalleled collection of societies, religions, dialects, and ethnicities. The first government Act of 1950 drew its structure from the British Government of India Act, 1935, and its motivation from the unified arranged development. But there was huge distinction between controlling a province like the "gem in the crown" in a tremendous straggling domain and making an organization to unite various individuals with a dream of social equity for all.

There can be a mixture of inspirations for different units to meet up to constitute an alliance. The political and financial hypotheses of federalism attempt to comprehend the reason for the "meeting up" to frame organizations and once they are shaped, examine the conditions for "holding together". The political drive for the smaller units to combine must be found in issues of opportunity, security, political dependability and quality while keeping a different group personality. Thus, access to a bigger basic market, acquiring economies of scale in the arrangement of country level open products and accessibility of more extensive decision in the heap of services to meet different inclinations are some of the monetary explanations behind the smaller units to come together to frame an alliance. Each combining unit will attempt to deal terms profitable to it to join the federation while the federation will attempt to attract entry and control exit. In these circumstances, symmetry in intergovernmental connections may not be conceivable.

"Asymmetric federalism" is comprehended to mean federalism in view of unequal forces and connections in political, regulatory and monetary courses of action between the

<sup>1</sup> K.C. Wheare, *Federal Government*, 4th ed. (London: Oxford University Press, 1963) at 11

Units constituting a federation. Asymmetry in the policies in an alliance can be seen in both vertical (amongst Centre and states) and horizontal (among the states) notices. On the off chance that alliances are seen as 'indestructible association of indestructible states', and Centre and states are believed to exist on the premise of equality; neither has the ability to make advances into the characterized authority and functions of the other especially. Be that as it may, such 'idealists' perspective of federalism is hardly seen in practice, if by any means, it is found practically applicable. Notwithstanding when the constitution ensures close equivalent forces to the states, in the working on federal matters, then at that time the government frameworks i.e. Centre commands in political, authoritative and monetary circles which in turn is a threat to the concept of federalism. There is extensive volume of literature on Central domination in Indian federalism and central intrusion into the States' domains in the working of the federation.

The essential features of federalism are *dual government*, *distribution of powers*, and supremacy of the constitution, the authority of courts, written Constitution, decentralization, and a *real division of power*, though the aforementioned principles are not exhaustive, they do encompass

major elements of federalism.<sup>2</sup> A federal constitution establishes a dual polity, comprising two levels of government—a central government having jurisdiction over the entire country in some areas, and state governments, each of which exercises jurisdiction within defined regional boundaries. A citizen in a federal country is subject to the decrees of two governments. The totality of governmental powers and functions are divided between the Centre and the states. Each level of government thus functions within its assigned field. The several governments do not, however, function in watertight compartments. They come in contact with each other at several points, and thus a host of inter-governmental relations arise in a federal country. The pattern of these relations is not static; it is dynamic and is constantly finding a new balance in response to the centripetal and centrifugal forces’ operating in the country, and, that is why the subject of inter-governmental relations is of much significance to a student of any federal constitution.<sup>3</sup>

The federal system in India has been designed by its founding fathers on three pillars: a strong Centre, flexible federation and cooperative federalism.

India is a holding together state as India has been defined as “India, that is Bharat, shall be a union of States,” in Article 1 (1) of Indian Constitution, Dr. B.R. Ambedkar said in the Constituent Assembly that the word ‘union’ instead of the word ‘federal’ is used for two definite advantages, viz. that Indian federation is not the result of an agreement by the units, and that the component units have no freedom to secede from it.<sup>4</sup> The fundamental features of federal system of India are that there are two sets of government in India: the central or union government and the state government. The Central government works for the whole country and the State governments look after the States. The areas of activity of both the governments are different; there exists division of powers in India, The Seventh Schedule of the Constitution contains three lists of subjects which show how division of power is made between the state and the centre; India has its own written Constitution, every provision of the Constitution is clearly written down and has been discussed in detail. It is regarded as one of the longest constitutions of the world which has 395 Articles 22 Parts and 12 Schedules; The Constitution is regarded as supreme law of the land in India; there exist separate judiciary body as guardian of the Constitution. These are some of the features of a federal form of government in the Indian Constitution.<sup>5</sup> The Constitution has also included some unitary or *non-federal features*, for example Constitution of India is not strictly rigid as it has been amended for more than 100 times in 68 years, there exists *single citizenship*, unified judiciary, *unequal representation of states in Rajyasabha*, *existence of emergency provision*, and the existence of a State or a federating unit depends upon the authority of the Centre as the boundary of a State can be changed by created out of the existing States.<sup>6</sup>

## 2. Challenges of Federal System

Federalism is one of the most important factors of modern constitutionalism. It is established all over the world perhaps, as the only form of political organization suited to communities with diversified pattern of objectives, interests and traditions, who seek to join together in the pursuit of common objectives and interests and the cultivation of common tradition. The basic objective of federalism is unity in diversity, devolution in authority and decentralization in administration. The basic condition of federalism is plurality, its fundamental tendency is harmonization and its

regulative principle is solidarity. According to Daniel J. Elazar, "Federal system provides a platform so as to allow each to maintain its fundamental political integrity".

As we have already noted, federalism stands on the principle of 'unity in diversity'. The cases of the United States, Switzerland, Canada and India illustrate that in each one of them there are prevailing diversities that are sought to be preserved. Though the people have diverse religious, ethnic and cultural patterns of life, they have also developed a sense of common identity that they do not desire to lose. This is not to deny that, in spite of these social and cultural differences, there must be an over-riding sense of unity to bind the diverse people together, but that needs to be in the interest of the general people.

The federal State, differing as it does from the Unitary State in essential features, has to face a number of problems. It has two sets of governments which must work in concert and harmony. Integration implies the co-existence of the people of various languages, religions, races etc. in India. But there are certain fissiparous federal tendencies which threaten national unity and integrity. They pose hindrances to federal system in India. Here we will continue our discussion to the following major areas of challenges:

### **2.1 Challenges of Regionalism**

Regionalism has been traditionally present in India but its emergence as a limiting factor of Indian politics is a post-independence phenomenon. The fathers of the constitution were aware of it and they wanted to keep it under control. The demand for separate states in India, demands for full statehood for different areas, demands for state autonomy and emphasis on regional interests over national interests are some of the examples which show how regionalism is quite strong in India. In a positive sense regionalism means love for one's area of living or a particular region to which one belongs. However in the negative sense and in its present form regionalism means love for one's region over and above the country as a whole. The negative view is dangerous from the point of view of federal system in India.

Regionalism is a great hindrance to federal system in India. It takes the different forms like demands for secession, demands for separate statehood demand for full state hood etc. The issue of creating smaller states like Telangana and Vidarbha and the demand for the division of Uttar Pradesh into four states needs to be tackled rationally, in a manner that would take into account demographic, economic facts and administrative conveniences. A fresh States Reorganization Commission can be set up to give recommendations on the whole issue. This can certainly help in containing misgivings and controlling public passions.

### **2.2. Problem is to effect a division of powers**

Two sets of governments operate simultaneously in a federation. The Central and State governments enjoy powers under the constitution. The main problem is to effect a satisfactory division of powers between them. It is, to adopt Bryce's metaphor, "to keep the centrifugal and centripetal forces in equilibrium, so that neither the planet States shall fly off into space, nor the sun of the Central Government draw them into its consuming fires". The general principle underlying the division of powers is that all matters of national importance, e.g. defence, foreign affairs, railways, currency are allotted to the Central government while matters that are primarily of local or regional importance e.g., education, public health, local administration are assigned to regional governments. The details of the division vary under different federal conditions. There

is variation not only in the particular subjects which fall within the sphere of the Centre and of the Units, but also in the way in which the division is affected. Broadly speaking, there are three such methods. *First*, in the U.S.A., Switzerland, Australia and the U.S.S.R., the powers of the Central government are enumerated in the constitution while the remaining powers or residue is left to the regional governments. *Secondly*, in Canada, the powers of the provinces are enumerated; the residue is left to the Centre. *Thirdly*, in India the powers of both the Central and State Governments are specifically enumerated in the Union list and State list respectively while powers mentioned in the Concurrent list are enjoyed by the two sets of governments. The residuary powers are vested in the Central government.

The governmental powers must not only be satisfactorily distributed between the Centre and the Units, but provision must be made to prevent either from encroaching upon a sphere allotted to the other. The most important safeguard is the setting up of an independent Supreme Court to interpret the constitution and decide conflicts of jurisdiction between the Centre and the Units. Again, the constitution is made rigid so that neither the Central nor State legislatures can unilaterally change its provisions. Some part is given both to the Centre and the Units in the process of amending the Constitution.

### **2.3. Protection of the Smaller Units against dominance by the larger**

In most federations the Units are unequal in size and the larger units may have a predominant influence in the Central Government on account of their larger representation in the lower House of the Central legislature. The first provision to prevent this evil is that in the second Chamber of the Central Legislature, every unit is given equal representation (followed in the U.S.A., Australia, Switzerland and the U.S.S.R.). Further in all these federations the second Chamber is given powers very nearly equal to the first. The second safeguard is that all amendments to the federal constitution require ratification by at least half of the Units.

### **2.4. Organization of the relation between the Centre and the Units**

Normally in a federation the Centre and the Units are independent of each other in the spheres allotted to each by the Constitution in legislation, in administration, and in finance. In actual practice various points of contact are established between the two. Under the American Constitution the federal government shall guarantee to every State a republican form of government and to protect them against invasion and domestic violence. In Canada the Governor General is empowered to veto provincial laws and appoint Governors of the provinces. The Indian Constitution provides for detailed legislative, administrative and financial relationships between the Union and States.

### **2.5. Organization of the relation among the Units**

Federal Constitutions contain provisions to regulate the relationship of the Units so as to secure harmony among them in respect of certain essential matters. Thus every State is enjoined to give full faith and credit to the public acts, records and judicial decisions of every other State; the citizens of every State are entitled to the privileges and immunities of citizens of every other; it is required that all goods and commodities produced in anyone of the Units mechanism which unites separate politics within an overarching political system shall be admitted free into every other; all alliances of a political character between the Units are forbidden; and so on.

### **2.6. A Satisfactory Method of Amendment**

A federal constitution is necessarily rigid. The peculiar problems with regard to the amending body are that:

- (a) Neither the Centre nor the Units could unilaterally amend the constitution, and
- (b) It is desirable that in the body which is authorized to change the constitution, both the Centre and the Units are given some place, and further that the smaller units must be protected against dominance by the larger.

### **2.7. Secession/Separation from the Union:**

It is possible that one or more of the Units may, as the Southern States of the U.S.A. did in 1861, claim the right to secede or break away from the federal Union. The issue in the U.S.A. was decided by the civil war against secession. The Soviet Constitution is unique in recognizing the legal right of secession. Where such a right does not exist the only method for a Unit to secede from the federation and regain its sovereignty would appear to be an amendment of the Constitution. However, the working of federalism exhibits a strong bias against secession. Some federations have proved successful, while others have failed. Some of the federations have disintegrated while others have been converted into unitary political unions.

### **2.8 Issue of Religion**

Religion may also be a challenge for federalism. India is a fine example of religious heterogeneity creating occasional turmoil to weaken the federation. But the religious process need not be always divisive. So long as there is a reasonable tolerance on the part of the people and a genuine secular policy on the part of the government, religion may not cause imbalances in a federation.

In a federation, if there is ethnic variety, the solution is to make the boundaries of the constituent federal units coincide with the boundaries of each ethnic group. This has been the case in Yugoslavia, Czechoslovakia, the Soviet Union, India, Switzerland etc. However, in such cases also problems occur. Even when ethnic groups occupy compact geographical areas their boundaries are not so sharp and distinct that minorities of one will not be left in a political unit designed for another group. Moreover, great difficulties may be created as migration and urbanization mix up the groups.

### **2.9 External forces**

External forces also sometimes disrupt a federation. For example, there are tensions in the North-Eastern states in India due to the involvement of neighboring countries. The Tamil issue in Sri Lanka creates disruptive forces in India.

## **3. CRITICAL ASSESSMENT OF FEDERAL SYSTEM**

The temperament of federalism in India during the coalition era has been changed evidently. Political deliberation seems to surpass the administrative and financial aspects of the Union-state relations in India. The states having the governments of those parties that form part of the central coalition give the impression that to have little conflict with the Centre. Their complaints are submissive or subdued and the general awareness is that they get particular contemplation and hold in matters of resources approved by the Centre. As a consequence, it is raising noise



sometimes that the Centre is being partial against the states having governments of the opposition parties..

**In January 2015, the central government had announced its decision to scrap the Planning Commission and replace it with NITI Aayog.** With this decision, the role that Planning Commission played in allocating resources to the states, keeping in mind the regional disparities, has come to an end. NITI Aayog, which replaced the planning commission, is established with a regressive mandate to take India further down the path of free markets, privatization and dilution of social welfare policies.

It cannot be denied that the erstwhile Planning Commission was an instrument in the hands of the Central Government, with the states having no say in the resource allocation. However, Modi's claim that the new set-up would be based on cooperative federalism\* with the states as stake-holders has turned out to be a spurious.

In January 2016, a year after the *dismantling of the Planning Commission*, the Central Government announced that it wished to completely *replace the National Development Council by the Governing Council of NITI Aayog*, which is a powerless body, designed to work like a think-tank. The governing council is directly under the control of the Prime Minister and the Prime Minister's Office -Making it in essence a centralized Unitarian structure.

After dismantling of the Planning Commission, as a substitute to the five-year plan, Central Government is coming up with a *15year vision document* comprising of 3 year action agenda and a 7 year strategy document. In this context Niti Ayog's chief executive officer, Amitabh Kant sent a letter directly to all the district collectors requesting them to prepare a one page document listing the suggestions and priorities of the citizens from every gram Sabha. This document is to be forwarded to NITI Aayog by January 31, after convening a 'special gram Sabha' on January 26. The letter to the collectors also says that 'Once collated, the national priorities will be taken into serious consideration in drafting India's vision document and shall also be presented as Citizen's Vision of India to the Prime Minister'.

*No communication in this regard has been made to the State Governments* and the letter has been directly sent to the district collectors. This is the second instance in which the Niti Aayog has directly given instructions to the district collectors.

If at all the Prime Minister was serious about formulating a *Citizen's Vision of India*, it would have been appropriate to convene a meeting of the Inter-State Council to draft it. It would have ensured that the citizens' voices from all across the country are recorded. Considering the fact that this is the second instance where the State Governments have been bypassed by the NITI Aayog, it is clear that this is a deliberate and planned effort at dismantling the federal structure of our country.

Another problem pertains to the allocation of *financial levies* in the context of the recent changes introduced. In this perspective the Central Sales Tax, VAT and the on-going discussion on GST (Goods and Service Tax) have strained the attention of the bargaining stakeholders at the Centre and the states. What is praiseworthy is that the discussion between these stakeholders is based on rigid facts and on the consideration of shared interest. Such joint spirit is a trademark of major federalism. It is vital to make sure that issues which are fundamentally economic should not turn into outstandingly political issues.



It is a frequently apprehended view that the Union government employs financial leverage to favour or disfavour particular states. This is the prevailing insight. Further, the dependency condition indicates a continuous dependence of the states on the Centre needs a far-reaching adjustment. There is a call for to work out a satisfactory mechanism that would ensure a more equitable and liberal sharing of the economic resources so that the dependency syndrome gives way to a healthy relationship between the territorial components.

Better wisdom in the struggle against *terrorism and Naxalism* by the Centre and the states is immediately addressed for. It is a strong signs that since 2007, a physically powerful federal initiative is going on to counter Naxalism in the exaggerated states of the country and that joint operations are being embarked on to combat this depression. The opposition from the states to the use of Central police force is fading, as now it is documented that without a supportive endeavour, crucial subject of internal security and advance management cannot be embarked upon effectively. Likewise, in the North East and Jammu & Kashmir, mutual discussion on the issue of tackling insurgency and terrorism has become essential to the political dialogue.

It is advantageous that legislations to contain terrorism, in consonance with the need for defence of human rights, should be calculated in a manner that they become successful gadget of internal security. The disagreement between the Centre and the state on the nature and contents of such state legislations ought to be determined through a composed contemplation of the necessity of internal defense.

On the subject of the *imposition of Article 356*, it is broadly held that the principles of natural justice and fair reflection must be pursued. 1970s and 80s will be remembered for the most malicious use of Article 356. From the year 1971 to 1984, *it was used 59 times* with maximum being used in the period 1977-79 during which Morai Desai government ruled. It was used by the post-emergency Central government as vendetta against Congress-ruled state governments. Later, Indira Gandhi returned the favour after storming back to power in 1980 and during the period 1980-84 it was *used 17 times*. The Law Commission has experimented that in a large number of cases, where article 356 has been in-motion, the situation could have been better gripped under article 355 without striking the President's rule. Article 355 speaks: *It shall be the obligation of the Union to defend every state against external aggression and internal disturbance and to ensure that the government of every state is accepted on in accordance with the provisions of the Constitution*. Almost not any precise attempt has been made to open downsize article 355 and to prevent the requirement to inflict the President's rule. Even in the substance of article 356, the concerned state is given very rarely a chance to give details at its place and restore the situation. True, the Central government has to take a wider view of national safety and steadiness, but this view should not be coloured with a narrow-minded, malicious or merely political considerations. The Union leadership should illustrate statesmanship while making such an important verdict moving the functioning of our federation.

In the current era of coalition government, *the role of Governor* in state administration has also become moderately less political and ever more moderate. The Sarkaria Commission, S R Bommai case and the Punchhi Commission - all have gone over a more than impartial and balanced approach to the role of Governor as an important establishment of federal polity. It is indispensable that the Governors should not become compulsive to prove their faithfulness to the Union government and should make only measured and balanced interventions at appropriate

times. As political heads of their respective states, the Governors are expected to first think in terms of the concentration of the states, instead of according dominance to political benefits, choice and product.

The coalition governments at the Centre have controlled the imposition of the President's rule in the states under article 356. It is a vigorous sign that the partners in a ruling coalition at the Centre have not always encouraged the slight interest of the dominant political party and have taken a purpose view in relation to article 356. The randomness generally found in the one-party dominant rule, has now given way to a more lawful constitutional standpoint in maintaining a fragile federal political equilibrium

A sound constructive approach to federalism in India also need that the *Zonal Councils* as well as the *Inter-state Council* should turn out to be permanent institutions to make possible long-lasting significant connections between the Centre and the states and among the states themselves. There are a number of critical subject that need a determined action through a serious discussion, the most imperative *being the river water disputes* that occasionally appear as subject of discontent. There have been a few success narrative in this respect. For instance, concerning the Krishna River, the role of tribunal for adjudication on river water disputes has been eminently functional. This needs to be reversed by greater amiability among various states. Self-centeredness of a particular state should not come in the way of wider national interest. There is a demand that all the major rivers should be speak out national assets and the subject of distribution of their water should fall within the domain of the Union government. Even when this principle is established, it will be pleasing to engage all the states anxious in the debate for shielding the federal as well as state interests in water management. It is far above the ground that the Inter-state River Water Disputes Act 1956 is made a successful device of determining the pending inter-state water disputes pertaining to Godavari, Narmada, Cauvery and other rivers that are our perennial national possessions.

The Concurrent List, as experimented by the Law Commission, presents a fine balance between the need for regularity in the national and the state legal systems and creating an instantaneous jurisdiction for the states to put up individual diversities and peculiar characteristics of different regions. However, there is a steady *grievance of states* against the Centre unilaterally legislating on the subjects mentioned in *the Concurrent List*. The main criticism against the Centre is that it uses its powers in this realm without sufficiently discussing with the states. As a result, the prevailing need is that this legislative power is used to get deeper inter-dependence and cooperation, and not strain the supremacy of Union government.

At the end, it is pertinent to mention here that the various recommendations put forth by various commissions on centre-state relations has proved effective to some extent, but the Indian governance-system should come up with some positive attitude keeping the state-interest in mind. The author would like to *highlight some suggestions*, so as to understand the main concern in the concept of co-operative federalism, these are:

- The preamble of the constitution should describe India as a *federation of state* than the *term union*. All the states should be accorded more powers to impose taxes.
- Rajya Sabha should be directly elected with equal representation of states and its power should be equal with that of Lok Sabha.

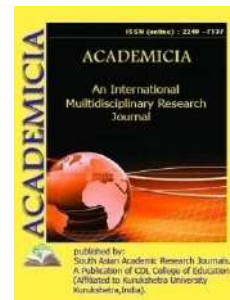
- English as an official language should be continued in non-Hindi regions.
- Article-249 should be abolished and Centre should have no jurisdiction of the State services. The 7<sup>th</sup> schedule and its list should be reformulated and the states should have exclusive control over police and paramilitary forces.
- For the President to consult the Chief Minister of the concerned state, before the appointment of a Governor is not a constitutional requirement. It must be held that the chief minister's consultation is mandatory.
- Article 248, should be repealed, and all the residuary powers should be vested with the state legislature.
- The inter-state council should be made a permanent body, not at the desire of the president.
- The president should not make any delay on state bills.

## CONCLUSION

'Federalism' is one of those good echo words that evoke a positive response towards many concepts such as democracy, progress, constitution, etc. Federalism tries to facilitate the sociopolitical cooperation between two sets of identities through various structural mechanisms of 'shared rule'. But because of the above reasons, center- state relations and the state autonomy have become the cardinal issues of the Indian federalism. The union government appointed Sarkaria Commission in 1983 to examine and review the working of the Indian Federalism, but this Commission doesn't make any useful recommendations for structuring the Indian federalism in a proper manner. The Union government also took in a very easy approach some of the recommendations made by this commission. This shows that even though our constitution is said to be a federal, but this overemphasis on the power of the federal government makes incapable of dealing effectively with socioeconomic challenges and strengthening national unity. Hence, it is appropriate to restructure Indian Federalism to make it more effective and promote center – state relation.

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DOI: **10.5958/2249-7137.2020.00691.6**

## NON-MADHHABISM AND ITS POSSIBLE CONSEQUENCES

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### ABSTRACT

*Author of this article speaks about importance of Islamic schools of law in protecting both unity and diversity of Muslim community. The idea of non-madhhabism among citizens of Central Asian governments creates a demand for an accurate explanation of the essence of this destructive idea, and at the same time unfolding the real essence and the priceless value of madhhabs. She tries to come up with historical evidences to defend her thoughts in this matter.*

**KEYWORDS:** *Schools Of Islamic Law, Fiqh, Shari'a, Non-Madhhabism.*

### INTRODUCTION

Many young Muslims today advocate the idea of non-madhhabism which is one of the dangerous aspects that desist from understanding the Shari'a correctly. Before we touch upon the role of madhhabs in correct interpretation of Shari'a we should expand on the meanings of the *Shari'a* and *fiqh*.

The word 'Shari'a' in the Arabic language is used in two ways: first is to talk about a path which leads to water. The word *shara'* means literally 'to chalk out or mark out a clear road to water'[1, p.100]. In this regard, the Arab proverb says, 'The easy way of drinking water is entering through *Shari'a*'; the second meaning of the word is "a right way". In verse 18 of al-Jathiah chapter of the Qur'an this meaning of the word is stipulated: **"Then We put you, (O Muhammad), on an ordained way concerning the matter (of religion); so follow it and do not follow the inclinations of those who do not know"**<sup>1</sup>.

In Islamic law, when the term "Shari'a" is used, scholars understand a set of divine instructions (commands) cited in the Qur'an and the Prophetic traditions, whereas for lawyers it refers to a set of Islamic legal system.

The word *fiqh* is Arabic term which means "deep understanding" or "full comprehension". Along with the word 'fiqh', such words like '*fahm*' (understanding), '*ma'rifa*' (enlightening) and '*ilm*'

(knowledge) also have such similar meanings as understanding, comprehension and perception. However, the word 'fiqh' is used to indicate a complete understanding with the comprehension of the essence of the matter[7, p.35]. This peculiarity is intended in the hadith "*rubbahamilifiqh, ghayr faqihin*", i.e. "many carriers of fiqh are not faqih (jurists)". In the famous hadith from our Prophet (pbuh): *If Allah wants to do good to a person, He makes him 'faqih' in the religion*<sup>2</sup>. This hadith is often mentioned in order to honor the knowledgeable scholars in religion.

As a terminology 'fiqh' means a study of Shari'a regulations, comprehension of Shari'a rules with all sections, as well as understanding the objective of those rules, and implementation of the acquired knowledge in practice[2, p.52].

It will not be an exaggeration to say that the formation of the Islamic jurisprudence as a separate field and the development of the schools of legal thought (*madhhabs of fiqh*) has been one of the steps towards right comprehension and implementation of Shari'a. The emergence of schools of legal thought in Sunni Islam and their development has created suitable conditions for the right application of Shari'a provisions in social relations.

According to the ideology of some literalists, categories developed by the madhhabs of fiqh are not recognized as a correct approach to comprehend Shari'a. Direct application of Shari'a provisions in practice is considered the most correct way.

The idea of non-madhabism promoted by literalists discharges the work of thousands of bygone scholars and rare sources created through arduous and life-long efforts. It brings to the conclusion that for centuries all Muslims have been following the wrong traditions in astray. The most unfortunate is that it harms the right path that has united all Muslims. As a result, it leads to discord among Muslims. Such call to non-madhabism originates in complete ignorance of the significance and value of madhhabs. Although there are four madhhabs of fiqh, they are considered groups within the single Ahl al-Sunna walJama'a, which unites and joins Muslim Ummah together. After all, the Prophet (pbuh) said: "*Allah does not gather my ummah (community) to aberration*"<sup>3</sup>. And in another hadith, "*What Muslims consider good, is also good in sight of God*"<sup>4</sup>.

At the end of the Prophet's (pbuh) life, members of different tribes and local people began to accept Islam. New Muslims had the task of learning the verses that were revealed throughout more than twenty years and implementing in their lives the provisions of Shari'a. Naturally, young Companions began to learn from the elders whereas new Muslims started to study Shari'a matters from earlier Muslims[3, p.87].

In the second half of the first century (AH) and in the second century (AH), Islam spread in various regions around the world. A variety of non-Arab nations became Muslim. Of course, they were not able to create Shari'a provisions and regulations for themselves from the Quran and the Sunna of the Prophet (pbuh).

As a result, there was a growing need for people with specific knowledge in order to gradually teach religious provisions to new converters of different societies and respond to their questions.



Thus, scholars started to emerge in several regions. Imam Abu Hanifa, Imam Malik, Imam Shafi'i and Imam Ahmad laid the foundations for four schools of fiqh which has preserved its actuality up to these days. They derived specific rules of prayer and many other issues according to the Qur'an and Sunna. The abundance of sources, and the fact that Prophet (pbuh) sometimes performed certain actions differently and the large quantity of hadiths, narrations and reports led to certain alterations in the approaches of these scholars. In addition, the dissimilar conditions in different regions have laid the foundation for the occurrence of natural differences in Shari'a matters. For example, in Shafi'imadhab it is preferred not wiping hands and face after ablutions whereas Hanafi madhhab favors the vice versa. Here the climate conditions in regions where madhhabs are spread were taken into account. On its turn there are narrations from the Prophet (pbuh) which confirm both choices.

It should also be noted that Imam al-Shafi'i changed some of the provisions due to the change of customs. We don't know at what point of his life he decided to abandon the "old doctrine", but it is highly likely that it was in Egypt some six years before his death[9, p.21]. For example, if two plaintiffs in their claims cannot reach an agreement due to the lack of documents, the judgment will be in favor of the one whom the custom supports; if husband and wife cannot agree upon the components of *makhr* given in advance and after the wedding, the issue is resolved based on customs; if somebody swears not to eat meat, but eats fish, he is not to give *kaffarah* (donation) according to customs.

As mentioned above despite the differences in minor issues, there are not dissimilarities and disagreements on the main issues of Islam in all four madhhabs of Sunnis because every founder of a madhhab had proven his words with reliable evidences. The differences between madhhabs are mostly seen in ritual worship: the shape of tying hands whilst standing for prayer, raising hands during *takbir* and reading or not reciting the surah of Fatiha while doing *iqtidah* to imam[8, p.177], etc.

For example, all the rules concerning the position of hands whether putting them on the chest or on the lower part of the chest or below navel or placing both arms down the two sides are mentioned in hadithes. These narrations are studied by the madhhab Imams and each madhhab selected separate rules on a certain basis. Such differences on issues of fiqh can be observed frequently in conclusions made up by scholars of madhhabs in referencing to hadiths since all of them rely on various approaches in selecting hadiths. The founder of the Hanafi school Abu Hanifa chose a unique way. Once Imam Abu Hanifa (rah) and Imam al-Awzai<sup>5</sup> (rah) met in Makkah: Imam Awzai asked: "Why don't you raise your hands while performing *ruku*?". Imam Abu Hanifah replied: Because we don't have reliable hadith on this issue by our Prophet (pbuh)". Imam Awzai narrated the hadith from Zuhri, from Salim, from his father Abdullah ibn Umar who said that Prophet (Peace be upon him) used to raise his hands when he (pbuh) began the prayer and before and after performing *ruku*. Imam Abu Hanifa replied: I heard from Hammaad ibn Salama, who heard from Ibrahim Nakhai'i, who heard from Alqama and al-Aswad, and they heard from Abdulllah Ibn Masud (ra) saying: The Prophet (Peace be upon him) used to raise his hands only in the beginning of the prayer and did not repeat it afterwards. Imam al-Awzai: How does your hadith take over from the hadith which I had provided? Imam Abu Hanifa: The reason is that Hammad is more *faqih* than Zuhri, also Ibrahim al Nakhai'i is greater *faqih* than Salim,



and Alqama is on par at *fiqh* as that of Ibn Umar, so is Aswad greater than many, and **above all** Abdullah Ibn Masud (ra) is Abdullah Ibn Masud. After these words Awza'i remained silent [7, p.39]. It can be assumed from above mentioned case that Abu Hanifa paid attention to the level of knowledge of the narrators on *fiqh* while making his conclusions from hadiths.

While performing Hajj, pilgrims from different places of the world pray according to the rules adopted in their countries and this does not cause any objections or discomfort [4, p.168]. Whereas praying in the same region, in the same manner, within the framework of the guidelines of the same *madhhab* has served to unite local population, the opposite of this had led to various forms of discord.

It is doubtless that Islam played a positive role in the history of the people of Central Asia. At the same time it can be observed that regional Islam which has been developed in Central Asia has its role in the whole Muslim culture. Regardless these positive influences of *madhhab*s, followers of non-*madhhab*ism continue invalidating legal schools which have been practiced by Muslims over centuries. As a result, various types of dissonance have emerged in Muslim societies and peaceful life seems to lose its track.

In sight of scholars people were always divided into religious specialists and ordinary people regarding to the level of knowledge in Shari'a. Specialists of religious aspects were engaged in a specific area and learned their specialty in perfection. Common people were engaged in their daily work and crafts, and when necessary consulted specialists seeking solutions on different issues. Similarly, *mujtahid* jurists were engaged in issuing Shari'a judgments whereas common Muslims abided by these judgements. Thus, in respect of Shari'a judgements and their evidences people were divided into two groups: *mujtahidun* and *muqallidun* (imitators).

When we touch upon *madhhab* and following certain *madhhab*, it is also necessary to highlight the issue of *ijtihad* and the levels of people in regard of it, as following a *madhhab* is a prerequisite for a person who has not reached the level of *ijtihad*. *Madhhab*s are the product of *ijtihad*, and *ijtihad* is not a simple job that everyone is capable of. Except a relatively few Qur'anic and Prophetic statements which were unambiguous and which contained clear and specific normative rulings, the rest of the law was the product of *ijtihad* [10, p.27]. 'Ijtihad' is an Arabic word, which literally means trying your best effort in a tough job using all your capacity. As a scientific terminology, *ijtihad* means "deduction of Shari'a provisions from Shari'a's divided evidences by a *fiqh* scholar having a certain scientific aptitude in Shari'a" [5, p.306]. The person engaged in legal reasoning is called a *mujtahid*. *Mujtahid* knows the sources prescribing Shari'a judgments and knows how to derive Shari'a provisions from them. They in their turn are divided into *mutlaq* (absolute) *mujtahid* and *muqayyad* *mujtahid*. *Mutlaq* *mujtahid* can independently resort to *ijtihad* in all issues without imitating *madhhab*s. It is considered that today there are no existing people possessing the qualities and fulfilling the conditions for being a *mutlaq* *mujtahid*. Four *madhhab* leaders Abu Hanifah, Imam Malik, Imam Shafi'i and Imam Ahmad ibn Hanbal are recognized as *mutlaq* *mujtahid*. *Muqayyad* *mujtahid* are those within one *madhhab*. Nowadays, such *ijtihad* related matters are dealt by international fatwa councils, *fiqh* academies, and *ulama* councils.

Terms *ijtihad* and *mujtahid* were explained above, next to be discussed is the second group of people called *muqallidun*.

Those who do not know the sources guiding to Shari'a provisions and those who do not know what type of provisions to derive from these sources or those who know the sources, but have no knowledge of how to derive judgements from them, in other words those who possess no *ijtihad* capacity and follow *mujtahidun* is called *taqlid* (imitation). *Muqallid* is the person who imitates.

*Taqlid* translated from Arabic means "to hang something or a necklace on somebody's neck" [5, p.391]. As a terminology it means following a judgement without knowing its evidences [5, p.390]. According to the scholars of the Hanafi school and Maturidi, it is permissible to be *muqallid* Muslim, and they have also reiterated that not knowing the evidences in worship and belief does not harm their religion. In general, most scholars emphasize that imitating is not against Shari'a, and person who has not reached the level of *ijtihad* must imitate even if he is a scholar; and provide the following evidences from the Qur'an, *ijma'* (consensus of scholars) and rational activity:

#### ***Evidence in the Qur'an:***

According to the verse of the Qur'an, "And We sent not before you except men to whom We revealed (Our Message). So ask the people of the message if you do not know!" (*Nahl*, 43) person who does not know the provisions and evidences of Shari'a law is obliged to ask someone who knows them and to follow him [5, p.399; 6, p.97].

#### ***Evidence from ijma' :***

As Ibn Khaldun and other historians mentioned not all of the *sahabas* (companions) could provide fatwas and not all of them are sources to learn the religion. But the number of *mujtahid* companions who issued valid fatwas was much lower than *muqallid* companions who asked for fatwas. *Mujtahid* companions encouraged *muqallid* companions to request fatwas and did not instruct them to develop their own level of *ijtihad*. The Prophet (pbuh) himself also dispatched *faqih* companions to the lands whose population did not possess enough knowledge of Islam. The local people of those lands fully followed all the fatwas of those companions sent to them. The companions sometimes resorted to *ijtihad* in matters where they were not able to find any evidence in the Quran and the Sunnah, and people followed their *ijtihad*s. Since none of the companions and *tabe'in* rejected this practice, imitating is considered as permissible due to a silent *ijma'* (consensus) [5, p.339; 6, p.98].

#### ***A rational argument:***

*Ijtihad* is a qualification which only few people can possess. Therefore, ordering all people possessing this quality is equivalent to ordering to something beyond endurance, which is not permissible in Shari'a since: "...Allah does not charge a soul except (with that within) its capacity..." (*Baqara*, 286).

Muslims ought to engage in daily life efforts, occupy professions, do activities which help them to provide their families and perform all the required actions to live their lives up. If it were obligatory for each Muslim to know the sources and provisions of Shari'a judgements, they had to set all things aside in order to study the provisions of Islamic law. As a result, social life in the

community would collapse, life's system would disrupt and people would face difficulties. And this is against Islam since Allah says in the Qur'an **"...He has chosen you and has not placed upon you in the religion any difficulty..."** (*Hajj*, 78). The solution of the problem is following Shari'a judgements derived by mujtahids, i.e. madhhabs [5, p.340; 6, p.97-98]. Hujjat al-Islam, scholar Imam Ghazzali in his *"Ihya'ulum al-din"* said the following: "The right way for common people is to believe, obey and engage in their prayers and deeds of life, and science should be left to scientists. Because the person who speaks about Allah and His religion without some definite knowledge, is like a person who has plunged into bottomless ocean without knowing how to swim, commits blasphemy without knowing it" [5, p.340].

Taqlid (imitation) is needed and natural way. Even those who claim not to follow any of the madhhabs and underestimate the importance of madhhabs, have to follow someone.

The above-mentioned evidences indicate that it is necessary to follow mujtahid for a person who has not reached the degree of ijtihad who can make judgements. A famous scholar, Abu Ishaq Ibrahim Shatibi mentioned: "The role of mujtahid to common people equals to the significance of Shari'a sources for mujtahid".

For centuries, Muslims followed one of the four madhhabs - Hanafi, Maliki, Shafi'i and Hanbali and no one questioned their reliability. Many jurists, hadith collectors, and scholars of scholastic theology and sufism had also led their activities according to these madhhabs.

The idea of non-madhhabism embodies the danger of dragging the nation backwards, diving in regression and hindering the progress. In case experts from various fields follow non-madhhabism, then they would end up failing to improve their professional skills or conduct researches, but instead they would get entangled in deep religious matters and spend their lives only for deriving religious rulings and judgements. Consequently, specialists of various fields may get lost in the rapidly changing conditions of globalization: they are neither good specialists, nor matured scholars. As a result, the deficiency of good specialists would lead the nation into stagnation followed by crisis. In fact one becoming a professional of his/her field who can serve for the progress of the society and helping people improve their lives and contributing his/her part for the growth is considered as an act of worshipping.

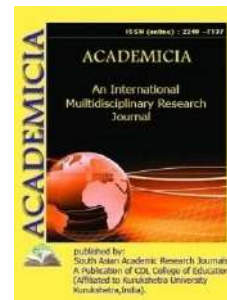
The idea of non-madhhabism is similar to a computer virus which intends to install its own poisonous ideas by deleting instantly the history of the countries in Central Asia connected to the teachings of Hanafi madhhab.

Nowadays, the existence of people who support the idea of non-madhhabism among citizens of Central Asian governments creates a demand for an accurate explanation of the essence of this destructive idea, and at the same time unfolding the real essence and the priceless value of madhhabs. In particular it is important to clarify the significance of the Hanafi madhhab which is the path which has been followed by Muslims in Central Asia for centuries.

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DOI: **10.5958/2249-7137.2020.00692.8**

## **EFFECTIVE METHODS AND RECOMMENDATIONS FOR TEACHING FOREIGN LANGUAGES IN HIGHER EDUCATION (IN THE CONTEXT OF UZBEKISTAN)**

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### **ABSTRACT**

*The article describes in detail the importance of teaching a foreign language in Uzbekistan, the requirements for foreign languages in the field of education. 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:** *Academic Mobility, Teaching Methods, Collaboration, Jigsaw, Competency-Based Approach, Student Team Learning, Team Rewards, Professional Competence, Teams Games Tournament, Space Organization.*

### **INTRODUCTION**

It is no secret that in today's growing educational process, the level of knowledge of foreign languages is important in every sphere of society. Therefore, the level of teaching foreign languages in the education system of our country is growing. In particular, the Resolution of the President of the Republic of Uzbekistan dated December 10, 2012 "On measures to further improve the system of learning foreign languages" states that "Advanced methods of teaching using modern pedagogical and information and communication technologies through the introduction of foreign language training of the younger generation, radical improvement of the system of training specialists fluent in these languages, and on this basis, their achievements in world development and the widespread use of world information resources, international cooperation and creating conditions and opportunities for the development of communication" and the need to perform a number of important tasks [2,2012].

As the result, higher education in Uzbekistan is designed to solve the problem of personal development with active attitude to reality, able to adequately respond to changes in the world

and in its own life, with developed critical thinking, ready to perceive the world around us in all its complexity, striving through self-realization for the transformation of reality.

The purpose of education today is not knowledge, The purpose of education today is not knowledge, skills, their volume, but neoplasms in personal growth. Such neoplasms can become competencies. The need to apply a competency-based approach to goals and the result of education is no longer discussed at the pedagogical community or at the state level, as evidenced by the principles.

Today's graduated students must own a foreign language for the effective solution of communicative tasks in situations of personal communication and in conditions of academic mobility, when many students take part in international educational programs, situations of communication in the educational environment. In the context of the need to increase the adaptation of high school students to work, earlier initial vocational training, the main purpose of teaching a foreign language at school is the formation of foreign language communicative competence.

However, among a set of modern methods of teaching foreign languages, it is not always easy for a teacher to select those methods of teaching, which most effectively contribute to the formation of communicative competence. In the transition period, which is now going through the education, when landmarks are defined, and the education system itself has not yet been rebuilt, until a foreign language teacher has been trained in a new way, while subject differentiation and a class-lesson system remain, it is important to select methods teaching foreign languages on the principle of compatibility of new and traditional approaches.

This piece of writing is intended for foreign language teachers, undergraduate and graduate students of pedagogical specialties and may be useful for self-study in order to self-improvement.

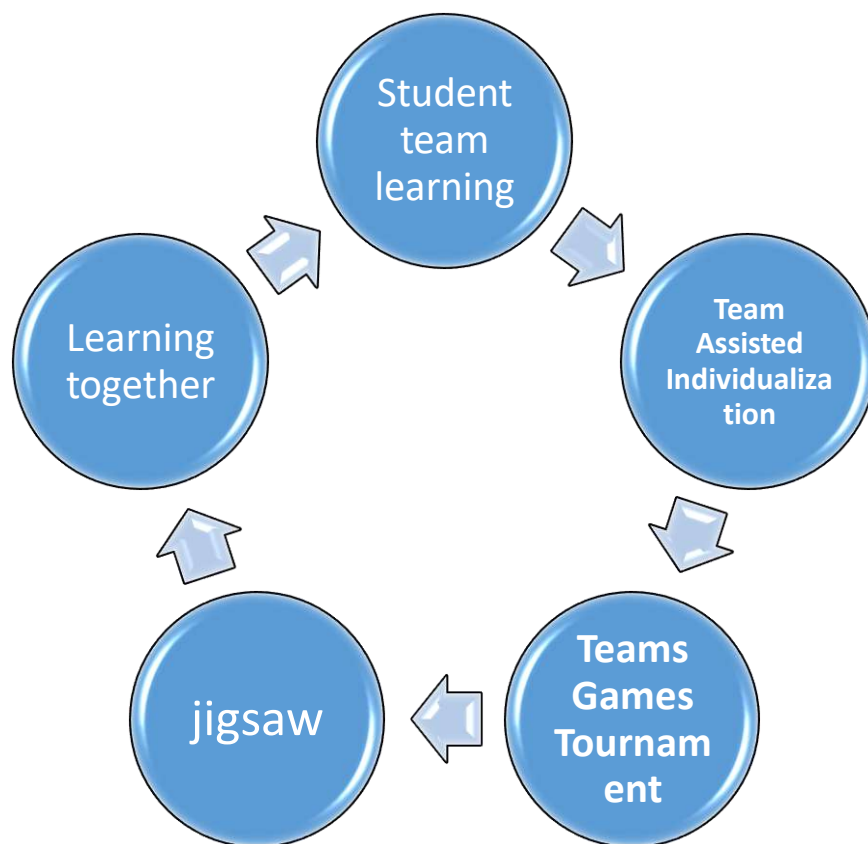
## MAIN FINDINGS AND RESULTS

Teaching method (from Greek *metodos* - the path to something) - a system of ordered actions of teachers and students, ensuring the assimilation of the content of education. Method due to the interconnectedness of learning goals, ways to achieve them and the nature of the interaction of subjects. Derived from goals, content and forms of training, the method at the same time has an opposite effect on the listed categories. The main thing in the method is the logical basis of learning. The structure of teaching methods distinguishes objective and subjective components. Objective part due to the permanent provisions that are necessarily present in any method, regardless of the use of different educators. It reflects the requirements of laws, principles and rules. The subjective part of the method is determined by the personality of the teacher, features of students and specific conditions.

### The teaching method in collaboration and its variations

There are several training options in collaboration. Let us consider in more detail their features.



**LEADING METHODS****Figure 1****Student Team Learning**

This method focuses on team goals and team success, which may be tipped only as a result of the independent work of each member groups (teams) in constant interaction with other members in the same group when working on a topic / problem / question. Thus, the task of each student consists not to complete a task, but in each team member possessed the necessary knowledge, taught the necessary skills, while the whole team knew what they had achieved.

The whole group is interested in learning educational information, each of its members, since the success of the team depends on the contribution of each to a joint solution to the problem.

The teaching method in a team comes down to three basic principles:

- “rewards” (team rewards) - the team receives one for all "Award" in the form of a mark, certificate, diploma and other types of assessment of joint activities;
- individual (personal) responsibility (individual accountability)
- the success of the whole group depends on the successes or failures of each its member, it encourages all team members to monitor success each other and the whole team to help a friend in the assimilation, understanding of the material so that everyone feels like an expert on this issue;

- equal opportunities for success - each student brings points to his group, which he earns by improving his own previous results.

Comparison, thus, it is carried out not with the results of other students, but with own, previously achieved results, which allows the student to feel like a full member of the team and stimulates the desire to raise their personal bar.

### **Student Teams Achievement Divisions**

The method is effective for the assimilation of new material. Within in this method, students are divided into groups of four. After Teacher explains the material, work is organized to form an indicative basis for action for each student: students are invited to discuss the material in groups, to understand. The task of checking the understanding of new material or in parts, when each student performs his part of the assignment, or by the principle of "turntable", when each subsequent task performed by the next student.

Moreover, the implementation of each assignments are monitored by the entire group. After completing the task the teacher organizes a discussion of work on the task by all groups, then students are offered a test to test the understanding and assimilation of new material, while complexity and volume of tasks for strong and weak students. The tasks of the test are not carried out in groups, but individually, and the work of each student evaluated personally. Grades for individual work are summarized in a group, and a general grade is set.

### **Team Assisted Individualization**

The essence of the method is as follows: students receive individual tasks according to the results of previous testing and then work individually, at their own pace, but within teams. Different teams can work on different tasks. Team members help each other in individual tasks. The successes of each member of the group are noted in a special journal. Upon completion of the topic, a final test is conducted. Each student performs it individually. Tests are evaluated by the students themselves, who were specially selected for the role of evaluators.

Each week, the teacher notes the number of topics, assignments on them, performed by the team, the success of their implementation in the class and at home, while the most significant successes of the group are especially noted.

Most effectively, this way of organizing training in collaboration has proven itself when working on home reading, so how much of the work is homework, and

the lesson only discusses issues related to the text. This saves a lot of training time in the lesson. In addition, since students independently keep track of the assimilation of new material by each member of the group, the teacher gets more time for individual work with individual groups or students who need his help.

### **Teams Games Tournament**

As part of this method of organizing group activities teacher explains new material, organizes group work for the formation of indicative framework for action, but instead of individual testing every week teacher holds competitive tournaments between teams. To this end, the so-called "tournament tables" are organized, three students each, equal in level of training. Assignments, differentiated by level of complexity and volume, depending on what level

students are at the table. As tasks for tournament tables in foreign language lessons there can be grammar and lexical tests, tasks on the read texts, tasks of a sociolinguistic nature, polylogues of the participants of the tournament table.

### **Jigsaw**

Another option for organizing educational activities in groups of four to six students is divided into fragments - logical or semantic blocks. "Travel" material can be divided into several semantic blocks: travel by plane, by train, by sea, by car and so on, or organize it in another way by highlighting the following subtopics: choosing a route, ordering tickets, booking a hotel, etc. Each member of the group searches for and processing information in its part. Then students studying one and the same question, but consisting in different groups, meet and exchange information as experts on the matter.

It called the "meeting of experts." Then they return to their groups and teach everything new that they themselves learned, other members groups. Those, in turn, report on their part of the assignment. The only way to master the material of all fragments is to carefully listen to your teammates and fix in different forms information. Students are interested in their comrades faithfully completing their task, as this may affect on a general assessment. Report on the whole topic individually and the whole team. It should be noted that not only the teacher, but also members of other teams can ask the reporting questions. members of the group are entitled to supplement the answer of their comrade, and such additions go to the general team standings. The teacher keeps score announces the end result.

Option Jigsaw-2 provides for the work of the entire team on the same material. But at the same time, each member groups gets the topic which is developed especially carefully and becomes an expert in it. Meetings of experts from different groups remain. At the end of the cycle, all students pass an individual control slice, which is evaluated. Student results are summarized. The team that managed to get the highest score is awarded.

### **Learning Together**

According to the concept of this methodology, the class is divided into groups of three to four people that are homogeneous in terms of training level. Each group receives one task, which is part of another, more ambitious task, which the whole class is working on. For example, when studying the topic "Travel", each group responds for a certain part of the route: the development of a cultural program, booking tickets, hotel reservations, etc. Groups communicate among themselves, specifying travel details, offering their options. Given that all the vocabulary on the topic has already been learned at previous lessons, the emphasis in group work is already on speech activity, communicative practice of students. Group gets rewards based on the achievements of each student. Therefore, According to the developers of this version of the methodology, special attention should be paid to the issue of staffing groups taking into account the individual psychological characteristics of each student and the development of tasks for each specific group. It should be noted that inside the group, students independently determine the roles of each, not only for the task of the group, but also for the organization of the coordinated successful work of the whole group. Every member the group monitors the activity of its other partners in solving the common problem, observing the culture of communication within the group, fixing the results, etc. So the group performs double role: on the one hand, the achievement of a purely educational, cognitive goals, on the other hand, socio-psychological:

students learn the culture of communication with each other, gain experience of tolerance and mutual assistance.

### **Some recommendations on the application of the teaching method in collaboration in foreign language lessons**

The specifics of the subject "foreign language" is that students should learn not only and not so much theoretical knowledge, but also master the language in practice, acquire skills and abilities foreign language communication. The main difficulties in mastering a foreign language in a mass school is a lack of oral student practices in each lesson.

The teaching methodology in cooperation involves providing the necessary conditions for students to communicate with each other and with the teacher, and communication is in a foreign language, which allows, as a result of systematic and focused work, to significantly increase the amount of oral speech practice in the lesson for each student. Method learning in collaboration involves a combination of techniques and principles that must be followed to ensure the best results. Meet some of them [1,2009].

### **Space organization**

Priority in the lesson is self-collaborative student activities. The traditional arrangement of desks involves a passive perception of information, that is, listening. For to organize communication in the course of cognitive joint creative activities, students need to see each other friend. Furniture in the classroom must be mobile so that before class or at any stage of the lesson it was possible to put the tables at an angle to a friend, or draw up together, or even move aside the presentation of the results of the work.

### **Small Group Rules**

These rules should be familiar to all students.

The teacher's task is to abide by them and make sure everyone respects them. You can hang them in the classroom. The rules can be supplemented, it is better to develop them together with students. For example:

- *interact with any partner or partners;*
- *politely and benevolently communicate with partners;*
- *remember responsibility not only to oneself, but also to their partners;*
- *remember that by helping others, we learn ourselves.*

### **The principles of the formation of small groups, the distribution of roles**

The teacher before the lesson divides the group into subgroups of three or four students. Each subgroup should have boys and girls, as well as weak, medium and strong students. This division is conditional and subjective. Any student can be weak, for example, in grammar, but can be a strong organizer of work in group. Throughout the year, the composition of the subgroups should be changed so that each student can work in different subgroups with all members of the group. By identifying the goals and objectives of the lesson, the teacher determines what roles students will have to take on to complete the assignment. These roles are discussed with students and they themselves distribute them. between themselves. Be sure to provide for such roles as the

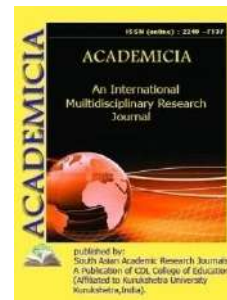
organizer of active activities (monitors the activity of partners in the group), the editor (controls the correctness of the assignment), the leader (organizes the work, prepares partners for the report on the completed assignment), the designer (is responsible for the aesthetics of the presentation of the completed assignment). Roles may vary from the tasks of the lesson and the size of the group.

## CONCLUSION

This article indicates that leading methods such as jigsaw, learning together Student Team Learning, Teams Games Tournament are considered integrated methods. As the result of the study it can be said that they are feasible and beneficial to both pre-service and in-service teachers. By following the given sequence of recommendations and methods, it is possible to effectively address the teaching problems that may have arisen in the classroom of current or future language teachers who are just starting their careers.

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DOI: **10.5958/2249-7137.2020.00708.9**

## LITERATURE – THE FOUNDATION OF STRONG FRIENDSHIP

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### ABSTRACT

*The importance of research in comparative literature is growing at a time when Uzbekistan's German literary and cultural ties are becoming more and more global, global and interstate integration processes are gaining momentum. The article covers the history of German-Uzbek literary and cultural relations in a concise and comprehensive way. The German and Uzbek peoples, as a whole, will lay the groundwork for the melting of relations between Asia and Europe in the broadest sense by analyzing certain features of the processes of globalization.*

**KEYWORDS:** *Globalization, Global Process, Interethnic Integration, Concise, Abridge And Important Ideas, Controversy.*

### INTRODUCTION

Friendly creative relations in German-Uzbek literature have made a significant contribution not only to the development of Uzbek and German literature, but also to the enrichment of world literature. The fruitful work and scientific research of literary critics have provided not only the development of science and literary theory, but also a large number of readable literatures for Uzbek and German readers. Since the importance of literature in the education of human



thinking is incomparable, the profound works of writers have contributed to the rise of the culture of nations.

From scholars of literature, fine arts, decoration, architecture and other cultures of the world to ordinary intellectuals, everyone has always been interested in the books of Uzbek classics, and later in the works of our modern writers imbued with humanistic ideas. European readers still love to read everything from the ancient, philosophical epics of the East to our prose works on the fate of people who are built on conflicting opinions and who can fight for their happiness in the face of adversity. Because they, too, find similarities by reading the lifestyles, feelings and experiences of artistic images in the literature of other nations, their struggle against injustice, understand the historical errors of national conflicts; get closer spiritually with different peoples.

Therefore, when there are social issues and contradictions in the society, the development of inter-ethnic literature will continue, and the coverage of problems in the literature in an artistic form will remain one of the main tasks of Uzbek writers.

Uzbek-German literary relations will always continue. It is no coincidence that the President said: "We have objectively assessed the current state of Uzbek-German relations and identified priorities and tasks for their further development". (From the speech of the President of the Republic of Uzbekistan Shavkat Mirziyoev - Federal President of the Federal Republic of Germany Frank-Walter Steinmeier at a meeting with media representatives during his official visit to Uzbekistan. May 28, 2019. (Shavkat Mirziyoev. Selected Works. Volume IV. Tashkent, Uzbekistan Publishing House. Volume III, 2019, Uzbekistan and Germany are reliable, important and long-term partners, p. 316.) Because there are still many undiscovered, unexplored aspects of German literature. There are also many unsolved mysteries of Oriental literature for Germany. Therefore, writers of both countries will continue to develop creative ties, our translators will continue to translate works from German into Uzbek, and German experts will continue to translate works from Uzbek into German. Literature always unites these two nations, despite the fact that the West and the East, Germany and Uzbekistan, different nationalities, different religions, as well as different traditions, cultures and worldviews. Because the regular continuation of their research in literature enriches the literature of both nations, serves the development of their cultures, the well-being of nations.

## THE MAIN FINDINGS AND RESULTS

Works of Uzbek writers have been translated into various languages. Many foreign literary critics still want to study the history of Uzbek literature more and more deeply, and sincerely translate it. In prestigious libraries and museums, as well as our historical manuscripts, the printed books of our modern works are treasured. Our books, which are highly published in our printing houses, are valued by Europeans as a work of art.

The German people have a great interest in the life and way of life of the Uzbek people, in classical literature, history, ancient architecture and crafts, fine arts, in short, in Uzbek culture. Therefore, they strive to strengthen friendly relations in all areas.

In literature, too, "Childhood" by Oybek, "Sister" by AskadMukhtor, "Destiny" by Ibrahim Rahim, "Crane" by Said Ahmad, "New Neighbors" by Hakim Nazir, almost all of the poems of the poetess Zulfiya, all the favorite works of Khudoiberdi Tukhtaboev, the best stories and short stories of Utkir Hoshimov, the works of other writers were skillfully translated into German. The

reason is that Uzbek readers like the elegance of Uzbek literature, the richness of ordinary human emotions, the vivid expression of events, and enjoy the oriental spirit.

Certainly, the work of German translators is to be commended. Due to their creative research, Uzbek literature became popular in Germany and in neighboring countries where German is spoken.

Our literature, which has emerged on the basis of Turkic and other languages over the centuries, has crossed the highest passes despite historical difficulties. Although Uzbek literature has suffered in political crises, it has retained its psyche. The works of Uzbek writers have become masterpieces of world culture. The most important event is the fact that our writers have friendly relations with European as well as German writers.

Indeed, our literature has led to a strong friendship, which has laid the foundation for a creative environment, the writing of new works, the solution of social problems, and even the development of political and economic ties.

Uzbek readers also enjoy German literature. They read the unique complex, philosophical works of the greatest German poets and writers in Uzbek. The pen of our translators was sharpened, and school of Uzbek translators were established.

Another important aspect is that the friendly creative ties in the Uzbek-German literature also contribute to the development of Uzbek-German political and economic relations. After all, where there is a strong mutual trust, people who are aware of the art and culture of the two countries will always strive for mutual cooperation. As the President of our country noted, "Cooperation between Uzbekistan and Germany in the fields of science, culture, education and healthcare is developing rapidly. There is a growing interest in the German language and culture in our country.

Your initiative "Schools: Prospective Partners" is being successfully implemented. Currently, more than 400,000 students study German in Uzbekistan, which is the language of Kant, Hegel and Schiller. The total number of German-language schools in our country is about 1,700. Over the past year, more than 400 new German language classes have been opened." (From the speech of the President of the Republic of Uzbekistan ShavkatMirziyoev at the meeting of the Federal President of the Federal Republic of Germany Frank-Walter Steinmeier during his official visit to Uzbekistan. May 27, 2019. (ShavkatMirziyoev. Selected works. Volume IV. Tashkent, Uzbekistan Publishing House. 2019 Vol. III. , "Uzbekistan and Germany: A High-Level Dialogue Based on Mutual Trust," p. 313.)

As the President noted, "... the agreements and treaties signed in Berlin are being consistently implemented today. In particular, together with major German companies such as Siemens, The Linde Group, Thyssen, Volkswagen, MAN, CLAAS, LEMKEN, Knauf, Deutsche Kabel, Oberhofer. In Uzbekistan, projects in the field of high technology, industry and agriculture, energy, transport and logistics, infrastructure are being actively implemented". (From the speech of the President of the Republic of Uzbekistan ShavkatMirziyoev - Federal President of the Federal Republic of Germany Frank-Walter Steinmeier at a meeting with media representatives during his official visit to Uzbekistan. May 28, 2019. (ShavkatMirziyoev. Selected Works. Volume IV. Tashkent, Uzbekistan Publishing House. Volume III, 2019. Uzbekistan and Germany are reliable, important and long-term partners, p. 318)

During the state visit of President ShavkatMirziyoev to the Federal Republic of Germany, open and transparent talks were held between the two countries to further expand our wide-ranging cooperation in the political, economic, scientific, educational, cultural and educational spheres. This historic visit also set priorities and tasks for the expansion of comprehensive ties between the two countries and peoples, in particular, for the skillful translation of works by Uzbek-German writers. The results of the high-level talks will open new opportunities in Uzbek-German relations.

The literature of these two countries has been a key tool in the closeness of the two countries, the strengthening of ties, the strengthening of friendship between peoples, namely:

- The emergence and development of modern Uzbek-German literature, as well as the interaction of art and culture is rooted in history and has its own history.
- The history of Uzbek-German literary relations can be divided into several periods: the ancient period - the period of prosperity of ancient classical literature in the East and the period of modern Uzbek literature - the period of works of art in modern prose. Studying in such periods is a relief not only for those who are engaged in science, but also for ordinary readers.
- Our people have had the opportunity to read in Uzbek the works of various German writers, from the philosophical works of the great Goethe to the modern democratic writer Anna Zegers.
- The translation into German of the works of writers of our classical literature, from the great poet and thinker Alisher Navoi to prose masters, masters of words Abdulla Kodiri and Abdulla Kahhor, has made a significant contribution to the development of German literature.
- As a result of scientific research on Uzbek literature by German literary scholars, the German people recognized the names of many Uzbek writers, became more and more acquainted with the information about their creative activities and works.

“As a result of conferences, cultural days and other events held by the Writers' Union of Uzbekistan and the German Writers' Union in Tashkent, Berlin and other cities, the ties of friendship between the two peoples has been strengthened. The two countries got acquainted with each other's traditions, way of life, culture, art, history, nature, ancient cities.

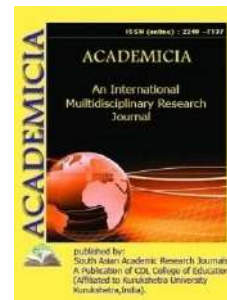
We hope that the friendship between the two countries will continue. As President ShavkatMirziyoev said at an official meeting with the President of Germany, “I am convinced that the opening of the statue of the great German poet and thinker Goethe in Tashkent will become a new symbol of friendship and cooperation between our peoples ...

We give great importance to the development of long-term and multifaceted relations with Germany, maintaining a high level of communication based on mutual trust. I am confident that the results of today's talks will open new horizons in Uzbek-German relations. “(From the speech of the President of the Republic of Uzbekistan ShavkatMirziyoev at the meeting of the Federal President of the Federal Republic of Germany Frank-Walter Steinmeier on May 27, 2019. (ShavkatMirziyoev. Selected works. Volume IV. Tashkent, Uzbekistan Publishing House. Volume III, 2019) Uzbekistan and Germany: High-Level Dialogue Based on Mutual Trust”, p. 313)

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DOI: **10.5958/2249-7137.2020.00693.X**

## USE OF LOCAL SORBENTS AS A REAGENT FOR SOFTENING DRINKING, BOILER WATER AND INDUSTRIAL WASTE WATER

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### ABSTRACT

*The article discusses the sorption of purification of water bodies from impurities using natural inorganic sorbents. The availability and low cost of minerals are an important economic advantage of their use for the purification of all types of water. The article describes a method of using an effective sorbent with high ion-exchange and sorption properties for purification of light oil products, for the purification of drinking or industrial water with a high content of heavy technogenic metal ions and organic substances. Based on the data obtained, conclusions are drawn about the possibility of using the studied natural mineral sorbents for the extraction of impurities from waste and natural waters.*

**KEYWORDS:** Glauconite, Alumsilicate Mineral, Sorbent, Cation Exchange, Adsorption, Water Treatment, Industrial Wastewater, Water Hardness, Technogenic Impurities.

### INTRODUCTION

In the modern world power supply questions in heat power branch have got a special urgency that is caused by reduction of water resources and an aggravation of ecological loads in environment. Now in the world more than 2 000 000m<sup>3</sup> a day desalted waters is made for the account nonconventional мембранных the technologies, allowing to raise to 30-40 % technological efficiency of the steam-power equipment of thermal power plants (TPP).

Therefore, carrying out of a complex of actions for the decision of problems energy saving and developments of use nonconventional, безреагентной technologies of water treating are actual. At the same time today, the problem of supply of the population qualitative potable water is in ecological practice of one of the sharpest. The reason of it is the overestimated general rigidity of potable water that can lead to heavy consequences. There is a direct communication between urolithic illness and superfluous rigidity of potable water [1-2].

For today priority research works on working out of technology of improvement of quality of water on water preparatory installation in the conditions of Uzbekistan are carried out, including: perfection of methods of optimization of technological processes of water preparation; installation creation reversible an electrodialysis for restoration of water from drains clarifier for the purpose of returning in a tower for slag cooling; working out of installation for regeneration cyanides allowing to improve ecological conditions in many regions of the world; working out of installations of sewage treatment containing heavy metals; creation of special installations for residue a brine with recycling of the concentrate, containing mainly salts etc.

In Uzbekistan deterioration of superficial waters because of anthropogenesis pollution is observed. The water problem of region consists that resources of superficial waters practically are completely settled. Underground waters have considerable rigidity and a high mineralization in this connection they are not suitable for use as initial water in work cycles of the industrial enterprises without preliminary desalination. Besides, underground waters have the raised concentration of harmful elements, inadmissible to application under standard requirements for hot water supply (HWS), therefore by water preparation there is a necessity of their removal. The condition of the majority group water conduit morally and physically obsolete because of corrosion damages of pipelines and overgrowth is shown, that, that leads to their repeated pollution, high cost of water that is economically unprofitable for objects of industrial and municipal power.

Industry development, increase in number of motor transport, water use for needs of agriculture lead to the raised pollution of hydrosphere. Work TPPS is connected with consumption of water from natural sources and formation of sewage with the raised maintenance of mineral components. Dump mineralized and organ-containing sewage in water sources leads to pollution of reservoirs, to deterioration of working conditions of other enterprises consuming water from this source, and also to increase of expenses for water preparation.

Variety of methods and technologies is developed for clearing of industrial sewage, such as flotation, a hyper filtration, return osmose and others, allowing to reduce anthropogenesis loading on water objects. The final stage in technological processes, as a rule, is additional cleaning of drains with application sorption materials. Therefore, the problem of complex sewage treatment from these elements and organic connections is actual and working out of new sorbents has the big scientific and practical value. Sorption water treating methods are the most perspective and resource saving for water supply and water removal systems. Used sorbents should be simple in operation and possess high technical characteristics.

Quality of sewage from chemical clearings depends on type of the established equipment and an applied method of clearing and is accepted according to the chemical control. In the absence of data of the chemical control the structure of waste waters after their neutralization is applied according to technical and economic indicators (TEI) [2] and tab. 1



**TABLE 1 APPROXIMATE STRUCTURE OF IMPURITY IN SEWAGE FROM CHEMICAL CLEARINGS OF THE EQUIPMENT ON TPPS, MG/DM<sup>3</sup>**

№	Indicator	Methods of chemical clearings						
		Soljano-acid	Integrated	Monoammoniumcitrate	Phthalic acid	Low molecular acid concentrate	Dicarboxylic acids	Hydrazine acid
1	Chlorides	4500	-	-	-	-	-	-
2	Sulphates	50	400	400	40	40	40	3000
3	Ironthegeneral	5	15	15	10	10	10	5
4	Inhibitors OP-7, OP-10	70	70	70	70	70	70	-
5	Inhibitors PB-5, V-1, V-2	30	-	-	-	-	-	-
6	Kaptaks	-	15	15	15	15	15	-
7	Formaldehyde	200	-	-	-	-	-	-
8	Ammoniumconnections	500	500	500	280	500	280	280
9	Nitrites	-	250	250	-	250	-	-
10	The dryrest	10000	6000	6000	6000	6000	6000	6000
	The maintenance of organic substances:							
11	Chemical indicator of oxygen, mgO <sub>2</sub> /kg	350	1900	1700	3400	3000	2800	-
12	Biochemical indicator of oxygen, mg O <sub>2</sub> /kg	180	650	1300	2400	2200	2200	-

In table 2 the structure and concentration of pollution in sewage of Mubarek TPPS are resulted

**TABLE 2 COMPOSITIONS AND CONCENTRATION OF POLLUTANTS IN THE WASTEWATER OF THE MUBAREK TPP FOR THE I-QUARTER OF 2019**

№	Indicator	Unit of measure	Norm	January	February	March	Average
	Fe	mg/l	0,5	0,073	0,35	0,48	0,301
	Cu	mg/l	1,0	0,031	0,43	0,21	0,22
	Cl	mg/l	350	44	156	120	116
	The weighed substances	mg/l	30	0,17	0,24	0,56	0,32
	Mineralization	mg/l	1000	365	720	424	500
	NO <sub>2</sub>	mg/l	45	0,068	1,02	0,44	0,509
	NH <sub>3</sub>	mg/l	2,0	0,84	0,64	0,04	0,506
	SO <sub>4</sub>	mg/l	500	7,4	10,3	12,4	10,0
	Mineraloil	mg/l	0,3	0,118	0,166	0,11	0,13

With a view of reduction of dumps of sewage and accordingly a fence of fresh water it is recommended at stations below-mentioned actions:

- Reduction of a fence of fresh water for feed of turnaround system of cooling at the expense of use for this purpose weakly mineralized sewage from other systems TPP after their preliminary clearing. Drains concern such waters from water washing of the coppers, loosening and flushing waters of filters water preparatory installation, blowing-off waters of coppers, a condensate returned with fuel oil, water after cooling of bearings of rotating mechanisms and other Petro containing drains after their clearing of mineral oil rain and thawed snow from territory TPPS;
- Use for ashes and slag washout in system hydro ash catcher (SAC) of sewage from other systems TPP in exchange fresh water. For these purposes it is expedient to use salt drains water preparatory installation, blowing-off water of turnaround system of cooling, water after chemical clearings of the equipment, hydro cleaning of premises, etc.
- The reuse organization on the water-preparatory device (WPD) sewage, both own, and other technological systems, clarifiers, loosening and process waters of filters it is expedient to use blowing-off waters as initial water, and the fulfilled reclaiming solutions to use for repeated regeneration. As initial water on food WPD is admissible to use weakly mineralized drains of other technological systems after their preliminary clearing if that it is necessary, etc.

For sewage treatment the big interest is represented by natural sorbents which concerns glauconite. Essential advantages of this mineral are: the wide circulation, cheapness, availability, granular structure, thermal stability, good ion exchange and filtration properties, and also possibility by chemical and structural modifying directed to change technological indicators of a mineral [3].

Glauconite - natural alum silicates with the general formula  $(K, H_2O) (Fe^{3+}, Al, Fe^{2+}, Mg)_2 [Si_3AlO_{10}](OH)_2 \cdot nH_2O$  [4].

*Glaukos* (γλαυκός) - on it is Greek "aeruginosa", a mineral of group of hydromicas of a subclass of layered silicates widespread in sedimentary breeds, autogenic monoprismatic a mineral from group alumsilicates, possessing high absorptions and cations-exchange properties. Rather widespread in some deposits of a sea origin. Maintenances of the main components in typical glauconite fluctuate in following limits (in %): Potassium oxide ( $K_2O$ ) -  $4,0 \div 9,5$ ; oxide sodium ( $Na_2O$ ) -  $0 \div 3,5$ ; oxide aluminum ( $Al_2O_3$ ) -  $5,5 \div 22,6$ ; Iron trioxide ( $Fe_2O_3$ ) -  $6,1 \div 27,9$ ; Iron oxide ( $FeO$ ) -  $0,8 \div 8,6$ ; oxide magnesium ( $MgO$ ) -  $2,4 \div 4,5$ ; silicon dioxide ( $SiO_2$ ) -  $47,6 \div 52,9$ ; water ( $H_2O$ ) -  $4,9 \div 13,5$ . In the form of impurity are present: CaO to 1 % (higher maintenances are usually connected with  $CO_2$  in the form of a carbonate), sometimes  $P_2O_5$ ,  $B_2O_3$ , etc. [5].

Glauconite possesses enough high ability to cationic to an exchange, then and it is caused its uses for the industrial purposes. Increase of productivity of soil, land improvement, manufacture of organon-mineral fertilizers, improvement and restoration of soils, sewage treatment, catching of gases, elimination of smells, neutralization of floods of mineral oil, sorption heavy metals, radionuclides and toxicants can be used in such processes as water purifications drinking and a process water, sorption and dehydration of mineral oil, clearing and regeneration of power oils, preparation of water for steam and gas generators and boilers, as the fodder additive in animal industries, poultry farming, fish culture. Such application is based on its ability to reactions cations an exchange. For these purposes glauconites concentrates are preliminary processed by a

table salt solution therefore sodium ions are absorbed by a concentrate. At filtering through such concentrate of hard water there is an exchange cation: alkaline earthcation waters are absorbed, and in a solution pass cation sodium, then and decrease in rigidity of water is caused.

High efficiency glauconite is established at clarification of water from salts of heavy metals, of some organic and inorganic structures, radionuclides [5]. Activated glauconite at a filtration through it of the polluted waters practically completely detains iron and ammonia structure, almost 10 times lowers contained in water of mineral oil, at 20-25 time lowers contents of radioactive isotopes of caesium-137 and strontium-90. High adsorptions and cation exchange properties glauconite can be used not only in quality adsorption heavy metals, oil sludge, polluting water objects and soil, and also for liquidation of the pollution which are in deposits of treatment facilities and industrial drains, in ground and water objects, by means of the vulgar entering and creation of geochemical barriers. Glauconite it is applied at rehabilitation of the territories amazed radionuclides or having high technogenic loading as a result of activity of the industrial enterprises. It is effectively used in rural, a national economy and the industry for neutralization of floods of mineral oil, clearing and restoration of soils, catching of gases, sewage treatment, sorption heavy metals, toxicants, radionuclides. It is an irreplaceable resource for reclamation dumps municipal solid waste (MSW) as it catches landfill gases and does not give them to more environment.

It is revealed [6], that clay breeds possess a high measure chemical inertia or protective properties of the equilibrium condition established in them that proves to be true presence in them of some buffer action factors. Collodion-disperse minerals concern major of them, sparingly soluble salts of the basic or acid character, structure exchange cations and anions, a parity in ashes-gel to a phase acidosis and basoids, the maintenance humus substances etc. Besides, is important for noticing, that clay and clay breeds steadily exist in rather narrow area pH, from 5 to 5,8 - two-layer fluosilicates - kaolinite, allofan, galluasit and from 6,5 to 8 - biotite, muscovite, glauconite, montmorillonite, illit, chlorite, etc. Therefore, at entering into Wednesday (ground, waters) alum silicate, capable to displace reaction of environment for limits of area of steady existence of clay minerals of breed, it will be subject to intensive hydrolysis. However, to the beginning of realization of such destructive process counteracts buffer action factors. But, as glauconite that is difficult mineral system, according to principle Le-Shatele, it renders braking counteraction adverse for its steady condition to change of reaction of environment. Therefore, factors of buffer action of clay breeds are as though primary means of maintenance of processes of self-organizing at protection of the generated structural structure of clay breed or a primary stagespecified above braking counteraction. If aggressive influence of chemical reagents completely overcomes action of factors of buffer action of breed (i.e. suppresses them) counteraction to these processes is carried out at the expense of buffer action of crystal lattices of the basic mineral, in our case GLAUCONITE. In particular, from its crystal lattices is extracted those oxides which are capable to render neutralized counteraction to ions of the chemical reagent which has caused adverse changes pH of environment.

Sorption substances glauconite - the multiphasic process directly depending on porosity of a sorbent and backlashes between contacting particles. Glauconite it is characterized by an active absorbing surface and presence of functional groups (silanols, silicanes, etc.), capable to connect ions of the various nature [7].

According to [8], possibility sorption softening drinking and boiler water of installations of an average and a high pressure with concentrate use glauconite as a sorbent with its finishing to standard requirements, accordingly, 7 and 0,10 mmol-ekv/l is considered. Maximum sorption it is reached in 20-40 minutes from the process beginning. Thus the general initial rigidity of potable water decreases on 35-40 %, and boiler water at two-cyclic clearing on magnesium on 96 %, on calcium almost on 100 %.

One of important and a challenge, at softening the natural waters arriving for household needs from artesian water fences and superficial sources, is, absence cheap under the cost price and accessible sorbents. To consider as base synthetic products, including various cations, for these purposes it is unpromising. The matter is that scale softening such waters demands huge weight cationic, considerably exceeding their existing manufacture. From here and inevitable deficiency. Besides, synthetic cations are insufficiently studied in relation to softening the waters comparable and even essentially exceeding concentration sulphate, nitrate and a hydro carbonate of ions in comparison with the maintenance cations rigidity.

It is known, that in a basis cation an exchange at softening waters lay following processes [9]:

- sorption;
- regeneration;
- loosening.

As a whole, regeneration very dirty process [10] generating great volume highly mineralized of drains, demanding, in turn expensive regeneration. And, since strongly acidifications as sorbents meet rather widely it should be recycled their big enough weights, creating essential volumes of sewage. Hence, it is expedient to replace these sorbents also with others which can be utilized economically expediently, not resorting to regeneration. It is a serious ecological problem.

With specified questions deep softening the waters, being as it was already marked, are socially-environmental problems closely connected by one of the reasons of high expenses also at use of heat of boiler installations. It is a question, first of all, of the water directed on a food of coppers of a high pressure. Special demands are made to such water [11-17] in general. For similar devices with natural cooling the feedwater should meet following standard requirements:

The general rigidity no more:

- For gas pipe and fire tube the coppers working on firm fuel, - 0,5 mmol-ekv/l;
- For gas pipe and fire tube the coppers working on gaseous or liquid fuel, - 0,03 mmol-ekv/l;
- For water trumpet coppers with working pressure  $13 < P < 39 \text{ kgs/sm}^3$  - 0,015 mmol-ekv/l.

Let's preliminary notice, that the scum represents averages and basic salts Ca (II) and Mg (II)- $\text{CaCO}_3$ ,  $\text{MgCO}_3$  [9/12],  $[\text{Mg}_4(\text{CO}_3)_3(\text{OH})\cdot 9\text{H}_2\text{O}]$  [18].

Naturally, formed components of a scum essentially differs on properties. So, for example, solubility  $\text{CaCO}_3$  decreases with temperature growth, and speed of adjournment of a carbonate of calcium, owing to a number of its features, should not exceed 0,25 g / (m<sup>2</sup>\*h). It was one of the basic requirements to the water spent for feed of turnaround systems, connected with restrictions on its rigidity.

Existing numerous methods of water treating from cations rigidity [11-13], of course, differentiated by efficiency concerning scum components. Deep softening waters can be reached by means of two phasic osmose with the subsequent tap permeate on decarbonization and definitive demineralization in filters of the mixed action [18]. But such approach conducts to essential increase of the cost price of a heat supply of the population, expenses on which constantly grow, strengthening social and economic intensity. However, turnaround water goes not only in heat exchange turnaround systems. It is spent in technological and power processes. In this case its rigidity should be less, than in systems of turnaround water supply - the maintenance of salts no more than 10 ... 15 mg/l, rigidity  $<0,020$  mmol-ekv/l [19] is more exact.

Expediently widely to use natural sorbents for the decision of problems softening waters as complex method of protection of environment by means of volume decrease high mineralized drains and improvement of health of the population, reduction of social and economic intensity. In this respect is available also defined, though and the extremely limited experience. One of natural sorbents - glauconite, meeting in powerful superficial deposits, practically does not lose the properties at hour action with hydrochloric acid (HCl). According to [20], application clinoptilolite sorbents at water treating under the scheme: chlorination  $\rightarrow$  ozonation  $\rightarrow$  contact coagulation leads to essential decrease in its chromaticity and turbidity. In [20], it is informed on 10-fold use bentonite for water treating from finely dispersed oil and mineral oil with stage-by-stage washing a sorbent ligroin and regeneration in special furnaces. It is used for this purpose natural sorbents in the USA [20]. In Japan on base alum silicates the sorbent for removal Cd (II) and Cr (II) of sewage is received. At the industrial enterprises of the USA, France, Japan the mix montmorillonite and poligorskite is with that end in view used.

Thus, search and research are necessary for the decision listed above problems of protection of a surrounding environment and population health physical and chemical and sorption characteristics of ecologically pure natural sorbent accessible on volume which extraction is possible in the open way. The similar sorbent should have deposits in various regions of the country, allow to lower to standard indicators rigidity of potable water on installations of various productivity and in volumes, sufficient for satisfaction of requirement of the population of the big and small cities. Use of such sorbent as follows from stated, should allow is essential to lower volumes high mineralized sewage or them completely to eliminate, reduce the price of logistics. The sorbent should work effectively in the presence of considerable concentration (1-10 mmol/l) anions  $\text{SO}_4^{2-}$ ,  $\text{NO}_3^-$ ,  $\text{HCO}_3^-$ ,  $\text{HSO}_4^-$  commensurable or exceeding the maintenance cations rigidity (Ca (II), Mg (II)), present in artesian or superficial water. Thus, softening waters it should be possible over a wide range according to technological problems, and the fulfilled sorbent - to suppose economically and toxicologically expedient recycling.

In Republic Uzbekistan bowels the considerable quantity of various kinds of the minerals which use promotes development of economy of the state [21] is concentrated. These minerals represent a raw-material base for production, best-selling in the internal and world markets. In the glauconite Uzbekistan it is developed in sandy-argillaceous adjournment of the Gissar range, Ziaetdin-Zirabulak mountains, Kizilkum raisings, Sultauizdag, and also in Northern Fergana and in Tashkent geological area, deposits glauconite sandstones - Kofrun, Chang, Aksu, Bolgali, Tagarasay and Mobika also are revealed. Qualities glauconite sandstones on displays Krantau have been studied. Besides deposits 17 perspective displays [22] are revealed.



It is established, that glauconitesand from deposits Krantau contains basically glauconite, quartz, anorthite, feldspar, illite, muscovite and galite.

Presence in Uzbekistan a large Krantau deposit glauconite, does actual working out on its basis of sorbents, suitable to use as loading of filtering constructions for sewage treatment from technogenic impurity on industrial productions.

The chemical compound glauconitefrom deposits Krantauis characterized by following data (%) [22]: SiO<sub>2</sub> - 70,27; Al<sub>2</sub>O<sub>3</sub> - 9,95; Fe<sub>2</sub>O<sub>3</sub> - 4,95; K<sub>2</sub>O-3,08; Na<sub>2</sub>O-2,46; CaO-0,80; MgO - 0,99; MnO - 0,05; TiO<sub>2</sub> - 0,49; P<sub>2</sub>O<sub>5</sub>-0,10; SO<sub>3</sub> - 0,72. In mineral structure glauconite breeds of the Krantau deposit presence of 35 minerals is established.

The capacity cations a concentrate exchange glauconite changes from 390 to 550 mg-ekv, naturalglauconitetheKrantau (ore) - to 250 - 300 mg-ekv on 1 kg of ore. The mineral possesses ability of selective absorption cationic and long-living radioisotopes. Limiting absorbing ability glauconite in relation to heavy metals looks below-mentioned image: on copper - 781,2; on nickel - 342,4; on zinc - 827,7; on gland - 1317,8 mg-ekv. on 1 kg of a mineral.

Ability glauconite to take heavy metals from solutions makes (in % from the initial maintenance): Pb - 99, Hg - 64, Co - 97, Cu - 96, Mn - 95, Cr - 92, Ni - 90, Zn - 90, Fe - 99.

Glauconite is a qualitative water softener, the good pigment of green color proof to atmospheric influences, and also adsorptions, on quality not conceding using now at processing of mineral oil and clearings of industrial sewage.

Glauconite also is of interest at clearing of radioactive drains. Possessing high sorption in capacity to radioactive salts, glauconite the filter after processing easily conglomerates in vitreous weight in which radioactive salts pass in an insoluble condition that facilitates a burial place of the fulfilled filters. The additive glauconite in cement as filler promotes reception of the concrete interfering penetration both rigid, and soft radioactive radiation. Despite the specified merits glauconite, its practical use till now the insignificant. The developed requirements of the industry to glauconite to raw materials are absent now. Breeds with rather high maintenances glauconite (more than 25-30 %), apparently, can be used in a natural kind, and breed with the smaller maintenance glauconite demands enrichment.

It is necessary to notice, that works on application glauconitetheKofrun, Changi, Aksu and Mabik deposits in clearing processes, additional cleanings are more exact, some water, in Uzbekistan was not spent. Therefore, samples glauconite the Krantau deposit for clearing drinking water and sewage of MubarekTPP have been investigated. Researches of structural-morphological features, physical and chemical are carried out, ion exchange characteristics glauconite the given deposit show possibility of its application in water preparation schemes. The basic physical and chemical indicators glauconite the Krantau deposit are resulted in table 3.

**TABLE 3 THE BASIC PHYSICAL AND CHEMICAL INDICATORS GLAUCONITE**

Specific surface on BET method, m <sup>2</sup> /g	Volume pores, sm <sup>3</sup> /g		
	micro	mezo	thetotal
20,56	0,0027	0,026	0,033



Preliminary in water the maintenance of investigated ions has been defined. Concentration of the general iron it is defined by a photometric method on device FEK-2 with sulfosalt acid, cations calcium and magnesium - complex metric titration Trillon B from indicators eriochrome black T, sulphate-anions - turbidimetric a method, chlorides-ions - titration by nitrate silver in the presence of the catalyst chromic acid kalium. Qualification reactants clean for analysis are used. Initial water was passed through ion exchange a column filled with the investigated sorbent, water was filtered and in a filtrate are made definition cations  $\text{Ca}^{2+}$ ,  $\text{Mg}^{2+}$ ,  $\text{Fe}^{2+}$  and  $\text{Fe}^{3+}$  and anions  $\text{Cl}^-$   $\text{SO}_4^{2-}$ .

**TABLE 4 RESULTS SORPTION IONS GLAUCONITE ACCORDING TO THE CHEMICAL ANALYSIS**

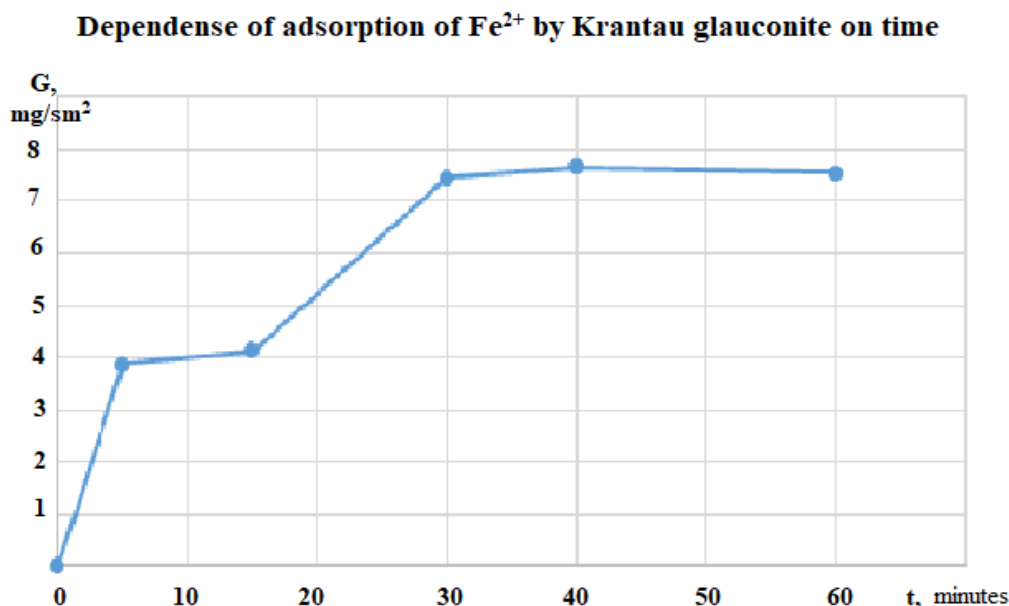
№	Investigated ions	Mass fraction absorbed adsorbate, %
1	$\text{Fe}^{2+}$ и $\text{Fe}^{3+}$	30,2
2	$\text{Ca}^{2+}$	79,8
3	$\text{Mg}^{2+}$	76,8
4	$\text{Cl}^-$	70,9
5	$\text{SO}_4^{2-}$	68,4

According to the received data, glauconite the Krantau deposit it is effective sorb ions  $\text{Ca}^{2+}$ ,  $\text{Mg}^{2+}$ ,  $\text{Cl}^-$   $\text{SO}_4^{2-}$  to a lesser degree cations gland and also, rigidity decrease, for the account sorb abilities of a mineral, has averaged 78 %. Studying kinetics only ions  $\text{Fe}^{2+}$  has shown adsorptions, that absorption of these cations Krantauglauconite makes 65-70 % and is reached for 30-45 minutes. Research of adsorption of ions  $\text{Fe}^{2+}$  was spent by a method of measurement of kinetic curves in stationary conditions. For this purpose, hitch adsorption by weight 2 grammes it was maintained in 250 ml to the distilled water in a current 24 hours. After decanting adsorbent in a damp condition, it was filled in just done with solution  $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$  with the maintenance cations  $\text{Fe}^{2+}$   $21 \pm 1$  mg/l (in the ratio 2 g a sorbent and 100 ml of a solution). Sorption cations it was spent at continuous hashing by a mixer in a current of 45 minutes. Through each certain time were selected and tests X-ray fluorescence on a method calibration a curve was analyzed by way. On the basis of the received data calculation of equilibrium concentration of ions  $\text{Fe}^{2+}$  (Cp) and their adsorptions (G) was carried out

In table 5 and on fig. 1 results sorption ions  $\text{Fe}^{2+}$  glauconite the Krantau deposit are presented.

**TABLE 5 RESULTS OF ADSORPTION GLAUCONITE IONS  $\text{Fe}^{2+}$  IN TIME**

№	t, minuts	Cp, mg/liter	$G \cdot 10^9$ , mg/sm <sup>2</sup>
1	0	0	0
2	5	15,97	3,87
3	15	13,1	4,12
4	30	6,01	7,46
5	40	5,81	7,66
6	60	5,92	7,54



**Fig.1. The dependence of the adsorption of  $\text{Fe}^{2+}$  ions by Krantauglauconite on time. Arithmetic mean values from five measurements are used.**

The obtained experimental data indicate that sorption equilibrium is achieved in 30 – 40 minutes. The concentration of sorbet  $\text{Fe}^{2+}$  glauconitecations under equilibrium is 15,97 mg/lor about 73mass. % of the initial value.

As shown by the analysis of samples of drinking water and industrial effluents from Mubarek TPP that passed through such an experimental installation, its properties after water treatment are significantly improved. Further development in this direction is the search for new variants of sorbents with high technological and sorption properties that can be used to treat highly concentrated industrial wastewater.

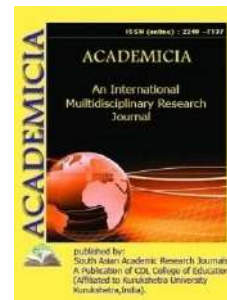
Analyzing the experimental data, we can draw the following conclusions:

- 1) Glauconite of the Krantau deposit has a high sorption with respect to non  $\text{Ca}^{2+}$ ,  $\text{Mg}^{2+}$ ,  $\text{Cl}^-$ ,  $\text{SO}_4^{2-}$ , which makes it possible to use it as a natural water softener in water treatment processes;
- 2) The adsorption of  $\text{Fe}^{2+}$  ions by glauconite is 70–73 %, while the adsorption of  $\text{Fe}^{2+}$  and  $\text{Fe}^{3+}$  ions together from tap water is only 30,2 %, which is probably due, under certain conditions, to the release of  $\text{Fe}^{3+}$  ions from the ionize crystal lattice.
- 3) The conducted studies are relevant for the use of glauconite as sorbents in water treatment processes.
- 4) Sorbent allows you to purify water from a large number of inorganic and organic and compounds at minimal cost.

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DOI: **10.5958/2249-7137.2020.00694.1**

## INTERPRETATION AND DESCRIPTION OF THE CONCEPT OF HISTORIOGRAPHY IN SCIENTIFIC RESEARCH

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### ABSTRACT

*This article analyzes the development of historiography and knowledge related to this area of science. Today, among researchers, there is a low knowledge of what a real historiographer really should be. The author tried to fill this gap, to reveal what the real goal and task of the historian of the historiographer should be his responsibility to science, his scientific mastery and professionalism as a historiographer. It was shown that this field of science has an ancient history; the field of its research is closely connected not only with one field of science, but also with many other areas of science. It was also emphasized that historiography today should be a tool for identifying objective historical truth, while the historian should be free from various political influences and contribute to the development of real historical knowledge.*

**KEYWORDS:** *Historiography, G.F. Miller, The History Of Historical Science, Historical Knowledge, Historical Reality, Objective History, Interpretation.*

### INTRODUCTION

In carrying out research in the field of history, the concept of historiography is of great importance. Relations with the term historiography have different meanings in both traditional and modern scientific views [1].

For a long time it was believed that historians were engaged in the science of history, that is, historians. G.F. Miller was declared the first historian scientist of Russia in 1747 year, in 1767 year the prince M.M. Sherbatov was found worthy of the same name. By the decree of Emperor Alexander I in 1803 year the writer N.M. Karamzin was also given such a title. It is known from sources that many famous Russian historians in the XIX century sought to obtain the title of honored historian.

In modern literature, when talking about historiography, in general, the science of history itself or the system of literature on a particular topic is understood. For example, the historiography of the Second World War, the historiography of the Ethnology of the Uzbek people, the historiography of the Turkestan National Liberation Movement, etc.

In the middle of the XX century, this term acquired a new scientific meaning, during this period the concept of “history of historical science” was formed. Historiography was formed as a separate science, and as a subject, the history of historical science was established. And the object of study of this science, as a rule, is the historical knowledge integrated in historical sources and in the form of research.

### THE MAIN FINDINGS AND RESULTS

In the Society of modern historians, the tendency to understand the subject of this science in a broader sense, exactly in the field of science, is developing. The science of historiography is understood between the sciences of Science, the history of culture and the sciences of social history. Therefore, attention is paid not only to the development of scientific knowledge, but also to their consumption and distribution. Modern researchers are more concerned with issues such as environment, economy, cultural space, socio-cultural tradition, visual landscape, intellectual discourse in historiography. In this case, the historian is interested not only in a particular historical doctrine, but also in its individual part, the process of creation, distribution, influence and destiny. In the last decade, science has paid great attention not only to ready-made knowledge, but also to the methods of its acquisition, which, of course, encourages the study of the self-active creative person.

It should be noted that scientific research in the field of history in the 1960s and 1970s made it difficult to enter into the practice of historical analysis of the problem. Historians' traditional neglect of science is reflected in the following factors: the fate of world culture in the twentieth century, the peculiarities of science in the Uzbek cultural environment and the difficulties in their practical coverage in the formation of intellectual processes, followed by their crystallization and manifestation.

Speaking of the impact of world cultural processes, it is known that the leading categories of world culture of the twentieth century will change from traditional to industrial category, resulting in the domination of popular culture with new values in science. Many famous sages of our time have pointed out that the palace of pure science is being destroyed. These include Jose Ortega and Gassettes. According to the scientist, neglect of science is more common among science practitioners - doctors, engineers, educators, who do not realize that the fate of science is inextricably linked with civilization, just as their profession is mainly related to the car or aspirin. Another reason is the stereotype (tradition) of considering science only on the example of the exact and natural sciences, which pushed aside the historical and scientific research of historians of the XIX-XX centuries.

Finally, with the overdevelopment of science in the former Soviet era, a model of a certain category of scientists was formed, which was strictly aimed at social order. There was no methodological activity, and instead of thinking about science, they believed in Marxism. According to P.N.Milyukov, the Bolsheviks needed craftsmen, not scientists. That is why Soviet historiography did not include the achievements of the science of the XIX-XX centuries, only in the lessons of historical materialism in higher education, science was considered as a direct



productive force. In the course of history in the late 1960s, this science was considered as science.

To this day, we have come to realize that historiography, which is the history of history, is undoubtedly a part of intellectual history that represents a complex, confusing, often interrupted process of understanding history when we look at the past. Important tasks of historiography as a scientific-educational discipline - mastering the laws of history through the study of the works of specific servants of history; teaching the principles of historiographical analysis and orientation in different areas of historiography; the traditions of the historian-scientist are to form a respectful attitude to the person, the principles of scientific ethics.

Referring to past experience, on the one hand, prevents historiography from “Rediscovering America” and, on the other hand, helps to gather new ideas that are born to create a new worldview, because socio-cultural tradition serves several functions at once - the old stores, transmits, and shapes knowledge.

To understand the laws of development of historical science, it is important to address both internal and external factors. Until now, historiography has been studied through contradictions: materialism-idealism, objectivism-subjectivism, and generalization-individualization of history, Marxism-bourgeois, and others. GI Zverev argues that with the help of rules derived in this way, history is defined as the history of thought within the boundaries of higher culture.

Gradually, the laws of traditional historiography are formed. According to him, the researcher extracted objective (objective) information about the emergence and development of theories, methods, doctrines from the texts of sources, determined the worldview of the historian, to which stream and school he belonged. Thus, the historian conforms to the established cultural norm of historiography. Cultural practice is still there today. History is written by the historian - he writes as he sees fit.

It is therefore very important to determine the identity of the author, his character, the school in which he grew up, the values of the century in which he lived. This personality factor should not remain the context of the science of history. Commenting on this, A.N. Sakharov said: “The real tragedy of historiography is the lack of connection between the personality of the historian, his destiny and scientific research, between creative difficulties, successes, mistakes and their evaluation”

The socio-political outlook of historians, their peculiar behavior, influences the writing of history both in terms of style, genre, and the sociality of the doctrine. The purpose of the general direction of the historian's scientific research is to determine the interaction and degree of these factors”.

Undoubtedly, among the factors influencing the diversity of historical and scientific activity, the spiritual peculiarities of the historian's personality are of great importance. For example, the peculiarities of A.S. Lappo-Danilevsky's historical writings (the work within the work, the infinite definition of terms, the constant dissatisfaction with oneself and this period) can be understood by referring to the personal character of the historian. Even in a love letter to his future wife, he talks more about the history of the origin of his love.

We see in his work on the methodology of history such qualities as a constant interest in the ideal world, astonishing diligence, faith in science, confession to the truth. He seeks to explain social

reality on the basis of his own philosophical beliefs (e.g., when drafting the State Duma on amnesty, the Russian people see supreme freedom as a parallel political force, a parallelogram of formed forces). As we can see, the language of science and the language of life are one and inseparable for the historian.

In historiography, it is important to clarify the socio-political views of historians. We draw your attention to the complex mechanism of the balance of historical and political views. The historian's affiliation with a particular class is not always reflected in his works. For example, it is known that the enlightened aristocrat A.I.Gertsen built the revolutionary-democratic concept of the Russian historical process. The famous Russian aristocrat M.M.Sherbatov sharply criticized the Russian tsars, explaining the bourgeois principle of separation of powers. M.N.Pogodin, an ordinary farmer, was the author of the concept of preserving Russian history.

In this case, we see not the proud principle of partisanship, but the social order, which is an important factor in the development of the science of history. The social order is not only the order of the authorities to write history, it is also the demand of the time, the wave going from society to the historian. For example, it is well known that historians of the mid-nineteenth century were interested in the period of Peter's reforms. In this case, S.M.Solovev writes folk tales about Peter the Great. Historians of the 80s and 90s of the XX century are more interested in the period of Peter I, Alexander II, Stolipin. The sociality of science applies not only to the external social order, but also to the internal self-organizing factors of science, which we call the world of the scientific community with certain rules and norms of play.

Often this situation hinders the transition of this or that concept to the scientific environment. That is, the fate of a concept, and even the fate of a historian as a researcher, often depends on how it is perceived in the scientific environment. B.I. Vernadsky draws attention to the fact that in science, in team work, individuals, especially those who are distinguished by their sharp minds, advances. Often their discoveries, innovations, aspirations are incomprehensible to their contemporaries.

In this sense, non-discrimination is in the logic of the development of science, and therefore the concept of discrimination (other scholars than the distinguished scholar) is not only related to those in power, but also to the value environment of the scientific community and society.

The scientific and organizational factors of the development of science are manifested in a very close connection with its social factors. An important element of the analysis of historiography is to take into account the philosophical views of the historian, the doctrine of the worldviews of his time, including the state of the sciences related to history. The philosophical worldview often also defines the perception of the universe, provides the imaginary integrity that creates the historical process, corrects historical research. For example, Slavophile historians, relying on Shelling's philosophy, viewed Russian history as a spontaneous development of a constant spirit. Thus, the history of culture, the history of the Russian people, its unique way of life becomes a topical issue. Within the framework of romantic philosophy (according to Solovyov - the philosophy of stagnation) there is a democratization of issues. The history of kings and kings is being replaced by the history of communities, peasants and farms. During this period, V. Dal's lexical dictionary of the Russian language, IP Sakharov's collections of Russian fairy tales were compiled.

If we turn to other philosophical teachings, for example, in positivism we see a unique process of building unique ideals and values, historical materials for the scientific community. Science is opposed to metaphysics, non-science, the historical process is considered to be evolutionary, evolving, historical life is huge and multifactorial and (like a kaleidoscope) instantaneous, historical research is based on a historical source. Historical knowledge is compared to the natural sciences.

In the works of V.O.Klyuchevsky, this situation is reflected in the theory of factors. It separates the 3 main forces of the historical process - the individual, society, nature. Each of these incorporates its own stock of elements and connections into the overall style. The elements of the common style of physiological type divided into (gender, age, kinship), economic type (labor, capital, credit), legal and political type (power, law, rights, obligations), spiritual type (religion, science, art, morality).

According to V.O.Klyuchevsky, the mechanism of action of these elements is different, but the most powerful driver of human development is mental labor and moral courage. Within the framework of this doctrine, it can be seen that history has been influenced by other sciences, especially psychology.

P.N.Milyukov emphasizes that history, like other sciences, must find the law of events and reveal the truth from it. He, like V.O. Klyuchevsky, considers the historical process to be multifactorial, in which the environment, the economy, the individual and the state are influential. According to P.N.Milyukov, we can only determine any reason in the way of ease of research. According to him, there is no particular influencing cause in the world, but there are complex equally influential causes.

The formation of P.N. Milyukov's theoretical ideas coincided with the achievements of experimental psychology and the period of transformation of psychology into a principle of the methodology of the humanities. This methodology had a great influence on the historian. Thinking about the complexity of the historical process, the historian should stop only when he reaches the small structural tissue of this process - the human psyche. In determining the author's philosophical position, changes in worldviews must be taken into account. As a social institution, the science of history is also a means of producing ideas, and it has its own constant internal development trends. Therefore, the philosopher's philosophical views and his clear research practice do not always coincide. The peculiarity of historical science is that it is highly dependent on sources. In the development of history, certain rules have been formed, such as the obligation to rely on sources. To do this, it is necessary to take into account the level of historical sources collected on the basis of the analysis of historical development and the technique of its delivery (interpretation). This is a relatively more difficult aspect of historical analysis. Because it requires the historian to be aware of the sources of a given period, on the other hand it suggests a reconstruction of the source technique of this or that author. The tradition of historical research is that the historian does not mention his research technique, unlike the naturalist-scientist. Even Klyuchevsky's students claimed that he did not use the technique of interpreting historical events, but worked with his own thinking and intellect. The reconstruction of historical doctrine requires the need to take into account the factors listed. Doctrine is a system of views and evaluations of historical events and processes that is developed by researchers based on the study of sources from a particular theoretical position.

According to many researchers, the scientific concept is a key factor in the history of science. According to E.B.Gutnova, each historical work has its own concept, only their significance differs. Constructing a concept is a complex process that requires you to dive into the text, to be like the other person. But historical analysis does not end there.

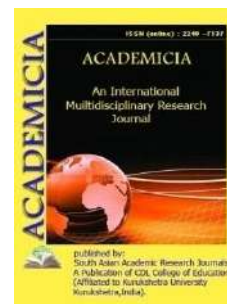
It is important to determine the importance of teaching. Certainly, this is not an easy task. In doing so, firstly, we determine its importance in terms of its place in historical science, and secondly, its impact on socio-cultural conditions. The first requires the determination of the relevance of the conclusions of the author under study to the traditions of pre- and post-historiography. The second is to analyze the transmission of a historical concept, its impact on the public consciousness.

## CONCLUSION

To conclude, it is important to recognize that historiography is important as a science that allows us to determine the past, present and future of all areas of society and shows the prospects for their development.

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DOI: **10.5958/2249-7137.2020.00695.3**

## CULTURAL LIFE AND ITS CHARACTERISTICS IN THE EPHTHALIS PERIOD

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### ABSTRACT

*Who were the mysterious Hephthalites, who united almost the entire territory of Central Asia, a powerful state in the V-VI centuries? This question aroused great interest in the last two or three centuries, a wide literature on the history of the Hephthalites appeared, epigraphic monuments of the Hephthalite period, numismatic materials of the Hephthalite period, interest in and study of culture, the main issues of ethnogenesis and modern history under the name "Hephthalite" the scientific controversy over the identity of the mysterious people included in the research is still ongoing. In this article, we want to focus not on the political history of the Hephthalites, but on cultural life, art, and religion.*

**KEYWORDS:** *Hephthalites, Bolaliktepadan, Hectare, Sughd, Dilbarjin, Sanskrit, Buddhism, Zoroastrianism, Christianity, Central Asia, East Turkestan, Ethnogenesis And Statehood.*

### INTRODUCTION

Speaking of the culture of the Hephthalite period, it should be noted that during this period many material and spiritual monuments were built in the country. The monuments of the city of Varakhsha, the palace found in Bolaliktepe near Termez, the unique images on its walls, the carvings and patterns of ganj are all vivid evidence of the artistic mastery of our ancestors. The uniqueness of the culture of the Hephthalite period was when it combined the appearance of ancient and medieval art.

As a monument of material culture of this period, it is worth mentioning the ruins of the city of Varakhsha. Its structure is rectangular, with an area of 9 hectares and a height of 10-20 meters. Surrounded by large square bricks in the form of a double tower, one of the pedestals is a royal palace and the other is a gatehouse with a guard. In the center of the arch is the palace of the ruler of Varakhsha, whose southern side is connected to the defensive wall in the center of the



arch. It consists of east (11.5 x 17 m), west (6.6x7.25 m), and red room (8.5x12 m) hotels. There are various scenes in the hotels, a prince riding an elephant, a horseman on a horse with a bow and arrow, a leopard fighting with a tiger, and a ruler sitting on a winged camel-shaped throne [1. 122-123].

Indeed, archaeological research suggests that urban culture flourished in early medieval Central Asia. In particular, in the 5th century a new city will be built in Panjikent to replace the relatively old village. With a total area of 18 hectares, the city had a strong defense order, a temple, a palace and socially separate settlements by the beginning of the 6th century. Intensive research has also been carried out in Poykand, another city in Sughd. Founded in a much older period (ancient), this ancient city expanded into the early Middle Ages and by the beginning of the V-VI centuries it became a large three-part center, with a total area of 18 hectares. Many artifacts from the early middle ages have been found in the Poykand excavations, indicating that Poykand was indeed a "City of Merchants" as described in Arabic sources at the time [2.180].

### THE MAIN FINDINGS AND RESULTS

Bukhara was one of the major centers (probably the capital cities) of the Hephthalite period, which played an important role in socio-economic life. The foundation of this rectangular city is 21 hectares, where strong fortifications, a ruler's palace, ideological structures, and residential ruins have been excavated. The artifacts found indicate that Bukhara has been one of the largest cultural and economic centers of Central Asia since the early Middle Ages. There were also seven gates to the city during this period, indicating that it was located on an important trade-transit route.

During this period, we can observe the rapid development of urban culture in and around Termez. The city of Zartepa around Termez is one such city. Zartepa, a small settlement in ancient times, became a large city of 17 hectares in the early middle ages [2.180].

During this period, irrigation facilities will be improved and new lands will be developed. On the developed lands, at the beginning of large irrigation facilities, around the central cities, on the borders of agricultural oases, fortresses, palaces and fortifications are built. The four corners of the fortifications were fortified, and the walls and pipes were provided with several rows of arrow-pointing targets and fortifications. The thick defensive aristocratic fortresses were built by the complex socio-economic and political life of the early middle ages and served mainly as a defensive structure against external enemy attacks, a military garrison gathering place, an administrative center, and a food and weapons warehouse.

In general, castles, fortresses and fortifications are typical examples of early medieval architecture, including Zahoki Moron in the Nakhshab oasis, Shahri Vayron in Bukhara, Fir Fort in Khorezm [3. 180-181].

Several miles of thick walls were erected to protect the oases from the external enemy. These include the Wall of Doomsday with 12 gates in the Samarkand oasis, the 336-kilometer Kampirak in the Bukhara oasis, and the Kampirdevor fortification walls in the Tashkent oasis. The construction of castles was especially important in the architecture of this period. The palaces usually consisted of several rooms with 2 floors, flat roofs, domes and arches. From the 5th century, raw bricks were used in the construction of palaces and castles, as well as baked bricks [7. 94].



As for the material monuments of the Hephthalite period, it is worth mentioning the Hephthalite carved “Gemma” seals found in Tokharistan. Уларалмандинданкилинган, олдтомонибўртвамаворқатомондантекис. In front of it, below the bust of a man, are two branches in different directions. On the left is a sign of ephthalite. On the right - the inscription “Kushan letter”: “Asparobido” (cavalry chief).

In addition, the clay reliefs and carved trees found on the Jumalik hill are also unique examples of the art of the Hephthalite period. Images of people holding flowers or bouquets found in Gandhar reliefs are also of interest to people. Such images are often found in carved gems — seals associated with ephthalites. There are murals from the Early Middle Ages in Dilbarjin, Bolalik-tepa, Ajina-tepa (which was a Buddhist monastery), Kofirqala (in Tajikistan). Kalai Kofirnigan, Kalai Shodmon and others. The theme of the murals is mostly religious in nature, with the image of Childhood on top, which contains secular stories, to be excluded. Art historians have identified a number of art schools of that period. Tokharistan school: Bolaliktepa, Ajinatepa, Kofirqal'a (in Tajikistan); North Tokharistan School: Buddhist temples in Kuva and Semirish; Sogd, the school of the “western region” with monuments in Khorezm: the palaces in Varakhsha, the palace of the Ikhshids in Kakhaha (Ustrushona) and Afrosiyab (Samarkand), as well as paintings in the Tok-kala Assyrian.

It is worth mentioning the “Marv” vase (its height is 46 cm) found in the Buddhist Stupa excavations near the head of the broken Buddha in the ancient city of Marv. The vase with Sanskrit manuscripts dates back to the V-VI centuries and is a wide-angle vessel with two oval handles with small folds in the form of balls at the top. The vase is covered with pictures of the whole body, created in a light angoba and shows the way of life of an asldoza person. These scenes can be divided into four parts: the first holiday scene, the second hunting scene, the third stage - illness, and the last fourth - the funeral.

In the art of the Hephthalite period, two torevtica (metal relief) bowls found in Afghanistan (British Museum) and Uzbekistan aroused great interest. The bowl, taken from the British Museum, represents a hemisphere depicting four horsemen (from the outside) hunting wild boar, lions, tigers and wild goats. At the bottom of the bowl is a bust of a beardless man, very similar to the image in Gemma print. Another bowl was found near Samarkand (in the village of Chelak) and dates back to the V century. The bowl, which has a flat surface on the inside, is beautifully decorated on the outside. A bowl found in a bucket depicts dancers. The figure is given in full, in which the ideal of Hephthalite's beauty is depicted [4]

The term “ephthalite terracotta” refers to a group of small terracotta from the 5th to the 6th centuries and is found in large numbers in the Chaghaniyan region. These terracotta figurines depict a character called a bodhisattva with a crown-shaped hat wearing a crown for three and a half months. Such crescents are also depicted on ceramic plates in the Buddhist god Marv, who is depicted with a similar headdress by Bodhisattva, and in Buddhist paintings of Bamian, Kakraka in Afghanistan. The pottery of the early middle ages is decorated with angob, anthropomorphic and zoomorphic letters. Wavy and straight lines or a combination of them, stamped pattern was used for decoration. In the Vakhsh Valley, an anthropomorphic nalep was found in a ceramic vessel in the shape of a male head with a crown containing symbols of the sun and moon. These nalep are called Hephthalite works because the crowns of the Hephthalite kings had emblems of the moon and the sun. Later, the ceramic pattern disappears, its

appearance changes. The main medium of decor remains wavy flat concentric lines. Khorezm pottery of the V-VIII centuries was distinguished by new technological features, light angob was used instead of red, turbidity was not used, the picture disappeared. The shape of many types of vessels has also changed. Small quantities of bowls and utensils were produced, and one-handed utensils were common.

The language of the Hephthalites has not yet been sufficiently studied scientifically, as researchers have very little information about it. According to the individual words that have come down to us, they spoke Turkish, Iranian, as well as some other incomprehensible language. The Hephthalite state included territories inhabited by different peoples, so other languages were used along with the Hephthalite language. In particular, documents written in the Sogdian language found in East Turkestan have been preserved. In addition to the Sogdian language, the Khorezmian script was also widespread. In the territory of Tokharistan and North-West India the letter kharoshti was also used, in the territories connected with the Sassanid state - Pahlavi. During the Hephthalite period, as the cattle-breeding population spoke Turkish, the Turkic language began to spread more and more. During this period, a large part of the settled population spoke the Sogdian language. The Sogdian language and script reached Ettisuv, passing through Fergana to East Turkestan. During this period, the culture of writing also developed in our country. In addition to the widespread Sogdian script, Khorezmian and Hephthalite scripts were also used. These records contain many valuable writings and information about the history and destiny of our ancestors [7. 94].

Songs and epics of the Hephthalite period are also reflected in Firdavsi's famous "Shohnama". The Hephthalite script is based on the Bactrian script. According to Syuan Szyan, it consists of 25 letters, with the help of which they make words and phrases, put the letter on the page, read from left to right. [5. 78]. Such inscriptions have been found and studied in the ruins of Zangtepa, Qoratepa, Afrosiab, and Kofirqala.

Huan Jiang, who visited Central Asia in the 7th century, wrote about the Hephthalite language and script: "The language of Tokharistan is a little different from other kingdoms. The writing characters are twenty-five, they are combined with each other and form different combinations. The letter is read horizontally, from left to right. The number of literary works in the country is very large - they are more than in Sogdia ... "But, unfortunately, only small parts of the number of these works have reached us.

Monuments of the Hephthalite inscription include:

- 1) From Zangtepa (near Termez), only a fraction of the six lines have survived;
- 2) Graffiti inscriptions from Qoratepa (in the north-western part of the old city of Termez);
- 3) An example of the official inscription of the Hephthalites is from the nearby Sogdian inscription found in Afrosiyab (near Samarkand);
- 4) A poorly preserved inscription on a mural in the village of Kofirqala (Vakhsh Valley).
- 5) Small ceramic tiles with five letters in Dalvarzintepa (average course of Surkhandarya).
- 6) Manuscripts in the Ethnographic Museum of Berlin (from the Lecoq meeting in Turfan) [6.103].

The Hephthalites include stone inscriptions from Uruzgan (northwestern Kandahar) and stone inscriptions from the Tochi River Valley (northwestern Pakistan). Among the manuscript documents from Mount Mug are four documents that have preserved 205 seals. Among the latest finds from the Hephthalite period are the Bactrian manuscripts in northern Afghanistan, known as the “Arch of the Rob Ruler,” which contain material from the Kushan period to the mid-eighth century. This archive, most of which are legal documents, was translated and published by N. Sims Williams. Among the materials, three documents related to 492 and 527 are of interest, and go on to mention the taxes paid to the Hephthalite rulers in the first two years. The letter without the third document-dating, its content is of particular interest: “Sartu, son-in-law of Hwad, obod yabsu (ebodalo shabgo) of the Hephthalite people, Haru Rob (Robo haro), writer Hephthalitian owners (ebodaloho (hell) eoaggo), judge of Toharistan and Garchistan.” Many scholars try to explain the language of the Hephthalites based on the names of the Hephthalite rulers and most of their names are based on Turkic languages, but an analysis of the available linguistic material shows the presence of Hephthalite and Iranian elements. A Turkish name such as “Tegin” was used in Gandhara, Hephthalite. S. Tolstov argues that the basis of the Hephthalite language was the language of the Sako-Massaget tribes, which for centuries were under the influence of Oltoy ethnic elements, among which the Turkic language played an increasingly important role. The Hephthalite language was very close to the Turkic languages and may belong to the group of paleoturkic languages presented in the Bulgarian and Khazar languages in the Middle Ages, and to the Chuvash language at the present stage. Hephthalite Turkic language, academician V. V. Struve S. He supported P. Tolstov's commentary on the book “Ancient Khorezm”.

The state of the Hephthalites in the great region was also united by many peoples, so the religious beliefs in it also varied. During this period (IV-VI centuries) there were many religious systems and cults. Along with Zoroastrianism, which took other forms than Iran in Central Asia, Monism spread rapidly, due to the fact that the religion was persecuted in Sassanid Iran and some of its followers were forced to go to other countries, including the Hephthalite state. In Central Asian Zoroastrianism, for example, the worship of Anahita and Siyavush was closely associated with local cultures. In particular, in the 4th century, on the morning of Navruz, Zoroastrians brought a rooster to the tomb of Siyavush by Bukhara firefighters in the early morning [7. 94].

One of the world's religions, Buddhism, was prevalent during this period in the territory of the Hephthalite state, mainly in the southern provinces. According to the “Bay-shi”, there were “many Buddhist temples in the residence of the ruler of the Hephthalites, and all of them were decorated with gold.” Similar information is available in the Suishu Chronicle. Another Chinese source, “Lianshu”, reports that the Hephthalites worshiped the god of heaven (Tien Shen) and the god of fire (Huoshen). Every morning they came out of the tent, prayed to these gods, and then began to eat.

V.M. Masson, on the contrary, believes that the Hephthalite rulers did not prevent the construction of Buddhist temples. According to B.A. Litvinsky, the Hephthalite rulers carried out their anti-Buddhist policy: “Buddhist religious institutions collapsed and were looted during hostilities. In general, Buddhism was not persecuted in Central Asia under the Hephthalites, and some Hephthalite rulers supported Buddhism.” There is also information that some of the Hephthalites in India began to believe in Hinduism. Thus, in a number of Indian sources, Hephthalite King Mihirakula is recognized as one of the currents of Hinduism - in addition to

Shivaism and the construction of temples in honor of Shiva, God depicted the bull Nandi's head as a symbol of Shiva in their bodies.

According to B. Gafurov, Christianity was widespread among some parts of the Hephthalites, and in the VI century the ruler of the Hephthalites sent a priest to the Sassanid capital for the map Aba I (Christian Nestorian Patriarch of the Sassanid Empire) at the request of all Christian bishops. Moreover, he said that "in the future, under the influence of the lower population who embraced Buddhism, supporters of this religion would appear in the Hephthalite environment), but had not forgotten their gods." Evidence from the 5th century shows that in Merv (belonging to the Hephthalites for some time), Bishop was converted to the metropolitan. Merv has become one of the main centers of Nestorianism in Central Asia. There was also a Nestorian church in the ruins near Merv.

When it comes to the religious beliefs of the Hephthalite period, it is worth mentioning the religion of Monism, which emerged in the third century, Monism was widespread during this period. It is believed that the Mazdakist sect originated in a monastic environment. The ceremonial language of service for various religious denominations in Central Asia served for Christians - Syriac, for Manicheans - Parthian, for Buddhists - Sanskrit. As we can see, the Hephthalite state united with each other: Buddhism, Zoroastrianism, Christianity (mainly in the Nestorian sense), Monism, Hinduism and paganism (worship of heaven, fire) [7. 94] The Hephthalites are based on the above information, different religious views. Due to the contradictions of the sources, it is very difficult for them to talk about the dominance of any religion.

Thus, the religious views of the peoples of Central Asia in the V-VI centuries BC were associated with the religious beliefs of Zoroastrianism, Buddhism, Christianity and Monism. Fireworks associated with Zoroastrian traditions of the IV-V centuries were found and studied in Erkurgan in Kashkadarya, around Panjikent, in the Bukhara oasis. In all of them there are ossuaries (astadons) associated with Zoroastrianism. According to researchers, Zoroastrianism was practiced in the central and northern regions of Central Asia during this period, while Buddhism was prevalent in the southern regions of the region. Temples of Buddhism were found and studied in Qoratapa, Fayoztepa (Termez), Ushturmullo (Kobadiyon), Ajinatepa, Gishttepa, Qalaikofirnihon (Tokharistan), Merv. Remains of a Christian church and a cemetery where Christians are buried have been excavated from Govurkala. There are reports of the spread of Christianity in some areas of Sogdia (Samarkand and Panjikent) [8. 183].

The religion of Monism was mainly practiced by the people of East Turkestan and partly by the Chaghaniyan and Sogdian peoples.

In the V-VI centuries, the creation and worship of ceramic statues of fine arts-ceroplastics-goddesses, which are inextricably linked with religious beliefs and imagination, became widespread. Ceramic figurines vary by region and also differ in terms of clothing, facial expressions, and jewelry.

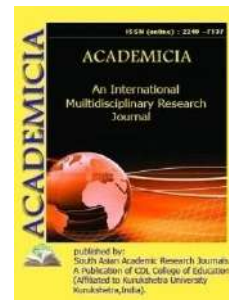
In the early Middle Ages, the art of the peoples of Central Asia was interpreted through murals, sculptures, various jewelry. The murals were found and studied in Dilbarjin (Afghanistan), Varakhsha, Afrosiab, Panjikent, and in Kuyavkurgan, Vakhsh oasis, Afghanistan, in Erkurgan, statues and jewelry of different sizes were found and studied. In general, the rich ornaments, pottery, metal vessels, murals, and even images on clothing testify to the development of fine arts in Central Asia during this period. [8. 183].

In short, during the Hephthalite period, the people of our country tried to create and enjoy a rich cultural and spiritual way of life. At the same time, they have left a worthy mark for future generations, as evidenced by the many unique finds and artifacts found in various regions of their time. In particular, the architecture of this period reflects the changes in the social life of the peoples of Central Asia, and the emerging category of landowners built large fortresses in different parts of Central Asia, surrounded by protective structures. Such castles are often built on natural hills in the oases. Such fortresses were found and studied in Khorezm, Tokharistan, Sogd, Ustrushna, Merv. In architecture we can see that stone, cotton, raw brick and wood were mainly used as building materials. The material and partly spiritual culture of the Hephthalite state is reflected in many archeological monuments located in different regions of Central Asia. Remains of ancient cities, castles, settlements, irrigation structures and irrigation systems show the development of the economy in the Hephthalite state. Thus, we can say that the Hephthalites played an important role in the ethnogenesis and statehood of the peoples of Central Asia, Afghanistan, India, Pakistan and East Turkestan.

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DOI: **10.5958/2249-7137.2020.00696.5**

## **SOCIAL SOLIDARITY: THE HISTORY OF THE DEVELOPMENT OF SOCIOLOGICAL THOUGHTS IN CENTRAL ASIA AND UZBEKISTAN.**

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### **ABSTRACT**

*This article analyses the history and social processes taking place Central Asia. The development of social solidarity in the traditional Eastern society and the emerging transition to the model of Uzbekistan based on the principles of interaction with civil society are discussed. The author analyzed the factors and conditions of social solidarity development. Social solidarity itself is interpreted as a factor in the development of national statehood. Uzbekistan is increasingly becoming the initiator of unification and solidarity of states and societies throughout Central Asia and the East. The article deals with the research work and research of scientist-researchers on the social and philosophical issues about the nature and principles of establishing social unity in society. The given article makes it possible to get a more complete and profound understanding of the structure and essence of the basic institutions of modern society.*

**KEYWORDS:** *Social Solidarity; Socio-Philosophical Views, Ideal Society, Humanism, Solidarism, Independence, Relationship, Harmony, Spiritual Development, National Morality.*

### **INTRODUCTION**

The actuality of the research topic is explained by the need to search for new incentives and mechanisms for uniting the masses of people freed from the path of totalitarianism, who have acquired state sovereignty in the conditions of strengthening the principles of a new ideology, free from the one-sidedness of class priorities.

Thinkers of all times sought to find a way to strengthen society, overcome its economic troubles, political instability, and spiritual impoverishment. Many philosophers and sociologists saw a way out in the solidarization of society, in reducing conflicts – class, ethnic, confessional, etc., in



finding the ground for unity, the principles of cohesion. The ideas of social cohesion, joint creative work, unity for the sake of the future are reflected in the Holy books "Avesta" and "Koran", in the brilliant work of Abu Nasr Farabi "Treatise on the views of the inhabitants of the virtuous", the works of Abu Rayhan Beruni, Ahmad Yassawi, Ibn Khaldun, in the Works of Alisher Navoi "Hamsa", "Khairatul - Abror", "Saddi Iskandari", the poetry of Bedil, Mashrab, Furqat, AVAZ Otari, works of Ahmad Danish, representatives of jadidism and many others.

The beginning of the twenty-first century was marked by the affirmation in the public consciousness of the axiom that despite the existing and existing national, geographical and temporal differences, the peoples of all regions of the world, are United in their aspirations – to common social progress, to a society in which there are relations of justice and mutual support that ensure human happiness. These aspirations of humanity were reflected in the works of all the outstanding thinkers of the past, both in the West and in the East. Diverse and numerous projects perfect social device in which priority is given to ideas of unity, brotherhood, the solidarity of individuals and peoples, can be found in the works of Aristotle, Plato, "Treatise on the views of the inhabitants of the city" Farabi, in the "Spiritual city of the Pure Brethren" ("Ikhwan as - Sappho"), "Perfect castle" Ibn Badji, the "Virtuous city," Ibn Rushd, the concept of understanding Ibn Tufala. This is no accident. The fact is that in the Muslim world of that time, a noticeable degree of religious tolerance was achieved, which allowed, along with other factors, to ensure General cultural progress through the interaction of various political, religious, economic, scientific, and community traditions – Arab-Muslim and Arab-Christian, Turkic-Muslim, Iranian-Islamic, Zoroastrian, Jewish, Euro-Christian, and so on. This cultural situation naturally determined special attention to the idea of solidarity, which immanently occupies a leading role in socio-political reflection, in the desire to understand the essence of society, power, the possibility of their positive structure, the role of spirituality and moral principles in it, because the achievement of human happiness, which was preached by many thinkers of that time, religious and secular, is unthinkable without unity, combining efforts and labour in any activity of people. "Happiness" is one of the main categories used by Abu Nasr al-Farabi and Abu Ali Ibn Sino. To achieve it, in their opinion, it is necessary to unite at least two people. But each person has many faces; by taking on new social roles, he brings complexity and diversity to this relationship. Therefore, the joint comprehension of truth and happiness is necessary. And it is not secured once and for all by any ritual or eternal formula, nor can it be secured by unquestionable authority, although, for example, Farabi [1] appealed to the activity of the ruler. The main conclusion of Muslim philosophy is that unity is difficult but achievable. Achieving happiness as the goal of human existence is possible only if the principles of cosmic harmony and unity are implemented in society. According to their ideas, it is possible to design a harmonious human world only by knowing the harmony of the world and its components. What unites people, what preserves society, for what purposes do different States, peoples, and individuals converge, so unlike each other? – These are the fundamental questions of the Muslim "practical philosophy", which was based on a kind of sociology. Various social groups United in an ideal society achieve happiness in cooperation and mutual assistance – this is the humanistic ideal of the best representatives of the Muslim worldview.

This is most fully manifested in the socio-philosophical views of Abu Nasr Farabi, described in the book "on the principles of the views of the inhabitants of the ideal city". It is the first time in the history of philosophical thought that the problem of the necessity of unity and binding

connection between people ("irtibat") is presented so systematically and consistently. For example, in the final sections of the Book, Farabi writes about how the foundations for unity are formed, what causes the need for solidarity in an "ideal society", how it is possible, what is the order of its ("ideal city") parts, what are the varieties of order in ideal cities [2].

Farabi distinguishes between several varieties of "irtibat" [4]. For example, it considers the "concept of antipathy". According to it, "there is no mutual love or connection between people – either by their nature or by their will, but the hatred and antipathy of each to the other; and two are United only by necessity, converge only in need." There is also an opposite concept - "sympathy", according to which people cannot do without each other's support, without trust, without mutual assistance, without which it is impossible to "unite hands" that can ensure victory over enemies and their protection.

The main connection and unity, according to the philosopher, the form of their approval can be an oath, a Union agreement, similarity of languages and customs, common forms of life and interests. Farabi, analyzing the various "irtibat", believes that it is necessary to understand and take into account not only the connections but also the differences between people. Only the unity of connections and differences, their balance, can ensure true unity (solidarity) in the city, "whose inhabitants help each other to achieve the highest happiness." People are different, but this leads to the creation of equality (this concept has the meaning of "matching", not "equalization"). Compliance with their social roles is a solid foundation for people's interaction in society. Farabi formulates the cardinal idea of his understanding of solidarity: people can achieve the highest happiness in an ideal city, where such a form of relationship ("irtibat") is established, which is characteristic of the relationship between a teacher and a student.

The agreement of the teacher and the trainee, the presence of a common goal, common aspirations ensure the dynamism of relations, consolidates the joining of efforts to achieve the highest happiness - the "goal of human existence" [5]. Farabi pays special attention to what hinders solidarity and prevents unity. "Ignorant cities" are such that they do not correspond to the goals and aspirations of people. Meanwhile, "an ideal city is like a perfect, healthy body, all the organs of which help each other to preserve the life of a living being and make it the most complete."

However, to understand Farabi simplistically, to see in these arguments a certain biologization would be incorrect. The fact is that the "City" is also a cosmic beginning. Harmony is needed between people, nature, and the cosmos because only it can ensure the achievement of the "highest goal". Unity, then, is not only a means but also an end.

This idea was picked up and took a significant place in the work of Alisher Navoi, who put a lot of effort to ensure the unity of people, the establishment of humanism. A. Navoi wrote: "If a person is alone, isolated from others, then he does not have human qualities, there are no human professions and cannot be. How can a single person be considered a person? Just as one hand does not produce cotton, a man outside of society, outside of an epoch, cannot be what he is. [6]" And if the great Amir Temur teaches that "strength is injustice", then Alisher Navoi adds that justice is multiplied by unity: "The deeds and character of the subjects," the poet and statesman notes, "of the people subject to the Shah are the same as the deeds and character of the Shah. If the Shah performs just deeds and this is what he has chosen as his profession, then his population, imitating him, is corrupted. The sages call the Shah a large, full-flowing river. Filed

– branches of this river. What properties and qualities do branching waters have? If the first is sweet, then the waters of the ditches are sweet; if the first murky, then muddy, and second; if the first clean and second clean. [7]" The ideas of humanism, solidarity, and justice are clearly expressed in the following lines of the poet: "If you are a man, do not call a man who does not care about the fate of his people. [8]"

The thought of Mirza Abdukadir Bedil [9] is in tune with this: "spikelet give the basis and eternal perfection to the Grain; scattered people have become stronger by living together, together."

All these and many other ideas and reflections of philosophers and scientists of the East are in tune with the understanding of solidarism, which in today's conditions has acquired a dominant position in the works of modern scientists of Uzbekistan. It should be noted that this was largely facilitated by the speeches, books and writings of the President of the Republic of Uzbekistan I. A. Karimov, which were of particular importance for an objective understanding of the role of solidarism in strengthening the independence of our country. At the same time, in the study of this problem, the most important methodological principle is the dialectical approach, which not only reveals the contradictions of spiritual development in the conditions of independence but also makes it possible to overcome them. In this regard, we agree with the opinion of A. K. Valiev [10], who States that "the study of dialectical contradictions, especially in the spiritual sphere, is now becoming very relevant in the conditions of deep transformations in the life of our society." This approach is the key to solving the problems of strengthening solidarity between peoples, social strata and groups in our Republic. Various aspects of the problem are thoroughly studied by our scientists and have become the subject of their serious research. Among them, we can point to the writings of the above-mentioned A. K. Valiev, K. H. Hanatarou, H. P. Pulatova, and others. Thus, H. p. Pulatov [11] was one of the first among our scientists to study the role of national ideology for the formation of a new independent state in our Republic. In many works of the scientist, solidifying guidelines of the new ideology, spirituality and morality is defined.

In modern conditions, the appeal of the ideas of unity, cooperation, consent, cooperation increases, which reflect various shades of solidarism, form the basis of a new type of state, which becomes the main initiator of the arrangement of society based on new economic, political and social relations. These issues are most thoroughly studied by A. M. Jalalov, R. Z. Dzhumaev, S. Zh. Juraev and others [12]. The increasingly solidifying democracy, adjusted by the Uzbek national mentality, is studied in connection with the ideas of national peace and justice, and religious tolerance.

Reviving spirituality, national morality, universal and national values, the best features of regional psychology that integrate the people's commitment to solidarity and are studied in the works of H.O.Shaikhova, A.M. Yunusov, K. N. Nazarov and others [13]. Thus, many aspects and social roots of solidarism are studied from the spiritual revival of the peoples of Uzbekistan, strengthening their cohesion in modern conditions. However, in these works, the problem of solidarism is not the subject of special analysis. All this will help to better understand and correctly define the features of functioning, the structure of social solidarity at the level of social policy and independent national consciousness, to identify its essence, to outline its inherent forms and the originality of its manifestation in the conditions of a renewed Uzbekistan.

The tragic experience of the USSR proved this with all the evidence. We cannot but agree with the idea of some scholars that if equality and individualism are the universal characteristics of

democracy in the West, then in Asian societies with existing traditional hierarchies that permeate all social and spiritual structures of society, the chaotic individualism of Western democracy is rejected as an alien body.

Solidarism combines the valuable aspects of both individualism and collectivism. First, solidarism proceeds from the unconditional recognition of the self-worth of the human person, its right to free creativity. In contrast to individualism, he understands this freedom not as an outwardly limited arbitrariness, but as self-restraint, when the creation of evil is hindered not only by legal law but also by his conscience. Not negative and irresponsible freedom "from", but positive, responsible freedom "for" serving higher values is true freedom.

The priority of individual rights, which is set out in the Constitution of independent Uzbekistan, implies that the realization of these rights is aimed not only at satisfying one's own needs, but also at increasing the wealth and authority of the Motherland and the prosperity of its people.

Secondly, solidarism understands society not as an impersonal collective or as a mechanical community of individuals, but as a special organic whole, as a kind of transpersonal organism. At the same time, the individual is not thought to be completely included in society, but to be part of it. The inner intimate essence of the personality, its self-consciousness, with the resulting acts of creativity, conscience, etc., must be beyond public control.

Thus, we can say that solidarity here acts as a principle that is necessary to establish what should be guided in life and education to put a person on the path of progress and development. And this principle is very necessary for the normal functioning of society, especially in times of transition, because solidarity is one of the main manifestations (along with service to society and freedom) of social life, the functioning of the social organism, constituting the very social connection between people. The principle of solidarity, which follows from the ontological unity of "we", assumes that the social connection consists of "small unions" and associations, where the unity of the whole is directly based on the living closeness between specific people, on the relationship of people. It should be noted that the Uzbek people have such powerful solidarity mechanisms as the family and the mahalla, which are the main pillars of our mentality, allowing us to cope with many problems of the current transition period, to preserve continuity in the process of negating the old and creating the new.

It is taking into account the experience of the past in this process that is one of the powerful factors for strengthening independence [14]. Therefore, all this should be taken into account when reforming society and its management system. Thus, the ideas of social solidarity in the conditions of independence have not only a historical and philosophical meaning, theoretical and cognitive significance but also pass into the practical plane associated with the management of the state.

## CONCLUSION

Based on the analysis of the concepts of social solidarity of philosophers and sociologists, we can conclude: first, solidarity is a necessary element of the social organization of the masses of people, whose form of existence is public consciousness, implemented in state policy; second, solidarity is a universal phenomenon that combines the idea of social justice and freedom of the human person with the idea of the public advantage; third, solidarism, in a certain sense, can be considered as a socio-political doctrine in the perception of social progress. At the same time, it

is necessary to take into account the positive (but also negative) role of unity and struggle of opposites in social development, to emphasize the moments of cooperation and connection of social subjects. For the original idea of solidarism is harmony between people. In other words, solidarity is a law whose violation leads to destruction, chaos, and crisis. In modern society, the processes of disintegration lead to economic, socio-political, and spiritual conflicts, and it painfully develops new ideas, norms, and values. It requires a new level of solidarity, on which the social calm and harmony of the various social forces of our time are based.

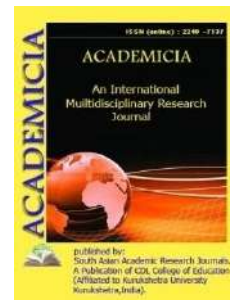
Fourthly, we can see that despite the different interpretation of the nature of solidarity and the system of its functioning, all the mentioned scientists, philosophers, sociologists agree on the main thing: solidarity is a set of socio-spiritual factors that determine the unity of people in solving problems of social development. It does not mean spiritual identity at all; it is consent, cooperation in the name of social progress, the achievement of common goals. The living personal connection between people, the awareness of the solidifying essence of all social institutions, their representation and embodiment in concrete individuals is what preserves and maintains the vital unity of the social whole. The closeness of man to man, understanding and direct respect for each other, the presence of sympathy, unanimity, guarantee a truly stable and lasting unity of social life.

This is the social essence of solidarity and its significance in the functioning of social relations.

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DOI: **10.5958/2249-7137.2020.00720.X**

## AN ARTICLE ON RELEVANT TECHNOLOGY EDUCATION CURRICULUM FOR MANPOWER DEVELOPMENT TO USE IN SUSTAINABLE POVERTY ALLEVIATION.

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### ABSTRACT

*The purpose of this study was to investigate whether the present curriculum being used to the development of technological manpower in our technical colleges is relevant, adequate in content, effective and enough to make the recipients self-employed for sustainable poverty alleviation. A total of 50 respondent comprising 20 technical teachers and 30 final year students from technical colleges formed the sample of the study. A set of questionnaire was used for data collection while the target population was all teachers and students. A total of three research questions were and simple percentage was used to analyze the data collected. The findings revealed that, the currently used curriculum in technical colleges is inadequate, not very relevant, no enough time for practical and cannot earn the products self-employment for sustainable poverty alleviation.*

**KEYWORDS:** curriculum, self-employment, alleviation

### INTRODUCTION

No meaningful progress can be made by any aspiring nation to become a technological giant without the initial step of developing an efficient and reliable labour force. During the colonial era when Nigeria was in the hands of her colonial master, a lot of notable establishments were put in place for the training of able-bodied Nigerians for manpower development in special trade areas. Such private sectors include among others, the then Electricity Corporation of Nigeria (ECN) which metamorphosed into National Electric Power Authority (NEPA), the Post and Telegraph now Nigeria Telecommunications Limited (NITEL) just to mention but a few (Akaninwor, 1992).



It is also worthy of note that in 1895, the Hope Waddel Training Institute in Calabar, Nigeria was established primarily for the training of men for employment in the society. In addition, the Yaba Trade Centre, which is now Yaba College of Technology, was established in 1984 including several others in Nigeria for the development of middle-level manpower for the world of work.

As a follow up, the Federal Government of Nigeria through Decree No.47 established the Industrial Training Funds (ITF) as an organ of government for the purpose of training students on the job-training and re-training of both students and staff of various training Institutions. In 1977, the Federal Government established the National Board for Technical Education (NBTE) through Decree 9 for the purpose of co-ordinating technology education programmes in Nigeria.

Nigeria as a developing country with over 100 million people, one cannot definitely ascertain the number of unemployed graduates or school leavers. As the growing uncertainty in the labour market continues, unabated with more and more graduates without the necessary employable skills being turned out yearly, one then tends to ask the question, where and when would these graduates be employed?

It is a fact that, the now so-called developed nations in the world today did pass through this hectic situation for some decades before arriving at a reasonable lasting solution but when will that of Nigeria come (Puyate, 2002)?

According to Agbionu (1991), education being a social service is prone to modifications and constant review if it is to bring about the desired change.

Manpower development generally is a factor, which no serious nation can afford to ignore. A sound skilled manpower based development is the bedrock for sustainable poverty alleviation. Both Federal and State governments at different times made serious efforts to engender the development of manpower necessary to enhance the nation's industrial aspirations.

According to Tudunwada (1984), Nigeria is naturally endowed with tremendous human and material resources, but there is no gainsaying of the fact that the country has not yet got all that is necessary to make her fully developed industrially".

Technology education covers the process of producing skilled manpower, craftsmen, technologists and scientists. The International Labour Organization (ILO), defined technology education as that which involves all activities which essentially aims at providing the skills, knowledge and attitudes required for employment in a particular occupation, group of related occupations or a function in any field of economic activity inducing agriculture, industry, commerce, catering, tourism, engineering, public or private services etc.

According to Ukaha (1986), for technological education; manpower development, and self-reliance, Nigeria requires essential skills for survival in the 21<sup>st</sup> Century. For Nigeria as a developing nation to survive in the light of the above, she needs to develop a strong employable, skilled manpower development programme different from the present orientation for sustainable poverty alleviation. Poverty can only be alleviated when there is a means to sustain it. Thus, the only means is to empower the citizenry is through employable skills' acquisition programme in the formal way through the proposed suggested skills acquisition innovation.

In his opinion Puyate (2002), stated that for any nation to develop technological and industrially, she must have well trained and capable manpower and that this training ranges from craftsmen to engineers.

Curriculum has been defined as the total learning experiences presented to the learner as a deliberate, systematic and planned attempts by the school to change his behaviour (Onwuka, 1981).

In this paper, curriculum is specially limited to the area of technology education. As earlier stated, it is an area of education in which the recipients acquire a level of applied and manipulative skills, and basic scientific knowledge that will enable them understand the world of technology and the society better.

According to Aremu (1986), the effectiveness of any curriculum can be evaluated in terms of its suitability, relevance and adequacy. A technology education curriculum is ascertained useful and relevant if it meets the needs and aspiration of the trainer and trainee. Hence, the relevance of the technology education according to Aremu (1986), is that of practicability, applicability and functionality if manpower development through relevant technology education for sustainable poverty alleviation is to be achieved.

### **PURPOSE OF THE STUDY**

The purposes of the study are to:

1. Ascertain the degree of relevance of the present technology education curriculum for manpower development and sustainable poverty alleviation.
2. Investigate the adequacy of the present technology education curriculum for employment and sustainable poverty alleviation.
3. Determine the effectiveness of the products of the present technology education curriculum in employment for sustainable poverty alleviation.

### **RESEARCH QUESTIONS**

For the purpose of this study, answers to the following research questions were sought.

1. What degree of relevance exists in the present technology education curriculum for manpower development and sustainable poverty alleviation?
2. What level of adequacy exists in the present technology education curriculum for manpower development and sustainable poverty alleviation?
3. What level of effectiveness exists in the products of the present technology education curriculum for employment and poverty alleviation?

### **RESEARCH METHODOLOGY**

#### **POPULATION OF THE STUDY**

In this research study, two groups of respondents formed the target population;

- i) Teachers of technology education in Technical Colleges, in Rivers State.
- ii) All final year students of technical colleges in Rivers State

### SAMPLE OF THE STUDY

From the target population a total of 20 technology teachers and 30 final year students were sampled for the study.

### INSTRUMENT OF THE STUDY

The instrument used for the study was a simple questionnaire, which comprises four sections. The first section requested for the personal data of the respondents while the second section comprised items, which sought to find out the degree of relevance of the present technology education curriculum. The third section also consisted of items that deal on the adequacy of the curriculum while the fourth section dealt on the effectiveness of the curriculum as it relates to employment.

### TECHNIQUE FOR DATA COLLECTION AND ANALYSIS

The questionnaire was administered personally to the respondents.' A total of 50 copies of the instrument were filled and returned which represents 100 percent return. Simple percentages were used to analyze the data collected.

### RESULTS AND FINDINGS

**TABLE 1: DEGREE OF RELEVANCE OF CURRICULUM FOR MANPOWER DEVELOPMENT**

Response Options	Number of Respondents		Total Respondents	Development Percentage %
	Teachers	Students		
Very relevant	6	4	10	20
Relevant	2	6	8	16
Not relevant	0	8	8	16
Enough practical	4	2	6	12
Little practical	8	2	10	20
No practical	-	8	3	16
<b>Total</b>	<b>20</b>	<b>30</b>	<b>50</b>	<b>100</b>

Source: Field Report, 2012

The above figures in Table I show that 12(20%) of the 50 respondents indicated their opinion that, the present curriculum is very relevant, 8(16%) indicated relevant, 8(16%) indicated not relevant, 6(12%) indicated that there is enough practice, 10(20%) indicated little practical work is done while 8(16%) finally indicated that no practical is conducted. This means that, the present curriculum is relevant for manpower development but enough time is not given for practical. Thus, the implication of this is that, students do not gain enough employment skills for sustainable poverty alleviation.

**TABLE 2: LEVEL OF ADEQUACY OF TECHNOLOGY EDUCATION CURRICULUM**

Response Options	Number of Respondents		Total Respondents	Development Percentage %
	Teachers	Students		
Very adequate	4	-	4	8
Adequate	10	2	12	24

Inadequate	6	28	34	68
<b>Total</b>	<b>20</b>	<b>30</b>	<b>50</b>	<b>100</b>

Source: Field Report, 2012

Results from Table 2 above indicate that 4(8%) out of 50(100%) indicated that the curriculum is very adequate, 12(24%) indicated adequate while 34(68%) indicated inadequate. The above findings therefore suggest that, the presently being used technology education curriculum is inadequate in content and cannot meet the demands in manpower development for sustainable poverty alleviation.

**TABLE 3: EFFECTIVENESS OF THE CURRICULUM PRODUCTS AND SELF-EMPLOYMENT**

Response Options	Number of Respondents		Total Respondents	Development Percentage %
	Teachers	Students		
Very adequate	2	-	2	4
Adequate	9	4	12	24
Inadequate	10	26	36	72
<b>Total</b>	<b>20</b>	<b>30</b>	<b>50</b>	<b>100</b>

Source: Field Report, 2012

Results from Table 3 above indicate that 2(4%) out of 50(100%) respondents strongly accepted that the current curriculum being used for instruction is very effective while 12(24%) indicated effective and 36(72%) vehemently opined that the curriculum is ineffective thus not for self-employment.

## CONCLUSION

From the study, it is evident that, the presently used curriculum for the production of technical manpower for the nation is relevant as indicated by the overall result in Table 1 but that there is little or no time for effective practical. The results also indicated that, the content of the present curriculum is inadequate in content as regards practical or skills acquisition aspect with 34, (68%) out of 50(100%) response while in Table 3 the respondents strongly affirmed that the curriculum is ineffective as 36(72%) indicated their response. Manpower development is a very important aspect, which any meaningful administration cannot overlook or ignore. It is the wheel that moves the progress of the nation. The problem associated with the present curriculum is lack of enough time for practical, which is the bedrock for self-employable skills in manpower production for sustainable poverty alleviation.

## RECOMMENDATIONS

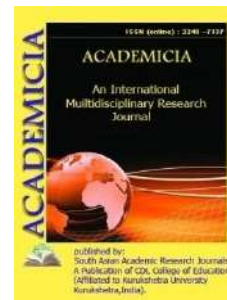
Based on the findings of the study, the following recommendations are made:

1. As a matter of urgency, the time for practical work should be increased weekly as to enable students acquire more practical skills.
2. Government should enact a policy called College — Industry Link Policy which will enable each student each day to spend half of his/her time in the school for theoretical work while the remain half time should be utilized in the students' proposed employment environment for enough practical skills acquisition.

3. Federal Government should urgently urge ITF to carry out its functions for both teachers and students alike.
4. Colleges should adopt students' projects teaching method in instruction for more skilled manpower development.
5. Government should provide more equipment, materials, and funds to schools for practical as obtainable in the industry so that the learning environment will look the same as the working environment.

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DOI: **10.5958/2249-7137.2020.00767.3**

## **SOME FEATURES OF ARCHITECTURE AND CONSTRUCTION IN THE CONDITIONS OF UZBEKISTAN**

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### **ABSTRACT**

*The article describes the general method of development of the architecture of Uzbekistan in the Soviet period (1917-1977). For a more accurate explanation of its specifics and significance, we refer to some features of architecture and construction (building materials and construction base, seismic, climate, internal and national factors). etc.) this not only affects the general nature of the architecture but in some cases serves as a source of significant problems in the planning and development of cities and villages of the republic.*

**KEYWORDS:** *Basic Building Materials, Industrial Design, Industrialization Of Construction, Industrialization, Large-Scale Socialist Construction, Mass Communal And Individual Construction.*

### **INTRODUCTION**

The main traditional building material of Central Asia in general and Uzbekistan, in particular, is loess in the form of broken clay - grouse, raw and burnt brick, clay - frame dam. In the use of this material, folk architecture has achieved great perfection, as evidenced by the world-famous architectural monuments, and the unknown buildings of many settlements and villages. With the universal use of brickwork and not only for walls, but also for vaulted floors, flat wooden floors were also used in construction, but the wood was used limited. There are few timber products in Uzbekistan, and they are mainly imported. To some extent, the absence of forest was compensated by reeds and products from it (chia, bordans). The main astringents were mainly clay (loess solution) and gypsum. With the growth of productive forces, from about the end of



the 19th century, this set of materials is replenished with imported rolling metal, and the use of lime also increases significantly.

## **MATERIALS AND METHODS**

Actually, with this raw material base, Uzbekistan approached the beginning of World War II. And although long before the war, already in the years of the first five-year plans, major socialist construction began - the construction of cotton and oil and fat plants, several large industrial complexes, in the construction of which metal, concrete and forest were widely used, all this raw material was imported. In the residential construction of new socialist cities (such as Chirchik), and in Tashkent, where the general reconstruction of the city began, the leading materials were burnt bricks, imported forests, cement and local lime, and the industry of local building materials - brick and lime factories, quarry - was very weak, semi-obsolete and barely met growing needs. Actually, with this raw material base, Uzbekistan approached the beginning of World War II. And although long before the war, already in the years of the first five-year plans, major socialist construction began - the construction of cotton and oil and fat plants, several large industrial complexes, in the construction of which metal, concrete and forest were widely used, all this raw material was imported. In the residential construction of new socialist cities (such as Chirchik), and in Tashkent, where the general reconstruction of the city began, the leading materials were burnt bricks, imported forests, cement and local lime, and the industry of local building materials - brick and lime factories, quarry - was very weak, semi-obsolete and barely met growing needs.

Thus, by 1945, Uzbekistan had a formed industry of basic building materials - brick, cement, metal, gypsum and gypsum products, partly roofing materials (asbestos and roll). The tree was completely imported; it was not enough since it was required a lot for formwork in the manufacture of structures. In rural construction, in the construction of small towns, as well as in mass individual construction, local building materials, adobe and cheese structures prevailed. In 1945 - 1955. Mainly low-rise construction was developing: from one or two (residential buildings of 148, 210 series, etc.) to four floors of residential buildings on individual projects, school construction). The structural design of the houses of this period is simple: Foundations and walls made of fired bricks on complex mortar, ceilings - on wooden beams with wooden shielding, floors - wooden, stairs - wooden or from piece reinforced concrete steps on metal, rarely reinforced concrete kosour, roofs - slate or from wavy asbestophanera on wooden rafters. Distinctive features of the constructions of this period were economy and scrupulous selection of sections of metal and wooden elements in full accordance with the differentiated actual loads. However, during these years a course was already taken towards the industrialization of construction; mechanization was introduced at construction sites - to help the Pioneer crane, conveyors, mortar pumps, and native forests were replaced by inventory ones. At advanced construction enterprises, an active struggle was launched to increase labour productivity, to save primarily forests. Instead of a brick and in addition to it, enlarged and more efficient three-void slag blocks (Stirns type) began to be used; wooden beams are replaced by prefabricated reinforced concrete, wooden roll - gypsum or gypsum reed blocks.

Finally, in 1953, the first series of four-story houses (ТЖ-1) with brick elements of floors, stairs and terraces (Uzgosproekt) was developed in Uzbekistan. These products were based on the all-Union normals of ribbed plates (ribs up) with refinement due to seismic and climatic conditions. The same series provided for the use of enlarged blocks of smoke and ventilation channels made

of heat-resistant concrete and enlarged gypsum partitions in wooden bandages, with a height from floor to ceiling, instead of the Trim type plates used at that time, as well as panels of that equipment. In 1955-1965 appropriations for the construction of the number of industrial facilities in Uzbekistan were increased. This, on the one hand, intensified the introduction of industrial products, on the other, increased the share of construction of residential buildings up to four to five floors high and large public buildings. The release of ribbed slabs was unfolded with ribs upwards, and then multi-cavity planks, stairways, large wall blocks of brick and concrete. Not without "overlays". For example, plants were purchased and installed for the production of multi-cavity decks such as the Combine, which later turned out to be unsuitable for construction in seismic areas. The fascination with "Fashion" for coarse concrete has entailed weighting and deterioration of heat engineering properties of walls; have not found a use for large brick walls and vibratory brick panels.

At the same time, one of the main shortcomings of industrial production manifested itself: in the name of unification and reduction of the number of product types, the detailed differentiation of products in terms of load-bearing capacity has been abandoned. If, for example, earlier beam slabs could be made under different payloads, now it was necessary to use only one or two gradations of decks, naturally, the overrun of metal at mass construction was significant. At the same time, the development of a new series of factory-made houses (I-Uz-500) with walls made of ceramic concrete panels was carried out. In the years 1960-1965. Projects of schools, kindergartens and other public buildings of frame construction with prefabricated floors, stairs and hinged large-panel walls were developed and the production of these products was established. As a result, by 1965. The use of prefabricated structures in the civil construction of the republic reached 20 - 30%, and in Tashkent - 50 - 60%.

In the next period, the construction base continues to develop and improve. Construction facilities are continuously supplied with high-quality cement, reinforcement, steel and aggregates. If earlier cement was imported from other republics, then with the construction of the Akhangaran plant, Uzbekistan fully provided its needs for cement. The production of a new for Uzbekistan, very effective building material for the production of reinforced concrete - expanded clay, which is made based on the Angren glieges and other deposits, was organized. Prefabricated reinforced concrete plants were built in most regional industrial centres, the nomenclature of manufactured products expanded. Uzbekistan is one of the republics where the national characteristics of domestic and family life are especially pronounced, even in cases where the social basis of social relations has completely changed. The best national traditions and national features of the Uzbek people not only do not die off but also strengthen and enrich the spiritual culture of the nation. To a large extent, they are reflected in everyday life and public life, making appropriate requirements for the architecture of residential and public buildings. The influence of national characteristics can be traced, for example, by comparing mass communal and individual construction. Although in both cases there is a process of "Europeanization" of housing, in the first case it is determined by standards and, as a rule, does not take into account national characteristics, in the second - the process goes "from below": national features are supplemented by the advantages and amenities of modern household appliances. Thus, the question of taking into account national circumstances has become a special and important problem that needs to be solved.

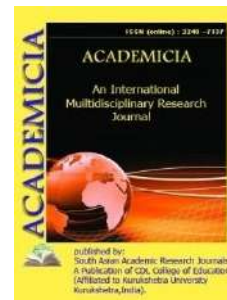
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## CONCLUSION

Today we are equal to the best examples of modern architecture and try to understand that the new brings time to the understanding of beauty, convenience, the longevity of works of architecture. At the same time, we conclude that some of the surviving buildings of the functional architecture of the 20-30s, and the stage of mastering the national architectural heritage of classics in the pre-war and post-war years, restructuring of our architecture following the requirements of industrialization of construction - all these periods unite that, that architects did not break ties with the figurative and artistic foundations of architecture, solving in different ways the problems of expressiveness of the appearance of residential and public buildings. And if today, with the scale and pace of construction increased many times, we look back on the path travelled over 70 years by the Soviet architecture of Uzbekistan, then regardless of the style characteristics of the existing development, we should note the fruitfulness of the search in creating an understandable, large-scale architectural environment, in industrializing the appearance of each street, square, building. Many outstanding problems remain in the field of industrial architecture. Despite some successes of Uzbek architects in this field, it must be noted that there is still little creation of progressive in terms of technology and function and at the same time architecturally expressive industrial structures and complexes. The role of the architect in industrial design is still insufficient. Such general creative problems of modern architecture as the formation of an architectural image, national identity, the problems of the interconnection of city monuments, as well as the synthesis of urban art, as well as the synthesis of art and architecture continue to be relevant both in theory and in practice. The turning point in the development of the country, Uzbekistan, the acceleration of this development on the basis of the wide introduction of the achievements of scientific and technological progress will require the architects to exert all creative forces and aspirations in order to increase the level of architecture, the quality of construction, and achieve the identity of our cities and villages.

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DOI: **10.5958/2249-7137.2020.00766.1**

## VALUE OF GEODETIC WORKS IN CONSTRUCTION OF HYDROTECHNICAL STRUCTURES

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### ABSTRACT

*This article discusses the specific procedure for conducting geodetic measurements in the construction of hydraulic structures, as well as the procedure for geodetic measurements in the construction of new hydraulic structures. The development of Geodesy in our country is one of the most important areas in the implementation of this work. Today, the need for geodetic monitoring of hydraulic structures is growing. To meet these requirements, you will need to rely on geodetic points. The mountainous part of the country is gradually washed out by river waters (in mountain rivers, as a rule, lower erosion, lateral erosion of flat rivers is strong), on the contrary, rocks are deposited on the plain. According to Mashrapov, 309 tons of Naryn and 664 tons of soybean per square kilometre. The absolute amount of displacement of a building or structure is understood as the absolute amount of horizontal displacement with part of their foundation. These shifts are detected with respect to fixed geodetic markers installed further from the structure.*

**KEYWORDS:** *Geodesy, Hydraulic Construction, River, Riverbed, Discharge, Level, Picket, Outline, Profile.*

### INTRODUCTION

Today, at the initiative of the President of the Republic, the large-scale construction of modern housing and the formation of appropriate infrastructure in the villages of the country on the basis of exemplary projects is a vivid evidence of attention and concern for further improving the quality and standard of living. The scale of such good deeds is increasing every year. This work is based on the development of agriculture, as well as the construction of hydraulic structures that will help the next generation live in modern housing. The development of Geodesy in our

country is one of the most important areas in the implementation of this work. Today, the need for geodetic monitoring of hydraulic structures is growing. To meet these requirements, you will need to rely on geodetic points. Geodetic points are in 4 classes, and their level of accuracy is very important. It is known that the smallest side of the class III road is 3 km, the 4th side is 2 km. Horizontal corners are measured in points of polygonometry of classes 3 and 4 with a mean square error 1.5" and 2.0" (in case of the closed polygons). On polygonometric alignments of classes 3 and 4, the length of the sides is measured with a standard error 1/200,000 and 1/150,000. [2]

## MATERIALS AND METHODS

There is a special procedure for geodetic measurements in hydraulic structures. During the construction of new hydraulic structures, the following geodetic works will be carried out.

- In the construction of rivers, canals and roads, it is necessary to cross large or small canals and build various structures along these canals. In this case geodetic works shall be carried out at the canal construction site.
- A certain length of river banks will be examined and a canal plan will be drawn up. The cross section of the river (living section) is determined;
- The slope of the river and canal is determined, the water flow rate in the river and canal is determined and the water flow rate is calculated. To survey the banks of rivers and canals, points A and D with a size of 500 m were found on both sides of the construction site. From point A along the canal bank, an open polygon (trunk road) ABCD was built.
- From point A to the last point D, the parts along the shore are selected by a perpendicular method.

To determine the width of the river and channel and plan the bank of the other side, its cross-section is examined in characteristic (expanded and narrowed) areas of the channel width. The cross-section is taken in at least three places (beginning, middle and end). During the station, the MA line is marked perpendicular to the flow, and the pegs are driven into t and p points equal to the characteristic points at the height and depth of this line and the water level on both banks. If the water flow intersects the vertical plane along the AM line, the cross-section in the resulting water movement will be the current portion of the channel. To photograph the living section, two heaps are driven into the water on the banks fixed above the edge (points E and F) (Figure 1). [3,4] A rope with an elevation of 5 or 10 m is stretched on them.

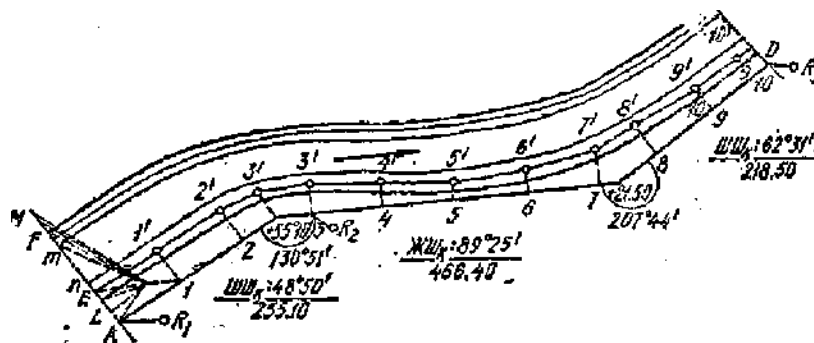
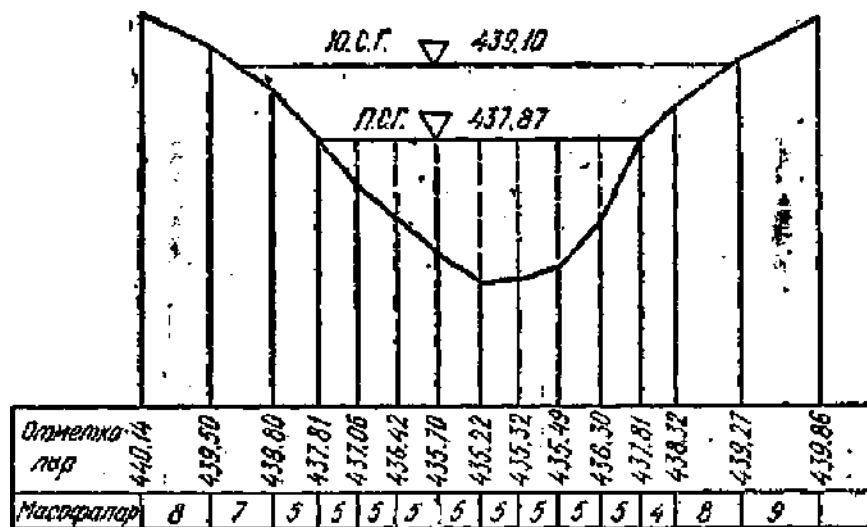


Figure 1. River section.



A second auxiliary cable is drawn in parallel. Holding the same rope and sailing on a boat from E to F, the depth of water is measured at points a, v, s, d., E, f and d. The depth of the river bed is measured using a mark (a rod divided into decimeters) or (wire with a large load at one end). The height of points A, V, E, F, M and N above the water level is determined during longitudinal and transverse levelling performed to determine the slope of the channel. Prior to alignment (at station time), cross-sections are trampled (t and p) equal to the water level at a certain time or at an agreed time when the water level height is determined. During the picket, several working rappers will be installed in the right places. When leveling, the counts are also taken from rails placed on piles that have been nailed to the surface of the water at each station. If it is not possible to extend the rope between the two branches of the channel, fluids A, B and S, D are nailed to the two branches of the channel in one row.[5] Then, by drawing the vertical line VE from point V and measuring the length (base) close to the width of the channel, you can find the point E. The theodolite is set at point E when walking in a boat along with the axis AD, the angles  $\alpha_1$  ( $\alpha_2$ ,  $\alpha_3$ ) are measured depending on the points 1, 2, 3, the depth of which is measured. The location of these F AD points and the angle of direction of the E1, E2 and EZ are in the hip method.[5] When field measurements are completed, the cross-section profile (straight section) of the channel is drawn on the marking of points A and B, E, G, M, N after the calculation of points and water surface (Figure 2). The water level lines are drawn in the profile. As a rule, river water and channel water are shown as the longest time horizon (the upper water horizon is in the form of Y.S.G.) and the lowest time and time horizon (the lower water horizon is in the form of K.S.G.).



2-рaчм. Cross sectional view.

Determine the water slope. When levelling the river and channel, the length is 1 km, the elevation of the water surface in the cross section of the head (ПK0), the water elevation of the cross-section  $H_6$  last (ПK10), the elevation of the water surface of the cross section by the  $N_0$  slope of the channel water is determined as follows:

$$d \leq h = -H_0 dd \quad 1)$$



It is known that the slope of the channel is not everywhere the same along the channel, depending on which slope of the soil layer also varies. Accordingly, sometimes the slope between each station, which is called a private slope, is determined. Use station water level elevations to calculate. The influence of river water on the shores. The erosion of rivers, oceans and sea waves by waves is called abrasion. As a result of abrasion, plains are formed on the ocean and sea coasts. The intensity of erosion of river water (washing out stones, erosion) depends on the natural conditions of its basin: geological structure, wetlands, relief, rainfall, vegetation volume, etc.[6,7] For this reason, rural rivers originating in areas with rapidly washing rocks, steep slopes and rare vegetation are dirty and quickly wash their pools, while rivers originating from hard rocks and dense vegetation wash less.

The mountainous part of the country is gradually washed out by river waters (in mountain rivers, as a rule, lower erosion, lateral erosion of flat rivers is strong), on the contrary, rocks are deposited on the plain. According to Mashrapov, 309 tons of Naryn and 664 tons of soybean per square kilometre. washes various stones and drains into the water. It is almost important to know the turbidity of the rivers of our country and the number of washed stones. It is not recommended to build various hydraulic structures (hydroelectric power station, reservoir, canal, dam) without knowing the river bed and its volume. River ditches, on the one hand, are damaged and fall by a bottom of reservoirs, dams, channels, ditches, superficial and demand big costs of their cleaning, on the other hand, slime can get on fields with water and sink for an increased infertility of the soil.[8,9] During geodetic work, the values of complex engineering and geodetic surveys for land plots with an area of up to 10 hectares were taken into account. The complex of engineering and geodetic surveys and the cost of work will be agreed with the organization conducting the surveys.

Design and construction of hydraulic structures take into account values of absolute and relative displacements caused by water pressure in the upper part of the dam. Actual offset values are then observed during construction and operation. These observations are made in order to determine unacceptable values of actual shifts in order to warn of future dangers. The accuracy of shear measurement often depends on the problem of combustion, foundation compaction and structure design. Therefore, the shear measurement error in structures located on hard (mountain) soils is + 1.5 mm; shall not exceed + 3 mm in compacted soils and + 7 mm in highly compacted soils. Main stages of displacement measurement. Displacement measurements are performed in the following order:

- Organization of monitoring (development of work program, design, preparation and installation of signs for monitoring, selection and study of tools);
- Monitoring of structures movement (control, determination of distances between observed and base elevations, periodic fills of horizontal flows of control elevations, etc.)
- Development of measurement results (monitoring of field log calculations, a compilation of measurement diagrams based on the assessment of their accuracy, calculation of deviations of control marks from the barrel and determination of horizontal shifts between cycles (periods), as well as their full values).
- Preparation of graphs and reports on the increase of horizontal displacements at characteristic points of the structure.

The frequency at which the design offset is measured. The measurement cycle time is determined by soil characteristics, structure type, expected deformation values and other factors. Measurements begin when the base elevations of the 1st cycle are strong, and the structure is not affected by horizontal forces (when the reservoir is not filled, when the edges of the pit are not covered with soil).[10,11] Measurements are made with great accuracy. P-cycle measurements are performed after horizontal force is applied to the structure. Subsequent cycles are determined by the change in pressure in the construction contract. Geodetic markers used to measure offsets. Observation columns. These elevations measure the offset of each design point directly. They serve as the basis for installing theodolite. Control marks. These are characters who change the position of building elements as they change. They are installed in the upper part of the building. Main signs. They are fixed elevations on fixed soils away from the structure and serve to determine the displacement of observation poles.[5, 12] Defines the design offset using observations. Storm methods are used to determine the horizontal displacement of dams, bridges and the foundation of a structure raised from a straight line of concrete or stone. Depending on the values, the horizontal offsets are absolute and relative. The absolute amount of displacement of a building or structure is understood as the absolute amount of horizontal displacement with part of their foundation. These shifts are detected with respect to fixed geodetic markers installed further from the structure. The relative magnitude of offsets is understood as the displacement of one part of the foundation relative to another. The following measurement methods are used to detect offsets:

- a method took on target.
- a method for measuring paralytic angles.
- a method for measuring the height of a triangle.
- Narrow method of swimming.

The essence of the siding is that the longitudinal axis of the structure is parallel to it, and ABSB is fixed by four basic elevations.

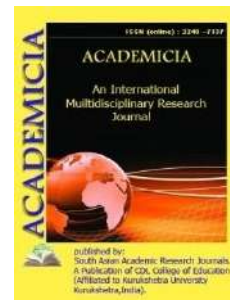
## CONCLUSION

Design and construction of hydraulic structures take into account values of absolute and relative displacements caused by water pressure in the upper part of the dam. Actual offset values are then observed during construction and operation. These observations are made in order to determine unacceptable values of actual shifts in order to warn of future dangers.

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DOI: **10.5958/2249-7137.2020.00765.X**

## DETERMINATION OF THE CHIMNEY ROLL

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### ABSTRACT

*Issues of geodetic monitoring of the vertical axis of the chimneys of industrial enterprises are considered, when a view to the structure is possible from one strong point, and in some cases there is no visibility to the forming structures. A method for determining the roll of chimneys from one stronghold using reflection less electronic total stations is proposed. The accuracy calculation of the proposed method is performed. It is established that the method provides the necessary measurement accuracy. In the absence of visibility to the forming structures, a method for determining the roll by coordinating at least 3 points located in the control horizontal sections is proposed, and the coordinates of the centers of the sections are obtained graphically in the AutoCAD system.*

**KEYWORDS:** *Geodetic Monitoring, Chimneys, Cramped Conditions, Measurement Error, Measurement Accuracy, Construction Roll.*

### INTRODUCTION

On the territory of industrial enterprises there is a significant number of brick, metal, and reinforced concrete chimneys, which are under cramped observation conditions. Thus, when examining 52 chimneys of one of the metallurgical plants, 15 of them are located in inaccessible places with the visibility of structures from only one stronghold. In addition, the 5 chimneys of 15 are not visible to their generatrices, which makes it impossible to apply observations from one reference point. Therefore, the development of more advanced methods of geodetic control of the position of the vertical axis of chimneys located in constrained observation conditions is an urgent task.[1, 2] The chimney trunk is designed from burnt clay brick of grade 100 on a solution of grade 50 and is a vertically standing structure in the form of a truncated cone with a slope on

## MATERIALS AND METHODS

Technical drawing of a tapered tower structure. The drawing shows a vertical cross-section of a tower with a tapered body. Key dimensions and features include:

- Top Section:** A small, flared top section with a height dimension of 3720.
- Callouts:** Three callout lines point to specific horizontal bands or sections on the tower's body.
- Height Dimensions:**
  - 2080 (from the base to the first major section)
  - 36000 (the main body height)
- Base:** A wide, flared base section.

4 результат наблюдений II-III-2019 г.

The calculated conditional coordinates of marks in each observation cycle determine the offset of marks and the entire structure as a whole. The disadvantage of this method is that it does not allow you to determine the absolute value of the roll, but only its increment. In addition, the proposed method involves a labor-intensive operation for laying marks at various levels of the pipe and accurately measuring the heights of marks. To determine the absolute value of the roll in similar conditions of observations, we propose to measure the horizontal angles between the directions to the centers of the lower and upper (controlled) sections.[5] The proposed method allows you to determine the absolute value of the roll of the chimney, but requires accurate measurement of the heights of the control points, which perform the sighting of theodolite, which is difficult to provide in the conditions of the operated structure.

**Inspection of the chimney condition.** To assess the condition of the trunk and the chimney foundation, the main focus was on the detection of vertical and circular cracks, the possibility of bricklaying and the presence of cracks in the foundation of the trunk, their width of opening, mechanical damage and corrosion condition. When visually inspecting the chimney shaft condition, it is determined that there are no significant defects affecting the strength and overall stability. By measuring the detected cracks in brickwork have local character and do not exceed the value of 0.1-0.2 mm. Vertical and ring cracks of considerable length are not detected at all heights. At the level of the tie rings are splinters of brickwork with different depths, the maximum of which is more than 3-4 cm and have a small spread over the surface of the masonry. Such damage occurred when the crutches were driven on which the tie rings are supported. Partial mechanical damages and violations of the protective layer were found in the foundation of the chimney. Oily spots were found at some places in the foundation.

The chimney was built in 1973, it has been in operation for more than 15 years and suffered several 4-5 magnitude earthquakes, so it was necessary to determine its roll. Given the importance of the consequences, a highly accurate method of engineering and geodesic measurements was chosen. In the present work, a geodetic instrument was used to determine the flue tilt: theodolite and leveling. Technical data characterizing the optical surveying theodolite 2T30M are given in Table 1.

**TABLE 1**

№	Indicator Features	Meaning
1.	Average square error of angle measurement in one step:	
	- horizontal	30"
	- vertical	45"
2.	Increasing the visual tube	16 <sup>x</sup>
3.	Less distance of sighting by the visual tube (in m) not more	1,2
4.	Nominal level division price on the pipe	20"

Geodetic levelling of the chimney platform (foundation) was also used to obtain accurate results. Leveling was carried out by a precision blind leveler with a Belitsyn NPG-62 system pipe and a barbed invasive ruler. Technical data of the LNG-2 leveler are given in Table 2.

**TABLE 2**

№	Indicator Characteristics	Meaning
1.	Lens Hole Diameter	60 mm
2.	Eye pupil diameter	1,2 mm
3.	Telescope enlargement	49,1 <sup>x</sup>
4.	Equivalent focal length	458 mm, $\pm 1\%$
5.	Pin Level	8,8" на 2 mm
6.	Subdivision drum	0,050 mm
7.	Rangefinder Ratio	100, $\pm 2\%$

In the geometric leveling of sedimentary grades, a special metal rail was used, with a millimeter division which is rigidly fixed to a wooden rail using screws. From tables 1, 2 we can conclude



that the applied geodetic instruments and tools are quite suitable and have high measurement accuracy.

**Determining chimney tilt,** During the geodetic observation of the chimney deformations, four sedimentary marks were set in pairs in the mutually perpendicular plane of the foundation platform.[7,8,9] The locations of observed sedimentary marks and binding points in the projected levelling scheme are shown in Figures 1, 2. Levelling was carried out in the forward and backward directions by the sedimentary markers installed on the upper edges of the foundation platform. Observations at the station were made by the method of "overlapping", in accordance with the requirements of the instruction. Two methods of geodetic measurements were used to obtain a reliable chimney roll. At the first stage of work the flue pipe roll was determined by theodolite 2T30M by measuring horizontal angles, which is one of the most common methods. The method of determining the flue pipe roll by measuring horizontal angles is described in the interim report of this contract work. Direct measurements and calculations have shown that the full flue roll is 52 mm and it is several times less than the maximum permissible roll. Further on, the development of the tilt was monitored by leveling the foundation of the chimney. During the reporting period, four cycles of geodetic observations of the pipe foundation sediments were conducted. Levelling was carried out from the initial repeater Rp (Fig. 2).[11, 12] Absolute sediments of sediment grades were calculated in each observation cycle and chimney roll was determined periodically. Sedimentary markings and absolute sediments are given in Table 3. When calculating heel, the difference between the marks in two mutually perpendicular directions is taken.

The value of the cross slope is determined by the formula:

$$q = \frac{\Delta}{l} H$$

Where:  $\Delta$ - sediment difference between grades;

$l$  – the distance between the stamps in the plan;

$H$  - chimney barrel height.

Four levelling cycles were carried out during the reporting period, the results of which are shown in table 3. Difference between values of precipitation of grades 1 and 3 is:

$$\Delta_1 = 6 - 3 = 3 \text{ мм}$$

Difference between values of precipitation of grades 2 and 4 is:

$$\Delta_2 = 9 - 8 = 1 \text{ мм}$$

Values of transverse rolls are correspondingly equal to

$$q_1 = \frac{\Delta_1}{l} H = \frac{3}{4,66} \cdot 45 = 28,97 \text{ мм} \approx 29 \text{ мм}$$

$$q_2 = \frac{\Delta_2}{l} H = \frac{1}{4,66} \cdot 45 \approx 10 \text{ мм}$$

The total roll of the pipe relative to the vertical axis is equal to:

$$\delta = \sqrt{q_1^2 + q_2^2} = \sqrt{29^2 + 10^2} = 30,67_{MM} \quad 30_{CM}$$

In the interim report, the stack roll was calculated to be. From this, we can conclude that the precipitation of the chimney has stabilized somewhat and the roll is gradually fading.

**TABLE 3**

№	Marks of sedimentary grades Precipitation							Precipitation					
	24.03.87	2.06.87	2.12.87	2.03.88	8.06.88	21.09.88	13.12.88	2.06.87	2.12.87	2.03.88	8.06.88	21.09.88	13.12.88
Pp	3,000	3,000	3,000	3,000	3,000	3,000	3,000	00	00	00	00	00	00
1	3,925	3,925	3,925	3,924	3,924	3,922	3,922	00	00	-01	-01	-03	-03
2	3,297	3,292	3,290	3,290	3,289	3,289	3,289	-05	-07	-07	-08	-08	-08
3	3,436	3,431	3,431	3,431	3,430	3,430	3,430	-05	-05	-05	-06	-06	-06
4	3,867	3,861	3,861	3,861	3,860	3,858	3,858	-06	-06	-06	-07	-09	-09

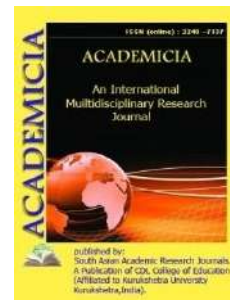
## CONCLUSION

To avoid the effect of concreting errors, the number of control points should be increased, which will significantly increase the accuracy of determining the coordinates of the centers of sections and roll of structures. Carried out geometric modeling and experimental studies on a 75 m high brick chimney and a 120 m high reinforced concrete chimney confirmed theoretical conclusions and proposed methods for determining the roll of chimneys located in constrained observation conditions can be used.

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DOI: **10.5958/2249-7137.2020.00768.5**

## TOURISM – THE FUTURE OF ECONOMY

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### ABSTRACT

*This article, based on several statistics on the realization of the tourism potential of our country, highlights new projects of recent years, as well as plans for the near future. The office of the World Tourism Organization (WTO) was opened in Samarkand. This office is designed to coordinate the efforts of international organizations and national tourism organizations of countries located on the Great Silk Road. On June 15 of this year, the national airline Uzbekistan Havo Yullari opened a new terminal at Tashkent Islam Karimov Airport. It meets all international standards, is equipped with modern engineering and technological equipment that maximizes the needs of customers, providing services at a high level, and significantly reduces the time to undergo formal procedures when entering the country. The presence of a large number of unique natural objects, rich cultural and historical heritage and ancient traditions of Uzbek national culture, tourism infrastructure, a developed network of modern hotels, services.*

**KEYWORDS:** *Economic Consequences, Modernization, Multifunctional Centres, Socially-Oriented Economy, Tourism Interests, Tourist Infrastructure.*

## INTRODUCTION

At the present stage, the country is observing the country's progress along the path of democratic transformations and sustainable development, decisive steps have been taken in implementing fundamentally important reforms aimed at achieving the main goal - to reach the level of developed democracies in the world with a strong socially oriented economy, ensuring a decent level and quality the lives of our people. Also, one of the main priorities of the reforms is the realization of the tourism potential of Uzbekistan. Possessing huge historical resources, Uzbekistan can lay on the tourism industry as one of the leading in the economic sphere.

## MATERIALS AND METHODS

The sphere of tourist interests in Uzbekistan includes both active types of recreation and sports tourism, such as climbing and skiing, and travel with cognitive goals, where the object of knowledge is the rich archaeological and religious history of this country. The number of tourists coming to Uzbekistan annually is growing: in 2005, the number of tourists visiting Uzbekistan amounted to 240 thousand people from 117 countries, and in 2017 more than 2.5 million tourists visited Uzbekistan.[1, 6] The number of tourists in 2018 amounted to 5.3 million, of which 5 million from the CIS countries, 325 thousand from far abroad.

Every autumn Uzbekistan hosts the International Tourism Fair. The share of tourists who entered the Republic of Uzbekistan for the purpose of tourism in 2006, 2007 is 9% of the total number of entrants. In 2007, 27,264 more people entered Uzbekistan for tourism than in 2006 (66% more). 80% of entrants are CIS citizens (726669 people), and 20% are citizens of other foreign countries. The share of tourists entering for the purpose of tourism is different - 72% of tourists are citizens of foreign countries, and 28% are citizens of the CIS countries.[2, 7] According to a Statistical Internet survey conducted from May 7 to August 7, 2008, the majority of respondents - 39%, visit the country due to interest in its historical and architectural sights. Another group - 24% visits Uzbekistan for the sake of familiarization with culture, traditions and lifestyle. Thus, most tourists want to visit: historical places, monuments, museums and art galleries, ancient buildings and structures (for example, ancient fortresses, mosques, madrasas, libraries, former prisons and wells), as well as parks, national festivals and other cultural events. (Fig. 1.)

The office of the World Tourism Organization (WTO) was opened in Samarkand. This office is designed to coordinate the efforts of international organizations and national tourism organizations of countries located on the Great Silk Road.[3, 8] According to the US State Department, Uzbekistan is in a group of safe countries for tourism, in which ordinary precautions should be taken. At the beginning of 2015, 1036 local enterprises had a license for tourist activities, of which 559 are tour operators and 477 hotel farms. To bring this future closer, Uzbekistan has undergone many transformations over the past year:

1. Red and green corridors have been established at airports for rapid inspection;
2. Cancellations of visas for citizens of 7 countries: Israel, Indonesia, the Republic of Korea, Malaysia, Singapore, Turkey and Japan;
3. A new procedure has been established for registering foreign nationals as independent travellers through the [www.emehmon.uz](http://www.emehmon.uz) portal;

4. An electronic visa system (evisa.mfa.uz) has been launched. Also, within the framework of the project, a visa-free regime was introduced at transit entrances (staying on the territory of the Republic of Uzbekistan for no more than 72 hours) for citizens of 101 countries;
5. A tourist police force has been established in the person of highly qualified employees who know foreign languages. This provides an immediate solution to the various problems of foreign tourists on the spot;
6. Lifted the ban on shooting in the metro and the use of drones. Foreign and local citizens can freely take photos and shoot videos on the subway. Foreign creative groups are allowed to shoot from drones;
7. The Uzbekistan Pass service has been launched. The service offers discounts when buying tickets, booking hotels, using other tourist services (uzbekistanpass.com).

Available credits for the hospitality business. By a decision of the President of the Republic of Uzbekistan "On priority measures for the development of the tourism sector for 2018-2019," the program of priority measures for the development of tourism for 2018-2019 was approved.[4] The resolution recommends that commercial banks of the Republic of Uzbekistan put into practice long-term loans (up to 15 years) to business entities for the construction of new and modernization of existing hotels and other tourist infrastructure, providing flexible conditions for repayment of the loan and interest taking into account the capital intensity and seasonal workload of hotels.



**Fig. 1.** The first world-class ski resort.

A leading global company providing business process management services for ski complexes, PGI (Andorra), has signed an agreement to coordinate the construction of the first ski resort in Uzbekistan with Amirsoy Mountain Resort (Uzbekistan). PGI will lead the project from the very beginning until the Amirsoy Mountain Resort is ready to start its work and receive guests. (Fig. 1, 2.)





**Fig. 2. Amirsoy Mountain Resort**

Amirsoy Mountain Resort is the name of the first ski resort in Uzbekistan, which will be located in the Bostanlyk district. It will meet all international standards and requirements. It is planned to create the winter and summer infrastructure of the resort, which will consist of the construction of 13 cable cars, 13 ski slopes, multifunctional centres with rental points for ski and other equipment, hotels, restaurants, a cottage town, a rope town, zipline, parking and a pool.[5, 8] Fans of mountain recreation will be able to visit the first ski resort of Uzbekistan in December this year. And on September 14, the presentation of the ski resort has already taken place at the Hyatt Regency Hotel, the first stage of the launch of which is scheduled for December 15. The full opening of the resort is expected in 2022.

“Expanding borders”. Changes in the field of passenger aviation passed precisely under this motto. Among the high-profile events was the Tashkent-Dushanbe flight, made by the “Uzbekistan Havo Yo’llari” NAC for the first time in 25 years. To date, Uzbekistan and Tajikistan have already connected three flights in the directions: Dushanbe-Tashkent, Dushanbe-Samarkand and Dushanbe-Bukhara. On March 16, 2018, the Samarkand-Istanbul direct flight appeared, the number of flights to Paris, New York, Seoul and Novosibirsk increased. The plans are to resume direct flights with Kyiv and Lviv, to launch flights to Belgium. ( Fig. 3.)



**Fig. 3. Tashkent International Airport.**

Since 2017, NAC Uzbekistan Havo Yullari regularly reduces the cost of air tickets in all areas - domestic and external. Passengers flying to Dubai, New York and Riga receive significant discounts.

Also, online ticket sales have been launched. You can pay them with UZCARD and Visa cards. The aircraft seat selection service is available. The business aviation services sector is developing, allowing you to order the services of a small jet superjet or a long-range trunk liner.[10]

On June 15 of this year, the national airline Uzbekistan Havo Yullari opened a new terminal at Tashkent Islam Karimov Airport. It meets all international standards, is equipped with modern engineering and technological equipment that maximizes the needs of customers, providing services at a high level, and significantly reduces the time to undergo formal procedures when entering the country. The new terminal with a capacity of up to 1200 passengers per hour has 24 passport control points, baggage receiving area, green and red corridors, a first-aid post, and a visa support point. The building provides for the use of telescopic ladders. All conditions have been created here for a comfortable stay, including for people with disabilities. The terminal is equipped with ramps, an escalator, an elevator and wheelchairs.

The passengers are provided with Duty-Free stores, currency exchange points, an open Wi-Fi network, two cafe bars and SIM card kiosks.

## CONCLUSION

An analysis of the activities of domestic travel companies, hotels and restaurants shows that the level of training of staff, the quality of services provided in them is inferior to world standards generally accepted in the West. By opening the market of services for foreign suppliers, the state not only attracts advanced technologies, knowledge but also contributes to the growth of employment of the population.

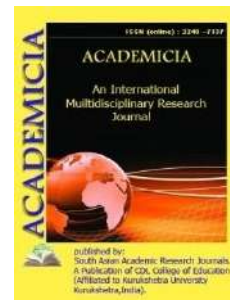
Potential of Uzbekistan for the development of the tourism and ecotourism industry. The presence of a large number of unique natural objects, rich cultural and historical heritage and ancient traditions of Uzbek national culture, tourism infrastructure, a developed network of modern hotels, services.

There is a view that liberalization of access to the national market for goods could be detrimental to industries, with all the resulting negative socio-economic consequences. However, there is a view that liberalization in the tourism and services markets, on the contrary, could strengthen the national services sector, facilitating access to cheap and quality services for the national tourism industry, strengthening competitiveness.

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DOI: **10.5958/2249-7137.2020.00769.7**

## CATEGORY OF IRONY IN HISTORICAL AND FUNCTIONAL LIGHTING

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### ABSTRACT

*The article considers irony as one of the categories of culture. A review of the history of the study of irony from antiquity to modernity is aimed at identifying ideas that underlie various theories of irony. Such a historical excursion is necessary for understanding existing definitions covering manifestations of irony in literary and artistic discourse. Note the variety of linguistic means of expressing the ironic intentions of the speaker or writer. So-called ironisms are a systemic phenomenon in the language because they have an ironic meaning outside the context. At the same time, the importance of context, as well as non-verbal means for expressing irony in oral and written speech, is undeniable.*

**KEYWORDS:** *The difficulty of defining irony, stylistic irony, conceptual irony, the worldview and aesthetics of authors, linguistic and extra-linguistic forms of realization of irony.*

### INTRODUCTION

Irony as an aesthetic category in different eras was understood in different ways, having undergone significant and significant changes. In addition, the category of irony is ambiguous, since it means both the language trail and a special type of cultural situation (what is commonly called the irony of fate or the "irony of history," according to G. Hegel), and the philosophical way of attitude to being (the irony of Socrates, romantic, postmodern irony). In modern science, the irony is also constituted as the modus of artistry (V.I. Tyupa), in the field of action of which all emotional-value orientations are able to fall since the irony is absolutely anti-dogmatic and mobile. [1] The complexity of the definition of irony is due to the formal and semantic variety of its manifestations in the artistic text. The prototypical irony is antiphrasis - a way to say one thing, referring to something opposite, in order to express a critical assessment of a phenomenon,

situation or object. However, this interpretation does not cover all manifestations of irony: for example, it does not correspond to absurd and plausible irony, as well as to cases when the irony is created using rhetorical questions, comments or intertextual references.

## MATERIALS AND METHODS

Modern antiquity and to this day, the category of irony is comprehensively considered in philosophy, cultural studies, aesthetics, rhetoric, linguistics and literary criticism. It is defined differently in the corresponding dictionaries. In our opinion, the most correct characterization from a scientific point of view of the essence of irony is contained in the modern philosophical dictionary: "Irony (Greek *eironeia* - pretence) is a metalogical figure of the hidden meaning of the text, built on the basis of the divergence of meaning as objectively available and meaning as a plan. Acts as hidden ridicule, which differs from satire and parody with their explicitly identified status". This general, modernized definition of irony is supplemented by its functional description: "The figure of irony is semantically ambivalent: on the one hand, it is derision and in this regard profanation of a certain reality, based on doubt about its truth or even suggesting the frenzy of this reality, on the other hand, there is irony as if a test of this reality for strength, leaving hope for its possibility or - with confidence in the opposite - based on regret about the absence of one ("bitter irony"). But in any case, it assumes a meta-level of understanding of the situation by the subject of irony involved in it. " [2] The interpretations of irony as an aesthetic category in different historical eras were very different, sometimes opposite. The first in the series of classical aesthetics of Antiquity, Socrates is usually mentioned. The concept of Socratic irony is associated with it, which manifests itself through deliberate ignorance or pretence. The purpose of such rhetorical behaviour is to lure the interlocutor into a logical "trap", to question the truth of well-known concepts, statements and dogmas. [3] The definition of irony as a way of saying one thing, bearing in mind the opposite, is also attributed to the ancient Roman orator Mark Fabius Quintillion, who distinguished irony as a rhetorical figure and irony as a property of a whole text or an individual person, thereby laying down the basic approaches to irony: rhetorical and worldview. [4]

As the artistic practice of antiquity has shown, irony can be aimed at an object in which there is initially no comic, but, on the contrary, there is a tragedy. Due to the author's ironic attitude, in some cases, the object appears in comic lighting, in others - irony questions and checks the true significance of the object, its compliance with the fact that an ironic person seems morally valuable. In the post of the ancient period, the concept of irony almost disappears from aesthetic works. It acts as a sceptical, antidogmatic category that does not need any authority, freely plays opposites, so it turns out to be destructive and immoral for the dogmatic and didactic way of thinking of the Christian Middle Ages. The attitude to the irony characteristic of the Middle Ages is manifested, for example, in the aesthetics of the Church Fathers. Clement of Alexandria strongly condemns laughter and its varieties: "How can you be funny or seem without mocking words and reason, these noble benefits of man? It would be a pitiful thing for this enterprise to imitate jokes that should not be listened to, for they speak of a deed unworthy in such terms that they reduce disgust with him. " Clement of Alexandria believed that laughter, by its very nature, is immoral. Especially harmful to morality, in his opinion, are those methods of speech that aim to "arouse surprise, bring listeners to the opening of the mouth and numbness... Truth is not taught through them anywhere". [5] In fact, there is a direct polemic with Socratic irony, whose aim was to awaken dialectical doubt in the interlocutor. During the Renaissance, the irony was



used in the traditions of funny, carnival folk culture, primarily by crowned jesters, as well as in everyday speech.

Thus, J. Burckhardt wrote about irony, wit and mockery in Italian Renaissance culture, emphasizing that "an independent element of life mockery could become only when there was a developed individual, her constant victim, with his claims. [6] Φ. Petrarch spoke of the jester laughing at his master: "how many times, marvelling at the recklessness of the spectator, he invented something supposedly for him, but actually for his own entertainment." [7]

Shakespeare's problem is ironic as a moral and historical problem. In his opinion, "the crime before humanist morality is called the irony of history". That's what some interpreters think, the final of King Lear. [8] Irony thus plays an important role in transitional periods of history as a tool and catalyst for the revaluation of cultural property. This was embodied by Cervantes in his parody novel "Don Quixote", which ironically describes the process of revaluation of feudal-chivalry values. The bourgeois epoch gave up the ideals of chivalry nobility and universal human values, replacing them with "ideals" of free enterprise, practicality and trade. With his novel, written in an extremely ironic form, the Spanish novelist warned humanity against such an overestimation, which could lead to danger. The irony of Cervantes is therefore tragic. During the Renaissance, the irony was actively used in satiric and folk laughter spheres. As Voltaire aptly remarked about the "Writing of the Dark," thanks to the laughter began "a process that threw off the yoke of Rome, and the great revolution that split the church. [9] Ironic wit played a significant role in the Baroque period when the desire to compare different facts and phenomena and the unexpected revelation of similarities with the dissimilar also led to irony. On the whole, it was Renaissance laughter that, thanks to its ambivalence, was a remarkable tool for cultural creativity and the reassessment of values. By ridiculing himself, the man was cleansed from the scant scales of outdated and harmful habits, and by ridiculing others, he exalted himself above their shortcomings. The educational laughter often looked satirical, often ironically directed against religion and the church. In D.'s pamphlet. Swift "The Tale of the Barrel" in an ironic form compares the three Christian churches and exposes the absurdity of fanaticism and superstition. In the figurative sense, the barrel is "mash, chatter." another meaning of the name is associated with the custom of throwing a barrel to an angry whale to distract his attention and save the ship from the destructive blows of his tail. Thus, during the Enlightenment, irony ceased to be just a path and acquired the features of a world view. In general, the literary creativity of the XVIII century is characterized by increased activity of irony. In the works of Voltaire and D. Diderot, A. Shefftsbury and L. Sterna, D. Defo and D. Swift, E. Kanta and Goethe, she performs in a variety of functions: as a means of social and political criticism, as a weapon against church dogmatism and, finally, as a means of self-control and self-limitation of the almighty mind. In the nineteenth and early twentieth century's, views on irony were radically revised by romanticists. The theorist of romantic irony was F. Schlegel, who presented his understanding of the ingenious subjectivity of the artist-creator, paying great attention to irony. It becomes a sign of the distance between the imperfection, incompleteness of the objectified idea and the perfection of the ideal world of the artist genius, allowing him to be free in relation to his own creation. [10] Emphasizing the ambiguous, dual nature of irony, F. Schlegel described her metaphorically: "she looks up from the height of all things, raising infinitely above all things conditional, including her own art, virtue and genius." The ways of manifestation of romantic irony, according to the German philosopher, are different. Firstly, it can serve as a conventional



irony of the creative elite, a way to help fence off other people's ideas. Secondly, it can manifest itself as a conscious or unconscious position, based on the contradictory game of life. Third, irony can be perceived as an attempt to escape from the cruel reality into a fairytale world of ironic fantasy, which is typical, for example, for Hoffmann's works. The reality of the situation is translated into a subjective plan and is lost again. According to F. Schlegel, "Ironically, everything should be a joke and everything should be serious, everything should be simple-mindedly honest and everything should be deeply serious. [11] In the history of aesthetics, the emergence of romantic irony is explained by "dissatisfied subjectivity, which is eternally hungry and never satisfied. The irony reveals the innermost, intimate gap between the creator and the work, the creator can never be fully objectified in the work that remains his personal wealth. The irony hovers over everything and everything, exalts our own love, and does not allow what we adore to be destroyed in our thoughts. But joy also comes from this absolute freedom of the artistic individual, who represents irony and with whom it is identical. The joy of mind from overcoming the object, nature, necessity. The joy of the spirit of the act, intoxication with the pleasure of creativity. [12] Thus, the irony of the romanticists is a game form of subjective freedom that removes the seriousness and responsibility of life, from which you need to free yourself to fly into the transcendental world of creative fantasy. The irony is the shield that hid the innermost and pure ideals of the romanticists from the thick and dirty clutches of the philistines; it is the mask under which the sensitive and vulnerable soul hides. Ironically, the Philistines cover up the innermost transcendental values, dreams and ideals. The era of Romanticism is a time when, after several centuries of existence in the status of a rhetorical instrument, irony acquires a new categorical status. Romantic irony is no longer just a rhetorical trail or stylistic device, but a way of philosophical attitude to the world and manifestation of creative subjectivity of the artist. In the history of aesthetic thought, the irony is usually considered in connection with the comic. However, there is a tradition of learning irony beyond the comic sphere. Thus, Hegel saw the essential difference between the "ironic" and "comic" in subjectivity irony, believing that the "comic" has its object, while the irony, in which negation comes entirely from the subject, may be directed towards an object that is moral and true, which will show itself to be insignificant and pathetic. [13] According to Hegel, "in this distinction between ironic and comic, the content of what is being destroyed is essential". [14] "The irony knows how to make any objective inner content insignificant and vanity, and thus itself is emptiness and vanity," wrote the German philosopher, relating this characteristic to a greater extent romantic irony. Hegel associated this attitude with the infinite freedom of the ironic "I". [15] In comic irony, with its characteristic lightness, virtuosity, with its playful beginning, this possibility is realized as an aesthetic principle. In this form of irony characterizes the artist, in whom all his "actions and manifestations related to any content remain only visible". [16] Another German philosopher, Karl Solger, defined irony as "a state in which contradictions are mutually extinguished, and it is through this that the essential things that we call irony or quirk and humour are preserved for us. What will become of all dramatic poetry, or theatrical performance, if there is no irony or humour in them? How would we be shocked by the bitterness in the tragedies of Aeschylus, or by the cruelty in Shakespeare's plays, if everything focused on the sad seriousness and irony did not elevate us above all? How would we have been able to awaken in us the disgust of naturalistic moments in Aristophanes comedies, if they had not been presented as jokes and if the feeling, the pure sense of innocence did not lead us to the most unrestrained sensuality? [17] With the tragic irony of K. Solger calls that "the mood in which

the dialectics of the finite and the infinite appear". [18] Tragic irony, in his opinion, is present both in works of tragic genre and comic, therefore without irony, there is no dramatic art. G. Heine is believed to have become the creator of a special technique of wit among romantics. His works are characterized by ironic-self-critical auto parody ("White Elephant," "God Apollo"). In Otta Troll, the romantic exotic of hunting in the Pyrenees ironically encounters a satirical fable, and in the poem Germany there is a contrast between satire and lyrics. The romantic irony in these works creates the artistic atmosphere in which, according to the German poet, "the reader is afraid to accept the artist's words for expressing a sincere feeling, is afraid to get carried away with this feeling, because the artist will immediately laugh at what might seem like a sincere impulse, and then the reader who dissolved the nuns is among the sentimental fools who cannot understand the subtle irony.

The artist, for his part, knows that the reader is wary and foresees an ironic smile or a cynical trick, the artist is afraid to be more sentimental than the reader. Therefore, each feeling is deliberately expressed in such a way that there is no way to believe in his sincerity, not to say probably that irony lies here. " [19] The successor to the theory of romantic irony is S. Kierkegaard. "In contrast to Hegel, Kierkegaard sees the essence of" Socratic irony "in the fact that Socrates knows about God as an absolute and an idea, that is, about God as an extraordinary basis of our existence and our integral belonging to it, which penetrates all our existence. Moreover, - and this is especially emphasized by Kierkegaard - the reliability of the knowledge of God achieved through the "Socratic irony" as the basis of human being, and the sense of involvement in divine being cannot be represented in any objective knowledge. This, in this case, means that the subjectivity revealed in the "Socratic irony" is separated from the present being, becomes independent about the world, or it has an intrinsic property of direct, independent of all "external" being and from all "objectivity" of communication with God, divine being. " The heir to the romantic understanding of irony was F. Nietzsche.

"How little joy is needed," he exclaims, "to most people to consider life good! How modest a man! " In such brief moral teachings, the insightful thinker's ironic wisdom is manifested: "A criminal who knows all the circumstances of the case does not find his act so incomprehensible and out of the ordinary, like his judges and hooters, punishment is imposed in the form of an act that seems incomprehensible to him. If the defence lawyer of some criminal is well aware of both the circumstances of the crime and the whole life of his client up to this time, then the so-called mitigating circumstances that he brings one after another, in the end, should soften the blame until its complete disappearance. Or, being expressed more clearly, the defender will soften step by step that surprise which condemned and defined punishment, and, at last, will finally disseminate it, having forced each sincere listener to admit to himself, "that the criminal had to arrive as arrived; by punishing him, we would punish eternal necessity. " [20] The nihilistic irony of F. Nietzsche can be considered as an example of extreme disappointment and objective destruction, when nothing holy and absolute remains in the soul of the irony, except for life itself. A new and peculiar interpretation of irony belongs to the German thinker and writer T. Mann. Linking irony with an objective, epic beginning in art, he contrasted his understanding of irony with romantic arbitrariness and romantic subjectivity:... " I put, "he writes," in the concept of irony a wider and higher content than that reported to him by romantic objectivism. Due to its inherent serenity, the content is almost infinite, because it is the content of art itself... " [20]

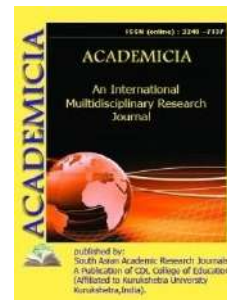
T. Mann brought irony closer to the new understanding of modern man, to the problem of humanism. The irony, in his opinion, is a means of recreating the humanistic integrity of man, a means of eliminating extremes in the understanding of his essence. In the article "Goethe and Tolstoy," he notes that "irony develops between contrasts and is in no hurry to get on someone's side and decide: for it is full of a premonition that in the great questions of man, any solution may be premature and untenable, and that the solution is not a goal, but a harmony that may lie somewhere in eternity and already carries a prudent reservation named "irony." [20] T. Mann believed that the intellectualism of irony does not exclude emotionality, it does not mean indifference, coldness, ridicule or mockery at all: "Epic irony is, rather, the irony of the heart, the irony of the fulfillment of love, it is great that feeds tenderness to small."

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DOI: **10.5958/2249-7137.2020.00770.3**

## WAYS TO INCREASE THE CREATIVITY OF PUPILS IN PRIMARY EDUCATION

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### ABSTRACT

*This article is devoted to the development of children's creativity in the process and methodology of teaching literacy to students in the general education system. Increasing the creative potential of students is one of the most pressing problems today. That is why our work reveals the aspects that need to be taken into account when training literate youth.*

**KEYWORDS:** Literacy, Increasing the Creative Potential of Students, Thinking, Essays, Talent, Creativity, Abilities, Education.

### INTRODUCTION

The literacy process consists of elementary reading and writing. Literacy is a very important problem not only in pedagogy but also in public life. Because the literacy of the people is the king of the struggle for independence, for political consciousness, for culture. In the independent Republic of Uzbekistan, special attention is paid to the literacy of everyone. In the process of teaching elementary reading and writing, in the process of teaching literacy of students, it is necessary that students function and participate in conversational activities, the need and the need to express their thoughts orally in writing should be created. Reading and writing skills help each other succeed. Therefore, reading and writing training is carried out in parallel, and this activity is regularly practised. Therefore, in the process of literacy, the child must read and write a lot. Increase the creative potential of students in the literacy process. To develop the creative qualities of students, you need to first learn the content of this concept.

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## MATERIALS AND METHODS

Creativity comes from the English word “create”, which means “create”. Creativity is an integral part of human thinking and spirituality as a category that develops a student.

This is manifested not in the multifaceted knowledge that the student has, but in the desire for new ideas, in making unexpected and unusual decisions in the process of solving life problems, i.e. Creativity cannot be achieved by repeating this knowledge. Imagination plays an important role in the process of creative thinking.[1] Therefore, imagination plays an important role in the process of creative thinking. This is what Albert Einstein meant when he said: “Imagination is more important than knowledge”. The word “creativity” was first used in 1922 by the American scientist D. Simpson. With this term, a person describes the ability to abandon stereotypes and stereotypes. In addition, in order to develop and activate the creative potential of elementary school students, teachers encourage students to think figuratively, clearly express the problem, express the idea with a full proposal and with an emphasis on important points, be polite and smart. It is recommended to use phrases such as “Imagine”, “Imagine”, “Fly creatively” and so on.[2] Creativity as a category that develops a person is an integral part of human thinking, spirituality is not in the multifaceted nature of knowledge that a person possesses, but in the pursuit of new ideas, reforming and changing established stereotypes, in solving life problems. manifested in unexpected and unusual decisions.[3] That is, creativity cannot be achieved by repeating this knowledge, the main condition in the process of creative thinking is the emergence of a new idea, a new idea. For example, if you remember English words and “drink” the rules of grammar, if you do not write an essay, all this is useless. Therefore, imagination plays an important role in the process of creative thinking. This is what Albert Einstein meant when he said: “Imagination is more important than knowledge”. Often unusual ideas and decisions come to mind unexpectedly.[4] To do this, first of all, it is necessary to eliminate monotony, a habit in the process of thinking.

We refuse templates. The human brain uses patterns and stereotypes to “facilitate” its work. Stereotypes are still well-known and accepted ideas. Thinking about them does not give us any new ideas.

Public opinion, which is a priority in society, as well as the forms and images represented in media products, also play a leading role in the formation of stereotypes. Everyone agrees that people should not be isolated from the public. In addition, “swimming in the stream” seems easier than thinking independently.[5] When we think about stereotypes, ordinary information and feedback arise when the human mind is “questioned” on a certain topic.

For example, when we say “New Year,” we mean a rich table, carbonated drinks, Christmas trees, etc. And seeing an old man with glasses holding a stick in his hand in the image of his grandfather is a form of thinking based on this sample. Creative people also create images that differ from ordinary ones, noticing aspects that no one has noticed. To demonstrate the creative abilities of students in the literacy process, the teacher must first tell the story and leave the rest to the student, it is important to complete a semi-painted picture, express a creative opinion about this picture, recommend works of art that require creative thinking.

Much of this research is being conducted today because of the importance of studying the creativity of primary school students. Studies have shown that there is a link between the creative and thinking characteristics of primary school students. [6] Qualitative and quantitative



differences were found between the creativity of girls and boys. A differentiated approach to primary school students has a positive impact on their creativity.

The following processes enhance the creativity of students in the literacy process:

- Ensuring awareness and efficiency of reading, linking the content of the text with the experience and impressions of students.
- Work on several dictionaries for conscious reading.
- Poetry, a quick reading, riddles, songs, proverbs, learning and memorizing words of wisdom,
- Teach reading to fill out words and phrases, make sentences, create quick and independent thinking.
- Examples include the fact that the teacher listens to each student, does not stop them, even if they know that the student is making a mistake, and even if they are wrong.

You can also develop creativity using pictures.

- a) Take a picture of a single rose and carefully look at the picture presented to children, describe this picture with at least 10 qualities;
- b) We can increase the creative potential of students with examples such as carefully observing the image of an elephant, painting a portrait of an elephant and writing it in a notebook.

The use of visual dictation is one of the most important and effective methods of literacy teaching. Using oral and written methods in the process of organizing visual dictations helps students to develop their creativity more effectively.

Set a boundary for creativity. By creating a problematic situation, we can determine the level of creativity of students. Ask the students: "What's the easiest solution?" to ask

Then imagine "an incredible solution to the problem".

Between simple and amazing solution you will have creative space. The new idea is no longer abstract, it has its limits. It relieves psychological pressure in the creative process.[7]

Let's take the story of "Zumrad and Kimmat", we can give students the following creative ideas:

- How do you change history?
- What do you think?
- How do you understand the modern meaning?
- Do you think that's the main problem?

Such issues require students to be creative about the history and to express their creativity.

If we recommend a story about "Bobosholgom" in the form of picture-text or if we suggest students create a mixed picture-text in this form, we will see how their creative experience is formed.

We need to ask students to think of "an incredible way to solve the problem". Then they will recommend the Uzbek version of the fairy tale of turnip, there will be many children in Uzbek families, our elderly grandparents will be honoured, young men from the family will do housework, young men will have no problem playing.

There is a creative space between a simple solution and an amazing one.

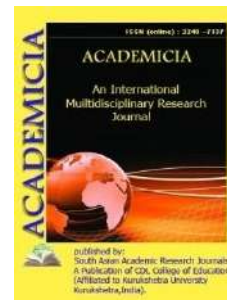
This encourages students to feel confident in their creative process and encourages creativity.

## CONCLUSION

The strength of our country, in addition to economic, political and social factors, largely depends on the potential of our staff and their ability to solve complex problems. Since young people are the decisive force and pillar of our future, let every future educator like us not be indifferent to his or her life, which is our main duty to our country.

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DOI: **10.5958/2249-7137.2020.00771.5**

## MECHANIZED SEED OF RICE ON WATERFILLED RICE CHECKS

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### ABSTRACT

*The article describes the technology and sequence of mechanized rice sowing on water-flooded checks with the help of a re-boring serial spreader HPV-0,5 in the unit with rice Chechen tractor MT3-82P. The results of the production tests of the proposed sowing unit are given, which gave positive results.*

**KEYWORDS:** *High-Clearance Tractor, Mechanisms Sowing, Spreader, Unevenness, Reel Apparatus, Seed-Wire, Damage, Spreading Discs, Flooded Check, Track-Spreader, Rhizome Weeds, Wet Layout, Sighting Device.*

### INTRODUCTION

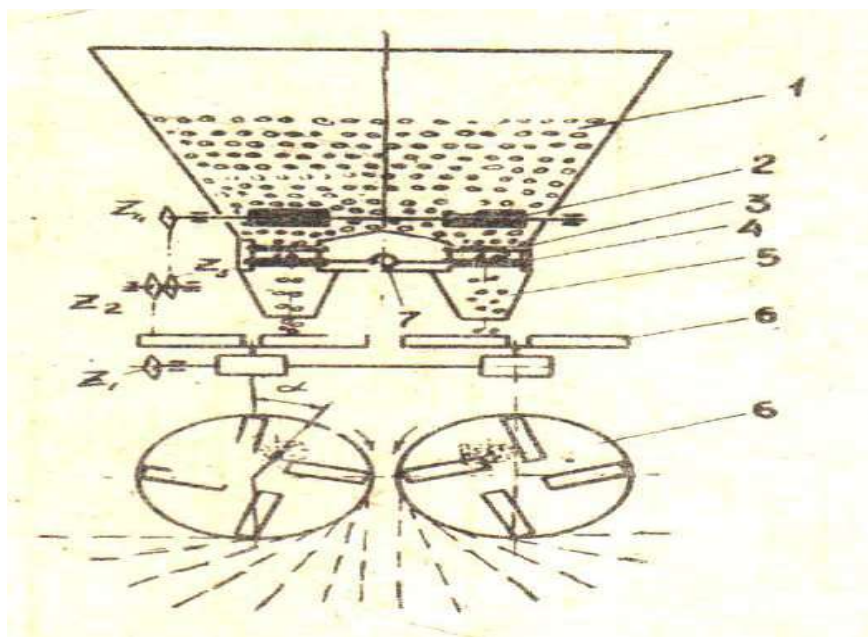
It is known that abroad and in the CIS countries, including Uzbekistan, the technology of processing and planning rice checks by water has become widespread, ensuring better levelling of fields, thorough soil treatment and giving the best results in the fight against weed vegetation [1,2].

Given the above, the Uzbek Research Institute of Agricultural Mechanization and Electrification (UzRIAME) has developed a technology and machines for pre-treatment of soil and rice sowing on water-filled rice checks using a high-clearance tractor *MT3-82P*, which is currently being successfully introduced into production [3].

Studies have shown that for mechanized rice sowing in water, the most desirable is the serially mounted spreader of mineral fertilizers HPY-0,5, which, in comparison with the existing rice sowing CPH-3,6, it has high productivity, high reliability of the technological process, has the simplicity of design and relatively small structural mass and is convenient to operate [2].

## MATERIALS AND METHODS

The main disadvantages of the spreader HPY-0,5 are the large unevenness (45%) in the width of the unit grip and the damage of rice seeds (up to 15%) by spreading working tools. To eliminate these shortcomings, the serial spreader HPY-0,5 was converted as follows (Fig. 1). The sowing apparatus and vaulting device of the serial spreader were replaced by sowing devices of coil type 2, which are installed above the discharge windows. Coil machines consist of a shaft with a diameter of 25 mm, on which plates with a length of 100 mm and a height of 40 mm and a thickness of 3 mm of 8 pcs are welded on both sides.



**Fig. 1.** Process diagram for reconfiguration: of the added spreader HPY-0,5:

*1 - hopper; 2- sowing apparatus; 3- shutter for adjustment of seeding rate; 4- shutter for supply; 5-семяпровод; 6- spreading disk; 7 hydraulic cylinder; Z1 = 22, Z2 = 22, Z3 = 32, Z4 = 40.*

On the bottom of the hopper 1, there is a tray made of sheet steel 3 mm thick. The tray has outlet holes with flaps (3) for adjustment of sowing rate and seed supply (4) (refer to Fig.1).

Under outlet holes seed wires 5 made of sheet steel in the form of the truncated pyramid are fixed to the bottom part of the tray. Ends of wire seed are located in the zone of rational supply of seeds on the surface of spreading discs at a radius of 130 mm and angle of 45 deg. From longitudinal axis in direction of disks rotation. The pump is driven by a chain with pitch  $t = 15.375$  mm through sprockets  $Z1 = 22$ ,  $Z4 = 40$  and sprocket blocks  $Z2 = 22$ ,  $Z3 = 32$ , control - alignment of sowing rate of seeds - using dampers (3), which are moved by levers (14) (Fig.2) installed on the spreader frame. To supply seeds to surface of discs, flaps (4) are opened using hydraulic cylinder (7) from the tractor cabin. To reduce damage to seeds, working surfaces of

disk blades are covered with 1.5-2 mm thick rubber. Studies have shown that the converted HPY-0,5 allows a sharp increase in dispersion uniformity and an increase in the width of the machine grip from 11.0 to 14 m. At the same time, the damage of seeds decreased to 1.0%. To ensure uniform distribution of rice seeds over the area, the converted spreader HPY-0,5 must be set to the required sowing rate and a working width of the grip. To do this, the dampers are opened by the required amount, a tarpaulin canvas is tied under the seed wire, the spreading discs are turned off, the initial position is marked with a hanger and 20-30 m pass through the sown area, then the sown seeds are weighed. Actual per hectare sowing rate is determined by the formula:

$$P = 1000 \times (Q:BL), \quad 1.)$$

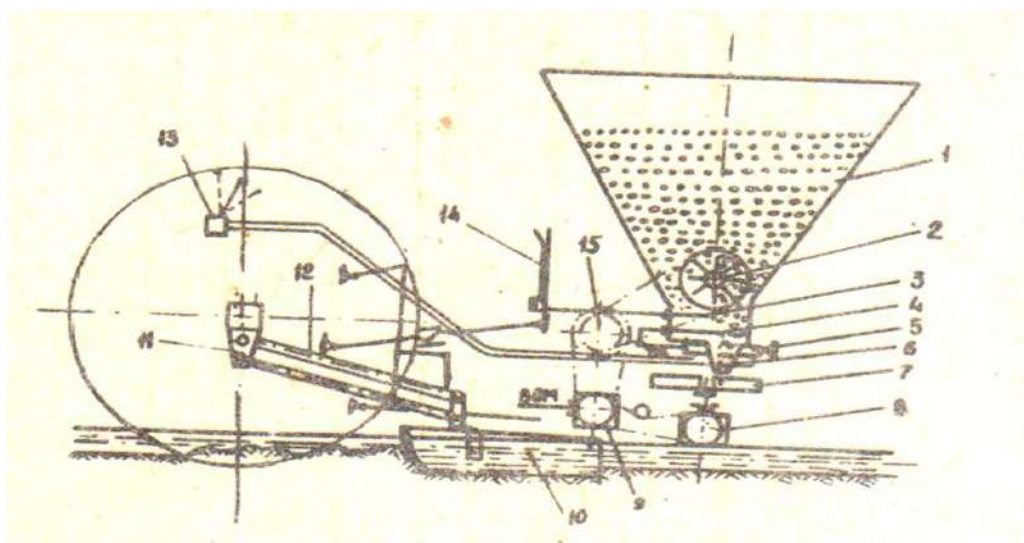
where, P - the actual seeding rate, g;

Q - a mass of seeded seeds on the travelled path, kg;

B - accepted width of the working grip, m

L is the length of the travelled path, m.

One of the disadvantages of the proposed sowing unit is also that during the tractor movement on the flooded check, its wheels form traces (tracks) with a depth of 20-25 cm and a width of 50-60 cm, and the seeds caught in this track are embedded to a depth of 5.0-12.0 cm, which leads to cutting of plants in this zone. To eliminate this, to seal the traces of the tractor behind its wheels, a special tracking device 10 (Fig.2) is installed, for which the author's certificate [4] was received. The conducted experiments showed that the use of a spreader HPY-0,5 with a tracer, the depth of sealing rice seeds, after passing the plant seed, was on average 1.5-2.0 cm, which satisfies agricultural requirements.



**Fig. 2.** Process diagram of sowing unit for rice sowing by water:

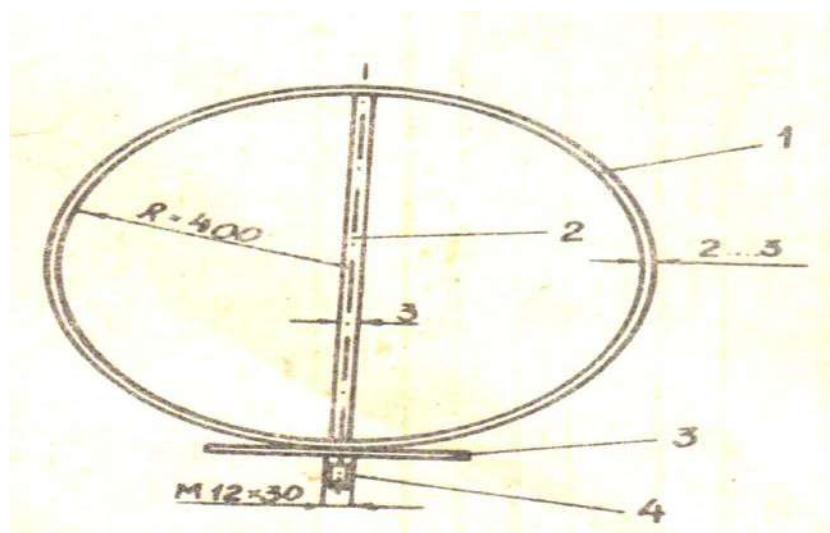
1 bunker; 2- sowing apparatus; 3- flap for adjustment of seeding rate; 4- shutter for supply; 5 hydraulic cylinders; 6-семяпровод; 7- spreading disk; 8,9 reducers; 10- tracer of wheels; 11 brackets; 12- longitudinal rods; 13- control handle; 14- lever for adjustment of seeding rate; 15- sprocket block.



To sow rice by water with high quality, on highly populated rice checks, especially pig and other rhizomatous weeds, after autumn ploughing, or in the spring before flooding the check, it is necessary to comb weed rhizomes by ordinary chiselling or with a special machine "Madadkor" to clear irrigated land from weed vegetation. [5]

Sowing rice with a spreader sowing is carried out scattering into the water after the wet layout (malting) of the surface of the check. At the same time, the fertile particles of soil (sludge) formed during agitation of water gradually settle and seal the seeds with a thickness of 1-2 cm. To prevent rice seeds from surfacing on the water surface during sowing, the seeds are previously soaked in water 1-2 days before sowing. For this purpose, rice seeds are boiled in bags and immersed in running water at specially designated places of channels. 3-4 hours before the start of sowing, the bags are taken out of the water and left on the site until all the water flows out of them. The seeds are then scattered onto an asphalt site or tarpaulin with a layer of 5-7 cm and ventilated for 1-2 hour until they accept the normal looseness necessary for free passage through the sowing apparatus of the sowing machine. After ventilation, the seeds are again boiled and brought to the sowing plant for sowing in a scatter in water. The uniformity of rice sowing largely depends on how much the tractor driver complies with the straightforward movement of the sowing unit. To do this, the tractor should be equipped with a sighting device (Fig.3), which includes: circular ring 1 with diametrical axis 2 installed using bolt 4 on the front part of hood perpendicular to the central axis of tractor.

And also, in the middle of the front windshield of the tractor, a vertical line is drawn, lying in the same plane with the diametrical axis of the ring. Before the unit comes to the checks, it is necessary to prepare the places of the turning strips, break the sections to the lights with flags or racks. These works are performed by the controllers, they also adjust the straightness of the tractor in the drive.



**Fig. 3.** Sighting device: 1- ring; 2- diametrical axis; 3 plate; 4 bolt.

To do this, at the ends of the check at the appropriate points set pointers (rails or flags) or stand traffic controllers themselves. When driving, the tractor driver sets the tractor at the indicated point, which is located in the centre of the implement's working width. When moving, you need to move so that the diametrical axis of the sighting device and the line drawn along the



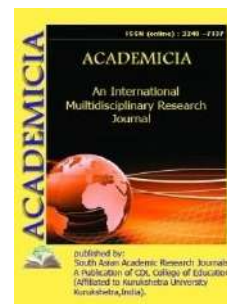
windshield, as well as the rails or flags installed on the opposite side of the check, lie in one line. When reaching the end of the corral, the tractor driver disables the tractor's PTO, closes the shutter 4 for feeding seeds, expands the unit, starts a new working stroke, and so on. (see fig. 2) The last run is seeded headlands.

## CONCLUSION

Conversion of a serial spreader of mineral fertilizers HPY-0,5 for rice sowing by water, as well as the production of a tractor track recorder can be carried out in any agricultural enterprises and farms. Production tests carried out in rice farms of the republic showed that a sowing unit, including a converted spreader HPY-0,5 and a tracer of a tractor in a unit with a tractor MTЗ-82P, allows obtaining uniform seedlings throughout the area, providing a high rice grain yield, increase productivity by 1.5-2 times compared to the manual method of sowing (by water) and obtain a significant economic effect from the introduction of this technology.

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DOI: **10.5958/2249-7137.2020.00762.4**

## AMYGDALA - IN PURSUIT OF FEAR OR CHEER?????

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### ABSTRACT

*Emotions are the state of mind of a living organism depending on the circumstances in which they thrive. It determines the actions, be the stimulus is pleasant or not. It is known that Amygdala, the body of nerve cells in brain has a role in determining emotions. So far the role of amygdala has been known to be confined to the mediation of fear responses until the studies done in past decade show that it has more promising roles. This short review is an attempt to discuss the newly defined roles of amygdala while citing a few experiments which emphasize the same. It comes out that amygdala can not only pursue all emotions but also judge the value of stimuli thereby deciding the apt response.*

**KEYWORDS:** Amygdala, Emotions, Cognition

### INTRODUCTION

Any organism shows the state of happiness if given a reward. The elation and the associated perking of moods would be the usual response. At the same time, the sight of a snake or the sound of a gunshot also evokes a response; usually fear i.e. a shock or fright. The response to these kind of emotions are mediated by structures known as Amygdala situated in the forebrain. They are two small almond-shaped masses of nerve cells buried deep in the forebrain, located within the median temporal lobes, as identified by Budarch in early 19<sup>th</sup> century. The amygdaloidal complex is structurally diverse and comprises of approximately 13 nuclei.

For years the amygdala has been regarded primarily as the brain's center for fear, both for perceiving and expressing it. The function of Amygdala was considered to take part in response to fear and terror<sup>1</sup>. Amygdala is a part of limbic system along with hypothalamus, thalamus, cingulate gyrus and hippocampus. All these structures constitute the Papez circuit involved in the

control of emotional expression<sup>2</sup>. Amygdala, in conjunction with prefrontal cortex and medial temporal lobe, is involved in consolidation and retrieval of emotional memories<sup>3</sup>.

### **Is it only fear?**

But in recent years, scientists' view of the amygdala's importance has been changed as it turns out that the amygdala helps shape behavior in response to all sorts of stimuli, bad and good. It plays a role not only in aversion to fright, but also in pursuit of pleasure. Signals about everything you encounter are passed from the brain's sensory processing areas directly to the amygdala. The amygdala shares elaborate communications channels with the prefrontal cortex (the brain's control center for planning and decision making). Its strategic location allows the amygdala to act as a spotlight, calling attention to sensory input that is new, exciting and important. In this way, it helps predict the timing and location of potential dangers, helping you dodge many of the things you dread<sup>4</sup>. But surprisingly, those same connections also help you acquire the good things in life, by identifying and assessing rewards such as food, sex and other delights. This is important as identifying pleasant situations and avoiding aversive ones can boost well-being and chances for survival. Now it is known that at least part of that reward-based behavior is driven by some sort of interaction between the amygdala and the frontal lobe, known to be involved in thought, memory and consciousness<sup>5</sup>.

The studies by the researchers at Columbia University provided a clue, showing how the amygdala judges the emotional value of stimuli<sup>6</sup>. The monkeys were taught to associate two patterns on a TV monitor with either a rewarding sip of water or an irksome puff of air to the face. By recording the electrical activity in the amygdala as animals watched the screen, it was shown that different amygdala nerve cells are tuned to handle positive and negative events. In a follow-up experiment with a slightly different setup, it was found that a set of nerve cells is specifically tuned for processing surprise. Some among those nerve cells were dedicated solely to the rewarding surprise specialized for the purpose, the water sip. Another set amygdala neurons did the opposite, registering surprise when it was aversive but not rewarding. By carrying two different sets of neurons for surprise, the amygdala may be better able to predict what's coming in order to prepare appropriate actions. So same visual stimuli can have negative or positive values and responses depending on the circumstances or the rewards which leads to reinforcement learning<sup>6</sup>.

This was demonstrated by a simple experiment, rather a game. i.e., the card game blackjack<sup>7</sup>. The object of the game is to hold cards with a total value as close as possible to 21, without going over. Players are initially dealt two cards and then can request additional cards. Say a player is dealt two cards with a total value of 11 and then gets a 10 of hearts, worth 10 points, to reach a perfect 21. Now suppose that in the next hand, after the cards are shuffled, the same player is dealt two cards that total 15. The third card reveals the exact same 10 of hearts. While golden in the first hand, the 10 becomes an unfortunate deal the second time around. This showed that in subjects, the amygdala's emotional response to the same sensory stimulus can be flexible.

Such flexibility also among monkeys in making food choices in the lab. Given a choice between two foods, monkeys (like most people) will invariably reach for their favorite. But after munching on a favored food for a while and savouring it, the reward value of that treat diminishes, the way the value of the 10 drops when a blackjack player already has 15 points in

hand. At that point the monkeys shift their choices and select a new food. Monkeys without a working amygdala, however, show little change in behavior and continue to stuff themselves with the first food choice. These findings suggest that the amygdala is needed to revise the assessment of a reward's value<sup>4,8</sup>.

Another study shows that people, like monkeys, do indeed use the amygdala to judge the value of a particular item. Rick Jenison, who studies Neuroeconomics at the University of Wisconsin, Madison, and his colleagues recruited three volunteers who were already undergoing a procedure that required electrodes to be implanted in the brain. Using the electrodes, the researchers eavesdropped on 51 amygdala nerve cells as the volunteers put price tags on a series of junk food items. Listening in on nerve cell chatter, Jenison's group found 16 individual cells that responded in a way consistent with the values that participants assigned to individual foods. Thus it shows how single neurons in the human amygdala work to assess the value of an object. In addition, the study shows how amygdala neurons compute value in real time, while decisions are being made<sup>9</sup>.

## CONCLUSION

While the amygdala may be important for assigning an emotional value, it may not be the “be-all and end-all” in valuing objects. As the saying goes, the brain isn't as simple as we sometimes make it out to be. A deeper knowledge of the neural circuitry that regulates emotional responses may help scientists understand what goes awry in addiction and may also allow finding new ways to intervene in times of distress. This could lead to medications and therapies designed to treat mood disorders, anxiety disorders, phobias and panic disorders such as depression, where stimuli that were previously pleasing aren't any more so. Further studies may also show a cross talk between amygdala and prefrontal cortex determining the ‘logic behind emotions’ which governs and even anticipates the required response.

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DOI: **10.5958/2249-7137.2020.00569.8**

## RESEARCH OF THE AIR-WATER-VAPOR COOLING PROCESS IN AIR COOLING DEVICES

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### ABSTRACT

*Water consumption for cooling in industry is very large, an increase in consumption, especially in the summer, is highly undesirable. Cooling recycled water also causes additional energy costs associated with its losses. In this regard, the improvement of the process of air-water-vapor cooling through the use of nozzles is the most preferable and economically beneficial. The article presents the results of an experimental study of the process of air-water-vapor cooling in the air conditioning system.*

**KEYWORDS:** *Air-Water Evaporative Cooling, Air Cooling Apparatus, I-D Diagram, Nozzle.*

### 1. INTRODUCTION

Oil and gas refineries are the largest consumers of water, fuel and energy resources, as well as thermal and electric energy. The efficiency, rationality of their use in the processing processes is largely determined by the efficiency of the plant's technological equipment [1]. However, the technological installations of existing plants are mainly large-capacity facilities built many years ago and they do not meet modern requirements for product quality, safety, level of automation of process control, etc.

To meet modern requirements, existing installations are undergoing reconstruction. During such reconstruction, investment in a new equipment should be minimized by making the most of the existing equipment.

Cooling is among the significant technological steps in the processing of gas, gas condensate and the production of various types of oil products at oil and gas refineries (refineries, gas processing plants). At one of the final stages of production, the hot product needs to be cooled. The temperature of the heated product varies over a wide range and depends on the type of product (gas, gas condensate, gasoline, kerosene, diesel fuel), the technological regime, the time of year



and day, and can reach 200°C or more. For the further use of gas, condensate, and oil products, they need to be cooled to a temperature equal to the value set by the technology requirements. The set temperature is determined by the type of product manufactured and the nature of its further processing. Cooling of products and various technological environments is an important technological process characterized by continuity, high reliability requirements, accuracy of maintaining set temperatures, automation, fire and explosion safety. The process of reducing the temperature of gas, condensate, oil products to a predetermined temperature is carried out by an air cooling apparatus (ABO) [2].

The development of modern engineering and technology are accompanied by the widespread use of air cooling devices (ABO), while ensuring reduced water consumption for technical purposes, optimal placement of plants, regardless of the source technical water supply with the goal to meet the increasing requirements of environmental protection from thermal and chemical pollution [3,4].

## **2. An experimental study of air-water cooling**

### **2.1. Investigation of the adiabatic humidification process during air - water evaporation cooling**

**Application:** air-water evaporative cooling in ABO has great advantages and prospects. An analysis of the literature data on heat and mass transfer in two-phase flows shows that even a small amount of moisture sprayed in the air flow can increase the heat transfer of the heat exchange surface, which makes it possible to increase the efficiency of the surface without special costs and complications. In air-cooled condensers - KBO - this helps to increase the condensate yield, decrease the amount of passing vapor, which significantly increases the efficiency of the whole process and allows you to reduce energy consumption, since there is no need to duplicate air heaters in summer with water coolers.

The essence of the process of adiabatic air cooling is to spray water with a nozzle and to evaporate a certain amount of supplied water. Energy is expended on evaporation, which is absorbed from the air itself, while the air is cooled. This principle of humidification called spray type is widely used in various industries. Adiabatic hydration occurs with a constant amount of heat ( $\Delta Q = 0$ ). With increasing relative humidity, its temperature decreases. In conventional air humidification and cooling systems, the maximum relative air humidity is  $\phi = 85 - 95\%$  and decreases rapidly during heating processes. By dispersing a certain amount of water, you can control the air humidity.

The authors at the universal experimental stand [5] carried out studies of the process of air-water-vapor cooling in the air conditioning system.

**The purpose of the experiments was to solve the following problems:**

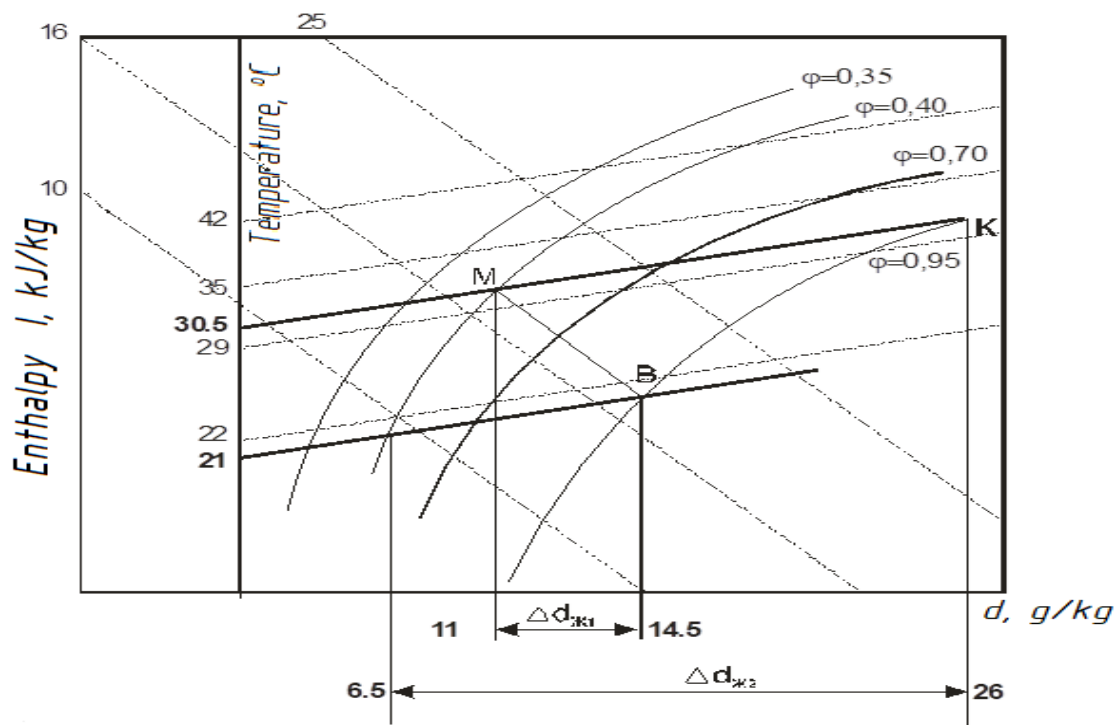
1. Creating a design of a dispersing device, which will provide: - a high degree of dispersion of water, which determines the possibility of complete evaporation; - minimum water consumption; - simplicity of the design of the dispersing device; - full ablation of the dispersed phase.
2. Ensure complete evaporation of the dispersed phase, guaranteeing the maximum decrease in air temperature to the temperature of the wet thermometer.
3. Ensure maximum heat removal from a unit of finned heat transfer surface.



To solve the set tasks, nozzles of a new design were designed, manufactured and tested at the universal experimental stand. The nozzles in the ascending air flow of summer parameters were tested to study the adiabatic process of water-evaporative air cooling.

The experiments were carried out in the following range of parameters: the initial air temperature  $t_B = 29,0-35,0^{\circ}\text{C}$ ; relative humidity  $\varphi = 45\%$ ; water pressure supplied to the nozzle  $P = 0-20 \text{ kgf/cm}^2$ ; air velocity  $w = 0,5 - 6,0 \text{ m/s}$ ; degree of irrigation  $\rho = 0,0013-0,004 \text{ kg/kg}$ . Water was supplied to the nozzles by a pump of the HIII-10E brand. Water consumption was  $G = 1 - 200 \text{ l/h}$ .

Figure 1 shows the results of adiabatic humidification using the example of constructing an I – d diagram for a nozzle of a new design with an outlet nozzle diameter  $D = 1$  mm.



**Fig. 1. Construction on the I-d diagram of the process of humidification**

For figure, the notation is accepted:

K- Point characterizing the state of the air at the end of the process of humidification,

BK - humidification process at  $\varphi = 95\%$ 

B - air condition at the end of the humidification process;

M - air condition at the beginning of the humidification process:

BM - a segment characterizing the initial moisture content of air,

$\Delta d_{\text{ж1}}$  - suspended moisture at the beginning of the humidification process, g/kg;

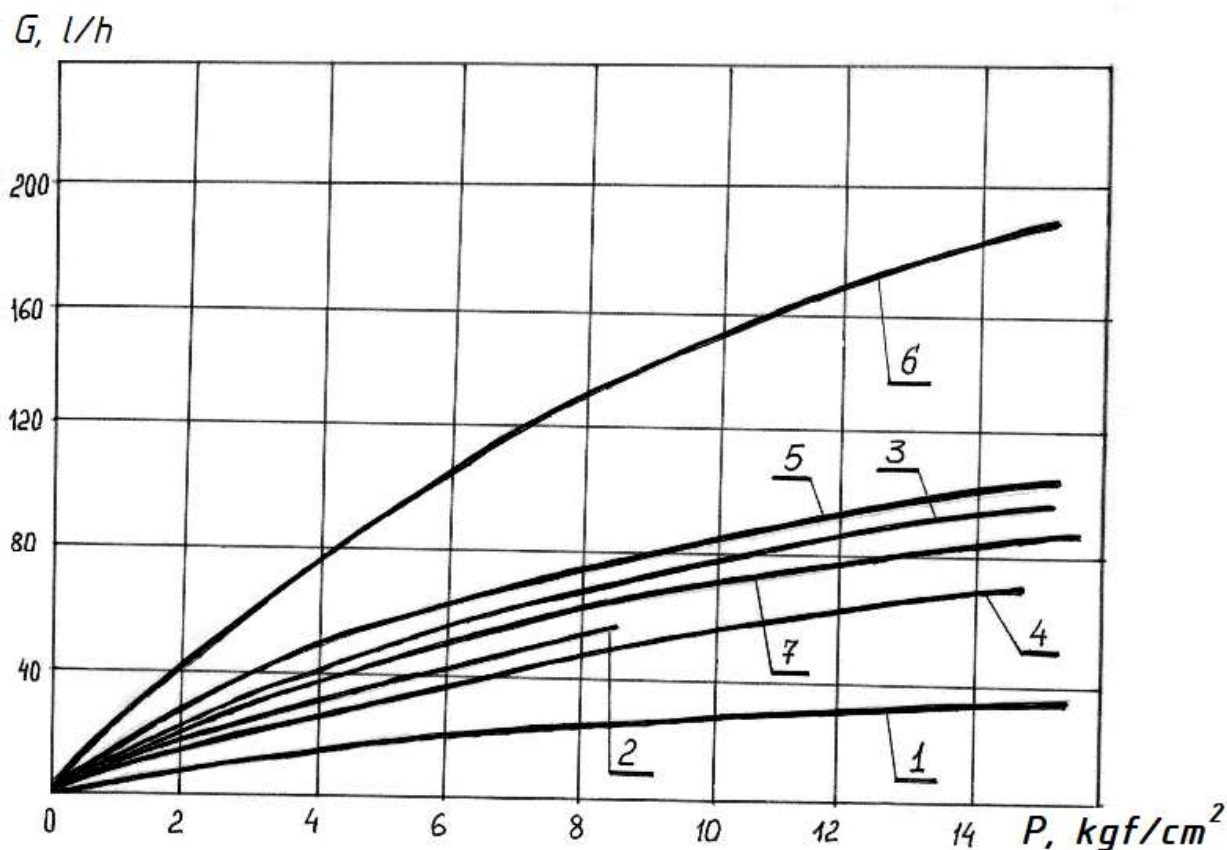
 $\Delta d_{\text{ж2}}$  - suspended moisture at the end of the humidification process, g/kg;

The initial ambient temperature is  $t_B = 30,5^\circ\text{C}$ ; initial relative humidity -  $\varphi = 40\%$ ; initial moisture content of air -  $d_{ж1} = 11 \text{ g / kg}$ ; final air temperature at the inlet to the air-conditioning system -  $t_K = 21^\circ\text{C}$ ; final moisture content of air -  $d_{ж2} = 14.5 \text{ g / kg}$ ; relative humidity in front of the heat exchange sections -  $\varphi = 95\%$ ; heat content of air -  $I = 14 \text{ kcal/kg}$ ; water pressure at the nozzle  $P = 5 \text{ kgf/cm}^2$ ; degree of irrigation  $\rho = 0,0013 \text{ kg / kg}$

An analysis of the results shows that at different values of the water's pressure at the nozzle, the increase in moisture content is approximately the same - about 3-4 times. Perhaps this is due to the fact that at  $P = 5 \text{ kgf/cm}^2$  the air flow is completely saturated, and at a higher pressure, the evaporation of the injected water is not completely ensured and moisture settles on the surface of the air heater, and the thermal resistance increases.

## 2.2. Comparison of flow characteristics and range of nozzles of various designs

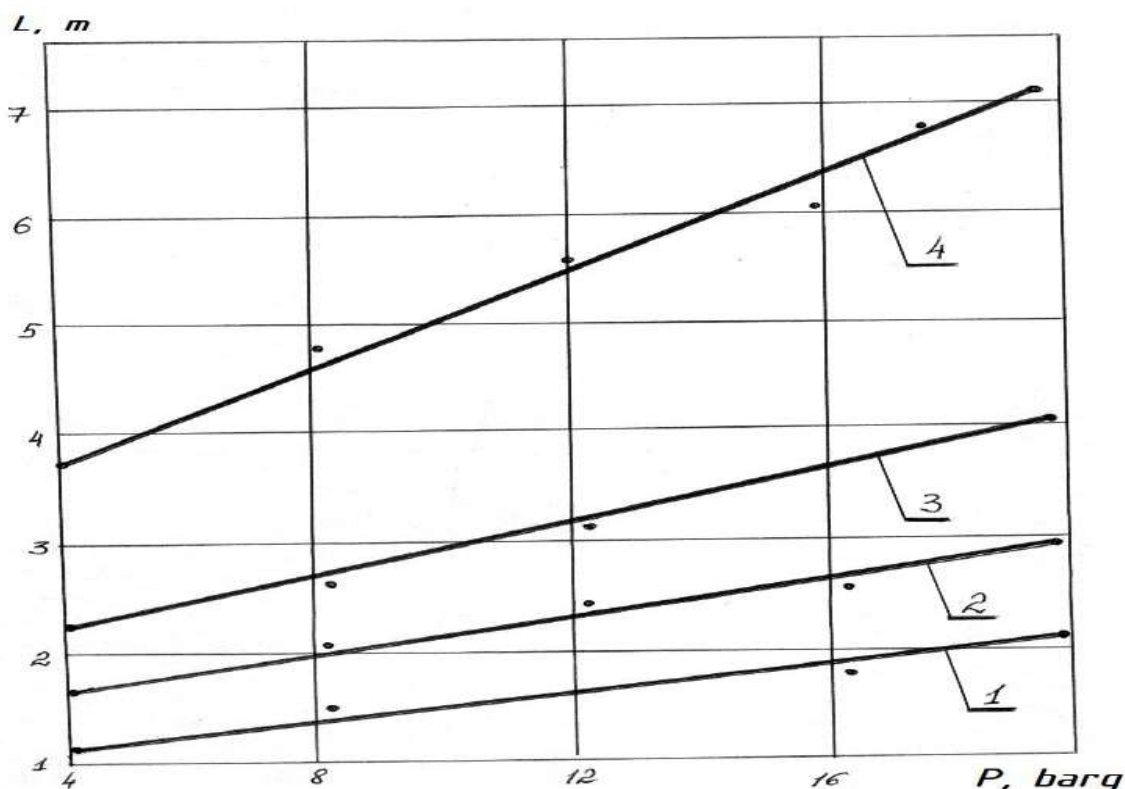
Nozzles of the new design are compared with industrial designs in terms of flow characteristics and spraying range. (Fig. 2, 3).



**Fig. 2. The dependence of the flow characteristics of the nozzles on the pressure of the water forcing.**

Curves 1 and 7 are experimental characteristics of nozzles of a new design; curve 4 characterizes the nozzle of the Tallinn Machine-Building Plant (TM3); and curves 2,3,5,6 are consumable characteristics of the Grigoriev - Polyak nozzle. By changing some parameters of the nozzle

insert of the Grigoriev – Polyak nozzle [6], various flow characteristics can be obtained. For comparative characteristics, we take the pressure of  $P = 4$  and  $6 \text{ kgf / cm}^2$ . Here, for curve 2, the flow rate of water (G) supplied for spraying is  $30 \text{ l / h}$ , for curve 3 this value is  $40 \text{ l / h}$ , for curve 5 the flow rate is  $50 \text{ l / h}$ , curve 6 shows an even greater flow rate sprayed water -  $80 \text{ l / h}$ . For a TM3 nozzle, the flow rate at the same pressure of  $4 \text{ kgf / cm}^2$  is about  $43 \text{ l / h}$ . For curves 1 and 7 at a discharge pressure of  $4 \text{ kgf / cm}^2$ , the water flow rate of nozzles of a new design is  $18 \text{ l / h}$  and  $20 \text{ l / h}$ , respectively. A further increase in the discharge pressure to  $6 \text{ kgf / cm}^2$  led to an increase in the flow characteristics of the nozzles under consideration: for the Grigoriev – Polyak nozzle, the water consumption was  $42 \text{ l / h}$  (curve 2),  $52 \text{ l / h}$  (curve 3),  $65 \text{ l / h}$  (curve 5) and  $110 \text{ l / h}$  (curve 6); for the TM3 nozzle, the flow rate was  $57 \text{ l / h}$ ; in experimental nozzles of a new design, the flow rate of water supplied to the spray was  $20 \text{ l / h}$  and  $39 \text{ l / h}$ , respectively.



**Fig. 3. The dependence of the range of the nozzles on the pressure of the discharge of water**

The most important characteristics of dispersants are the length and the angle of the spray pattern. The nozzle design provided a fully filled fa-cell with a spray angle of  $80^\circ - 110^\circ$ . Figure 3. shows a comparative graph of the range (L) of the experimental nozzles and typical nozzles of other designs used in industrial plants (TM3 nozzle, NIIKhIMMash nozzle).

In fig. 3 curves 1 and 2 refer to nozzles of a new design; curve 3 characterizes the range of the nozzle design TMZ; curve 4 characterizes the range of the NIIChIMMash nozzle.

Analysis of the figure allows us to conclude that the range of the nozzles of a new design is small in comparison with those used in industry. So at different injection pressures of sprayed water, the nozzle torch length of the new design is less than the TM3 torch length by an average of 2.0

times. Compared with the NIICHIMMash design nozzle, the range of the new design nozzles is almost 3.3 times less.

### 3. CONCLUSION

The scarcity of chemically purified water makes it necessary to replace water refrigerators with air-cooled devices, while maintenance is simplified, operating costs for cooling are reduced, and the consumption of process water in large quantities is eliminated. The development of modern high-tech industries and the introduction of effective air-cooling equipment is associated with the need to create an adiabatic humidification and air-cooling process. Dispersing water into the air stream is carried out by nozzles.

In this case, the air temperature decreases, relative humidity and moisture content increase, the heat content and water temperature remain unchanged. The obtained results show that at various values of the degree of irrigation, the temperature of the cooling air decreases by 8-16°C and the heat transfer intensity increases significantly. Air – water evaporation cooling has significant advantages; it preserves the relative simplicity of air cooling and greatly increases its efficiency, which is consistent with [7].

The summer airflow efficiency in the southern regions of Uzbekistan is determined by the air temperature control system due to water-vapor cooling. Lowering the temperature of summer air to optimum values is ensured by the evaporation of water dispersed in the flow. The complete evaporation of water provides cooling of the air to the temperature of the wet thermometer and increases the total heat removal from 1 m<sup>2</sup> of the heat exchange surface. The completeness of moisture evaporation depends to a large extent on the degree of dispersion of water, i.e. determined by the size - the radius of the droplets, their number and total surface [8]. The size of the evaporation chamber in industrial air handling units is very limited, the passage time of the chamber with a drop obeying the laws of gas flow is 0,25 – 0,6 sec. Atomizers used at present in industrial air-blasting machines - nozzles give a polydisperse spray of particles with a size of 80 - 100 microns, the time of complete evaporation of which is 2 - 5 seconds, which leads to the separation of droplets, under-saturation of the air with vapor. The high consumption and range of these devices also contribute to the uneven irrigation of the air flow [3]. All this leads to low performance of industrial cooling systems.

The results of the experimental studies allow us to conclude that the efficiency of nozzles of a new design depend on such parameters as the initial and final air temperature and its moisture content, the amount of sprayed water is low flow rate, as well as a short spray torch.

#### Designation List

Q - the heat removed, W;

t<sub>b</sub> - initial ambient temperature, °C;

t<sub>k</sub> - air temperature, before the heat-exchange sections ABO, °C;

φ<sub>1</sub> - initial relative humidity, %;

φ<sub>2</sub> — relative air humidity in front of the heat exchange sections, %;

d<sub>ж1</sub> - initial moisture content of air, g / kg;

$d_{ж2}$  - final moisture content of air, g / kg;

$I$  - Enthalpy, kJ / kg;

$P$  is the pressure of the water on the nozzle, kgf/cm<sup>2</sup>;

$\rho$  - degree of irrigation, kg / kg;

$\Delta d_{ж1}$  - suspended moisture at the beginning of the humidification process, g / kg;

$\Delta d_{ж2}$  - suspended moisture at the end of the humidification process, g / kg;

$G$  - water consumption per nozzle, liter / hour;

$L$  - the length of the spray nozzle.

$D$  - outlet nozzle diameter

Indexs:

$B$  - air;

$\kappa$  - final;

$ж$  – liquid.

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DOI: **10.5958/2249-7137.2020.00570.4**

## A LIBRARY CULTURE IN THE WORLD

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### ABSTRACT

*This article provides information on how to instill in children a love of books around the world, the development of reading skills, the culture of reading, the rules of correct reading, increasing their interest in fiction foreign, children, books, students, personality, reading, skill, reading, speech, fiction, education, literacy, reading, technology, reading culture. In the last year (2012 data), 65% of the U.S. population was able to read print, 28% (three times more than in 2011) read electronic, and 14% read audio books. Americans read an average (on average) of 12 books a year, while middle-class Americans read 4 books in the last month of the same period. At the same time, under the influence of global information, the traditions of reading printed, electronic, audio books by children and adolescents in leading foreign countries have been formed. However, the attitude of children and adolescents to reading is not positive.*

**KEYWORDS:** *Speech, Fiction, Education, Literacy, Reading, Technology, Reading*

### INTRODUCTION

There are many benefits to learning. Even research in the field of group and individual reading has a positive effect on the intellectual, psychological and physiological development of older people. The information provided includes ideas that are important for the overall psychological, intellectual, and even physiological development of children and adolescents...



For example, reading: calms the nerves (according to scientists from the University of Sussex (USA), reading is the most effective way to calm the nerves; it takes only 6 minutes a day); cultivates emotions (such as reading a prayer or a poem) (a person who reads a work of art understands the feelings of others well in life); increases brain activity, increases the number of nerve fibers in the brain (according to researchers from Emory University (USA), as a result of reading a person's mental capacity is at a high level for several days); develops communication, listening, writing and creativity skills (Obafemi Awolau University (USA) educators have found that children develop creativity, in fact, most people who read a lot can write poems, stories, essays or scientific articles at a high level; expressive works of art, especially poems ability to read, perform plays with high skill); increases social activity; cultivates artistic taste; facilitates the learning of foreign languages (helps to easily understand and memorize new words when learning other languages); children who read a lot of books master the lessons well; becomes a good storyteller (the more books read, the greater the person's ability to tell stories), the better the relationship between parents and children.

Research from YEL University confirms that reading a book for 3.5 hours a week, or an average of 30 minutes a day, reduces the risk of death by 17 percent. For those who read more than 3.5 hours a week, the risk of death was reduced by 23 percent. According to researchers, the books serve to "develop empathy, social perception and emotional intelligence" as well as increase "cognitive skills".

In 1574, I. Fyodorov published the first children's book "Azбука". The book also provides advice to parents on educating children, as well as examples of creativity for children to read independently. The book by L. Zizaniya, published in Vilnius in 1596, was also of great interest at that time. In this book, the author first tried to take into account the interests and abilities of children.

VG Belinsky emphasized the importance of books and reading in the formation of children's spiritual, cultural, artistic and aesthetic qualities, the culture of reading, their patriotic, humane upbringing, work, preparation for life.

Scientific research conducted by M.M Bezrukikh focuses on the special role of the state in the formation of reading skills and culture among children, youth and the general population. The researcher believes that the role of the state in this regard is manifested in the following two areas: 1) the training of future teachers in the process of higher education to read correctly; 2) organization of educational propaganda among parents; third, to support the activities of children's writers.

During the experimental work, the reforms and advanced traditions in the field of education in foreign countries to form a positive attitude to reading among young people, especially children, were studied. The results of the study show that Russia has witnessed the development of a number of educational programs in the for this purpose.

Australian educator M. Christine Mergan believes that reading art to satisfy the spiritual needs of primary school students is one of the simplest ways to "develop literacy skills in them."

The researcher believes that "reading a book for pleasure is not only a pleasure for the child, but also has a number of advantages, including significant achievement in literacy, while literacy is associated with advantages that determine academic and professional prospects".

According to E. Perrin's book "Reading - 2016", despite the popularity of e-books among Americans, printed books continue to lead them. According to a study by the Pew Research Center, the share of Americans reading books in 2012 (73%) was almost unchanged compared to 2011 alone. In the last year (2012 data), 65% of the U.S. population was able to read print, 28% (three times more than in 2011) read electronic, and 14% read audio books. Americans read an average (on average) of 12 books a year, while middle-class Americans read 4 books in the last month of the same period. College graduates read about four times more e-books, twice as many printed and audio books than high school graduates.

Between 2011 and 2016, the number of tablet users quadrupled (from 4% to 15%) among American readers, and the number of smartphone readers doubled (from 5% to 13%).

According to the results of this study, among Americans of different ages: 84% are on specific topics of interest, 82% do not lag behind the changes in society (47% of them almost every day), 80% enjoy the book (35% of them almost every day), 57% are readers at work or in schools (31% of them almost every day).

A 2007 study by the National Endowment for the Arts (NEA) found that young people were increasingly "moving away" from reading. "One in three 13-year-olds reads a book every day. This is 14% lower than 20 years ago. The number of 17-year-olds reading has more than doubled in the last 20 years, with a negative 19% increase in attitudes toward reading between 1984 and 2004. If middle-aged Americans spend an average of two hours a day watching TV, the amount of time they spend reading a book is 7 minutes.

Foreign experience has shown that the problem of reading books in person, forming a positive attitude to reading, the analytical study of the interest of members of society in reading printed, electronic and audio books has become important in the practice of leading countries.

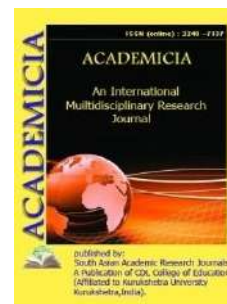
Hence, the study of foreign experiences in the formation of reading skills in primary school students is also important. Therefore, the study studied the experience of the United States, Great Britain, France, Finland, Norway, Japan, Russia and other countries in the formation of personal reading skills.

The results of the study showed that the research problem can be solved at the level of public policy in these countries. Research in the field has confirmed that it is consistently conducted by individuals and legal entities. At the same time, under the influence of global information, the traditions of reading printed, electronic, audio books by children and adolescents in leading foreign countries have been formed. However, the attitude of children and adolescents to reading is not positive. In this regard, there is a decline from year to year, and this situation can be explained by a number of reasons.

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DOI: **10.5958/2249-7137.2020.00571.6**

## FACTORS INCREASING WOMEN'S SOCIAL AND POLITICAL ACTIVITY

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### ABSTRACT

*The article presents scientific opinions on the women-related issues such as increasing women's socio-political activity, ensuring their rights and interests, the role of political party "Women's Wing" in enhancement of women's politicking, increasing women's participation in public administration, the role of women in democratic reforms etc.*

**KEYWORDS:** *Women's Issues, Political Activism, State, Politics, Society, Women, Democracy, Gender Equality, Family Strength, Reforms.*

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### INTRODUCTION

Ensuring women's rights and interests, increasing their social, economic and political activity in Uzbekistan has been acknowledged as an important direction of the state policy. A number of adequate conditions have been created for women to enhance their status and role in the society, ensure their rights and interests, increase their socio-political and economic activity. Over the past years, the women's activity in the socio-political and socio-economic life of the republic has significantly increased resulted from the state's policy on protection women's rights and legitimate interests. In this regard, it is worth to mention the speech of Sh. Mirziyoev, the President of the Republic of Uzbekistan given at the twentieth plenary session of the Senate of the Oliy Majlis of the Republic of Uzbekistan on June 22, 2019 and at the 63rd session of the

Commission on the Status of Women (UN), at the head of UN Secretary-General Antonio Guterres held on March 11-17, 2019 where Uzbekistan took active part with its delegation: “The economy is growing, stability is being strengthened and the well-being of citizens is increasing in such societies where women are actively involved in the political and social life of the country”. [1]

Indeed, women’s social activity is one of the significant factors in the development of any society. Therefore, as a result of large-scale democratic reforms in Uzbekistan, special attention has been paid to increasing women’s socio-political activity and a number of measures are being developed and implemented to protect their rights and interests in the family, state and public affairs. In particular, in the elections to the Oliy Majlis and local councils organized in December 2019, women once again demonstrated their increased status and political activity. An official reminder about such women’s activity was noted in the speech of President Sh. Mirziyoev at the anniversary meeting dedicated to the International Women's Day on March 8, 2020: “According to the results of the elections, 48 women out of 150 deputies (32%) elected to the Legislative Chamber of the Oliy Majlis. That figure rose to more than 25 percent in the Senate and local councils.

It is particularly to be noted that for the first time in the history of Uzbekistan, the number of women in the national parliament has reached the level set by the United Nations. The country's parliament has risen to 37th place among 190 national parliaments in the world in terms of the number of women deputies. We should pay great attention to these figures because 5 years ago we were in the 128th place in this regard.

Currently, more than 1,380 women are holding leadership positions in the system of state and public organizations.

We are glad to announce that 16 of our honourable women have been awarded the highest award of our country - the title of “Hero of Uzbekistan”. It is our pride that we have hundreds of women who have been awarded the titles of doctors of sciences, professors and academics, and Public Education Awards, National Poetry Awards etc. [2]

The establishment of the “Honourable Woman” medal of honour for those who have shown initiative and active participation in the life of society and state, the formation and strengthening of the family through their fruitful work, a worthy contribution to the protection of motherhood and childhood is also a good example of the attention paid to women by the government.

At present, the participation of women in public administration is growing day by day. Specifically, in recent years, the performance of women in the executive branch has increased 5 times, that is from 3.4% to 16%. [3]

The number of women in the electorate of political parties is also growing and the establishment of “Women’s Wing” can be a great example for the constant increase of women leadership. According to the Women's Committee of Uzbekistan, the number of women in the Liberal Democratic Party of Uzbekistan has increased from 35% to 38%, in the Uzbekistan National Revival Democratic Party from 40% to 46%, in the People's Democratic Party from 41% to 56%, and in the Adolat Social Democratic Party from 38% to 49%. [4]

There are also various organizations working to support women in all areas. For instance, Business Women’s Association of Uzbekistan “Tadbirkor ayol” was founded in 1991 to promote

and protect the economic and social rights of women. The Association has branches in 14 regions and 68 cities and districts of Uzbekistan. In 2018, the Association organized 713 business events which hosted about 12,000 women. More than 2,500 new jobs were created by the members of this organization. In the first six months of 2018, 28,000 women received loans from the Association worth 1.3 trillion soums for developing their entrepreneurship activity. For four years, November 19 has been celebrated as International Women's Entrepreneurship Day in 144 countries around the world. Since 2016, the Business Women's Association of Uzbekistan "Tadbirkor ayol" has joined this initiative, and since that time various large-scale events have been being held within this day, including the "Women's Entrepreneurship Week" held on November 19-24, 2018, where the winners of the Progress review under the Republican Contest "Anor-2018" were awarded valuable prizes and special diplomas in the nominations "Best Entrepreneur Woman", "Best Farmer" and "Best Service". In total, more than 2,500 new jobs were created by the Association last year. One of the giant projects of the Association in partnership with the Islamic Development Bank was the announcement of a competition for small grants in 2018 to support socially oriented innovative business projects to ensure women's employment. Since August 1, 2018, 69 regional branches of the Association have been functioning on legal basis.

At the beginning of 2018, the 1st International Conference was held on the Development of Innovation and the Fundamentals of Business Struggle in Women Farming. At the exhibition of textile products in Bursa, Turkey in 2018, women entrepreneurs of Uzbekistan took active part using the advantage of the vast opportunities created by the President and the government for entrepreneurs. Today Uzbek business women are working hard to expand women's entrepreneurship, reach new heights and make a significant contribution to the country's economy. [6]

Without any doubt we can say that women are the "mirror" of any society. Regardless of the social system of the society, the level of well-being of the population, the stability of families, the upbringing of the next generation - intellectual potential in society, spirituality and culture, enlightenment, and other achievements in all spheres are determined by the attitude of that society towards women and their contributions to the society. The expression of respect and honour to women in Uzbekistan can be seen in the following saying: "With one hand a woman shakes the cradle and the world with the other."

Although many measures such as the organization of various events and meetings over the years by the Women's Committee, the community and other public organizations have been taken to improve the social status of women in the society, there is still a lack of an effective mechanism for the realization of women's interests. As a result, many issues have accumulated in the field due to the limited social situation and the ineffectiveness of social assistance to families, women and young girls.

Therefore, the Presidential Decree of February 18, 2020 "On measures to improve the socio-spiritual environment in society, further support the institution of the community and bringing the system of working with families and women to a new level" supports women's social activity, strengthens their position in the society, guarantees the protection of their rights and legitimate interests and brings the legal mechanisms of the organization of a healthy and stable



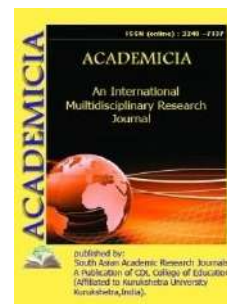
socio-spiritual environment in society and the family, as well as peace, harmony and tranquility reform and work with the women in the family and out of the system to a new level.

To sum up, increasing the socio-political activity of women has been an important factor in the ongoing reforms in our country. To ensure the active participation of women in the society and public administration, the following conditions emerged in the socio-economic changes during the independence period:

- The reforms have served the social activity of women;
- Women's labor has played an important role in ensuring the effectiveness of democratic reforms;
- Women and families are protected by the state.

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DOI: **10.5958/2249-7137.2020.00572.8**

## BARBARISMS OF ENGLISH ORIGIN IN RUSSIAN LITERATURE

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### ABSTRACT

*This article is devoted to identification, analysis and functioning of barbarisms in the text. The research material was barbarism extracted from texts of fiction, contemporary magazines and newspapers. The relevance of the article is determined by the fact that the problem of studying barbarism has received insufficient coverage in linguistics and is of particular importance in the modern language situation*

**KEYWORDS:** *Barbarisms, Foreignisms, Slang, Youth Slang.*

### INTRODUCTION

Inter language interactions are a natural phenomenon that is characteristic of all languages of the world. The interaction of the Russian language with a foreign language, the result of which are lexical borrowings, is one of the most difficult and at the same time topical issues of modern linguistics. Some borrowings are so organically integrated into the lexical system that they are perceived as primordially Russian (for example, зонтик (umbrella)). Others, by contrast, retain the features of foreign languages. Over time, they can either withdraw from circulation and be forgotten, or find application in limited areas and go into the category of professionalism or slang (for example, the words пейджер “pager” or хакер “hacker”).

Similar words are called barbarisms. This article is devoted to their identification, analysis and functioning in the text.

The research material was barbarism extracted from texts of fiction, contemporary magazines and newspapers.

The relevance of the article is determined by the fact that the problem of studying barbarism has received insufficient coverage in linguistics and is of particular importance in the modern language situation, since the process of enriching the Russian language of various kinds with borrowings becomes active and versatile.

### Main Part

Currently, there are several interpretations of the concept of "barbarism" (from the Greek. barbarismos and Latin. barbaris - foreign). The earliest sources of information about this phenomenon were dictionaries of foreign words, which suggested a schematic definition of barbarism. So, in the Dictionary of Foreign Words (edited by I.V. Lekhin and F.N. Petrov) barbarism is broadly defined: "a word or expression from another language that is unusual for this language and is borrowed from another" [3, p. 120], which practically equalizes barbarism and borrowing, not allowing revealing any distinctive features of the concept of interest to scientists.

A. A. Reformatsky interprets barbarism as "foreign words suitable for coloristic use in describing alien realities and customs" [2, p. 137-138]. This value was most commonly used in the 1960s.

In accordance with the definition of B. N. Golovin, barbarisms are foreign-language words or phrases that are included in speech without any need [4, p. 19]. A scientist brings barbarisms closer to lexical means that clog up speech and violate its purity: dialectisms, jargonisms, vulgarisms, swear words, parasitic words and clericalism [1, p. 18-19].

Most of barbarisms have corresponding Russian synonyms: арт (art) - искусство, брэнд (brand)- марка, геймер (gamer); дискомфорт (discomfort)- неудобство.

It is very important stylistically to distinguish between barbarisms and foreignisms. Barbarisms have already become facts of English language and are given in the bodies of dictionaries, while foreignisms though used for certain stylistic purposes do not belong to English vocabulary, nor are they registered by dictionaries. Barbarisms can be labeled as a historical category resulting from the development of foreignisms until they become naturalized and merged into the native stock of words.

Barbarisms are used with various functions: e.g. to supply local color, i.e. introduce language elements that reflect the environment as a background to the narrative. By local color we also mean the devices used to describe the conditions of life the customs, the morals, and the manners of a given country at a given period.

Another function of foreignisms is to build up a stylistic device of non-personal direct speech or represented speech of a local inhabitant which helps to reproduce his manner of speech and the environment as well.

It means that in order to develop students' language-proficiency, it is an important aspect to develop their speaking skill because they have great effect on their success in learning the foreign language.[7]

The same characteristics play a role in the description of the location of birds on branches, poles etc. Compare: "Two of them "hornbills" crashed into the branches above us and sat there silhouetted against the green sky, carrying on a long and complicated

conversation...". "He", "Woodford's owl" sat on the branch, regarding us with a wide-eyed horror, while I took up my position behind the camera".[9]

Foreignisms and barbarisms are used in various styled but most often in publicist one. In fiction they sometimes help to elevate the language, because words which we do not understand have a peculiar charm. A hero may pronounce whole phrases in a foreign language without translation, but frequently it is sufficed to mention only 2-3- words to produce the effect of a whole utterance pronounced in a foreign language.

Intensive borrowing of foreign vocabulary (especially English origin) is an integral feature of modern stage of development of the Russian language. According to our calculations, based on data of dictionaries of foreign words, for the last decade the Russian language was replenished with 674 English words.

У Маяковского в стихотворении "Бродвей" из цикла "Стихи об Америке" встречаем следующие строки:

*На север*

*с юга*

*идут **авеню**,*

*на запад с востока –*

***стриты**,*

*Хочешь под землю –*

*бери **собвей**,*

*на небо –*

*бери **элевейтер**...*

- **Собвей** – подземная дорога(subway); **элевейтер** – воздушная железная дорога(elevator); **авеню, стрит** – улица(avenue, street).

Десять лет спустя она участвовала в раскрученном вокальном проекте и пела в **прайм-тайм** на первом канале. Расценивать это можно по-разному: и как успех Нуки как творческой единицы, и как попытку телепродюсеров расширить аудиторию, и как банальную жажду наживы со стороны **менеджеров** группы, и много чего ещё опопсения**андеграундной** сцены.(SerjBrusov "DetiSeti")

Here we can see three examples of barbarisms of English origin: прайм-тайм–prime-time, менеджер–manager, андеграунд–underground.

"Шучу, – добавил Анджей, зная, что Леша практически не употребляет алкоголя. – Ну, тогда – **бай**, – сказал Леша. – Марии привет." (А. Белозеров "Чайка"). The word "бай" (bye) refers to barbarism in the same way as "хай" (hi), "сэнкс" (thanks), "сорри" (sorry) and others. This is a variant of youth slang. Barbarisms also help to distinguish the speaker from the mainstream.

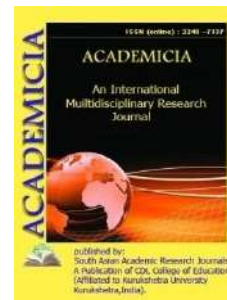
## CONCLUSION

Thus, foreign words, becoming barbarisms, are rapidly entering the Russian language, have the opportunity in the near future to become essential components of Russian culture.

The main sign of barbarism is not that it is borrowing words, but that barbarism is almost always recognized as alien. Barbarism differs from other foreign borrowings also in that it has a “foreign” appearance, sharply distinguishing them from the background of Russian vocabulary. Barbarism always enters into a competitive relationship with another word or expression of the recipient language.

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DOI: **10.5958/2249-7137.2020.00573.X**

## INTRODUCTION OF MODERN INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE FIELD OF NORMATIVE ACTIVITY AND ACTIVITIES OF JUSTICE BODIES

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### ABSTRACT

*This article examines the activities and trends of the justice authorities of the Republic of Uzbekistan, investigates the nature of the rule-making function, analyses the activities of foreign justice bodies in this area and offers suggestions for improvement. Additionally, this article discusses and analyses the introduction of modern information and communication technologies in the field of regulatory activities and the activities of justice bodies.*

**KEYWORDS:** Information, Technology, System, Justice, State, Ministry, Norm, Expertise, Structure, Function, Law, Resolution.

### 1. INTRODUCTION

Currently, the democratic and legal reforms carried out in the Republic of Uzbekistan create the necessary conditions for the rule of law and protection of the rights and legitimate interests of citizens, guarantees of business activity, legal protection of the investment climate and improvement of the legal culture among the population. Within the framework of these reforms, further improvement of the activities of the judicial authorities, including the development of the rule-making function of the system, is manifested as an element of the unified state legal policy.

However, the introduction of new and modern mechanisms regarding the quality of the norm-setting activities of judicial authorities, the coordination of the legislative activity of state bodies and agencies and more effective and systematic methodological processes in this area suggest that similar further improvement of the tasks and functions of the judiciary is needed.



## 2. LITERATURE REVIEW

Until now, problems in this area have been studied in the framework of research by legal scholars and practitioners who have studied the field of the functional tasks of justice bodies and their rule-making activities. We can provide examples of researchers from the CIS countries in this area, such as A. Kim, A. Baldin, A. Gulyagin, V. Bushkov, V. Stepanishchev, E. Tretyakov, M. Gorbachev, L. Tarasov, O. Yakovlev, S. Filipchuk, N. Kotova, N. Yeltsov, and N. Polyakova. In particular, O. Yakovleva has studied the powers of the justice authorities in the process of norm-setting and issues of mutual cooperation with other state bodies.

The PhD thesis of legal scholar A. Kim thoroughly studied issues such as regulatory documents and legal and anti-corruption expertise by regional bodies of the Ministry of Justice of the Russian Federation [1].

In the Republic of Uzbekistan, several theoretical studies have been conducted on justice bodies and their rule-making. In particular, the scientific works and dissertations of such scholars as B. Abdullayev[2], D. Matrasulov[3], S. Said-Gazieva[4], O. Faiziev[5] and H. Khayitov[6] have analysed the activities of the judicial authorities, their rule-making, and aspects of the legal examination of legislation. Among them, the research of O. Faiziev and H. Khaitov, who studied certain types of rule-making and issues of justice in this area, stand out for their scale.

In particular, O. Faiziev's research paper "Improving the effectiveness of orders and resolutions of ministries, state committees and departments, as well as the activities of state registration" analyses improvements based on the analysis of the impact of legal expertise on the quality of departmental legal documents and important aspects of the industry as well as the associated rules, including anti-corruption expertise, the possibilities of implementing effective mechanisms to ensure that departmental legal documents can be removed from the state register. The issues of improving liability for violations of the law on state registration of departmental legal documents are analysed, and proposals and recommendations for improving the efficiency of legal expertise and state registration of departmental legal documents based on the experience of foreign countries are provided [7].

Additionally, the legal scholar H. Khaitov in "Improvement of organizational and legal bases of the examination in law" scientifically analysed the forms and types of expertise and organizational and legal mechanisms of examining drafts and subjects as well as trends in activity [8].

In addition, Yakovleva studied the powers of judicial bodies in the process of normative creativity and their interaction with other state bodies[9].

However, the analysis shows that to date, no specific research has been conducted on the rule-making activities of the judicial authorities in the Republic of Uzbekistan; thus, this area has not been studied comprehensively.

## 3. METHODS

In addition to the general theory of state and law, private scientific methods (methods) that help determine the concept of state and law are used in this article, including formal-logical, formal-legal, comparative, concrete-sociological, and social-experimental techniques and modelling of state and law.

The formal-logical method studies the essence of the state and the object of law, the main content of which is in theoretical form, based on abstract and logical laws.

The formal-legal method involves the study of the names of rights and the internal universal structure, analyses the forms and sources of law, etc. In general, this method helps to reveal the phenomenon of state and law (the different sides of the most rare phenomena) to classify and to categorize it depending on the nature of the state and law.

The method of comparison is a comparative study of the phenomena and views (thoughts) of the state and law.

The essence of this method is that there are certain similarities between various state and law phenomena, and one of them, if the private signs (model) are known, can therefore adequately reflect others.

Through the concrete -sociological method, it is possible to clarify the effectiveness of the legal regulation of the system of all state bodies, the state of legality, law enforcement, and their implementation.

The social-experimental method - the expediency of applying a norm of state and law can be tested in certain regions by experiment (experiment) [10].

#### **4. DISCUSSION AND ANALYSIS**

In state and legal theory, the creation of normative legal acts of authorized state bodies, the activities aimed at making changes to them and their cancellation are expressed as law-making.

Additionally, the following types of law-making exist: direct law-making (national referendum), the law-making of state bodies (Oliy Majlis, Cabinet of Ministers, Ministry of Finance, etc.), the law-making of individual officials (president, ministers, khakims, etc.), and the law-making of local self-government bodies.

In the process of law-making, new legal norms are developed and approved. First, the planned tasks of state activity find their expression in law. Of course, in regard to state functions, it is first advisable to mention the forms of their implementation and, as one of them, law-making or law-creating activity, which is one of the forms of state leadership in society. Therefore, regardless of the function, type of state, or forms of state administration and organization, law-making is carried out by the state[11].

This is why rule-making is a process that covers the identification and assessment of the legal needs of society and the state through the formation and adoption of legal documents of legal entities in the prescribed manner. This description focuses on the following important aspects: understanding, studying and analysing the state or process that requires legal regulation, determining the body (entity) that has the authority to adopt a legal act, choosing the form of the act to be adopted, and preparing, adopting and changing the legal act through the appropriate procedures. Of course, all these aspects are interrelated and are an integral process.

According to the Decree of the President of the Republic of Uzbekistan dated August 8, 2018, No. DP-5505, "On approval of the concept of improving normative activity", the following are defined as the main directions for improving normative activity:

- systematization of the legal framework, ensuring the stability of the legal regulation of public

relations;

- improving the quality of the development and adoption of legal acts as well as improving the monitoring of their implementation;
- introducing modern information and communication technologies into the rule-making process;
- applying elements of the "smart regulation" model to rule-making; and
- improving the institutional framework for rule-making [12].

As an example of law-making by state bodies, it is appropriate to cite the activities of justice bodies in this area. In particular, the approved Decree of the president of the Republic of Uzbekistan dated 13.04.2018, No. DP-3666, "On organizational measures to further improve the activities of the Ministry of Justice of the Republic of Uzbekistan" of the Statute on the Ministry of Justice, defines a number of areas of activity of justice bodies, including in unified state legal policy, the coordination and improvement of law-making activities, and the Ministry of Justice performing certain functions. Additionally, according to the Decree of the president of the Republic of Uzbekistan of April 13, 2018, No. DP-5415, "About measures on radical improvement of activity of bodies and establishments of justice in the implementation of state legal policy", the main tasks of the departments of justice of districts (cities) is to conduct legal review of decisions made by hakimovs and kengashes, the people's deputies of districts (cities), to determine their compliance with the law and the goals and objectives of the ongoing reforms in the country [13].

According to article 7 of the law "On normative legal acts" of the Republic of Uzbekistan, dated December 24, 2012, the absolute supremacy of the constitution and laws is recognized in the Republic of Uzbekistan. The constitution has supreme legal force and applies to the entire territory of the Republic of Uzbekistan. The laws of the Republic of Uzbekistan and other normative legal acts are adopted on the basis of and in compliance with the constitution of the Republic of Uzbekistan and may not contradict its norms and principles.

Here, to ensure the supremacy of the constitution and laws of the Republic of Uzbekistan, the judicial authorities, together with the state bodies that carry out norm-setting activities, conduct legal examinations of draft laws and regulations that are currently being developed to ensure that they comply with higher legislation.

Article 22 of the law "On normative legal acts" of the Republic of Uzbekistan ensures, in the course of legal examination, the compliance of drafted normative legal acts with the constitution and laws of the Republic of Uzbekistan, other regulatory legal acts of higher legal force, and the rules of legislative technique and determines the validity and applicability of reference standards.

One of the original documents adopted in the years of independence, which was important for the activities of the judiciary and for governing this area, the Presidential Decree of the Republic of Uzbekistan № PD-314, dated January 8, 1992, "On improvement of activities of the Ministry of Justice of the Republic of Uzbekistan", planned a number of activities of the system.

The abovementioned decree was adopted to increase the role and responsibility of the judicial authorities, strengthen the activity of law-making, improve legal services for the population, and protect the constitutional rights and legitimate interests of citizens based on the activity of law-making. The Ministry of Justice was entrusted with the task of applying legal expertise and

registering mandatory regulatory documents that are adopted by all ministries, state committees and departments within its jurisdiction.

In the structure of the central apparatus of the Ministry of Justice of the Republic of Uzbekistan, the approved decree “On improvement of activities of the Ministry of Justice of the Republic of Uzbekistan” of the Cabinet of Ministers of the Republic of Uzbekistan, dated 12 November 1992, No. 523, created the Office of the Law according to the Statute on the Ministry of Justice of the Republic of Uzbekistan. The department deals with the study of problems of legislation, participation in the preparation of legislative and other normative acts of the republic, regulation, codification of laws of the Republic of Uzbekistan, and decisions of the Cabinet of Ministers of the Republic of Uzbekistan.

Based on the Resolution of the Cabinet of Ministers No. 294 of June 17, 1993, “On approval of regulations on legal expertise and state registration of normative acts of ministries, state committees and departments, having a compulsory nature”, the Ministry of Justice applies legal expertise and carries out the state registration of the normative documents of ministries, state committees and departments that are of a general binding character.

The resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 27, dated 24 January 1994, in the structure of the central apparatus of the Ministry of Justice established the office for the preparation and legal expertise of draft laws and regulations on economic reform. This office manages the development and legal examination of draft laws and non-economic instruments on economic reform, participation in the preparation of legislative and other informal documents of the republic, and identifying and coding the laws and decrees of the president of the Republic of Uzbekistan, and the Cabinet of Ministers.

Additionally, by Resolution No. 257 of the Cabinet of Ministers of the Republic of Uzbekistan, “On certain issues of improving the structure of the Ministry of Justice office”, dated 13 May 1994, the Department for Legislation of the central office of the Ministry, which included the Department for the preparation and legal examination of draft legislative and regulatory acts on economic reform and the information and legal centre, was transformed into the main Department of Legislation of the Ministry of Justice.

In addition, in accordance with Cabinet Resolution No. 469, “On measures to ensure the legality of normative acts of ministries, state committees and departments”, of 9 October 1997, the Department of State Registration of Normative Acts of Ministries, State Committees and Departments of the central office of the Ministry of Justice established the Department of State Registration of Departmental Normative Acts and established that the Ministry of Justice applies legal expertise and conducts the state registration of the normative acts of ministries, state committees and departments, regardless of whether they are permanent or temporary and the nature of the information contained in them.

According to the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 370, “On measures to further improve the activities of the Ministry of Justice of the Republic of Uzbekistan”, dated August 27, 2003, the development and implementation of priority areas for improving legislative activity and law enforcement practice are identified as among the most important tasks and activities of the Ministry of Justice.

Therefore, according to this resolution, the central office of the Ministry of Justice has created

departments of the main Department of Legislation that are directly engaged in normative activities: "Administrative and Social Legislation", "Economic Legislation", "State Registration of Departmental Normative Documents", and "Classification of Legislation and Legal Information". Additionally, this resolution established the activity of the "Legislation Classification" departments in the structure of the Ministry of Justice of the Republic of Karakalpakstan and in the structure of the Departments of Justice of the regions and the city of Tashkent.

Under the Ministry of Justice, one of the main tasks of the systematic analysis of the development and reform of the country's legislative and legal framework, determining compliance with the priority goals and objectives of democratization and the renewal of society, reform and modernization of the country, was established by the Decree of the President of the Republic of Uzbekistan No. DP-237 of December 15, 2005.

On June 17, 2011, in accordance with the Decree of the President of the Republic of Uzbekistan No. DP-1555, "On measures to further increase the role of justice bodies in ensuring the rule of law in the activities of state bodies", the centre for monitoring the implementation of legal acts under the Ministry of Justice was transformed into the main Department for Compliance with the Law by the Ministry of Justice, and its territorial divisions were created.

Later, by the Decree of the President of the Republic of Uzbekistan dated July 24, 2014, No. DP-4636, "On measures to further improve the system of enforcement of legislation", the Main Department for Supervision of Compliance with Legislation of the Ministry of Justice and its territorial divisions were abolished.

In accordance with the Decree of the President of the Republic of Uzbekistan № DP-1602, "About measures on further improving activities of the Ministry of Justice of the Republic of Uzbekistan", dated August 23, 2011, the adoption of the uniform state policy aimed at ensuring the reliable protection of the constitutional rights and freedoms of citizens in the area of norm-setting and enforcement in the context of rule-making, the consistent implementation and development of proposals on the gradual improvement of the legal framework of democratic, socio-economic and socio-political reforms, and defining "white spots" in the current legislation and in rules and regulations that create conditions for corruption and other offenses in the system of state power and management are among the main tasks and activities of the Ministry of Justice.

Under the abovementioned Cabinet of Ministers decision No. 370 of 27 August 2003, the office "Administrative and Public Law" in the structure of the central apparatus of the Ministry of Justice was reorganized with a change of name and functional tasks to the Office of Criminal, Administrative and Public Law, and the "State Register of Administrative Normative Documents" was renamed the "State Register of Administrative Legal Documents."

In addition, under the Decree of the President of the Republic of Uzbekistan of August 23, 2011, № DP-1602, in the structure of the Department of Justice of the regions and Tashkent, the department of "Classification Law" was renamed "Legal Examination and Classification Laws."

Finally, based on current requirements and the experience of developed countries, in order to radically improve the functioning of the organs of justice in the Republic of Uzbekistan and enhance the role of the Ministry of Justice in the system of public administration on the basis of



the Decree of the President of the Republic of Uzbekistan № up-5415, “About measures on radical improvement of activity of bodies and establishments of justice in the implementation of state legal policy,” dated April 13, 2018, Decree № DP-3666, “On organizational measures on further improving activities of the Ministry of Justice of the Republic of Uzbekistan”, was adopted.

Decree of the President of the Republic of Uzbekistan № PP-3666, dated 13 April 2018, created the office for the examination of the legal decisions of government protocol and departmental normative documents, management analysis and classification laws in the structure of the central apparatus of the Ministry of Justice on regulatory activities.

Currently, the function of legal expertise in the area of norm-setting of bodies of justice is performed by the offices of “criminal, administrative and public law” “on examination of the legal decisions of government protocol and departmental normative documents” of the central apparatus of the ministry and the offices of legal expertise of the regional departments of justice and offices of justice of the district (city).

Normative creativity in foreign countries and the activities of the judicial authorities in this area call for a comparative legal analysis. If we consider the experience of the norm-setting activities of judicial bodies of the members of the Commonwealth of Independent States, in accordance with article 34 of the law “On normative legal documents” of the Republic of Belarus of July 17, 2018, then the “Methodological guide” manages the rule-making implemented by the National Centre of Legislation and legal research as well as coordinating the regulatory activities in the Council of Ministers of the Republic of Belarus (in the system of bodies of state administration under the Council of Ministers of the Republic of Belarus) provided by the Ministry of Justice [14].

Article 19 of the law of the Republic of Uzbekistan “On Normative legal documents” of December 24, 2012 (as amended), stipulates that the coordination of work on the preparation of the draft normative legal documents of ministries, state committees and departments, as well as bodies of local state prosecutors’ offices, is carried out in accordance with the legislation of the Ministry of Justice of the Republic of Uzbekistan. The abovementioned law and its norms do not establish the appropriate norms of the Ministry of Justice for the “methodological management” of the norm-making activities of public administration bodies.

However, in paragraph 10 of the statute “On the Ministry of Justice of the Republic of Uzbekistan”, approved by the Decree of the President of the Republic of Uzbekistan no. DP-3666 of April 13, 2018, the Ministry of Justice is charged with coordinating the activities of state bodies and organizations on law-making and implementation of methodological guidance [15].

In addition to scientific sources, the legislation of foreign countries defines the legal characteristics of the concept of “rule-making”. For example, according to article 1 of the constitutional law of the Republic of Azerbaijan, “On normative legal documents,” of February 17, 2011, rule-making is the activity of preparing, examining, adopting, amending, interpreting, suspending or cancelling normative legal documents [16].

The Ministry of Justice of the Russian Federation submits draft federal constitutional laws to the president and government of the Russian Federation, summarizes the practice of adopting legislation, and provides legal and anti-corruption expertise for legislation [17].



In our opinion, it would make sense for the law of the Republic of Uzbekistan “On normative legal documents” to also establish rules that provide for the concept of “norm-making” and the range of subjects that carry out this activity, “methodological guidance” for norm-making activities, and a specific mechanism for coordinating these activities.

One of the important tasks of the Federal Ministry of Justice and Consumer Protection of Germany, which is considered one of the judicial bodies of European states, is to conduct a legal examination of draft laws developed by other ministries to determine their compliance with constitutional laws and the legal system [18]. The French Ministry of Justice performs the function of family law, French citizenship, and preparation of laws and regulations in the field of civil and criminal law [19].

The Department of Legal Advice of the Ministry of Justice of one of the developed Asian states, South Korea, reviews proposed legislation and interprets laws as well as improving civil legislation [20].

Regarding the basics of implementing modern information and communication technologies in the rule-making process through the widespread introduction of modern information and communication technologies in all spheres of society, the use of information and sources and programs in electronic form is becoming widespread and popular. At the same time, due to the need to use information and communication technologies in the field of rule-making, appropriate measures are being taken to improve the relevant legislation.

Since the strategy of actions on the five priorities of development of the Republic of Uzbekistan, radical improvement of the quality of legislative activity aimed at strengthening the influence of laws adopted in the process of socio-political, socio-economic and judicial-legal reform has been one of the main tasks in improving the system of state and public construction.

The implementation of the abovementioned measures is defined as one of the priority areas of the concept “Improvement of normative activity”, approved by the Decree of the President of the Republic of Uzbekistan dated August 8, 2018, “On approval of the concept of improvement of normative activity”.

The concept of “Introduction of modern information and communication technologies in the rule-making process” is one of these priority areas, that is, the development of e-rulemaking providing for stages of advancement, development, agreements, introducing and monitoring the implementation of legal documents transitioning to electronic form and being sent the optimized routine interdepartmental agreements of draft normative legal instruments, thus streamlining the former processes. Among other things, it is planned to introduce a mechanism that schedules such agreements, taking into account the volume of a project, the complexity of the subject of regulation, and other factors.

Within the framework of the abovementioned norm, Resolution No. 284 of the Cabinet of Ministers of the Republic of Uzbekistan, "On organizational measures for the introduction of a unified electronic system for the development and approval of draft legal acts", was adopted on April 8, 2019, to translate the rule-making process into electronic form, that is, the stages of promotion, development, approval, implementation and control of the implementation of legal acts.

On the basis of this resolution, the Ministry of Justice of the Republic of Uzbekistan, together

with the Ministry of Information Technology and Communications Development and with UZINFOCOM as the unified integrator for the creation and support of state informational services, put into operation a trial pilot project in the world Internet information system, a unified electronic system for the development and approval of draft legal documents.

The developed unified electronic system provides for the implementation of the following priority tasks:

- creating an opportunity for all interested ministries, departments, and local executive authorities to review draft regulatory legal acts, approve (review) them using an electronic digital signature, including simultaneously and promptly sending them to the general public and discussing them with specialists;
- Automatically registering the performed actions, ensuring transparency of the process of the consideration and approval of projects (revising) related to draft legal acts;
- confirming the authenticity of electronic digital signatures, including the validity and relevance of visas;
- collecting and storing information about actions taken in the process of reviewing and approving (sighting) draft laws, proposals and objections of interested ministries, departments and local executive authorities on draft legal documents;
- implementing the process of developing draft legal documents as well as the system of a single electronic agreement maintaining a single electronic database to provide information about interested ministries, departments and local executive authorities, as well as using a single electronic database in the formation of analytical and statistical information;
- developing draft legal documents as well as managing, monitoring and controlling the agreement process (revising) with interested ministries, departments and local executive authorities in real time;
- developing draft legal documents and saving significant time and travel resources in the process of agreement (revising) with interested ministries, departments and local executive authorities.

Based on this decision, within the framework of using the unified electronic system, the main functions of the Ministry of Justice were defined as follows: ensuring effective use of the unified electronic system by ministries, departments, local executive authorities, and other state bodies and organizations, as well as providing methodological guidance on its use in standard-setting activities; providing constant monitoring by ministries, departments, local executive authorities, and other state bodies and organizations of the process of development, approval (approval) and introduction of draft laws of the Republic of Uzbekistan and documents issued by the president of the Republic of Uzbekistan and the government of the Republic of Uzbekistan through a single electronic system;

Developing draft laws, agreements (revising) and introduction of draft laws of the Republic of Uzbekistan and documents issued by the president of the Republic of Uzbekistan and the government of the Republic of Uzbekistan through a single electronic system, as well as proposals for improving legislation regulating the procedures and mechanisms of work through this system;

Preparing proposals for the wider implementation of innovative methods of work using modern information and communication technologies in the rule-making process [21].

## 5. CONCLUSION

Research related to rule-making and analysis of the legislation of the judicial authorities requires further improvement in this area. Therefore, due to the development of activities in this area, it is advisable to provide the **following suggestions**:

**First**, according to the approved decree of the president of the Republic of Uzbekistan of April 13, 2018, № PP-3666, "On organizational measures on further improving activities of the Ministry of Justice of the Republic of Uzbekistan", the Ministry of Justice, coordinates the activities of state bodies and organizations in the field of law-making in the coordination, improvement and guidance of legislative activity.

However, although the legislative departments that are part of the ministry mainly apply legal expertise to norm-making activities, the legislation does not reflect the exact mechanism for implementing the ministry's methodological guidance of the norm-making activities of state bodies and organizations.

Taking this into account, it is advisable to create a Department of Methodological Support for Rule-making and Scientific and Technical Expertise in the system of the Ministry of Justice. This department, in the direction of implementing "methodological guidance" for the normative activity of state bodies and organizations, would perform the following functions: together with developing instructions related to this activity, studying structures that carry out normative activity in the justice system and state bodies and organizations; identifying systemic shortcomings and problems in the field; developing proposals for improving the area; improving the skills of employees and specialists of the region; and providing them with methodological and practical assistance.

Additionally, theoretical scientists and experts in the relevant branches of law, as well as specialists in linguistics and information technology, should carry out the examination of draft legislation exclusively in regard to the scientific, linguistic and other technical aspects.

The organization of this management and the implementation of the rule-making of public authorities and institutions in the system of justice can be the basis of the quality and functioning of particular system structures for the effective implementation of the "legal expertise" of the draft legislative departments of the ministry exclusively from the point of view of legislative direction.

**Second**, laws on law enforcement agencies in the Republic of Uzbekistan have now been adopted, and their legal status is determined in the framework of law enforcement. The laws of the Republic of Uzbekistan "On courts" of December 14, 2000, "On the Prosecutor's office" of August 29, 2001, "On the state security service" of April 5, 2018, and "On internal affairs bodies" of September 16, 2016, regulate the activities of these law enforcement agencies.

However, according to the Decree of the President of the Republic of Uzbekistan No. DP-3666, "On organizational measures to further improve the activities of the Ministry of Justice of the Republic of Uzbekistan", although the Ministry of Justice and regional justice bodies are law enforcement agencies, no law has yet been adopted defining their legal status.

Adoption of the law “About justice” of the Republic of Uzbekistan will be expedient to define absolutely new and advanced areas of activity of the bodies and departments of justice, ensure their role in the ongoing reforms and effective implementation of priorities, and form a more perfect system of justice.

**Third**, a legal examination of draft resolutions such as mandatory state guidelines adopted by people's deputies of regions, districts, city kengashes, khakim regions, and cities is carried out by the relevant justice authorities in accordance with the current procedure as well as the results of legal examination. The positive conclusion of regional justice bodies is a prerequisite for the adoption of legal documents.

Legal expertise is needed for the draft resolutions of people's deputies of kengashes and khakims. Although the Department of Legal Expertise and Coordination of Legal Services of regional departments of justice conducts reviews, there is no legal expertise division in the structure of city (district) departments of justice to apply legal expertise to district and city kengash resolutions.

To ensure that the goals and objectives of the rule of law reforms in the regions and the activities of local authorities correspond to the goals and objectives of the on-going reforms, it is advisable to create a “legal expertise” unit in district (city) departments of justice to directly address legal issues of district and city councils and khakims to prevent the possible discontent of the population and violations of the law.

**Fourth**, although the national Internet portal on e-rule-making developed “Discussion of draft laws and regulations of the Republic of Uzbekistan” and “Single electronic system for the development and approval of draft normative-legal acts”, it is necessary to develop an online portal that involves the corresponding departments and organizations in improving legislation, examining the proposals and developing bills according to their results. The creation of this online portal will contribute to the timely improvement of legislation that does not work in practice or has gaps.

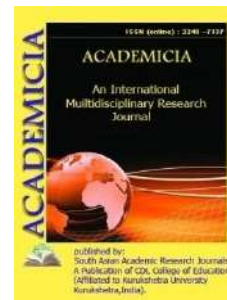
## 6. ACKNOWLEDGMENTS

This article was based on research in the theory of state and law and constitutional law with assistance from Prof. M.Najimov. We also thank the teachers of the Department of Theory and the history of the state and law of TSUL, who provided scientific materials for our article.

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DOI: **10.5958/2249-7137.2020.00574.1**

## KEY FACTORS - LEADING TO DEPRECIATION OF THE NATURAL SOIL CONDITION: CAUSES AND CONSEQUENCES

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### ABSTRACT

*This article discusses the factors that lead to the deterioration of the natural state of the soil, their causes and negative consequences. Thus, bird droppings need to be processed, which is not always provided by farms. It is forbidden to dump manure on frozen ground and snow in order to prevent the subsequent washing off of manure with melt water and its entry into open water bodies.*

**KEYWORDS:** *Soil, Soil Erosion, Water Erosion, Wind Erosion, Accumulation, Landscape, Soil Degradation, Agroecosystem, Desertification.*

### INTRODUCTION

Soil - is an invaluable element of our planet, without which human existence is impossible. The earth provides people with food resources, many animals feed on the gifts of nature grown in the ground. Pollution and deterioration of the natural state of the soil leads to a decrease in its fertility, which in the future threatens a global catastrophe for all living things on our planet.

The main factors in the deterioration of the natural condition of the soil are:



**Soil erosion** - is a natural geomorphological process, an integral part of both global biogeochemical cycles and the global denudation-accumulation cycle. The highest values of natural water erosion outside the mountainous territories are observed in the zones of semi-deserts and steppes. The smallest values of natural water erosion are characteristic of those landscape zones where continuous, often multi-tiered vegetation protects the soil surface from erosion (in areas of humid forests), or where precipitation is insufficient for a noticeable erosion (desert zone). The maximum natural wind erosion is located in arid zones (semi-deserts and deserts). At the global level, the role of wind erosion is approximately half that of water erosion.

With the transformation of the natural ecosystem into an agricultural field, the conditions for erosion change dramatically. The surface of the soil becomes poorly covered by vegetation, and a significant part of the year is completely bare. Numerous data indicate that when converting a forest landscape into a field agroecosystem, erosion increases by at least two to three orders of magnitude, and when converting an open (non-forest) landscape, by one or two orders of magnitude. Therefore, in the agricultural development of territories, soil erosion increases sharply and remains at a high level.

Numerous facts from other parts of the world also indicate an extremely high degree of decline in natural soil fertility. The erosion resistance of soils depends on the content of humus and carbonates, the concentration of cations in the absorbing complex, and the mechanical and aggregate properties of the soil. Each genetic type of soil has a characteristic set of parameters.

It has been established that annually at least 90 billion tons of soil is washed off from the fields. For comparison: a solid runoff of the world's rivers is estimated at 22 billion tons per year. At present, water erosion of soils is at least five times greater than it was under undisturbed farming conditions. The volume of washed soil contains more phosphorus than the entire production of phosphorus fertilizers in the world in a year.

The main potential land reserves for arable land are located in tropical and equatorial areas. The expansion of the area of arable land will lead to a significant increase in soil erosion there. Continued deforestation will lead to a further increase in soil erosion, especially in the humid equatorial zone, where, compared with the pre-agricultural period, erosion has already increased by 8 times, and if all available land resources are used, it can grow by 24 times.

The largest increase in soil erosion, by 33 times compared with the time before the start of agriculture, is noted in areas of sufficient moisture in the temperate zone, where climatic conditions initially grew forests and where the area of arable land is very large.

At the river basin level, washed away soils are sediments carried by rivers. An increase in sediment runoff leads to siltation of reservoirs, canals, irrigation systems and shipping lanes.

**Secondary salinization of soils.** In the process of agricultural activity, a person can enhance the natural salinization of soils. This phenomenon is called secondary salinization and it develops with excessive irrigation of irrigated lands in arid areas.

Around the world, about 30% of irrigated lands are subject to secondary salinization and salinization processes. Salinization of soils weakens their contribution to maintaining the biological cycle of substances. Many species of plant organisms disappear, new halophyte plants appear (hodgepodge, etc.). The gene pool of terrestrial populations decreases due to worsening living conditions of organisms, and migration processes intensify.

**Desertification.** One of the global manifestations of soil degradation, and indeed the environment as a whole, is desertification. According to B. G. Rozanov, desertification is a process of expanding desert areas due to the loss of continuous vegetation by adjacent territories with the further impossibility of its restoration without human intervention.

As a rule, a combination of several factors leads to desertification, the combined effect of which sharply worsens the environmental situation. On the territory subject to desertification, the physical properties of soils deteriorate, vegetation dies, groundwater becomes saline, biological productivity drops sharply, and therefore, the ability of ecosystems to recover is undermined.

Desertification is both a socio-economic and natural process, it threatens approximately 3.2 billion hectares of land, on which more than 700 million people live. As a result of ill-conceived economic activity (improper cultivation of land, excessive grazing of livestock), deep irreversible degradation changes in the natural environment, primarily its edaphic part, took place in these territories.

**Agricultural machinery.** In the course of agricultural activity, a person uses a large arsenal of special equipment. In Uzbekistan, it includes:

- base tractors, wheeled and tracked;
- combines for various purposes;
- seeding agricultural machinery (seeders, universal pneumatic seeders, planting machines);
- soil-cultivating agricultural machinery (fertilizer spreaders, units for applying liquid fertilizers, sprayers, cultivators, subsoilers, combined units, plows, disc harrows, compactors);
- harvesting agricultural machinery (combines, potato diggers, tractor semi-trailers);
- forage harvesting equipment (feed crushers, choppers, mixers, feed distributors, balers, balers, forage harvesters, mowers, packers).

All these techniques, when used, will necessarily negatively affect the environment. For example, agricultural machinery emits gaseous, solid and liquid emissions and heat emissions into the air. When the brake pads are abraded, copper, vanadium, molybdenum, nickel, chromium get into the air and soil, and cadmium, lead, and zinc get worn when tires are worn. A particular danger of these emissions is that they contain soot, which contributes to the deep penetration of heavy metals into the human body.

**Poultry farms and livestock farms.** As a result of economic activity, a rather large amount of solid waste is generated at poultry farms, for example, from laying hens weighing 2-2.5 kg - about 0.11 kg of litter (70% humidity) daily, or 30 kg of solid substance per day. Poultry farming is one of the sources of air pollution, groundwater and groundwater.

Approximate (typical) composition of dry poultry manure (SPP) in%, typical for Uzbekistan ("dry" substance 91.4%).

Crude protein - 29.32.

Crude fat - 2.68.

Crude fiber is 16.93.

"Ash" (mineral base) - 29.5.

Calcium 6.74.

Phosphorus 2.98.

In bird droppings (PP), many chemicals were also found, for example, acids, sulfides, organosulfur compounds, benzopyrroles, phenols (in particular, 2,6-ditretbutylphenol and its derivatives); 2,6-ditretbutylcresol, benzoquinones, aromatic compounds (with a pleasant smell), etc. Vitamins are contained: carotene / provitamins D, E, K; riboflavin, pyrodoxin; nicotinic acid, B12, etc. In the range up to 1.5% are all essential amino acids.

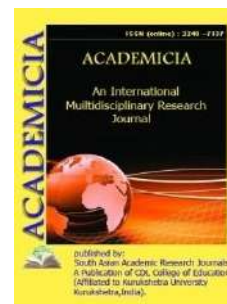
Despite the apparent value and attractiveness of the litter as an organic fertilizer, many technological problems arise during its storage and processing, especially in large poultry complexes. Chicken droppings are a "good" colloidal system, and poorly lose moisture, it requires huge energy consumption during drying. In addition, it is very "concentrated" (unlike cow, horse and even sheep manure). Thus, bird droppings need to be processed, which is not always provided by farms. It is forbidden to dump manure on frozen ground and snow in order to prevent the subsequent washing off of manure with melt water and its entry into open water bodies.

The same problems exist in animal husbandry, at the enterprises of creameries, meat processing, where a significant amount of organic waste is generated.

It becomes obvious the need for a systematic transfer of agricultural production to an ecological and adaptive basis, providing for the development of integrated land reclamation.

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DOI: **10.5958/2249-7137.2020.00575.3**

## APPLICATION OF THE COMMUNICATIVE APPROACH TO THEORETICAL KNOWLEDGE APPLIED IN PRACTICE

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### ABSTRACT

*The article is devoted to the application by students of the studied theoretical knowledge in practice, the implementation of the communicative approach applied in practice, the development of knowledge, skills in the lessons of the mother tongue of primary classes. Speech accuracy is one of the factors in mastering speech culture. Clearly, a reader who speaks piece by piece always speaks clearly. This shows that he is being brought up to be a beautiful speaker. Hence, it should be assumed that in the process of acquiring knowledge in oral linguistic observation and in the nature of preparation for the development of oral and written speech applies a communicative approach in the narrow sense, which is unique to this stage.*

**KEYWORDS:** *Communicative Approach, Creative Approach, Linguo-Cognitive Approach, Principle Of Consciousness, Definition, Classification, Information.*

### INTRODUCTION

In primary school mother tongue lessons, students need to master the types of work and mental operations that are performed in a sequence of comprehension and use in speech in order to apply the theoretical knowledge in practice. These types of work and mental operations are acquired at the skill and skill level through tasks such as observation and reasoning. All educational activities in this area should be carried out in accordance with a certain approach, reflected in the principles corresponding to this approach. But in practice, the work of strengthening rules, which is an important element of theoretical knowledge, is not being done at the level of acquiring sufficient mental operations and skills to apply them in practice. This is often due to the fact that the teacher himself does not know exactly what approach to take and what principles should be considered within this approach.

The idea of following a communicative approach is put forward in most methodological literature [1-7] on the methodology of teaching the mother tongue in primary school. In our opinion, the exercises that students perform in their native language classes in order to acquire practical theoretical knowledge and related mental operations should be organized in the first place in accordance with the communicative approach.

### **Main part**

Communication means the exchange of information. But in the work on theoretical data, communication or preparation for it is unique. If students exchange ideas on the basis of theoretical information and in the process make verbal observation in the process, it is considered communication. When children, in the process of acquiring new knowledge, draw clear conclusions about it, come to a firm conclusion, and begin to speak and write correctly, using the phenomenon of language being studied correctly in speech, it signifies a readiness for the communication process. Hence, it should be assumed that in the process of acquiring knowledge in oral linguistic observation and in the nature of preparation for the development of oral and written speech applies a communicative approach in the narrow sense, which is unique to this stage. In the first case (when observing linguistics), students' linguistic speech is developed at an elementary level on the basis of theoretical knowledge, in the second case, speech exercises are performed to prepare for the development of speech in a broad sense, ie to lay the groundwork for a broad communicative approach.

It should be noted that the theoretical knowledge that is not used in practice in this lesson, in general, does not require observation. For example, so are definitions, classifications, and terms. They are taken as a multiplication table, "What is a horse?", "How many consonants are there in Uzbek?" reinforced by questions such as. Answering questions, telling a topic is also a speech, but the communicative aspect of such a speech is very small, because the answers are ready, it is necessary to memorize them without studying them.

Oral linguistic observation of students on theoretical information shows that they are developing buds of creativity and cognition. According to the creative approach, students are nurtured with a desire to learn independently. Cognitive education (approach), as described by the authors of the article "Current issues of mother tongue education", "encourages learning, teaches ways to learn, recommends methods - the student holds the key to knowledge" [8]. But it can also be thought of in linguistic observation. In this case, that is, when students inspect a linguistic phenomenon in internal speech without speaking, it is beyond the control of the teacher whether the conclusions and judgments they draw are correct or incorrect. Making a mistake is the negative fruit of this uncontrolled process. Therefore, in this context, it is advisable to follow the principle of priority of linguistic exercises in the form of oral observation within the communicative approach.

Typically, the knowledge gained is reinforced through exercise. These should include analytical exercises that can support the student's theoretical observation. Accordingly, the initial exercises must be in the nature of linguistic communication (or professional communication specific to linguists). Only after students have begun to master the knowledge thoroughly will it be appropriate to move to a communicative approach in the broadest sense. In this case, the studied educational materials, including theoretical information (knowledge) are considered to be aimed at achieving this goal. The effectiveness of these materials is largely due to the accuracy of the speech, the reliance on oral and written expression, ie the adequacy of practical knowledge, the

availability of exercises to develop practical skills and competencies, the teacher pays more attention to working with students in this area. determined.

Linguistic observations require the selection of linguistic phenomena, on the one hand, on the basis of variability, and, on the other hand, the study of cases of correct or incorrect use. It cannot be observed without analysis. Without analysis, theoretical information can only be memorized. In this case, the focus is not on variability, nor on whether it is right or wrong. In order to apply the rules in practice, it is necessary to observe, perform mental operations. Only then does the reader begin to think, remember how he used the linguistic phenomenon in the speech experience (activates the sense of language), remembers what he reads, checks the rule.

Linguistic phenomena are occupied by the sense of language in practical speech activity. The principle of relying on students' sense of language in the process of learning a new topic and applying the acquired knowledge in practice.

The child comes to the 1st grade with a small vocabulary, some grammatical skills, mainly with increased speech. The period of mastering the norms of literary language is the result of school education. Students organize their spoken speech phonetically, lexically, grammatically, achieve spelling and punctuation literacy in written speech, and continue to enrich it; get acquainted with the norms of literary language, the elements of "biblical style", take correct speaking lessons in literary language. In fact, thinking about language phenomena begins in childhood. Even at school, this process doesn't stop, even if it's for a moment. Therefore, it is necessary to take into account the fact that the analysis and research of the word, suffixes, sentences is in the nature of the student, to develop these innate abilities based on the sense of language in mother tongue education.

In the process of acquiring the ability to apply theoretical knowledge in practice, students observe each other's speech, correct mistakes, teach each other, check each other, control each other according to the pedagogy of cooperation. A person's sense of language (language sensitivity) lasts a lifetime. But in elementary school, the sense of language is a reliable helper for a child who is writing and speaking. Not everything in language can be explained theoretically. The sense of language replaces that. The child's ability to control himself also plays a big role in this. The ability to self-control is exercised by memorizing the desired rule as needed.

In terms of activating theoretical knowledge applied in practice, a narrowly communicative approach requires students to engage in conscious observation. Accordingly, the principle of consciousness is followed within the communicative approach. In the process of observation, the child compares language phenomena, tries to distinguish cases of correct or incorrect use, draws conclusions, comes to a clear conclusion.

Observations show that students lack the consciousness to apply certain rules in practice, i.e., the rule does not allow for the full provision of conscious mental and verbal action when the language phenomenon cannot be explained in two different ways. Take, for example, the rule, "An exclamation mark is placed at the end of a sentence." In fact, the exclamation point (command statement) can often be followed by a period, sometimes an exclamation mark. If we compare two sentences (Turn off the light. Turn off the light!), One has a dot at the end of the sentence and the other has an exclamation mark. The first is said in the tone of darak (advice, please), the second in the tone of strict command. An exclamation mark is placed at the end of a



sentence that means a strict command. Only if the child understands this difference will he be conscious in applying the rule. In rules like the one above, it is not enough to follow the principle of consciousness (say, the rule provides consciousness). In such cases, in our opinion, it is appropriate to introduce the principle of raising awareness.

As noted above, the effect of following a communicative approach in the narrow sense is that it provides a lexically and grammatically sufficient basis for the transition to a broad communicative approach and is effective in the subsequent process, i.e., the creation of oral and written speech products. This is achieved through exercises related to the application of knowledge in practice. In other words, an orientation approach to speech activity is introduced. The ability to apply theoretical knowledge in the native language is directly related to speech, because the student has the ability to analyze and study the phenomenon of language, to ensure the correctness of his speech, to control it by coming to the desired solution using the rule. It is known that the programmatic knowledge applied in the studied practice is selected to meet the needs of speech development, is passed from lesson to lesson, from class to class according to the principle of continuity. This allows the speech to develop consistently on the basis of continuity.

The main indicators of students' mastery of the methods of learning activities, their activation in the classroom are their becoming a subject of education. Accordingly, the principle of raising students to the level of the subject of education should be distinguished as one of the main principles in teaching students to apply theoretical knowledge in practice. In order to increase the creative personal qualities of students in the process of acquiring theoretical knowledge, exercises to apply them in practice, it is necessary to work in small groups, to establish a collaborative learning.

According to the textbook "Methods of teaching the mother tongue", "As a result of learning the language, students will change the quality of speech, increase awareness. Linking language learning to life provides a foundation for understanding the materiality of the world. At the same time, one of the main tasks of mother tongue lessons is to develop students' ability to observe and express themselves clearly, both orally and in writing. "[9]

Accordingly, the principles of teaching a child to think logically, to develop his thinking are distinguished. It is well known that language and thinking develop in close connection with each other. Accordingly, the principle that language learning should not be interrupted by thinking is important. As the child learns the word, he or she becomes acquainted with concepts, acquires ideas, learns to express the richness of emotions through words, learns about artistic images, and learns the logic and philosophy of language. To express an opinion, a child must have a wealth of imagination. Therefore, it is necessary to cultivate not only speech but also imagination. A child who does not know his native language well and does not read books reads worse than other subjects.

The application of the rules in practice requires the application of a communicative approach in the narrow sense, which is the application of the principle of unity of theory and practice. This principle suggests that there must be a certain relationship between theory and speech practice (practical exercise). Because "there is a risk that children in primary school will be overwhelmed with theoretical knowledge and underestimated the role of practical exercises. The reader, on the one hand, has no experience of theoretical study (research) of the language material, nor is his

written speech well developed. Therefore, the course of learning grammar and spelling in small classes is mainly a practical course "[10].

Creating a reasonable balance between rule and practice is the key to success. Because even if the student knows the rule, he or she may not be able to follow it in a fast-paced speech due to insufficient practice.

Methodist scholars A.Gulamov, M.Kadyrov's manual "Methods of teaching the native language" explains the importance of the above principle:, means linking people to work "[11]. Accordingly, the principle of unity of theory and practice is the basis for the process of teaching students to apply theoretical knowledge in practice. Indeed, if theoretical knowledge is supported by a sufficient number of practical exercises, and the use of this knowledge becomes a practical skill and competence, they will serve to develop students in all respects. In this regard, it is appropriate to talk about the educative principle of education. Speech accuracy is one of the factors in mastering speech culture. Clearly, a reader who speaks piece by piece always speaks clearly. This shows that he is being brought up to be a beautiful speaker. This means that the rules that apply in practice are not only knowledge, but also upbringing and development of the child in all respects (perception, observation, vivid imagination, memory, thinking, speech).

At the same time, such knowledge essentially perfects students. This reflects the developmental nature of education. Each new topic studied in the mother tongue classes serves to raise the student one step higher, thus ensuring continuity in the growth of speech, in the developmental nature of education.

Students do not develop at the expense of new knowledge, but also acquire knowledge, that is, constantly improve their skills in the field of research. Each time a student begins to study a new topic, he or she begins to analyze language phenomena more quickly, seeks to discover it based on previous experiences, and performs some analytical operations on his or her own because he or she knows what to do. At the same time, he begins to show that he is ready to apply the richness of his methods of learning to new material, that he is developing skills. Therefore, it is important to follow the principle of going from skill to skill in mother tongue lessons. The ability to apply theoretical knowledge in practice gradually becomes a skill through periodic repetitive exercises. At the same time, the speed of memorization of the rule increases, the analysis and study of linguistic phenomena accelerates, the student's perseverance in drawing conclusions, judgments and decisions, self-confidence increases, these actions are automated, and eventually skills are formed. The repetition of exercises is reflected in the principle of regularity and continuity. This is due to the fact that some rules are studied in one class, as well as in several classes, and the types of exercises are repeated. For example, from 1st to 4th grade, students are introduced to punctuation marks in purposeful types of sentences, resulting in the ability to apply this knowledge in practice.

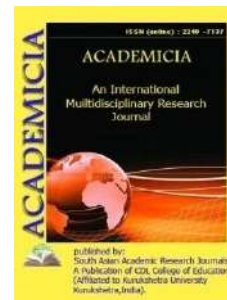
In order to properly organize the process of teaching students to apply theoretical knowledge in practice, it is advisable to take it as a principle of design (modulation) as a detailed plan that reflects the methods and techniques of teaching, types of work. Each method and method chosen according to modern pedagogical technology should be based on efficiency.

## CONCLUSION

Thus, it is expedient that the theoretical knowledge (rules) applied in the native language classes in primary school should be studied on the basis of principles that are connected with linguistic observation and provide for the introduction of a narrow communicative approach, preparing for the implementation of a broad communicative approach.

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DOI: **10.5958/2249-7137.2020.00721.1**

## TO STUDY YOUTH PERCEPTION REGARDING IMPACT ON ECONOMIC GROWTH IN VIEW OF DECLINE IN CRUDE OIL PRICE IN OMAN

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### ABSTRACT

*The main objective of the study is to know the opinion of students regarding economic growth in Oman due to decline in crude oil price. Data was collected from 424 students using a structured questionnaire. Chi-square test was used to analyze the relationship between gender, specialization and level of education with opinion of students. The findings of the study shows that Female students have positive opinion that government will normalize budget deficit than male students, majority students have a positive opinion that government will increase taxes and Male students have slightly positive opinion that decline in crude oil prices brings more investment in oil sector than female students. Over all it can be concluded that Female students and diploma students have an optimistic opinion about the economic growth in Oman.*

**KEYWORDS:** *Economic Growth, Oil Prices, Decline, Perception*

### 1. INTRODUCTION

With production of less than 1 million b/d of oil, the Sultanate of Oman has less oil and gas reserves compared to its GCC neighbors, except Bahrain. Since the sharp drop in oil prices in the second half of 2014, the government has taken bold steps to increase revenues from non-oil sources. These include turning to debt markets for the first time (it sold \$2.5 billion in bonds on June 8) and taking on some reforms such as subsidy cuts, reduced benefits for public sector workers and increased fees. Furthermore, they introduced a royalty on telecom operators, a “fair tax” on Liquefied Natural Gas (LNG) exports, and an increase in royalties paid for mineral exploitation. Oman has recently approved a 35 % tax on petrochemical firms and increased taxation on liquefied natural gas companies. The change will see taxes on LNG firms increase from 15 to 55%. Reforms in 2015 include the doubling of the price of gas for industrial

users. The World Bank estimates that \$10 billion in revenues were lost in 2015, and the new budget projects a deficit of 16.8% of GDP in 2016. Government subsidy spending is expected to fall by 64 % in 2016, as local fuel prices are brought in line with global prices. The deregulation of petrol prices began in mid-January 2016, with diesel and petrol prices increasing by up to 33%. An increase in the corporate income tax rate from 12 to 15%, as well as the removal of the tax exemption for the first OMR 30,000 of taxable earnings, has been approved by the Shura Council and a GCC-wide VAT has been agreed upon. Other measures to boost non-hydrocarbon revenue include: revising electricity and water tariffs for commercial and industrial users; and increasing fees for government services including licenses and labor cards, vehicle registration, real-estate transactions and land allocation. The following table shows the GDP growth of Oman.

**TABLE 1: GDP GROWTH OF OMAN FROM 2012 TO 2016**

<b>Years</b>	<b>GDP Annual Growth Rate</b>	<b>GDP in USD Billion</b>	<b>Average Annual OPEC Crude oil prices</b>
<b>2012</b>	11.5	76.7	109.45
<b>2013</b>	2.8	78.9	105.87
<b>2014</b>	4.6	81.03	96.29
<b>2015</b>	-14.1	69.83	49.49
<b>2016</b>	-5.1	66.29	40.68

**Source:**

<https://www.statista.com/statistics/262858/change-in-opec-crude-oil-prices-since-1960/>

<https://tradingeconomics.com/oman/gdp-growth-annual>

## **2. LITERATURE REVIEW**

Several empirical studies have focused on developing oil-exporting countries. According to Mehrara (2008), an oil boom would release foreign exchange constraints and would stimulate economic performance for oil-exporting countries from both supply and demand sides. Furthermore, the government would follow expansionary fiscal policy and would use such money to finance its development and infrastructure which will induce investment, consumption and economic growth (Emami, 2012). However, such positive effect could be weakened by real exchange rate appreciation which leads to the contraction of tradable sectors and so the country will be under the risk of the Dutch disease. In addition, when oil prices decrease governments are not able to adjust their current spending immediately.

Pieschancon (2009) used a vector autoregressive (VAR) model to assess the impact of oil prices on government revenue, government purchases, tradable and non-tradable output, transfers, private consumption and the real exchange rate for Norway and Mexico over the period 1980-2006. He found that fiscal policy is the most responsive policy to oil prices and he argued that this is the main transmission channel through which the degree of exposure of the economy to oil price volatility is determined.

Cologni and Manera (2013) consider the role of the government and its reallocation process in the economy through fiscal policy. They address the effects of oil shocks and the expansionary fiscal policy on the business cycle of GCC countries (Oman, Kuwait, Bahrain, Saudi Arabia, UAE and Qatar) by using the real business cycle model. Results revealed that the negative impact of oil shocks on private output, capital and employment can be more than offset by the

positive effects of oil shocks on government revenue and expenditure. This fact causes a shift of productive factors from the private sector to the public sector, thus government employment and output both expand causing a boost in the total output.

DiDomenico and Bonnici (1996) recommend measuring both student expectations and perceptions in order to expose expected versus perceived quality gaps. In the view of this study, service quality is a product of lecturer calibre and skillfully using teaching methods that deliver satisfying learning experiences. This does not mean student perceptions should be the sole consideration for defining appropriate teaching methodology and lecturers 'characteristics. Instead, service gap analysis should aid the identification of areas in teaching and learning that need modification.

Liu (2010) investigated students' use of different social media tools and their attitudes and perceptions towards these tools. The author sought to identify the knowledge and trends of using 16 social media tools that included Facebook, Wiki, YouTube, Bulletin Board, LinkedIn, Blogs, Twitter, Podcasts, Virtual Worlds, RSS, StumbleUpon, Netlog, Delicious, Digg, Plurk, and Jaiku. The study results revealed the top four reasons why students use social media tools. As reported, 85% use such tools for social engagement, 56% use them for direct communications, 48% use them for speed of feedback/results, and 47% use them for relationship building; however, fewer than 10% of the students mentioned using social media tools for academic practice

### 3. Objective of the research

The objective of the study are;

1. To know the opinion of youth on impact of economic growth.
2. To generate idea regarding whether government would normalize budget deficit.
3. To identify whether investment in oil sector increase.
4. To determine the impact on exports and imports.

### 4. RESEARCH METHODOLOGY:

This study employed a quantitative research design based on a survey method through questionnaires. The survey method employed in this research because it is an efficient way of collecting information from a large number of respondents. Besides that, this method is easy to administer and cheaper to conduct.

Population selected for this study is Nizwa College of Technology. Out of 5380 population, sample size of 424 students were selected at randomly from the three academic departments. The age group of the respondents ranged between 18 to 25 years old.

The main research instrument of this study is a questionnaire. The researcher has used the 5-points Likert scale which was Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree was used for the following:

- a. Perception about improvement in Oman economy with decline in crude oil price.
- b. Decline in crude oil prices helps government to normalize budget deficit.
- c. Decline in prices of crude oil will bring more investment in oil sector.



d. Decline in prices of crude oil will increase exports.

e. Decline in prices of crude oil will increase imports.

Descriptive analysis was used to interpret the data collected. Chi-square test was used to analyze the relationship between gender, specialization and level of education with opinion of students.

## 5. Data analysis

**TABLE 2: PERCEPTION ABOUT IMPROVEMENT IN OMAN ECONOMY WITH DECLINE IN CRUDE OIL PRICE**

Gender	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Male	58 (26)	110 (49)	16 (7)	34 (15)	6 (3)	224
Female	50 (25)	114 (57)	12 (6)	22 (11)	2 (1)	200
Departments	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Business	34 (26)	68 (52)	8 (6)	18 (14)	2 (2)	130
Information Technology	22 (29)	44 (58)	4 (5)	5 (7)	1 (1)	76
Engineering	52 (24)	112 (51)	17 (8)	34 (16)	3 (1)	218
Level of Education	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Diploma	58 (27)	113 (53)	15 (7)	26 (12)	1 (0)	213
Advanced Diploma	26 (22)	64 (55)	7 (6)	15 (13)	5 (4)	117
Bachelor	24 (26)	46 (49)	4 (4)	16 (17)	4 (5)	94

(The values given in parentheses are percentages)

It can be understood from Table 1 that 26 percentage of the male strongly agree and 49 percentage agree that decline in crude oil price will improve Oman economy. Thus 75 percentage of male have shown a favorable opinion. Whereas 25 percentage of the female strongly agree and 57 percentage agree that Oman economy will improve with decline in crude oil price. It shows that 82 percentage of female have shown a favorable opinion. Based on the gender opinion it is clear that female students have shown more favorable opinion than male students that decline in crude oil price will improve Oman economy.

On the basis of departments, 78percentage (26 strongly agree and 52 agree)of business department students, 87percentage (29 strongly agree and 58 agree)of information technology student and 75percentage (24 strongly agree and 51 agree)of engineering students have a positive opinion about improvement in Oman economy even with the decline in the crude oil prices. It is clear that information technology student have more positive opinion that decline in crude oil price will improve Oman economy than business and engineering students.

On the basis of level of education, 80percentage (27 strongly agree and 53 agree) of diploma students, 77percentage (22 strongly agree and 55 agree) of advanced diploma students and 75 percentage(26 strongly agree and 49 agree) of Bachelor students believe that even with the decline in crude oil prices the economy of Oman will improve. It shows that diploma students have more optimistic opinion that decline in crude oil price will improve Oman economy than advance diploma and Bachelor students.

Based on the above findings the following hypothesis is tested:

$H_0$  (G): There is no significant relationship between gender and the opinion with respect to improvement in Oman economy with decline in crude oil prices.

$H_1$  (G): There is a significant relationship between gender and the opinion with respect to improvement in Oman economy with decline in crude oil prices.

$H_0$  (Dpt): There is no significant relationship between departments and the opinion with respect to improvement in Oman economy with decline in crude oil prices.

$H_1$  (Dpt): There is a significant relationship between departments and the opinion with respect to improvement in Oman economy with decline in crude oil prices.

$H_0$  (LoE): There is no significant relationship between level of education and the opinion with respect to improvement in Oman economy with decline in crude oil prices.

$H_1$  (LoE): There is a significant relationship between level of education and the opinion with respect to improvement in Oman economy with decline in crude oil prices.

To analyze the relationship between gender, specialization and level of education with opinion about improvement in Oman economy with decline in crude oil prices chi-square test is used. It is found that there is no significant relationship between gender and opinion on economy's improvement due to decline in crude oil prices (p value 0.35), departments and opinion on economy improvement due to decline in crude oil prices (p value 0.58) and there is no relationship between opinion on economy improvement due to decline in crude oil prices and level of education (p value 0.46).

**TABLE 3: INCREASE IN PETROL PRICES SHOULD HAVE BEEN TAKEN FEW YEARS BACK (5 TO 10 YEARS)**

Gender	Yes	No	Total
Male	148 (66)	76 (34)	224
Female	132 (66)	68 (34)	200
Departments	Yes	No	Total
Business	89 (68)	41 (32)	130
Information Technology	50 (66)	26 (34)	76
Engineering	141 (65)	77 (35)	218
Level of Education	Yes	No	Total
Diploma	148 (69)	65 (31)	213
Advanced Diploma	64 (55)	53 (45)	117
Bachelor	68 (72)	26 (28)	94

(The values given in parentheses are percentages)

It is observed from table 2 that 66 percentages of the male and female students equally have the opinion that petrol prices increase should have been taken few years back.

On the basis of departments, 68 percentages of Business Students, 66 percentages of Information Technology students and 65 percentages of Engineering students have the opinion that petrol price increase should have been taken few years back. It can be concluded that Business students showed slightly favorable opinion that petrol prices increase should have been taken few years back than Information Technology and Engineering specialization students.

On the basis of level of education, 69 percentages of the Diploma students, 55 percentage of the Advanced Diploma students and 72 percentage of Bachelor students have the opinion that petrol price increase should have been taken few years back. It is clear from the above table that Bachelor students have more optimistic opinion that petrol prices increase should have been taken few years back than Diploma and Advanced Diploma students.

Based on the above findings the following hypothesis are tested:

$H_0$  (G): There is no significant relationship between gender and the opinion that petrol prices increase should have been taken few years back.

$H_1$  (G): There is a significant relationship between gender and opinion that petrol prices increase should have been taken few years back.

$H_0$  (Dpt): There is no significant relationship between departments and opinion that petrol prices increase should have been taken few years back.

$H_1$  (Dpt): There is a significant relationship between departments and opinion that petrol prices increase should have been taken few years back.

$H_0$  (LoE): There is no significant relationship between level of education and opinion that petrol prices increase should have been taken few years back.

$H_1$  (LoE): There is a significant relationship between level of education and opinion that petrol prices increase should have been taken few years back.

Chi-square test results shows that there is no significant relationship between gender and the opinion that petrol prices increase should have been taken few years back (p value 0.98) and departments and the opinion that petrol prices increase should have been taken few years back (p value 0.77). But there is significant relationship between the opinion that petrol prices increase should have been taken few years back and level of education (p value 0.008). Bachelor student are more opinionated than other students.

**TABLE 4: DECLINE IN CRUDE OIL PRICES HELPS GOVERNMENT TO NORMALIZE BUDGET DEFICIT**

Gender	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Male	36 (16)	95 (42)	76 (34)	4 (2)	13 (6)	224
Female	28 (14)	96 (48)	56 (28)	14 (7)	6 (3)	200

Departments	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Business	17 (13)	59 (45)	40 (31)	10 (8)	4 (3)	130
Information Technology	10 (13)	38 (50)	24 (32)	3 (4)	1 (1)	76
Engineering	36 (17)	98 (45)	68 (31)	3 (1)	13 (6)	218
Level of Education	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Diploma	36 (17)	91 (43)	72 (34)	7 (3)	7 (3)	213
Advanced Diploma	19 (16)	56 (48)	29 (25)	4 (3)	9 (8)	117
Bachelor	8 (9)	48 (51)	31 (33)	4 (4)	3 (3)	94

(The values given in parentheses are percentages)

Table 3 reveals that 16 percentages of males strongly agree and 42 percentages of the males agree that government will normalize budget deficit, whereas 14 percentage of the female strongly agree and 48 percentage of female agree that government will normalize budget deficit. Based on gender it can be concluded that female have positive opinion that government will normalize budget deficit.

On the basis of departments, 13 percentages of Business students strongly agree and 45 percentages of Business students agree that government will normalize budget deficit. In case of Information Technology students 13 percentages strongly agree and 50 percentages agree that government will normalize budget deficit. Whereas for Engineering students 17 percentages strongly agree and 45 percentages agree that government will normalize budget deficit. It shows that majority of the students in the three departments have a favorable opinion that the government will normalize budget deficit.

On the basis of level of education, 17 percentage of the Diploma students strongly agree whereas 43 percentages of Diploma students agree that government will normalize budget deficit. In Advanced Diploma it shows that 16 percentages of students strongly agree and 48 percentages of students agree that government will normalize budget deficit. Bachelors show that 9 percentages of the students strongly agree and 51 percentage of the students agree that government will normalize budget deficit. It can be concluded that, majority of the students in three education level have optimistic opinion that government will normalize budget deficit.

Based on the above findings the following hypothesis are tested:

$H_0$  (G): There is no significant relationship between gender and opinion that government will normalize budget deficit.

$H_1$  (G): There is a significant relationship between gender and opinion that government will normalize budget deficit.

$H_0$  (Dpt): There is no significant relationship between departments and opinion that government will normalize budget deficit.

$H_1$  (Dpt): There is a significant relationship between departments and opinion that government will normalize budget deficit.

$H_0$  (LoE): There is no significant relationship between level of education and opinion that government will normalize budget deficit.

$H_1$  (LoE): There is a significant relationship between level of education and opinion that government will normalize budget deficit.

It is found that there is a significant relationship between gender and opinion that government will normalize budget deficit (p value 0.01). Whereas there is a no significant relationship between departments and opinion that government will normalize budget deficit (p value 0.11) and level of education and opinion that government will normalize budget deficit (p value 0.23).

**TABLE 5: GOVERNMENT DECISION ON FISCAL POLICY (TAX POLICY)**

Gender	Increase in Taxes	Taxes Remain Same	Decrease in Taxes	Total
Male	137 (61)	59 (26)	28 (13)	224
Female	114 (57)	48 (24)	38 (19)	200
Departments	Increase in Taxes	Taxes Remain Same	Decrease in Taxes	Total
Business	73 (56)	28 (22)	29 (22)	130
Information Technology	46 (61)	20 (26)	10 (13)	76
Engineering	132 (61)	59 (27)	27 (12)	218
Level of Education	Increase in Taxes	Taxes Remain Same	Decrease in Taxes	Total
Diploma	130 (61)	53 (25)	30 (14)	213
Advanced Diploma	64 (55)	28 (24)	25 (21)	117
Bachelor	59 (63)	28 (30)	7 (7)	94

(The values given in parentheses are percentages)

It can be revealed from table 4 that, majority (61 %) of the males have the perception that government will increase taxes, whereas 57 percentage of the female students have the perception that government will increase taxes. It can be concluded that majority have a positive opinion that government will increase taxes.

On the basis of departments, 56 percentage of Business students, 61 percentage of Information Technology students and 61 percentage of Engineering students have the opinion that government will increase taxes. On the basis of departments it can be concluded that majority of the students have favorable opinion that government will increase taxes.

On the basis of level of education, 61 percentage of the Diploma students, 55 percentage of the Advanced Diploma students and 63 percentage of the Bachelor students have the opinion that government will increase taxes. Based on level of education also majority of the students have favorable opinion that government will increase taxes.

The following hypothesis are tested:

$H_0$  (G): There is no significant relationship between gender and opinion regarding government decision on fiscal policy.

$H_1$  (G): There is a significant relationship between gender and opinion regarding government decision on fiscal policy.

$H_0$  (Dpt): There is no significant relationship between departments and opinion regarding government decision on fiscal policy.

$H_1$  (Dpt): There is a significant relationship between departments and opinion regarding government decision on fiscal policy.

$H_0$  (LoE): There is no significant relationship between level of education and opinion regarding government decision on fiscal policy.

$H_1$  (LoE): There is a significant relationship between level of education and opinion regarding government decision on fiscal policy.

Statistical result shows that there is no significant relationship between gender and opinion regarding government decision on fiscal policy (p value 0.18), departments and opinion regarding government decision on fiscal policy (p value 0.14) and no relationship between opinion regarding government decision on fiscal policy and level of education (p value 0.33).

**TABLE 6: DECLINE IN PRICES OF CRUDE OIL WILL BRING MORE INVESTMENT IN OIL SECTOR**

Gender	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Male	62 (28)	65 (29)	53 (24)	41 (18)	3 (1)	224
Female	46 (23)	60 (30)	40 (20)	48 (24)	6 (3)	200
Departments	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Business	30 (23)	39 (30)	30 (23)	29 (22)	2 (2)	130
Information Technology	22 (29)	22 (29)	14 (18)	16 (21)	2 (3)	76
Engineering	55 (25)	65 (30)	49 (22)	45 (21)	4 (2)	218
Level of Education	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Diploma	58 (27)	66 (31)	44 (21)	41 (19)	4 (2)	213
Advanced Diploma	33 (28)	25 (21)	27 (23)	30 (26)	2 (2)	117
Bachelor	16 (17)	35 (37)	24 (26)	18 (19)	1 (1)	94

(The values given in parentheses are percentages)

Table 5 depicts that only 57 percentage (28% strongly agree and 29% agree) of the male students have opinion that decline in crude oil prices brings more investment in oil sector, whereas 53 (i.e. 23 strongly agree and 30 agree) percentage of female have the same opinion. Based on



gender opinion it shows that male have slightly positive opinion than females that decline in crude oil prices brings more investment in oil sector.

On the basis of departments, it is clear that 53 percentage of Business students (23% strongly agree and 30% agree), 58 percentage of Information Technology students (29% strongly agree and 29% agree) but in case of Engineering students 55 percentage (25% strongly agree and 30% agree) have the opinion that decline in crude oil prices brings more investment in oil sector. It can be inferred that Information Technology students have slightly favorable opinion than business and engineering students.

On the basis of level of education, is shown that 58 percentage of diploma students (27% strongly agree and 31% agree), 49 percentage of advance diploma students (28% strongly agree and 21% agree), whereas in bachelor students it is 54 percentage (17% strongly agree and 37% agree) have the opinion that decline in crude oil prices brings more investment in oil sector. Overall it shows that diploma students have optimistic opinion than advanced diploma and bachelor students.

The following hypothesis are proposed and tested:

$H_0$  (G): There is no significant relationship between gender and opinion regarding that decline in crude oil prices brings more investment in oil sector.

$H_1$  (G): There is a significant relationship between gender and opinion regarding that decline in crude oil prices brings more investment in oil sector.

$H_0$  (Dpt): There is no significant relationship between departments and opinion regarding that decline in crude oil prices brings more investment in oil sector.

$H_1$  (Dpt): There is a significant relationship between departments and opinion regarding that decline in crude oil prices brings more investment in oil sector.

$H_0$  (LoE): There is no significant relationship between level of education and opinion regarding that decline in crude oil prices brings more investment in oil sector.

$H_1$  (LoE): There is a significant relationship between level of education and opinion regarding that decline in crude oil prices brings more investment in oil sector.

Chi-square result shows that there is no significant relationship between gender and opinion regarding that decline in crude oil prices brings more investment in oil sector (p value 0.16), departments and opinion regarding that decline in crude oil prices brings more investment in oil sector (p value 0.99) and no relationship between level of education and opinion regarding that decline in crude oil prices brings more investment in oil sector (p value 0.22).

**TABLE 7:DECLINE IN PRICES OF CRUDEOIL WILL INCREASE EXPORTS**

Gender	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Male	40 (18)	76 (34)	97 (43)	9 (5)	2 (1)	224
Female	32 (16)	82 (41)	64 (32)	16 (8)	6 (3)	200

Departments	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Business	23 (18)	51 (39)	45 (35)	8 (6)	3 (2)	130
Information Technology	10 (13)	31 (41)	31 (41)	3 (4)	1 (1)	76
Engineering	39 (18)	77 (35)	84 (39)	14 (6)	4 (2)	218
Level of Education	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Diploma	45 (21)	75 (35)	83 (39)	8 (4)	2 (1)	213
Advanced Diploma	19 (16)	46 (39)	40 (34)	9 (8)	3 (3)	117
Bachelor	8 (9)	38 (40)	40 (43)	7 (7)	1 (1)	94

(The values given in parentheses are percentages)

It can be examined from table 6 that, 18 percentage of male have strongly agree and 34 percentage have agreed that decline in prices of crude oil will increase exports. In case of female, 16 percentage strongly agree and 41 agree that decline in prices of crudeoil will increase exports. It shows that female have optimistic opinion than male.

In case of departments, 18 percentages of Business students strongly agree and 39 percentages agree that decline in prices of crude oil will increase exports. 13 percentage of Information Technology students strongly agree and 41 percentage of agree that decline in prices of crude oil will increase exports. 18 percentages of Engineering students strongly agree and 35 percentages agree that decline in prices of crude oil will increase exports. It shows that Business students have slightly positive opinion than Information Technology and Engineering students.

In case of level of education, 21 percentages of diploma students strongly agree and 35 percentages agree that decline in prices of crude oil will increase exports. 16 percentage of advanced diploma students strongly agree and 39 percentage of agree that decline in prices of crude oil will increase exports. 9 percent of bachelor students strongly agree and 40 percentage agree that decline in prices of crude oil will increase exports. It shows that diploma students have favorable opinion than advanced diploma and bachelor students.

The following hypothesis are tested:

$H_0$  (G): There is no significant relationship between gender and opinion about decline in prices of crude oil will increase exports.

$H_1$  (G): There is a significant relationship between gender and opinion about decline in prices of crude oil will increase exports.

$H_0$  (Dpt): There is no significant relationship between departments and opinion about decline in prices of crude oil will increase exports.

$H_1$  (Dpt): There is a significant relationship between departments and opinion about decline in crude oil prices brings more investments in oil sector.

$H_0$  (LoE): There is no significant relationship between level of education and opinion about decline in prices of crude oil will increase exports.

$H_1$  (LoE): There is a significant relationship between level of education and opinion about decline in prices of crude oil will increase exports.

Test result shows that there is no significant relationship between gender (p value 0.05), departments (p value 0.95) and level of education (p value 0.11) and opinion that decline in prices of crudeoil will increase exports.

**TABLE 8: DECLINE IN PRICES OF CRUDE OIL WILL INCREASE IMPORTS**

Gender	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Male	35 (16)	88 (39)	90 (40)	9 (4)	2 (1)	224
Female	30 (15)	74 (37)	68 (34)	22 (11)	6 (3)	200
Departments	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Business	18 (14)	55 (42)	44 (34)	10 (8)	3 (2)	130
Information Technology	12 (16)	25 (33)	33 (43)	5 (7)	1 (1)	76
Engineering	35 (16)	81 (37)	81 (37)	17 (8)	4 (2)	218
Level of Education	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Diploma	36 (17)	85 (40)	73 (34)	17 (8)	2 (1)	213
Advanced Diploma	10 (9)	45 (38)	53 (45)	6 (5)	3 (3)	117
Bachelor	18 (19)	32 (34)	32 (34)	10 (11)	2 (2)	94

(The values given in parentheses are percentages)

Table 7 shows that 16 percentage male strongly agree and 39 percentage of agree that imports will increase with decline in crudeoil prices. 15 percentage female strongly agree and 37 percentage agree that imports will increase with decline in crudeoil prices. On the basis of gender it is clear that both the genders have almost favorable opinion.

In case of departments, 14 percentage of Business students strongly agree and 42 percentage agree that imports will increase with decline in crudeoil prices. 16 percentage of Information Technology students strongly agree and 33 percentage agree that imports will increase with

decline in crudeoil prices. 16 percentage of Engineering students strongly agree and 37 percentage agree that imports will increase with decline in crude oil prices. On the basis of specialization it is clear that Business students have positive opinion than Information Technology Students and Engineering students.

In case of level of education, 17 percentage of diploma students strongly agree and 40 percentage of students agree that imports will increase with decline in crude oil prices. 9 percentage of advanced diploma strongly agree and 38 percentage of student agree that imports will increase with decline in crudeoil prices. 19 percentage of bachelor students strongly agree and 34 percentage of student agree that imports will increase with decline in crude oil prices. It shows that diploma students have optimistic opinion than advanced diploma and bachelor students.

The following hypothesis are tested:

$H_0$  (G): There is no significant relationship between gender and opinion about imports will increase with decline in crude oil prices.

$H_1$  (G): There is a significant relationship between gender and opinion about imports will increase with decline in crude oil prices.

$H_0$  (Dpt): There is no significant relationship between departments and opinion about imports will increase with decline in crude oil prices.

$H_1$  (Dpt): There is a significant relationship between departments and opinion about imports will increase with decline in crude oil prices.

$H_0$  (LoE): There is no significant relationship between level of education and opinion about imports will increase with decline in crude oil prices.

$H_1$  (LoE): There is a significant relationship between level of education and opinion about imports will increase with decline in crude oil prices.

On the basis of test there is a significant relationship between gender and opinion about imports will increase with decline in crude oil prices (p value 0.03). There is no significant relationship between departments and opinion about imports will increase with decline in crudeoil prices (p value 0.92) and there is no relationship between level of education and opinion about imports will increase with decline in crude oil prices (p value 0.16).

**TABLE 9: SALARIES IN PUBLIC AND PRIVATE SECTORS WILL INCREASE WITH THE DECLINE INCRUDEOIL PRICES**

Gender	Increase	Same	Decrease	Total
Male	90 (40)	61 (27)	73 (33)	224
Female	102 (51)	40 (20)	58 (29)	200
Departments	Increase	Same	Decrease	Total
Business	66 (51)	29 (22)	35 (27)	130
Information Technology	33 (43)	16 (21)	27 (36)	76
Engineering	92 (42)	58 (27)	68 (31)	218
Level of Education	Increase	Same	Decrease	Total

Diploma	101 (47)	53 (25)	59 (28)	213
Advanced Diploma	52 (44)	30 (26)	35 (30)	117
Bachelor	40 (43)	19 (20)	35 (37)	94

(The values given in parentheses are percentages)

It is observed from table 8 that 40 percentages of the male students have the opinion that salaries in public and private sectors will increase with the decline in crude oil prices. In case of female students, 51 percentages have the same opinion. On the basis of gender it is clear that female students have a favorable opinion than male students.

On the basis of departments, 51 percentages of Business students, 43 percentages of Information Technology students and 42 percentages of Engineering students have the opinion that salaries in public and private sectors will increase with the decline in crude oil prices. It is clear that Business students have a positive opinion than Information Technology and Engineering students.

On the basis of level of education, 47 percentages of diploma students, 44 percentages of advance diploma students and 43 percentages of bachelor students have the opinion that salaries in public and private sectors will increase with the decline in crude oil prices. It is clear that diploma students have an optimistic opinion than advanced diploma and bachelor students.

The following hypothesis are tested:

$H_0$  (G): There is no significant relationship between gender and opinion about salaries in public and private sectors will increase with the decline in crude oil prices.

$H_1$  (G): There is a significant relationship between gender and opinion about salaries in public and private sectors will increase with the decline in crude oil prices.

$H_0$  (Dpt): There is no significant relationship between departments and opinion about salaries in public and private sectors will increase with the decline in crude oil prices.

$H_1$  (Dpt): There is a significant relationship between departments and opinion about salaries in public and private sectors will increase with the decline in crude oil prices.

$H_0$  (LoE): There is no significant relationship between level of education and opinion about salaries in public and private sectors will increase with the decline in crude oil prices.

$H_1$  (LoE): There is a significant relationship between level of education and opinion about salaries in public and private sectors will increase with the decline in crude oil prices.

On the basis of statistical test there is a no significant relationship between gender and opinion about salaries in public and private sectors will increase with the decline in crude oil prices (p value 0.05). There is no significant relationship between departments and opinion about salaries in public and private sectors will increase with the decline in crude oil prices (p value 0.39) and no relationship between level of education and opinion about salaries in public and private sectors will increase with the decline in crude oil prices (p value 0.44).

## 6. FINDINGS

1. Diploma students have more optimistic opinion regarding improvement in Oman economy due to decline in crude oil price than advanced diploma and Bachelor students and also there

is no significant relationship between gender (p value 0.35), departments (p value 0.58) and level of education (p value 0.46).

2. Majority of the students in three different education level have optimistic opinion that government will normalize budget deficit. Hypothesis test showed that there is a significant relationship between gender and opinion that government will normalize budget deficit (p value 0.01).
3. Diploma students have optimistic opinion that decline in crude oil prices brings more investments in oil sector than advance diploma and bachelor students. Chi-square test showed that there is no significant relationship between gender (p value 0.16), department (p value 0.99) and level of education (p value 0.22) with opinion that decline in crude oil prices brings more investments in oil sector.
4. Business students have positive opinion that imports will increase with decline in crude oil prices than information technology students and engineering students and there is no significant relationship between gender (p value 0.05) department (p value 0.95) and level of education (p value 0.11) with opinion that decline in prices of crude oil will increase exports.

**7. CONCLUSION:** It can be concluded from the study that students are having an optimistic opinion that Oman economy will improve even with decline in crude oil prices, they are also optimistic that taxes in near future will increase and also have positive opinion regarding increase in salaries in both the sectors. It is evident that Oman economy is affected because of decline in the crude oil prices. Oman government is taking necessary steps to improve the economy by exploring other sources of revenues through tourism, fisheries, infrastructure, and service sector. Oman government is also considering value added tax and cutting down the subsidies to consumers.

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DOI: **10.5958/2249-7137.2020.00776.4**

## THE PRACTICAL STATE OF THE FORMATION OF SOCIAL CONSCIOUSNESS IN PRESCHOOL ADULT CHILDREN

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### ABSTRACT

*The article considers the factors that determine the formation of social cognition in preschool age. An analysis of research on the mechanism of social consciousness is given. So, the process of development of social knowledge of a person continues throughout his life. The construction of the Self-image is associated with the culture, traditions, and customs in which a person develops.*

**KEYWORDS:** Education, Social Cognition, Preschool Age, Practical Work, Kindergarten, School, Modern Education.

### INTRODUCTION

In the Uzbekistan state educational standard of preschool education, one of the tasks is to form a readiness for joint activities with peers, to develop the abilities and creative potential of each child as a subject of relations with himself, other children, adults and the world. Modern pedagogy is actively building its new paradigm, focused on people. At the center of the modern educational process is put the personality of the child with its inherent originality of character and behavior. The question of education is not only a question of means and methods of education, but also a question of moral values, norms and rules that a person has accepted and is guided by in communicating with people.

However, there are negative trends in the pre-school education system: excessive focus on the intellectual development of the child, the technologization of modern life, which lead to underdevelopment of the emotional and communicative spheres, and as a result– the formation of an inadequate attitude to peers. Therefore, one of the main tasks in the senior preschool age should be the formation of readiness for joint activities with peers. The priority of universal

values, the humanistic principle that forms the basis of the modern educational process, requires the development of such types of human relations as joint activity, co-creation, partnership, and the ability to work in a team, contributing to the formation of a person who freely manifests himself in the social and spiritual spheres.

Pedagogical science, considering the personality as the main value of society, it assigns it the role of an active, creative subject of knowledge and communication, activities and interactions. Joint activity as one of the values of culture sets the Foundation for vital ways of human behavior and activity, provides features of self-realization, and also allows you to broadcast the experience of positive, creative interaction.

At the same time, the variety of training in kindergarten, the different educational content of classes, the possibility of integrating different types of children's activities in the classroom, the regularity and systematic nature of their conduct opens up great prospects for children to accumulate experience of joint activities with their peers in the process of solving joint tasks. The task set in the modern concept of preschool education to increase the developing potential of learning is directly related to the development of theoretical and practical development of children's cooperation in kindergarten classes, which meets the current needs of a wide practice of preschool education and preparation for school. In this regard, it is necessary to search for ways to form readiness for joint activities in older preschoolers with their peers in a preschool educational organization.

Modern theory and practice of domestic education are searching for such opportunities for the development of the younger generation that would ensure the continuity of cultural achievements of different generations, while at the same time creating a Foundation for reaching the heights of personal development of each person. The starting point for solving these problems can be the consideration of internal psychological conditions that contribute to the organization of socially significant human behavior, which is carried out in the process of social cognition.

The term "social consciousness" is now widely used in pedagogy, psychology, and other social and humanitarian fields. However, for many centuries, scientific thought has considered the definitions that make up this term as unrelated to each other, gradually bringing them into a single channel. Questions concerning the social conditionality of knowledge have been considered in philosophy since antiquity, but only by the beginning of the twentieth century. The question of how a person learns the social world was proposed.

Mechanisms of interpersonal cognition develop throughout the life course of a person. This is primarily associated with the development of the intellectual and personal sphere of a person. In general, how a person constructs their Self is closely related to how they understand and construct the world around them and their relationships with people. There are probably two possible directions for the development of social cognition: along the path of knowing oneself as a social object or a social subject. In the adult, manifest the one and the other direction. In childhood, the question of the direction of social cognition is quite difficult to solve unambiguously. Manifestations of reflection of the preschooler indicate that he knows himself as if "from within".

At the same time, the mechanisms of interpretation and identification allow us to say that the child also knows himself "from the outside". This means that the formation of the child's attitude

to himself occurs in two directions: I as subject and I as object of knowledge. What are the ways to develop social knowledge in preschool age?

At an early age, the child's social cognition is mainly aimed at understanding the manifestations of the social essence of people from the immediate environment: mom and dad, sisters and brothers, grandparents. During this period, the child's interaction with other people is based on understanding the direct meaning of their actions, words, and actions. The appeal to the person also occurs as an external object that has similar features to other people. These manifestations indicate that at an early age there is a basis for social cognition: the child clearly delimits social objects, identifies close people, refers to their own human essence.

The dynamics of the formation of the child's cognitive activity is of crucial importance for the development of social cognition of a preschool child.

The most important aspect of preschool cognitive development is memory. With an increase in the physiological capabilities of a preschooler, abilities also increase, and memory becomes the center of consciousness. The development of a preschool child's memory depends significantly on the influence of culture and society: "... a developing child most often receives ready-made systems that help him remember, and only becomes involved in them, learns to use them, masters them and through them transforms their natural processes".

During preschool years, children develop a system of sensory experience, which is another aspect of cognitive activity. The preschooler learns how to determine the numerous qualities and properties of objects, such as shape, size, color, taste, smell, the state of objects, the position of objects in space, the relationship between objects, and the perception of time. The perception of the surrounding world is carried out through the prism of social experience, the assimilation of knowledge takes place in a certain training system.

An essential aspect of cognitive development is children's thinking and speech. At preschool age, there is an active formation of concepts, including about social objects: about yourself and other people. The development of speech and thinking helps to increase the child's knowledge and understanding of the world around them.

The question that preschool children are able to receive differentiated social knowledge about themselves and other people, to experience different attitudes towards themselves, peers and adults, makes us think about the formation of a holistic education - image-self. The self-image is a central mental formation that should be considered as a "product of communication". In this understanding, the self-image is put in accordance with the Self-concept of a person. In general, the self-image is formed by the child, by accepting the roles of adults, i.e. by the social environment. Image-I is a complex structural formation that includes an element of self-control, self-esteem, determining the place in the unfolding social situation, its main function is to build an adequate picture of the world in the process of social cognition, ensuring internal consistency of the individual, the relative stability of its behavior. The development of the personality, its activities and behavior are significantly influenced by the self-concept.

At first, the child imitates adults, trying to be similar in the subject activity. The child is interested in how the other person acts, what objects they use for this purpose. Imitating an adult in object actions, the child constantly strives to be like him: also "read", "sew", "hammer nails". Gradually, the child identifies not only the subject component of the adult's social functions, but

also notices that various interactions are formed between people, which depend on their role positions. During this period, the child comes to the identity of gender, place in the family, position in kindergarten, etc. Through the mechanisms of social cognition, the child learns a lot about himself and others. On the other hand, communication with peers and adults contributes to the development of social cognition mechanisms.

At preschool age, children actively communicate with their peers. The research of A. G. Ruzskaya shows that in early and preschool childhood, in communication with a peer, conditions are created that provide a child with self-knowledge and self-esteem. The dynamics of self-esteem development during childhood is of favorable significance for the development of social cognition. The preschooler sets himself tasks of "increased" difficulty, his claims make him maximally mobilize forces for their resolution. In interaction with peers, children can check how they have learned the experience of their elders, directly compare their behavior with the actions of other children, and find out what to do and how to do it in an argument and discussion with them. Communication with peers gives an impetus to the disclosure of potential opportunities of the child, the formation of his attitude to another, and also affects the self-knowledge of preschoolers.

Adults, performing various social roles: father, mother, parents, abstract adult, have a determining influence on the nature of social interactions of a child of preschool age, and as a result in subsequent age periods. One of the most important fundamental psychological effects of adult influence is the formation of social cognition in a child -subjective sociality, a sense of belonging to the social world, a sense of "we". In this way, according to G. Craig, adults can help children in two ways. First, offer examples and explanations for them in teaching social skills. Secondly, creating conditions in which children can acquire successful experience of interaction with peers in the process of full-fledged communication.

The construction of the self is undeniably linked to the culture, traditions and customs in which the child grows and develops. A special place here is occupied by the position of adults in relation to the child. So, according to O. Conner, acceptance and love leads to the formation of a sense of security and normal development of the individual. Overt rejection leads to aggression, criminal behavior, and emotional underdevelopment. Excessive demands create a feeling of frustration and self-doubt. Excessive guardianship is reflected in the form of infantilism, especially in social relations, and the inability to act independently. As a result, the growing person acquires certain personal traits that become visible to others and often invisible to himself. The unbalancing of the I-real, I-ideal, and I-mirror can lead to the destruction of the I-concept as an integral structural personal formation in which the subject is immersed.

A special approach is required to nurture a free person who is able to make decisions independently and be responsible for their consequences. It is necessary to train the ability to think before acting, to act without external compulsion, to respect the choice and decision of the individual, to take into account its position, views, assessments. The most important condition for the development of children's personality is the development of the subject's position in various types of joint activities. A mandatory component of the process of forming readiness for joint activities is jointly comprehended coordinated actions of participants aimed at solving value-significant tasks with a common understanding and mutual empathy for the result of joint

activities. This makes it possible to consider joint activities as coordinated activities of subjects to achieve joint goals and results.

So, the process of development of social knowledge of a person continues throughout his life. The construction of the Self-image is associated with the culture, traditions, and customs in which a person develops. The conceptual basis of self-knowledge is laid at preschool age and is fixed in the image of the child's Self, which in turn determines the dynamics of its Self-concept. The positions of adults in relation to preschoolers determine the balance of structural components of their Self-concept. The most significant mechanisms of social cognition also have their origins in childhood, their development is associated with the formation of the cognitive and personal sphere of a person. The child's mental world becomes richer if adults take into account its potential, the dynamics of mental mechanisms and the results of the unfolding of social knowledge, create conditions for the construction of the Self-concept of the growing child.

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DOI: **10.5958/2249-7137.2020.00777.6**

## TECHNOLOGY MANAGEMENT ACTIVITIES OF SECONDARY SCHOOLS

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### ABSTRACT

*Management technologies are considered in the most general form as a focused system of management methods and processes, as well as a scientific description of management activities, including the formation of management decisions to achieve the general and specific goals of the organization. There is no doubt that education management depends on the specific characteristics of the social and economic sphere. In this article the technology of management of secondary schools are analyzed.*

**KEYWORDS:** *School Management, Technology, Education System, Requirement, Education Management, Management of Processes, Engineering Technology, Monitoring Technology*

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### INTRODUCTION

In the conditions of dynamism of public life, on the one hand, and obviously insufficient investment, on the other, one of the compensatory measures is the introduction of new pedagogical technologies in school life, including in the management of the educational process. Only competent scientifically-based intra-school management can guarantee translational movement along the selected trajectory in a given mode. This means that the demand for modern society in the school manager, a professional, has significantly increased.

Modern understanding and recognition of the humanistic position in pedagogical activity involves the development by managers and teachers of self-production of productive ways to create their own educational and managerial technologies, complemented by personal senses. Leaders and teachers lack knowledge on how to set goals, design activities that are adequate for them, introduce innovations, and lack the skills to achieve what was planned with a high degree

of guarantee. All taken together also dictates the need for the development and implementation of pedagogical technologies, the hallmarks of which are the presence of the above-mentioned character logical qualities: guaranteed final result and streamlined system of sequential design procedures for the future educational process.

One of the main goals of the state in the field of education is to achieve a high level of quality education through the development of fundamental knowledge and creative abilities of students, based on the needs of the individual, civil society and the state, and to constantly improve the professional skills of teachers. The goal is to ensure the safety of the process and the health of the children.

The development of the education system in Uzbekistan today is determined by the development of new forms and methods of the education system, the growth of various schools and curricula. Strategic management is of particular importance for a modern school. In many educational institutions, strategic management is accomplished through the creation and implementation of a school development program

### **Research Methods**

To solve the tasks, both theoretical and empirical research methods were used: theoretical analysis of scientific sources, documents and literature, modeling, design, induction and deduction methods, method of pedagogical observation, methods of conversation, questioning, interviews, monitoring, diagnosis, testing, the method of pedagogical experiment, the method of expert assessments and self-esteem, the method of pedagogical consultation, the method of studying the documentation of educational institutions, mathematical statistics on the processing of experimental data.

An analysis of the many definitions provided by science allows us to distinguish the main components of this concept: methods, techniques, procedures, sequence of operations and procedures. The goal of technology is to determine the components of the process and the sequence of their application to achieve any result. Technology in the general sense of the word is a system of methods and means of carrying out activities in accordance with this or that purpose in order to achieve a certain result.

The modern subjective interpretation of this concept is that technology refers to a system of scientific and/or practice-based activities used by man to change the environment, produce material goods or spiritual values. Such an understanding of technology takes it beyond the narrow production process, which allows the technological approach to be applied in all areas of human life, including the management of education.

Management of processes and events in the social sphere belongs to the category of social management, which is rightly included in a number of independent scientific disciplines and is considered as follows.

- A set of works performed in parallel and in series
- Actions to solve management problems;
- Type of social activity that aims to achieve an objective result;
- Impact of the target person on the object and its change as a result of exposure;

- Process of targeted exposure to an individual or group of people, leading to their transformation;
- Interaction of subjects with each other, resulting in subject-controlled and manageable changes;
- Data collection, storage, processing and transmission;
- Decision-making process;
- The process of ensuring that certain types of actions and the joint activities of people who help achieve those goals are appropriate and organized.

Thus, the process of social management, including school management, should be considered as a continuous sequence of actions performed by the subject of management, resulting in the formation of the reputation of the managed object, which is itself a subject of activity and will change. The goals of joint activities are set, ways to achieve them are identified, the types of work are distributed among its participants and their efforts are combined, subject-subject cooperation develops.

Educational institution management technologies are a vague and diverse phenomenon. General is the mandatory existence of a particular goal and the sequence of actions aimed at achieving it. This is the goal that determines the content of technologies and their direction.

The uniqueness of the concept of “education” is that it is also a bright manifestation of itself in terms of a technological approach. On the one hand, education is considered to be the most important source of socio-cultural development of any country. The goal of education is to develop the personality, as it is the ability of the individual to develop continuously, which is a necessary condition for him to adapt to rapidly changing or qualitatively new conditions. Thus, education itself as a social technology, that is, a set of methods, techniques and influences used to achieve set goals, prepare a particular society for the type of person necessary for its successful operation and development should be considered as a tool.

Education, on the other hand, is the transfer and assimilation of socio-cultural experience, on the basis of which a specially organized process of shaping individual life experience, cognitive and meaningful activity and student behavior, this is the process of achieving goals in specially organized social management. 'lim management. Thus, the learning process requires the use of “internal” technologies - learning management technologies as a set of management processes, methods, techniques, procedures, procedures. It is a sequence of actions taken by the management system to select procedures and implement changes and organizational influences that ensure that the educational institution is brought to the desired state.

The technology of school management goes through three stages:

- Theoretical - to determine the purpose to be achieved as a result of the application of this technology; creating a system of criteria for selecting possible options;
- defining a range of possible options; methodological - the principles of selection of methods of obtaining information, means, its processing, analysis, transformation of it into clear conclusions and recommendations;
- Procedural and operational - organization of practical activities on the practical use of technology.

There are different classifications of management technologies in modern educational management; one of the most important is the classification by the scale of the problems to be solved (universal and special technologies).

Universal technologies primarily include strategic design technologies, management decision making, sociological research, management cycles, and more.

Strategic engineering technologies involve the following steps:

- Assessment and analysis of the external environment;
- Analysis of strengths and weaknesses of the management system;
- Development of a concept that includes mission, general and specific (short-term, medium-term, long-term) goals, the main stages of development; strategy selection (identification and study of the main directions of the project);
- a description of the expected results.

An important tool for assessment, control, and correction is to monitor the quality of education as a private technology. Monitoring is the most important part of management and database, periodically collecting, processing, storing, disseminating, summarizing and analyzing information about the education system or its individual elements, as well as strategic, tactical, is a science-based system of presenting the information obtained to make operational decisions.

The main tasks of monitoring as a mechanism for integrated management of the quality of education are:

- Creating a single system and set of methods for determining the quality of education;
- Identification of data that provides state status analysis;
- obtain secondary (comparative) information on the dynamics of the education system, its subsystems and components;
- Organize, collect, process, store and disseminate information on the dynamics of the quality of education.

Development of monitoring technology includes: 1) identification of diagnostic objects and appointment of responsible managers in accordance with the main directions of quality management; 2) identify sufficient methods to diagnose the condition and its frequency; 3) determine the methods of processing, analysis, distribution of the obtained data. The technological efficiency of monitoring consists of a strict sequence of actions, namely: diagnostics - analysis - identification of ways of correction - correction itself - secondary diagnostics and so on. It is important to keep in mind that monitoring is an infinite, spiral process, only then will it become integral. Management tool.

It follows from the foregoing that the traditional system of interschool management, which has hardly changed, does not allow to effectively influence the development of flexibility of thinking, action, and the ability of the teacher to sensitively and adequately respond to any changes in society, to receive and use the necessary information in a timely manner, to satisfy professional requests and interests of employees, maintain a high level of internal motivational readiness to improve interaction with all participants of the school community, ensure genuine

joint work productivity, apply new approaches, research methods, optimal mechanisms and tools in practice, skillfully organize pedagogical support for students in the cognitive and educational processes of students, to guarantee the opportunity self-realization of personality.

Thus, our vision of the state of modern education, its contradictions explains the desire to investigate a scientific problem, the essence of which is to establish under what conditions pedagogical technologies provide an increase in the efficiency of managerial activity in an educational institution.

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**DOI: 10.5958/2249-7137.2020.00778.8**

## **CONTENT OF THE CONCEPT OF CITIZEN POLITICAL ACTIVITY**

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### **ABSTRACT**

*The main task for any country is to build a humane, democratic state and civil society. The full implementation of the noble principle that all reforms in the country are for man, for his future has always been and will remain a top priority. Also, every reform carried out in the life of society today, of course, requires social, economic and political activism from every citizen. This article highlights the content of civic political activism and its role in the political life of the country.*

**KEYWORDS:** *Politics, Democracy, Society, Civil Society, Citizen.*

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### **INTRODUCTION**

After gaining independence, the main task was to build a humane, democratic state and civil society. The full implementation of the noble principle that all the reforms being carried out in our country are for man, for his future, has always been and will continue to be the most important priority for us. Also, every reform carried out in the life of society today, of course, requires social, economic and political activism from every citizen.

Political activity is growing in our society, profound reforms are being carried out in all spheres. Their goal is to build a democratic state and a just society in which the implementation of the simple and clear principle that "the interests of the people take precedence over all else" is a priority [1].

The political life of a society is related to various political institutions, political processes and has its own meaning and content. Political institutions are structural systems related to the activities of the state, parliament, government, political parties, political institutions, lobbying.

Political processes are manifested as the relationship of political institutions, social groups, organizations, individuals, and show that political activity is complex, multi-subjective and



multifaceted. The concept of political processes is related to the subjects, elites, interest groups, parties, media that seek power or want to influence political decisions, as well as conflicting interests, ideologies, goals, values, and ways to reconcile them [2, 52].

Entities involved in political processes are called participants in the political process. Political participation means that members of the socio-political community are involved in internal political relations and power structures (and at some stage in the international community relations as well). It is used in democratic concepts, political modernization and political development, political culture, as one of the basic concepts in the activities of political parties.

Subjects of political participation include citizens, social groups and strata, and political and public institutions. In terms of scope, political participation is carried out at the level of local, regional, national and international politics.

Political participation can be direct (direct) and indirect, as well as general and limited; voluntary and compulsory; traditional, active and passive, legitimate and illegitimate, legal and illegal.

Forms of political participation also vary. To them:

- receipt and transmission of information;
- Communication with politicians and government officials and organizations;
- participation in elections and other political campaigns;
- In demonstrations, political strikes, mass protests, wars of liberation;
- in governance and self-governance,
- In the creation, protection and enforcement of laws;
- participation in the activities of political parties and socio-political movements [2, 58].

Democratic and legal states create the most favorable conditions for political participation. Participation in political processes is called political activity.

Political activity is the activity of groups that consists of the formation and realization of the collective interests of a particular community. Groups that have important materials and intellectual resources that represent such special interests are the elite groups. Social elites have their own way of establishing social ties and actively seek to achieve this goal.

A politician is a person who clearly reflects a political force and is active in pursuing the collective interests of that political force. However, one of such collective forces, as a rule, stands in power and implements its doctrine. When the goals of other collective groups are fully or partially compatible with each other, or when they are in legal and illegal opposition, they cooperate with them. Within these different political forces, creative enterprising leaders engage in political activity, while the remaining citizens participate politically. Cooperation between them ensures the stability of the existing system of political relations. Of course, the first initiative must come from an active citizen and be able to politically follow other citizens with him. To do this, the active citizen must first and foremost have socio-political motivation.

The main way of the current democratic development of our country is to encourage initiative, activism, creativity and healthy competition in the political process, as well as to improve its

legal framework. Today, the goal is to achieve this goal by encouraging citizens to take an active part in the socio-political processes taking place in our lives.

Therefore, the political activism of citizens in the political process leads to a further strengthening of democracy in this society. The democratization of public life requires civic, socio-political activism from citizens [3].

Civic activism can also be conditionally divided into levels in terms of activism. If a citizen is responsible, conscious and conscientious, he can be included in the first tier, that is, in the ranks of persons with civic characteristics. If a citizen has a certain attitude to the events around him, he can be recognized as a person with a civil position. If a citizen has the ability to take practical action for his rights and duties, he can be included in the list of active citizens [4].

It is this last step that distinguishes itself in several respects. People who belong to an active civic group will be people who are willing to learn about the political and economic system. In addition, they will have the knowledge and ability to actively exercise their rights, as well as the skills to implement that knowledge [5].

Civic activism can be assessed as a creative approach to socio-political and labor activities. It is a person's civic activism that contributes to the full development of the individual, the full manifestation of his potential. Having a civic position and civic activism requires a deep understanding of all the events taking place in society, their consequences and solutions to existing problems. The concept of social activism is closely related to the concept of civil society. This means political activism, participation in the activities of non-governmental non-profit organizations, various social initiatives and social movements, which implies membership in parties. In this sense, participation in various programs and public associations that are beneficial to society is also included in civic activism [6].

The definition of political activity by lawyers states that political activity is one of these socio-political indicators, the levels and forms of voter participation in political processes.

Political activism in the field of psychology is called the ways in which citizens participate in relations with the authorities.

In political science, political activism is defined as the action of individuals and social groups to change their political position or political environment. The concept of political activism combines practical and intellectual components, while in practice it focuses on the accumulation of political knowledge and experience, the exchange of information between individuals or groups, while the focus is on changing political relations. Political activity is manifested in the interaction in political activity, in changes in political processes. Personal attitude refers to the active participation in political processes related to lifestyle changes that affect an individual's interests and values.

Civic activism is the generality of citizens' actions to achieve collective goals on vital issues in political processes in society [7].

The simplest form of activity is interest in this policy. More active forms are participation in rallies, speeches, active participation in the activities of political parties, active membership in political and social centers, participation in various social projects, participation in various mass movements, regular voting in elections. In today's globalization process, the development of the

Internet allows the above activities to be carried out directly online, which also leads to the phrase "online activity", which motivates citizens to become more active. Online political activism is the participation of citizens in public appeals using various social networks, online participation in elections, discussion of political processes with friends in various networks, active participation in various state programs and other issues, and the expression of their wishes.

When studying various theoretical and practical definitions of social activity, it is concluded that all of them require activity from the citizen.

In particular, the political activity of citizens in society is divided into two categories. The first category is participation in campaigning, voting in elections and lobbying.

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DOI: **10.5958/2249-7137.2020.00785.5**

## SOURCE STUDIES OF THE FOOD PROBLEM IN THE FERGANA VALLEY (1917-1924)

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### ABSTRACT

*In this article analyzed the sources concerning the problems of famine and food scarcity in Fergana valley during 1917-1924 years. It also provides a detailed review of archival sources stored in the Central Archive of the Republic of Uzbekistan and in the regional archives of the Fergana Valley*

**KEYWORDS:** *Fergana Valley, Famine, Archive Sources, Soviet Period, Economic Policy, The Problem Of Food, Turkestan ASSR.*

### INTRODUCTION

Historiography of the former Soviet Union began to study the political, economic, spiritual and educational activities of Turkestan in the early years of the Soviet regime, especially in the Fergana Valley, and their significance in the years of independence, which allowed to objectively assess the events of this period. . Based on this task, we will try to comment on some sources on the history of the food problem and famine that occurred in the Fergana Valley in the first quarter of the twentieth century.

It is known that after the occupation of Turkestan by Tsarist Russia, the Fergana Valley became one of the main suppliers of raw cotton for metropolitan factories. In particular, the fertile lands of the valley were directed mainly to the cultivation of cotton, and the area allocated for grain and vegetables, which are necessary for the livelihood of the population, was sharply reduced. As a result, the valley became dependent on imported grain and other foodstuffs.

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## MATERIAL AND METHOD

Soviet-era historiography did not adequately cover the famine in Turkestan in the early 1920s. The literature and research on the subject are largely limited to showing the role of Soviet and party organizations in solving the problem. Although a number of studies have been conducted on the famine in Turkestan in the post-independence years, the terrible famine that occurred in the Fergana Valley between 1917 and 1923, which is an integral part of the problem, has not yet been fully explored [5, 6-7.]. However, the famine in the region, with its scale and horrors, does not lag behind the severe consequences of the famine in the Volga region and Kazakhstan.

Continuing our opinion, it should be noted that the study of the famine in the Fergana Valley, first of all, can not be achieved without a complete classification of available resources. In this process, the documents and literature stored in the archives and libraries of the Republic play a special role.

**For this purpose, sources on the topic can be divided into several groups.**

- 1) Official documents in the category of orders and decrees: correspondence of state bodies, reports of local authorities on the end of the famine and its consequences.
- 2) Minutes of the meetings of the Soviets of the Republic of Turkestan. Proceedings of the Congress of Food Bodies.
- 3) Statistical documents on food supply and assistance to the hungry.

Special attention is paid to official documents in the study of sources. Documents of this category are stored in the documents of the Central State Archive of the Republic of Uzbekistan. In particular, such archival materials include the Central Executive Committee of the Republic of Turkestan (R-17 Fund), the People's Commissariat of Food of the Republic of Turkestan (R-31 Fund), the Commission on Combating Hunger (R-22 Fund), the Council of People's Commissars of the Republic of Turkestan (R-22-25 fund) documents.

In addition, periodicals covering the chronological boundaries of the problem in the documents of the Central State Archive also serve as a valuable source in the coverage of the subject. Such as "Military example" (1921-1922), "Military worker of Turkestan" (1922), "Cotton business in Turkestan" (1922-1923), "Turkestanskoe selskoe khozyastvo" (1917), "Izvestiya Kommissariyat zemledeliya TASSR" (1918) On the pages of publications such as, we can find valuable information on the topic of famine in the Fergana Valley. An example is Nazir Turakulov's article "Fergana problem" ("Fergana problem") under the pseudonym "Darvish" in the 1921 issue Vo2 of the magazine "Voennaya mys". In this article, the author analyzes the difficult situation in Fergana during this period, highlighting the gross mistakes of the Soviet authorities in the conduct of food policy and the tragic fate of the local population.

It should be noted that the publications published in the early 1920s showed a somewhat realistic approach to the situation in the Fergana Valley. Nazir Turakulov describes the activities of the first representatives of the Soviet government in Fergana, calling them "colonial, Dashnak and local parasite companies" [1, 108-118]. In fact, many articles and books published in the Soviet periodicals in the 1920s accurately described all the terrible consequences of the famine in the Fergana Valley.

## RESULT AND DISCUSSIONS

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Documents stored in the archives of the valley are also important in the study of the problem of famine in Fergana. In particular, the funds 121, 263, 425, which are in the state archives of Fergana region, contain a lot of information about the difficult economic situation of local authorities and the food problem. In particular, various works in the 263rd Fund contain documents that allow us to fully imagine the early period of the famine in the Fergana Valley. Among these documents is a telegram sent to the Center on July 20, 1917 by the head of the Fergana regional food committee Genkuzen. It describes the situation in the region as follows: "Famine in the valley. The population lives on plant roots and stalks and dies of starvation" [10, 7-10].

During the telegram, the valley's population's need for grain was estimated at 28 million. pood (Russian measure of weight, equal to 16.3 kilograms), only 2.5 million here pood of grain, a total of 10.5 mln. The presence of pud grain is emphasized. As a result, the rate of distribution of bread to the population of the Fergana Valley will fall by 1/8 pound. From the above documents it is clear that the famine in the Fergana Valley began in the summer of 1917, before the establishment of Soviet power. Because of the drought in the spring and summer of 1917, grain production in the valley had declined sharply.

It is not difficult to imagine the gravity of the situation in Kokand, where there were 120,000 people in those years and 400,000 in the district.

On October 21, 1917, the Kokand City Food Committee sent a telegram to the Fergana Regional Food Committee asking for bread, saying: "Yesterday, about 500 locals came to the Food Committee building to ask for bread and more. We could only tell them that there was no bread, that the provincial food department could only send grain. However, not a single package of bread has been distributed to the Sart (local population) mahallas for two days.

We get only 12-15 wagons of grain a month to provide for the city and county population of 500,000. In such a situation, our committee has no choice but to grieve and weep together. However, we hope that the provincial food department will send bread". According to the information, the population of Kokand was starving in the autumn of 1917.

As a result of economic measures taken in Turkestan with the establishment of Soviet power, the economic situation in the valley worsened. Soviet government decrees, such as the confiscation of cotton fiber and raw cotton, the Bread Monopoly, and the Class Bread Storm, further aggravated the plight of the local population. Food detachments formed on the basis of decrees also began to seize the last loaf of bread from the local people. In addition, more than 40,000 Red Army fighters fighting the independence fighters in the valley were provided by the local population [7.199].

Unfortunately, the archival documents of the turbulent years of 1917-1919 contain little information about the economic situation in the Fergana Valley. This information is mostly observed in the national press and Soviet periodicals. However, archival documents about the famine that re-emerged in 1921-1922 are well preserved. In particular, in the works 944 and 947 of the R-17 Fund of the Central State Archive, the document "History of famine in Fergana" and "On the famine in the Republic of Turkestan" reflected the famine in the Fergana Valley [8.199]. The report of Kalonkhodjaev, the representative of the Anti-Famine Commission in Fergana region, describes the horrors of 1921-1923, and regrets that about 1 million people died of starvation during this period [9.199-201]. According to historian K.Rajabov's archival



documents, 1 million people died as a result of famine in the Fergana Valley in 1917-1923. 200,000 people died in the Samarkand region [3.56].

The work of the 22nd Central State Archive Foundation of the Republic of Uzbekistan, along with the assistance provided to the hungry in Fergana, also contains information about the terrible picture of famine. In particular, case 112 of the fund reflects the amount of assistance provided to the hungry in Margilan and Asaka districts. The document notes that the bulk of the aid was distributed to the European population and that the food distributed to the local population was not received in a timely manner, and that the Soviet authorities made mistakes and shortcomings in this regard [10, 4].

In conclusion, the study of archival sources on the famine in the Fergana Valley provides an in-depth and comprehensive study of this problem. This process can also serve as one of the main materials in the study of this period in the history of Uzbekistan.

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DOI: **10.5958/2249-7137.2020.00779.X**

## COMPUTER GRAPHICS AS A TOOL FOR THE DEVELOPMENT OF STUDENTS' CREATIVE AND INTELLECTUAL ABILITIES IN CLASSES ON THE BASICS OF INFORMATION TECHNOLOGY

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### ABSTRACT

*This article discusses computer graphics as a tool for the development of students' creative and intellectual abilities in classes on the basics of information technology. The introduction of innovation is considered from two perspectives:- this is the result of a joint creative process of the teacher and students,- This is the process of using a teacher new technologies. At the same time, the content and technology of training and education are changing, with the aim of increasing their effectiveness. Thus, the conditions for achieving the effectiveness of classes are fulfilled: As a result of the application of innovations, the creative, cognitive, developing potential of the "My friend is a computer" educational program is realized, a high level of motivation for learning and creative activity is maintained in children, and a teacher-student interaction is carried out in a personality-oriented manner.*

**KEYWORDS:** *Computer, Computer Graphics, Hobbies, Design, Intellectual Potential, Abilities, Computer Programs*

### INTRODUCTION

Computer graphics is one of the most popular areas of using a personal computer in almost any field of human activity. For each direction, special software is created, which is called graphics programs or graphics package. Currently, for most designers, computer and imaging software have become the main working tools. The same can be said of polygraphists, filmmakers and artists. Using computer graphics programs helps designers quickly realize their creative ideas,

choosing the most successful one from several options. In modern printing technologies for the publication of books and newspapers, computers and software play a central role. Almost all printed publications are prepared using computer typesetting programs. For her work, both the text and the illustrations must be presented in digital form. This means that they can be processed using special computer graphics programs - publishing systems. Illustrations prepared in traditional graphic technology, as well as photographs in the publishing house are scanned and processed using computer graphics.

Many graphic artists working in the genre of book illustration use computer graphics programs. When creating cartoons, artists manually draw reference frames, and then all intermediate frames are drawn on them. The use of computer graphics methods allows you to form intermediate frames on the reference automatically if the changes in images in the frames are minor. Nevertheless, this reduces the time for making animated films and videos, increasing the efficiency of creative work. Computer graphics in cinema began to be used when the increase in the cost of filming made us look for ways to save money, and computer graphics proved to be very effective in this sense. Digital video editing technologies have allowed, where it is possible to abandon the construction of expensive decorations. In addition, digital technology in the cinema allows you to create frames of extraordinary expressiveness and beauty. Computer graphics are also used in the work of photographers. In practice, photographers use computer graphics to retouch photographs, adjust color and photomontage. In addition to the indicated areas of using computer graphics, there are such areas as scientific graphics, business graphics, design graphics, thus, methods and means of computer graphics are in demand in any area of human activity where images are used.

Mastering the techniques of working with graphic programs requires intellectual effort and hard work. But as a result of their development, the efficiency of creative work increases. Students learn the basics of computer graphics with great interest, carried away by its expressive effects and inexhaustible possibilities and understanding the relevance of applying the knowledge gained in the possible choice of a profession in this direction. The greatest interest in computer graphics is for children who attend classes in fine art, since it effectively complements classes in art studios, fulfilling the tasks of developing creative imagination, artistic taste, imagination, the formation of spatial thinking, and the ability to work. But only dedication and creative imagination to achieve significant results is not enough, intellectual and volitional efforts are required from the guys. To realize their plan, they need knowledge of graphic programs and the confident use of technical techniques. Lack of knowledge and understanding of these techniques increases the share of routine operations, leaving less time for the creative process. The motivation for creative self-expression is the desire to discover and realize his personality, the desire to do something new, unique, born of his imagination. Computer technology provides the children with a wide range of opportunities to work in various directions, to develop an individual creative style based on the choice of the effects used, color solutions, and compositions. In the process of working with computer graphics, children develop skills in working with computer program interfaces, learn technical techniques, and gain an understanding of the distinctive features of vector graphics and raster. Students actively use the printer and scanner in the learning process, work with photos. Studying graphic editors, children apply the knowledge gained in drawing classes, but at the same time work in an environment with wide capabilities. They can use gradients, experiment with color, can quickly change

compositional, coloristic options. Thus, in the learning process, the development of the horizons and abilities of the child is possible. He has more chances for further personal and professional self-realization. A child engaged in computer graphics is actively expanding his horizons, acquires skills in working with various kinds of images, develops and trains perception, forms research skills and the ability to make optimal decisions. One of the main aspects of the upbringing and development of the younger generation in the learning process is the intellectual and creative development of students. Currently, the volume and level of complexity of the information offered to children for assimilation is constantly increasing, so the process of intellectual development of students requires intensification and a creative approach. One way to increase the intensity of training is to use computer-based training technologies. The knowledge and skills acquired as a result of mastering computer graphics are the foundation for further improvement of skills in the field of three-dimensional modeling, animation, video editing, and the creation of virtual reality systems. The need to constantly update and expand professional competencies is also dictated by the modern conditions of the information society.

At the present stage in education, the emphasis is shifted to the formation in children of the ability to independently think, obtain and apply knowledge, carefully think about decisions and clearly plan actions. This is due to the introduction of innovations in the program "My friend is a computer". The introduction of innovation is considered from two perspectives:- this is the result of a joint creative process of the teacher and students,- This is the process of using a teacher new technologies. At the same time, the content and technology of training and education are changing, with the aim of increasing their effectiveness. Learning becomes active, focuses on the use of such technologies and ways of influencing the personality of the student, in which his individual needs are taken into account, and the self-development mechanism is launched. All this corresponds to the modern educational system aimed at creating knowledge, continuous education of a person throughout his life. In the process of implementing the educational program, both technological innovations (new methods and teaching methods) and organizational innovations are used:- Business games (a method of simulating situations that simulate professional or other activities).- The project method (a project is a focused event aimed at creating a unique product that develops skills in search, research, and the ability to organize its activities correctly).- Decision making technology.- Research activity (discussion and solution of problems together with the child becomes the first manifestation of the child's research activity, leading to the development of flexibility of thinking and knowledge of terminology).The development of creative and intellectual abilities is carried out using various creative tasks and projects, which are also a comprehensive test of knowledge and are used as the basis for the implementation of the ideas of pupils. The educational project is a means of development, training and education, which allows you to develop and develop the following competencies of students:- activity planning- introspection,- search for the necessary information, its systematization,- application of knowledge, skills in various, including non-standard situations,- selection, development and use of the necessary technologies to create the final design product.- presentation of the activity and its results.

The work on the project turns into creative work for the children - this is the opportunity to maximize their creative potential, the opportunity to try their hand, apply their knowledge, prove themselves, demonstrate the result achieved. Children learn to plan their activities, search for information, interact within a group, if the project is a group, evaluate the success of the project.

The teacher becomes an organizer of activities, an assistant in solving problems, searching for information. The act of "co-creation" of the child and the teacher is very important here. It is important to open the child from the creative side, open his soul to everything new, provide the child with the opportunity to think through, bring the skill to perfection. Such an activity requires a deep understanding of the fact that the personalities of the teacher and the student interact, they are open to constant updating of knowledge, relationships. Stages of the project:- Discussion of the project.- Identification of the problem. Setting goals and objectives. Organization of activities.- Implementation of project activities: independent work of students, teacher advice, presentation of the results.- Presentation of the results. In the process of implementing the program, in addition to the project system, other activity-based forms of conducting classes are also used: occupation - a business game, occupation - a creative workshop. Creative works of a small volume are performed in classes simulating work: in a photo lab (correcting photo defects, creating photo collages), in an office (paperwork, using Internet technologies), in an advertising agency (developing booklets, flyers), in a design studio (creating logos, postcards), in the artist's workshop (creating book illustrations, designing book covers, drawing still lifes, landscapes). Demonstration of children's works are exhibitions, competitions, protection of creative projects. The guys actively participate in competitions at various levels, their work is evaluated by diplomas of winners. The most valuable are the diplomas of the winners of the St. Petersburg Mouse contest, which is held annually in St. Petersburg. The children are offered to design a book cover layout in accordance with the provisions of the competition in one of several nominations. This is a creative, very time-consuming work related to the search for expressive means, execution techniques, and compositional options. Competitive work is evaluated by professional artists, so the diplomas obtained confirm the creative abilities of the children, their dedication, hard work and deliver great satisfaction to both children and their teacher.

During the classes, the level of knowledge and skills of students, their independence, creative activity, individual characteristics and cognitive interests are taken into account; educational, developmental and educational (development of the personal qualities of the pupil) tasks are solved in a complex manner, the measure of participation of all children and each individual is monitored. Thus, the conditions for achieving the effectiveness of classes are fulfilled: As a result of the application of innovations, the creative, cognitive, developing potential of the "My friend is a computer" educational program is realized, a high level of motivation for learning and creative activity is maintained in children, and a teacher-student interaction is carried out in a personality-oriented manner. All this helps to form a creative personality of the child, prone to independent activity and self-determination in the surrounding world. As examples of children's creative works below are works marked with diplomas at the city competition.

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DOI: **10.5958/2249-7137.2020.00780.6**

## USING THE EDUCATIONAL ELECTRONIC RESOURCE PHET IN THE TEACHING OF PHYSICS

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### ABSTRACT

*This article plays an important role in conducting virtual laboratory work on distance learning platforms based on scientific achievements, in particular PhET Interactive Simulations, at a time when modern innovative technologies are developing. This program allows students to create a real laboratory environment in front of their eyes, creating models that virtually combine images, diagrams, animation, and quantitative tools.*

**KEYWORDS:** *Modern Teacher Image, Electronic Resources, Information Technology, Computer, Internet*

### INTRODUCTION

A modern teacher should be well-versed in various branches of science, the foundations of which he teaches, to know its capabilities for solving socio-economic, industrial and cultural problems. But this is not enough - he must be constantly up to date with new research, discoveries and hypotheses see the near and far prospects of the science being taught.

The processes of informatization of modern society are characterized by the improvement and massive dissemination of modern information and communication technologies (ICT), including in education, providing instant access to any information. Today, there are more than 2,000 Uzbek general education resources. Suffice it to say that the use of ICT in pedagogy is devoted to more than 400 sites only on Russian-language resources.

In this regard, it is difficult to overestimate the impact that the computer has on both the teacher and the student due to the fact that the modern student is used to perceiving the world on-screen - catchy, kaleidoscopically colored, impressive. It can be argued: as long as the computer does not work in the lesson, a full lesson will not work.

In teaching, universal office applications and ICT tools were widely used: word processors, spreadsheets, presentation preparation programs, database management systems, organizers, graphic packages, etc. These include email, mailing lists, newsgroups, a forum, and chat. Special programs for real-time communication have been developed, which, after establishing a connection, transmit text entered from the keyboard, as well as sound, image and any files. Not least, what has been said applies to the teaching of physics.

Currently, the teacher can take advantage of a wide range of electronic manuals in this scientific discipline provided by social networks. The most common form are presentations that are universal in scope and age of the student. However, along with accessibility and visibility, the presentation has its drawbacks: this resource is not able to provide input data variability, material changes in accordance with the requirements of a particular curriculum, and opportunities for self-realization. In this regard, virtual designers are a step forward, allowing you to create visual and symbolic models of mathematical and physical reality and conduct experiments with these models.

Sergienko A.Yu. in his dissertation, "Study of physics teaching technologies in the US general education system," writes: "... in the USA, the main goal in teaching is to comprehend nature," rediscover "physical laws and their application, that is, comprehension of real natural phenomena from the point of view of physical laws, while the Russian method of teaching physics focuses on physical models in which training takes place: solving standard problems and typical technological situations".

At present, the most complete compliance with the principles of modern didactics aimed at developing the independence of the young generation, creative thinking, overcoming inertia of perception and eliminating misconceptions is demonstrated by virtual designers - sims

Educational simulation is defined as "a structured scenario with a well-developed system of rules, tasks and strategies that have a specific goal - the formation of specific competencies that can be transferred directly to the real world".

One of the resources provided free of charge by the Internet is the PhET Interactive Modeling Project, founded in 2002 by Nobel Prize winner Carl Wieman at the University of Colorado at Boulder. The mission of the PhET project is to develop science, mathematics and education around the world with free interactive simulations. It should be noted that the authors of electronic manuals are currently creating educational materials translated into 65 languages, not only in physics, but also in other branches of science.

Since virtual designers allow you to create visual and symbolic models of mathematical and physical reality and conduct experiments with these models, the main drawback inherent in other manuals is eliminated - the impossibility of making a controlled request. The concept of Phet includes the following points: defining specific learning goals, minimum guidelines for using sims, relying on previous knowledge and understanding of students, encouraging students to understand the material and their own conclusions, connecting to real experience, designing joint actions, helping students to control their understanding.

The result of modeling Phet was the creation of a meaningful, capacious, flexible manual that can be used as lecture demonstrations, laboratory or homework. These manuals use an intuitive game - an environment where students can receive new representations in simplified reality by

modeling dynamic visual representations associated with real phenomena. From an economic point of view, Phet, like other similar electronic resources, is a “non-competitive good”: an additional consumer does not make it less accessible to others. Moreover, the attractiveness of such products grows in emergency situations, like the 2020 pandemic, when distance education acts as a key solution to this problem. Now it’s clear that online teaching is becoming more relevant.

In this regard, various types of distance learning were organized in Uzbekistan. A broadcast of lessons has been prepared for all classes in accordance with the curriculum. The official UZEDU telegram channel of the Ministry of Public Education operates and the YouTube video hosting channel publishes a schedule of TV lessons and directly records of these lessons for all classes; the EDUUZ telegram channel is also available, which also publishes information on the latest changes in the field of education and publishes materials for self-education. At the same time, the process of forming more than 3,500 electronic textbooks in various disciplines, which are posted on the website “Innovatsion kutubxona”.

The electronic manual Phet can take its rightful place in teaching and provide significant assistance to teachers in improving the educational process.

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DOI: **10.5958/2249-7137.2020.00781.8**

## FROM THE HISTORY OF AGRICULTURAL SCIENCES OF CENTRAL ASIA

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### ABSTRACT

*Agriculture is one of the first types of human economic activity, and its origin dates back to the end of the Stone Age. During this period, man began to domesticate some wild animals, working with simple weapons on Earth in order to meet his economic and other needs. For centuries, under the influence of various conditions, the peasant system has changed and improved: the beneficial properties of animals have been taken care of, many breeds have been grown.*

**KEYWORDS:** *Agriculture, History, Economy*

### INTRODUCTION

Central Asian farming has a very ancient history. Especially irrigation in Khorezm, Khoroson and Sugd was developed in 2000 BC and grain crops, rice, cotton, sesame, melon, vine, mulberry and other plants were grown. Central Asian farming is characterized by the diversity of cultivated crops, the work of their cultivation, care and exchange, developed in very ancient times. The system of protected and barren lands, which is the basis of the primitive system, was widely used in Central Asian farming, methods of crop cultivation, plowing, long-term (15 -20 years) abandonment and lalmicarlik without the use of river water on muddy lands.

The Avesto book, created in 2000 BC in Central Asia, covers the concepts of astronomy, geography of the peoples who lived in the countries of Central Asia, Khorasan, Sugd and Iran at that time, as well as the traditions of the people who lived at that time, public activity, medicine, child education, old age, as well as livestock and peasant experiences. So, at that time, along with other branches of Science in Central Asia and the countries of the army to it, livestock and farming have achieved tremendous success. It is also possible to know from archaeological excavations conducted on the territory of Central Asia that the agriculture of Central Asia has a very ancient history. The finds of a wood-fired Stone plow from the ancient Bronze Age farming tools found in the jargon settlement of the jargon indicate that our ancestors were still engaged in

irrigated farming in the ancient Bronze Age in the Middle Asia, including in our republic. Another evidence showing that irrigation farming in Central Asia has been developing since very ancient times is the farming tools found at the Buonamozor settlement in Chust. In this address, stone Sickles were found, which were used in farming in the X-XII centuries BC, in particular, in grain harvests. On the one hand, if the favorable climatic conditions of Central Asia, caused by increased prosperity, on the other hand, such a leaf has developed in the very ancient times of Central Asia, on the other hand, the existence of such levers as the book "Avesto" and the mountain of "Nabati" farming, on the other hand, the complex of Sciences, which was considered a source of knowledge Among the scientists who expressed valuable views on the favorable nature of farming, Rivers, Lakes, Water Resources, livestock and farming of the countries of Central Asia and the army are Ma'sudiy, Istahoriy, Ibn Rusta, Yoqub Hamoviy, Ibn Xavkal, Ibn batuta, A.R.Beruniy, Z.M.Bobur, Hamidulloh Kazviniy. It is possible to give an example of Babur, Hamidullah Kazvini, etc. Of these, Abu Istahari wrote "Kitab ul-akolim" ("Book of climates"), dedicated to the climatic conditions, peoples, craftsmanship and farming of Central Asia, the Aral Sea basin, Arabia, Iran, India.

In Central Asia, such Sciences as medicine, pharmacology, biology, physics, mathematics, astronomy, geography, geology, geodesy, melioration, philosophy, logic have developed, as well as such Sciences as farming, horticulture, seed growing, vegetable growing, selection, hybridization have been developed. Created at the beginning of the XVI century, the works "On the science of farming", "On the science of farming" and "Boburnoma" show the development of Agriculture in Central Asia. It is possible to give an example of many scholars who have created such works and added a huge share to our spiritual heritage.

### **CULTIVATION GUIDE IN THE SCIENCE OF FARMING**

As already mentioned above, the name of the work is "cultivation guide in peasant science" ("Irshad az-Ziro'a fi-ilm al-Hirosa"), it consists of 8 chapters:

1. Soil science, soil or soil types
2. Table of sowing various crops
3. Grain crops
4. Grape growing
5. Vegetable and Greens
6. Fruit, landscape trees and floriculture
7. Order of planting fruit trees, methods of watering a beekeeping, making a beekeeper
8. Fruit and landscape trees are made up of such areas as planting flowers with a certain plan.

When you get acquainted with the content of the work, you can be sure of the same thing, the author spoke about Soil Science, noting that the composition of black soil at that time, just as it is now, is useful for different crops. The book gives a great place to the methods of soil analysis, washing of salty lands, agro technical methods such as shudgorlah in the field of Soil Science. In soil analysis, rain water was used instead of distilled water. To do this, a small area of the analyzed Earth was dug up to 2-3 g of gas, from which a sample of soil was taken and passed it through several layers of tissue.



Periodically poured water into the mud, if the smell of the soil, the taste does not change, it means that such soil is suitable for any sowing. Several activities on the Bosphorus for washing the Earth's brine are also shown. Of these, methods such as trench extraction, groundwater desalination, intrusion irrigation, flotation are now also widely used in agriculture. The table of sowing various crops presented in the work is also drawn up based on their perennial observations and scientific sources of grandfather peasants.

At that time, by observing the behavior of animals and climatic phenomena, the periods of cultivation (depending on different conditions) were determined in different ways. The significance of this book is that it is also a valuable tool in studying the impact of the external environment on the animal world (or bioecology in the current scientific language) by determining the duration of cultivation. At the same time, predicting (predicting) the weather on the basis of studying the behavior of animals, at night in different periods. The moon in the daytime, with the change of seasons, changes in the characteristics of animals (phenology) are also illuminated, which is also an integral part of the current agricultural science.

In order to determine the duration of sowing, the ylduzes from ancient times, the moon, the state of the sun, their movement, the animals were fovdled from changes in their. Included are: dog, mouse, (sheep, donkey, cattle, Rooster. it was determined that wild animals like locusts do not have to be in the precipitation, which is due to changes in the behavior of the fell. These issues are given a wide place in the manual. As well as the need for fumigation of animal manure or watering the garden and vineyards until the frosts fall, in order to keep the trees from falling cold, become overgrown. these important agrotechnical events are also now being held. At the time of drying in the armpits, the hole buried the pots near the stem of the vine and the fruit tree, periodically drying them with water, the vine and fruit trees did not dry up and gave the usual harvest.

In the manner of proof that the " manual of crop husbandry in the science of farming " is written with reference to scientifically based sources, it should be noted that there are some measures related to the issue of fertilization of the land, which was used even before the Islamic religion came into being. It is known that during the time of the Islamic religion, no one used dawn manure as fertilizer. In the game it is shown that pig manure be the most useful fertilizer for most crops. At the same time in the game there is information about more than 20 species of fertilizer, the methods of their application. In particular for the vine it was recommended to use fertilizer-style dilapidated walls, or puddles soil. However, on the scale, the soil composition of any fertilizer and fertilizer was determined and trained only when monanant came to zauriyeti and soil and crop consciousness. For this reason, if it is necessary to plant another crop on the arable land, it is shown to feed the crop with moths and sheep. It is well known that the people of Central Asia with cotton cultivation have come to the fore. Archaeological research carried out at the location of the valleys of the rivers Ammu, Sir, Mirgob, Zarafshan proved that cotton growing in Central Asia developed in the VI-V century BC.

In principle, there is a good reason to say that the evidence we have given in the field of cotton growing is based on centuries-old experience of our people on the basis of cotton growing. After collecting the crop from the field in which the crop is planted in the hands of the farmer, it is indicated that there is a need to exchange the lands for planting activities, to plant another crop that has remained since the harvest. At the same time, it is emphasized that it is possible to



increase the fertility of the soil by means of qualitative processing, plowing, necessary fertilizing in the required composition. At hand, there is an opinion on the role of grafting, unification, increasing the amount of varieties, pollination of vine, fruit trees and other flowering plants from the outside, as well as the role of measures in the increase of productivity. Another of the most important issues mentioned in the game is beekeeping. In it, the most important events and rules related to beekeeping are considered. In conclusion, the book is an important source in the study of the history of Central Asian farming.

### **ABOUT THE SCIENCE OF FARMING**

The second work on Central Asian farming is called "science discovery and farming" (about the science of farming). This work, like the first one, was written in Persian, copied in 1783 year by an unknown book, and was first sewn together with into a single volume. The fact that the work is devoted both to the science of farming, and the commonality of the issues to be covered in it, leads to the birth of the idea that both works were not written by one author, and maybe that for this reason the secretary did not sew in the second century a single volume without indicating the author's Future research would certainly show how close these considerations are to reality. This work" on the knowledge of farming" consists of 12 chapters , which is a brief guide for farmers used in agricultural practice. This work is a treasure of valuable thoughts of the Peoples in the field of Agriculture of Central Asia, paid during the centuries-old history. In it, the methods used in ancient times in the field of plants and their use, harvesting and harvesting, cultivation, vineyard cultivation, harvesting and drying of fruits, protection of plants from insects and pests have been highlighted. This work is also by M.A. Abduraimov (1956) it was studied. We hope that the readers will benefit even if little of this work. We brought a short fragment translated from Persian by M. Khasanov (1972).

### **WEATHER**

If the moon is bright and shallow on the third or fourth night, then the next night and daytime weather will come in the open. If redness appears, it is indicative of persistent rain. If the location seems pale, it is a sign of precipitation. If the moon appears wider at the third or fourth night, and the weather is turbid, it means from the rain. There are many other signs of precipitation: after cooking , there are a lot of sparks under the cauldron , if the chicken shakes itself , the cock screams , the donkey throws its weight on one leg , the Wolves jump to the village, take out what the mouse has fallen into the nest , all this is a sign of precipitation. If redness appears on the surface of the moon in the previous days, severe frosts occur. The fact that insects have a lot of rot in their nest, even if the lamp is turned on, and the House goes away like a dark one is a sign of precipitation.

### **ABOUT GERMINATION TRANSFER**

The time of germination is from half of the criterion (September) to the end of the month of Scorpio (October). If at this time it is not possible to divide the transfer, it is possible to transfer from the beginning of Hut (March) to the beginning of Hamal (April). The germination held in autumn will be sertomir. When germination is conducted, there must be a lunar Mahal (the Old Moon is over, and the darkness at the time when the new moon does not come out). The germination held at this time makes many fruits and grows very high.

## REPRODUCTION FROM SEEDS OR SEEDLINGS

Pistachios, almonds, plums, nuts, peaches, apricots and dates are trees that are bred from seeds, it is possible to transplant them from one place to another. It is possible to multiply the apple tree from the FIR. But it is necessary to disassemble the horn so that the husks hang on the Horn. In this case, greens are sown. From the germination of almonds, plums, apples, quince trees can also be increased. The Horn of some trees is not broken, it can be cut and planted, but it can be sprouted. Such trees are Mulberry, olive, fig, pomegranate, Beech. Sprouts from sprouts along with sunflower and palm seeds.

## SEED CARE

Twenty days are put in its own way, if the germination is held in autumn. Then the bottom is softened. In summer, watering should not be forgotten. Sprinkle with Earth dry. If the sprouts grow from the lower part of the germination body, they are removed by hand. It is necessary not to touch it. Otherwise it will remain weak. If necessary, the shrinkage is put until the germination holds itself.

## GETTING SEED

As soon as the fruit is harvested, it is dried in the shade, under the poppy. Then the Dogi is taken. It can be planted anywhere. Water is poured in until it becomes bruised. Until the germination is two years old, it is impossible to move to another place. Some trees reproduce from seeds in this way, but zaytunni will not multiply in this way.

## TRANSPLANT OF GERMINATION

First the place where the seedlings are planted is roasted. Then the excess branches and veins of the seedlings are cut off. When planting the seedling in a depth, the veins or branches should not be wrapped together. Then a little bit of gooseberry. Buried with soil from the pit. In order not to stir in the wind, spikes are placed on the seedling body from three sides. Two pitchers filled with water are installed close to the root, under which a very small hole is opened. The water from it seeps out. Up to two months, the water is replenished with a decrease. After two months, it is watered normally.

## TO WELD

When the Apple Horn is grafted to the Plum, the Apple is red. It is impossible to weld a woodpecker on another tree. But it is possible to weld other tree branches on a walnut tree. Peaches can be grafted on a plum, an apple and a behemoth. All trees have a tendency to be beheaded. Some say that the olive tree is prone to buckling.

## ABOUT VEGETABLES

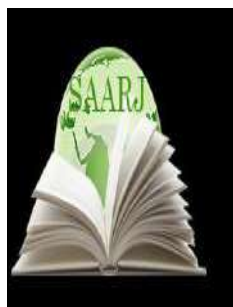
Salok, it is called chugindar (beet). If the hair is washed off with the juice of the beet leaf, it loses vinegar and itching. If the juice of the beet leaf is rubbed into the bud, mixing it with the burnt wax, it will eliminate the bud. This ointment will remove hair if the hair is rubbed into the spilled Earth.

In the book "About the science of farming" there is information that the benefit of this vegetable for the human body is such vegetables as cabbage, carrots, beets, garlic, radish, improve digestion, the activity of respiratory organs, protect against various wounds, colds and other diseases. Especially it concerns the role of raw consumed vegetables in cosmetics. Thus, these two works dedicated to agriculture are an important encyclopedic resource about farming.

In conclusion, it should be noted that the study of Agriculture of Central Asia and its occurrence as a science dates back to the distant past. Because Central Asia is considered the homeland of irrigation farming, so there is no doubt that agricultural science has developed even in very ancient times. The history of agricultural science of Central Asia is not surprising, if it appeared even before the "Avesto" and "The book on Nabotian farming". But for now, many works on Agricultural Sciences of Central Asia have not yet been found and studied, we are sure that this will certainly come true in the future.

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DOI: **10.5958/2249-7137.2020.00763.6**

## SEXUAL BEHAVIOR OF LEFT BEHIND WIFE AND POTENTIAL MIGRANT IN INDIA

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### ABSTRACT

**Background:** The paper explores sexual behavior across migrant and left behind populations along with the use of condom in different relationships. **Methodology:** Mixed method cross-sectional study captured wives of migrants (891), potential migrants (881), and migrant husbands (40). Demographic characteristics (age, education, and employment status), knowledge of HIV (transmission and prevention) and sexual behavior (number of partners and condom use) was gathered. Descriptive and bivariate analyses was used for quantitative findings, whereas content analysis was done for qualitative data. **Result:** The degree of sexual network was highest for migrant husbands and potential migrants. Knowledge about condoms' downplaying HIV/STI risk was lowest among wives of migrants (6%), followed by migrants (10%) and potential migrants (37%). Results indicate low condom use with primary partner and increase with the rise in number of relationships. An unmet need to promote the condom as triple

protection measure has been felt during the study. **Conclusion:** The paper stipulates an urgent necessity for further evidence-based study on promoting safe sexual practices amongst wives, who are left behind along with their partners.

**KEYWORDS:** Migrant, Sexual Network, Condom, Wives Of Migrants, Sexual Behavior

## INTRODUCTION

### Background

Worldwide throughout the history of HIV, women have been considered as a passive and men as an active factor especially when it involves migrant men. However, being a migrant alone is not sufficient to act as a potential vector for HIV rather the structure changes brought along with migration process accentuates the propensity to engage in risky behavior. They act as a bridge, connecting unconnected components of population forming new partnerships<sup>1</sup>; facilitating shift of HIV virus from high to low prevalence areas<sup>2,3</sup>. In India migrant men usually travel without their spouses. Staying away from family and community for a long period often frees them from social and sexual control. Probability of multiple relationship increases as formation of new social network takes place<sup>4</sup>. The route of HIV transmission has been associated to social networks; depending on the degree of network<sup>5</sup> as personal relation has substantial importance in STI/HIV transmission<sup>6</sup>. Pathways linking migration to risk behavior involves individual, dyadic, and network characteristics.

Presence of sexual relationship in a defined group shows the evidence of sexual network<sup>7</sup>. Number of people in a network and their “links” each has determines spread of HIV/STDs and called as network degree. It often overlaps with social network<sup>8</sup>. The process of migration links distinct sub-populations of place of destination and origin. The sexual network structure of sending migrants to another community increases their risk behavior. In Tanzania, the separation of couples increased the risk behavior of the stay-at-home spouses<sup>9</sup>. Out-migration may lead to broadening of network structure by creating a sex ratio imbalance<sup>10</sup>.

Empirical studies in India on sexual network have viewed one – side of the story, addressing migrant population and leaving behind non-migrant population. Sexual behavior survey (2006) reported that 10-20 % of the HIV infection was introduced by female partners<sup>11</sup>. Similarly, National Family Health Survey III showed 39 % HIV infected women who had uninfected husbands. There are number of factors which compels stayed behind spouse to indulge in risky sexual behavior. Henceforth, wives of migrants are not only vulnerable to HIV infection by their spouse’s risky behavior rather their own behavior too is involved in it.

Condom use is an important measure of protection against HIV and other sexually transmitted infections (STIs), especially among people with multiple sexual partners<sup>12,13</sup>. It’s constant used assess progress towards preventing exposure to HIV through reducing unprotected sex with non-regular partners, in addition to the extent to which condoms are used by people who are likely to have risky sex and have multiple concurrent partners<sup>14</sup>.

During the intervention Meri Life Meri Choice, supported by Elton John AIDS Foundation, implemented by MAMTA Health Institute for Mother and Child on reducing vulnerability of rural girls to HIV in four districts of Madhya Pradesh (Rewa & Satna) and Uttar Pradesh (Allahabad & Banda); has a long distance migration history and those tested positive were amongst these families. Henceforth in final phase of implementation focus was realigned to



reach out to women with migrant husbands, potential migrant (adolescent boys having at least one family member as migrant) and migrant husbands themselves. Contemplating literature and project's experience, a baseline was conducted firstly with an objective of exploring the degree of nodes in sexual network through egocentric approach (individual focal node) and secondly use of condom in different relationships.

## **MATERIAL AND METHODS**

### *Survey Design*

A cross sectional baseline study captured wives of migrants (891), potential migrants (881) through quantitative method and migrant husband (40) through qualitative method. Of the four districts three of them were "A" category (HIV prevalence over 1% in general population and more than 5% amongst the high risk groups). July and August, 2015 was the time when survey for final phase of implementation of Meri Life Meri Choice was conducted.

Multi stage stratified sampling was carried out to select the Primary Sampling Unit and the target population as suggested by State AIDS Control Society in the concerned states. Villages in the selected blocks were stratified based on their Scheduled caste and scheduled tribes (SC/ST) status (assuming that women in this ethnic group belong to underprivileged community). Altogether, 56 villages were selected across two states UP and MP. Complete house listing was done in the selected villages to identify migrant households. Further households with wives of migrants (15 - 35 year), potential migrants (15 – 19 years) and migrant husbands (19 – 35 years) were selected using systematic random sampling procedure.

The questionnaire was validated and translated into local language and revised after insight obtained during pre-testing. Ten field investigators and three supervisors in each district were trained for baseline quantitative data collection. The qualitative data was collected through a trained team of four members. Ethical compliance for the study was obtained from MAMTA's Ethics and Review Board. Consent of the respondents was taken before the interviews were conducted, after which they were explaining the purpose of the study in detail. Investigators were trained on the ethical protocol beforehand.

### *Data Analysis*

The survey tool collected information on socio-demographic characteristics (age, education, employment status), HIV/AIDS knowledge (transmission and prevention) and sexual behavior (number of partner and condom use). The subjects were asked to recall their life time and recent sexual partners. Information on condom association with HIV infection was also collected. Descriptive statistics (i.e. mean and standard deviation) and bivariate analysis has been carried. Data entry and analysis was carried out in SPSS.

Qualitative data was manually coded reviewed before analyzing it under different themes that we had formulated through a structured process.

## **Results**

### *Socio-Demographic Profile*

Nearly half of the women respondents were educated up to secondary level and two fifth of them were illiterate. More than 80% of the wives stay with in-laws, 12.5% alone and rest with their



parents. Majority had freedom to go out of home on their own wish (53%) rather than spending money according to their wish (32%). 80.58 % had some source of income. Mostly money was sent to in-laws and they catered to their economic needs.

Potential migrant boys were between 15-19 years. Majority of them were either in high school or college students. Out of total, 2.2 % never attended school. Nearly half of them had experience of paid occupation i.e. agricultural laborer, farmer, mechanic, construction worker, shopkeeper, sewing/ embroidery worker.

The mean age of migrant husbands was 24.6 ( $\pm 4.8$ ) years. Migrant husbands were mostly high school drop-outs and usually migrated to Maharashtra, Gujarat and Delhi in search of livelihood. People from UP migrated to long distance from home than those from MP. At place of destination these migrants mostly worked as laborers in the factories, brick-kilns, railway tracks, and construction sites; skilled occupations they pursued were mostly of a driver, guard, electrician, Zari/embroidery and painter.

### Sexual Behavior

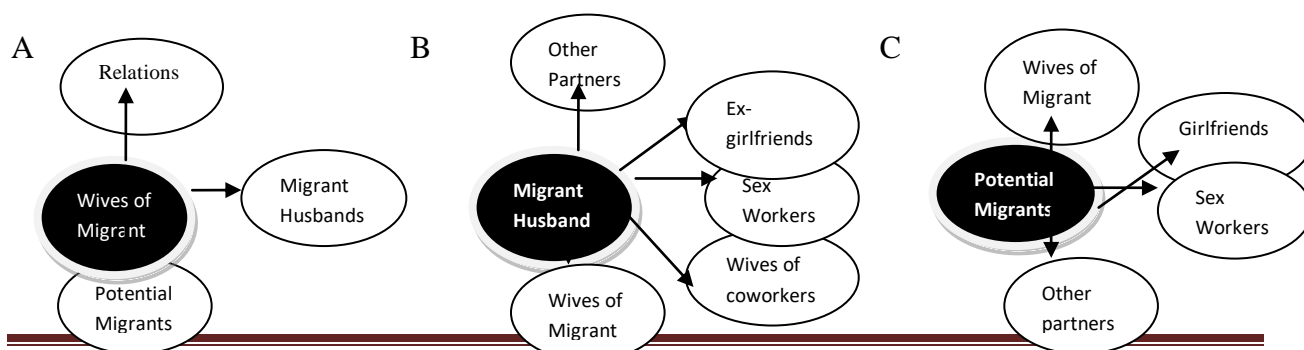
Around 8% wives of migrants reported physical relationships with men other than their husbands. Compared to men, women had lesser number of partners. The highest node reported was that of three alters. Network degree for 93% wives of migrants was 66.7% having three nodes of connection. Figure 1 (A) shows that in most of the cases it was a family member (77%) like brother of husband, close relative or neighborhood guy. Pre-marital relationships (11%) were reported with class-mates, brother-in-law and friends.

A migrant husband, 36 years of Kamasin block revealed that:

*"My friend used to help her (my wife) whenever I went back to Haryana for work. Then slowly-slowly he became attached with my wife and one day, asked her to have physical relation with her."*

Women having economic crisis had higher percentage of having non-spousal sexual relationship than those who had emotional or loneliness problem. None of these problems were significantly associated with non-spousal sexual relations.

Potential Migrants too showed a lot of variations in sexual network design. Nearly half of them had multiple sexual partners; of which 72% of them had 66.7 % of network degree with three nodes, 8% of them had 40% network degree with five nodes. In all more than two third had physical relationship with girl friends and one tenth with the other women (figure 1 (C)). Paid sex was common among the adolescent boys (47%).



**Figure 1.** Egocentric design reported by different egos. A: representing nodes for wives of migrants (ego); B: representing nodes for migrant husbands (ego); C: representing nodes for potential migrants (ego).

Among migrant husbands, in total, twelve egocentric networks having fifty alters were reported; of which the largest had eight alters and smallest had two alters. As represented in network design (figure 1 (B)) non-spousal relations i.e multiple sexual relationships were observed. Exposure to sex workers and having paid relation was found commonly among those who had pre-migration exposure to sexual relationship. Relationship with co-migrant wives was also reported at the place of destination.

#### *Condom Use*

Concurrent relationship was observed among migrant husbands; associated with low use of condom and often considered as scariest part of a relationship. In total, only five of them used condom with their wives.

*"I had physical relationship with three partners before marriage. One relation among these lasted over eight years. We could not get married due to caste problem. After marriage during her visit back to village my ex-lover insisted with me to have sexual relation. After that, whenever we both visited village and met, every time we had physical relation. Including my wife and sex workers, I had physical relationship with almost 5/6 women. I never used condom. I gave her pills (26 year migrant husband, Banda)."*

Results showed low usage of condom among couples and steady sexual partners outside marriage. Use of condom in a marital relationship in India leaves a person under a doubt of being engaged in multiple relationships.

*"I had physical relationship with two girls in my village; didn't use condom with anyone of them. Neither had they asked me about my other relationship nor I asked them. If you love someone, and think them as your own then why would you get scared? Why use a condom?" (28 years migrant husband, Rewa)*

*Had relation with three women and used to do it with condom but with wife I never used a condom. You do not need it in this relationship (34 years migrant husband, Allahabad).*

*I trust my wife then why use a condom. (26year, migrant husband, Rewa)*

Out of 896 women, only 18 % used condoms during sexual intercourse; of which 67% used it with their husbands and remaining 33 % with partners other than their husbands. Use of condom in monogamous relationship was not common. Due to inaccessibility including barriers posed by husbands and in-laws, unavailability at village health centers, its use was less.

Condom use and number of relationships has presented a direct relationship in this study. Physical relations other than husbands were significant with use of condom (Chi-sq 0.002). Marital status of women decided the condom use; with married women condom use was low in comparison to unmarried girls'.

Some participants reported that they wanted to use condom but their partners refused. A migrant husband said:

*"She does not like using it. When I asked her why, she said it reduces the pleasure." (21 years migrant husband, Banda)*

Buying of condom is perceived as a matter of embarrassment in India. One of the migrant husbands explained his hesitation as:

*"I had relationship with a girl before marriage and continued after marriage. I asked her about her other relations and she said all truth about it. I didn't use condom with her. I trusted her and it's embarrassing to buy a condom." (25 years migrant husband, Rewa)*

Condom in India has only been considered as a birth control measure and less as a safety measure to prevent from HIV and STIs. The respondents stated that:

*"Never felt the need. Condom is used to do birth control." (23 years migrant husband, Satna)*

*"I give her pills then why to use condom." (30 years migrant husband, Allahabad)*

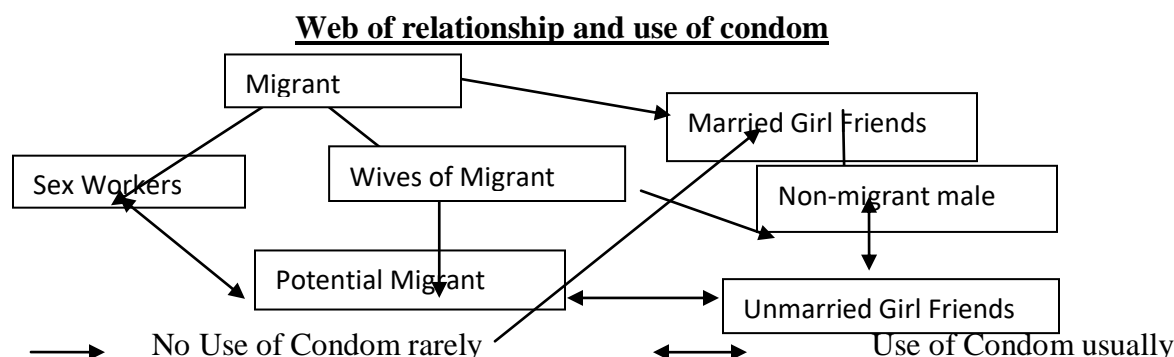
Condom downplays the risk of HIV/STI infection which was known by only 37.7% of adolescent boys, 6% of wives of migrants and 10% of migrant husbands. Risk is optimized due to inadequate knowledge about HIV among all the three groups.

## DISCUSSION

This study highlights prevalence of concurrent partnerships sexual network. As the data was collected from same geographical settings and villages, it has possibilities of overlapping to form a broader sexual network within and beyond the village due to involvement of migrants even in an egocentric network. Migration status of the husbands not only often puts them at risk for HIV infection, but also increases risk of infection to their partners. Concurrence alone can fuel an epidemic even if the average number of partners is relatively low<sup>15</sup> and migration acts as a catalyst<sup>16,17</sup>. Serial monogamous relationships were found in most of the cases among potential migrants along with a separational relationship among migrants' wives and migrant husbands.

Recent studies suggest that migrants have risky non spousal sexual relation at place of origin. It was reported that migrants had their sexual debut before migrating as most of them got married during their late teens or had girlfriends prior to migration. Half of the migrants in the study who had non-spousal relation at the place of destination had similar history. Placing their partners and themselves at risk to STI and HIV both knowingly and unknowing was high. Low use of condom both in non-spousal and spousal relations was due to barrier to sexual pleasure and trust. Analysis reveals that the use of condom with regular partners was fairly low in all the three cases allowing body fluid exchange and increasing the chances of vulnerability to HIV and STI of nodes (individuals) connected through the network<sup>18</sup>. Migrants exposed to brothel based sex work revealed higher use of condom and had better knowledge about HIV than others<sup>19</sup>.

Short-term migration and frequent visits resulted in less involvement of both migrant and their wives in extramarital relationships. Geographical distance from home may alter risk<sup>20</sup> and increases women's dependency over her in-laws and other relatives on most occasions make her vulnerable to have intimate relationship. In this study women's extramarital affair was significantly associated with duration of husband's stay at destination. Separational relationship was evidently marked during the absence of individual's partner with low use of condom both with the former and new partner<sup>18</sup>.



The study demonstrates prior social connection between the women and her sexual partner. Physical initiation by *devar* (husband's younger brother or husband's friend) was most common among wives of migrants' divulged relationship. When asked about condom use with husbands, most of them narrated its low use as they meet each other after a long time.

Limitation of the study: The study left out an important group of unmarried girls and men having sex with men, as its main focus was on wives of migrants, along with adolescent boys and their knowledge about HIV. Data from them could have helped understanding the dynamics of sexual network more clearly. Due to sensitive nature of research questions the responses might have been given socially desirable answers and the responses might have been underreported and methodological problem of identifying boundary along with its nodes of network. Lastly, there are changes of recall bias when asked about their life time sexual partners.

## CONCLUSION

Application of network analysis has been made to explain the structure and nature of egocentric sexual relation within the population surveyed. We can conclude that both the partners, the one migrating as well the one staying back showed sexual risk behaviour and high risk of being exposed to infectious diseases (STI/HIV). The study clearly represents the lack of condom use especially with the primary partner and their lack of awareness about its consequences. It has become the need of the hour to highlight the triple protection of condom amongst the population and not just as a preventive measure against unwanted pregnancy. The paper stipulates an urgent need to gather more evidence in this regard and to intervene, and promote safe sexual practices amongst wives who are left behind along with their partners. Further research on wives of migrants their sexual network in connection to mobile population can also provide information about how network can bring change in relevance to health at the national level.

**Competing Interests:** No authors have any competing interests.

**Source of funding:** There is no funding support for this publication.

**Statement of Informed consent:** The paper did not require as such any required consent.

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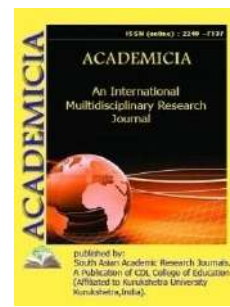
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**Table 1 : Sexual Behavior and use of condom among the Target Groups**

Variables	Wives of Migrants Total (n=896)	Potential Migrant Total (n=881)	Migrant Husband Total (n=40)
<b>Use of Condom</b>			
Yes	18.1 (162)	7.7 (68)	25 (10)
No	80.9 (734)	92.3 (813)	75.5 (30)
<b>Life time Sexual Relationship</b>			
Single Relation	92 (824)	17.9 (150)	75 (30)
Two - Three Relations	7.4 (66)	14.6 (123)	18 (7)
More than three Relations	0.6 (5)	4.3 (38)	7 (3)
Never had Relation	-	63.1 (556)	-
<b>Use of Condom when in Sexual relation</b>			
Single Relation	19 (137)	12.7 (20)	16 (5)
Two - Three Relations	41 (20)	13.2 (17)	20 (3)
More than three Relations	90 (5)	40.9 (16)	50 (2)
<b>Condom prevents risk to STI/HIV</b>			



Yes	6 (54)	37.7 (332)	10 (4)
No	94 (842)	62.3 (549)	90 (36)



DOI: **10.5958/2249-7137.2020.00697.7**

## EFFICIENCY OF COMPUTER TECHNOLOGY IN TEACHING FOREIGN LANGUAGES

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### ABSTRACT

*This article discusses the benefits of using computer technology in teaching foreign languages, as well as the need to broaden the content of technology for developing students' learning abilities. The use of modern means of computer, multimedia, internet, distance learning, a*

*unique information environment and information and communication technologies has been yielding good results in high-quality educational process.*

**KEYWORDS:** *Information, Education, Environment, Vision, Innovation, Pedagogy, Technology, Process, Modernization, Computer.*

## INTRODUCTION

At present in the educational system of the country educates young people to think independently, to have a broader understanding of independence, to care about the future and independence of their Motherland, to protect and defend themselves and their people, the dignity and honor of the Motherland, new ideas and new ideas. , working with intentions,

He has entrusted his talents, their every opportunity and, if necessary, the feeling of dedication to the future of the country. At the same time, improving the quality of education is one of the most important issues.

The tremendous changes taking place in our country have an impact on all spheres, including the higher education process. Creative, active, independent thinkers, critical changes and transformations in higher education remain vital for the upbringing and development of personality. Therefore, the fundamental task of a number of disciplines is to make radical changes in education, to create an active, creative, intelligent, intelligent, educated specialists who will enrich the future with new innovative ideas.

The stronger the knowledge, the more the student's worldview and intellectual potential develops and grows. Currently, information literacy for students and teachers is an important prerequisite for improving the effectiveness of education. Successful solution of these tasks requires use of modern educational technologies in educational process.

The use of advanced pedagogical and information technologies in all levels of education to improve the education system up-to-date creates favorable conditions for students to unlock their spiritual strength and abilities. Information and communication technologies, which are constantly developing in the education system, serve to raise the educational process to a higher level. Of course, it is advisable to use modern techniques to make the learning process more meaningful. The use of modern means of computer, multimedia, internet, distance learning, a single information environment and information and communication technologies has been yielding tangible results.

One of the most important tasks is the implementation of state policy in the field of education, improvement of educational process in accordance with the unified requirements of personnel training, provision of educational literature, extension of the database created for science, continuous methodical service of teachers.

## LITERATURE REVIEW

As a result of consistent reforms in the country to create the conditions for the full development and prosperity of the person, his / her interests, to bring the quality and effectiveness of education to a new level, opportunities for the development of students' foreign language skills are being expanded. There is also a need to expand the technology of developing students' learning skills in teaching foreign languages. The Strategy of actions for further development of

the Republic of Uzbekistan identifies priority tasks such as “further improving the system of continuous education, enhancing opportunities for quality education services, supporting and implementing the creative and intellectual potential of the younger generation”. to determine the criteria for logical thinking, to the intellectual development of students and to their own abilities and inclinations. It is important to develop recommendations on appropriate skills acquisition [1].

The educational process of methodological literature in recent years Many new concepts are being introduced, such as "Innovative pedagogy", "Innovative technologies", "New pedagogical technologies", "Interactive methods and methods". Russian scientists V.I. Zagvezinsky, V.P. Bospalko, V.A. Slastinin and others B.Ziyomammedov, L.V. Golish, N.H.Aliklikulov, N.Saidhmedov, A.Kosimov, U. Tolipov and F. Kholikova have detailed theoretical and practical views on modernization of the educational process, new pedagogical technologies and their pedagogical and psychological bases. In almost all of the aforementioned studies, the innovative ideas proposed are characterized by their application in the teaching of social sciences and humanities. In other words, the methods and methods of interactive organization of the Uzbek-speaking and speaking people, their interest in learning new knowledge are discussed. In addition, any student who does not have the skills of communication in a foreign language can never participate in "brainstorming" technology, such as on-topic trainings. This means that students need to be able to speak a foreign language first, to learn how to express their thoughts without hesitation, to develop communication skills, to develop communication skills, to be able to respond to information. The strengthening of such skills and competencies is based on the proposed new information technologies [3]. Pedagogical literature describes the concept of "innovation" as a pedagogical reality that leads to emerging theory and practice of previously unknown and undisclosed methods and techniques in teaching, teaching and educating pedagogical innovations.

The most promising direction in the field of using information technology in education is the organization of independent work of students. The independent work program of the students is based on the use of electronic textbooks, integrated dictionaries, a library of educational and methodical literature, which interact in computer technology.

## RESEARCH METHODOLOGY

One of the important conditions for the implementation of the innovative pedagogical process in teaching foreign languages is the ability of the learner to exercise self-control and self-motivation in mastering speech activities. One of its most important conditions is the formation and development of students' communication and cognitive functioning on the basis of communicative, functional, emotional and cognitive principles, which results in the formation and development of students' communicative competence. In this process, the teacher creates the conditions for the formation and development of intellectual abilities of students, the ability to communicate in a foreign language, to enhance their interest, and at the same time serve as a manager. The student becomes the main figure in the learning process. Interactive methods are part of the content of the lesson, enabling the creation of a team, group or pair of learning communication materials, that is, the learning process is organized through collaborative learning activities of teachers and students. Each lesson has a specific technology of the subject,

ie pedagogical technology in the learning process is an active learning process that is focused on a specific, pre-designed and guaranteed result based on the communicative needs of the learner.

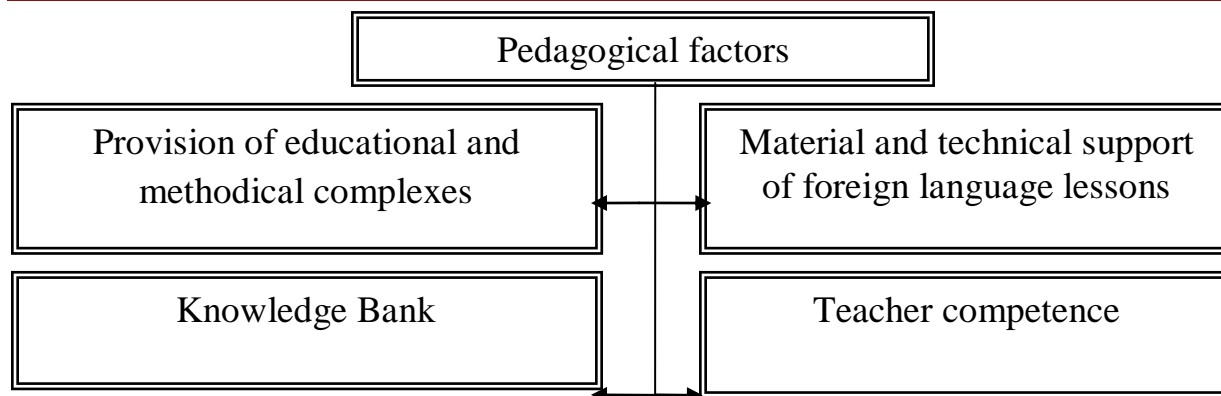
New pedagogical technologies advance the learning process designing. In this case the teacher's educational materials specificity, in its explanation and in the process of independent work strengthening communication skills, students' communication needs, technical means of education and all audio-visual, extrathalvistic and take into account the possibilities of using emotional resources and only then can the desired guaranteed result be achieved [10].

Students are treated differently in the learning process Application of pedagogical technologies and modern methods independent, free thinking, research, creative approach to each issue, sense of responsibility, research, analysis, the effective use of scientific literature, most importantly, reading, science, itself enhances their interest in their chosen profession. There is a need for a new approach to the design of the educational process based on the new educational system, the content, the curriculum, the textbooks.

When using computer technology, it can perform a number of tasks. Computer technology with active access has the following main objectives:

- 1) Increase students' interest in learning through the use of multimedia technology;
- 2) Enhances students' thinking abilities through interactive teaching and increases the effectiveness of learning material;
- 3) Difficult or difficult to present is important as it allows modeling and visualizing processes;
- 4) make learning materials effective not only in terms of their level, but also in the level of logic and perception of students;
- 5) Provide distance education not only for undergraduate students or the Internet, but also for students who missed classes;
- 6) Provide students with the opportunity to carry out specific research activities by searching for material through independent research and finding answers to problematic issues;
- 7) Promote students' performance in reading, coursework, writing and graduation, self-study materials, selection and analysis of information and data [9].

Non-traditional educational technologies are primarily innovative technologies aimed at organizing and managing students' collaborative learning activities, teaching communication skills, ensuring reproduction of learning, consecutive formation and improvement of skills and skills, and independent research. This activity is done by working in pairs and in groups modeling, designing and using different games such as.



Over the past decade, much has been said about changing the concept of education, developing innovative teaching methods, and applying new technologies in the learning process. In the Resolution of the first President of the Republic of Uzbekistan “On measures for further improvement system of learning foreign languages” dated December 10, 2012 No. PP-1875 provides an analysis of the current system of organizing the study of foreign languages, which shows that educational standards, curricula and textbooks do not fully comply modern requirements, especially regarding the use of advanced information and media technologies, training is conducted mainly by traditional methods.

At present, teachers have wide opportunities for teaching theoretical and practical disciplines using various technical means. Many educational institutions boast language laboratories, multimedia classes, video rooms. In the classes, audio and video equipment, computer technologies, including the Internet, projectors of various types (digital projectors, etc.), interactive whiteboards [4] are actively used.

Among the problems theoretically and experimentally solved by the methodology of foreign languages, communicative competence and methods for achieving it are one of the most relevant. Mastering the communicative competence in French without being in the country of the language being studied is a very difficult matter. Therefore, an important task of a teacher is to create real and imaginary situations of communication in a foreign language lesson, using various methods and working methods (role-playing games, discussions, creative projects, etc.). No less important is the task of introducing students to the cultural values of the people - native speakers. For these purposes, the use of authentic materials (drawings, texts, sound recordings, etc.) is of great importance. Acquaintance with the life of French-speaking countries occurs mainly through the text and illustrations to it. It is especially important to give students a visual representation of the life, traditions, linguistic realities of French-speaking countries. Educational video programs can serve this purpose, the use of which contributes to the implementation of the most important requirements of the communicative methodology. Moreover, the use of video in the classroom contributes to individualization of training and the development of motivation of speech activity of students. It should be noted that the use of video in the lesson is the use of another source of information. In recent years, the question of applying new information technologies both in higher, secondary specialized educational institutions, and in a comprehensive school. This is not only new technical means, but also new forms and methods of teaching, a new approach to the learning process. The main purpose of teaching foreign languages is the formation and development of a communicative culture of students, teaching

practical mastery of a foreign language. The teacher's task is to create the conditions for practical mastery of the language for each student, to choose such teaching methods that would allow each student to show their activity, their creativity [7,8].

The teacher's task is to enhance the student's cognitive activity in the process of teaching foreign languages. Modern pedagogical technologies, such as training in collaboration, a project methodology, the use of new information technologies, Internet resources help to implement a personality-oriented approach to learning, provide individualization and differentiation of learning, taking into account the abilities of students, their level of training, inclinations, etc. A variety of topics, activities, colorfulness, fascination of computer programs are of great interest to students. Existing CD-ROMs today allow you to display information in the form of text, sound and video. Computer-based training provides the opportunity to organize the independent actions of each student. When learning to listen, each student gets the opportunity to hear foreign language speech, when learning to speak, each student can pronounce phrases in a foreign language into the microphone, while learning grammar phenomena - each student can perform grammar exercises, achieving correct answers, etc. The computer-based training programs in foreign languages currently available for sale do not always meet the basic requirements of the programs; they are intended mainly for individual lessons, for independent study of foreign languages. And, at the same time, without an experienced teacher, this way of learning a language is ineffective. It takes a lot of time to study computer programs for teaching a foreign language and choose the material that is appropriate for the programs. These lessons are distinguished by their diversity, the increased interest of students in a foreign language, efficiency. Each student, even the weakest, shows his skills, the excitement of competition makes him achieve better results. There are fears that technology may crowd out teachers. Some teachers are skeptical of this technique: "Why is this needed?"

There are many new teaching aids, audio and video programs, and no one will teach a teacher better than he himself."Perhaps they are right. But no one talks about replacing the "living teacher with an electronic one." As an aid to teaching a foreign language, computer programs have their advantages. They allow you to take an individual approach to students, computers deal with each as much as necessary. Multimedia tools allow the teacher to adjust curricula based on the interests and capabilities of individual students. Students can use multimedia elements in their homework, transferring them in electronic form on a diskette or via the Internet [4].

To achieve the maximum effect, it is necessary to use a wide range of innovative, including, of course, a variety of media educational technologies in the learning process. Also create multimedia Power Point presentations.

The use of computer presentations in the lessons allows us to introduce new lexical, country-study material in the most fascinating form, the principle of visualization is implemented, which contributes to the firm assimilation of information. Students' independent creative work on creating computer presentations is the best way to expand the supply of active vocabulary. The tasks of modernization of education cannot be solved without the optimal implementation of information technology, which gives impetus to the development of new forms and contents of traditional types of students' activities, which leads to their implementation at a higher level. Work with a computer should be organized in such a way that from the very first lessons of the initial stage of training it becomes a powerful psychological and pedagogical means of forming



the need for a motivational plan for students, a means of maintaining and further developing their interest in the subject. Properly organized work of students with a computer can contribute, in particular, to the growth of their cognitive and communicative interest, which in turn will contribute to the activation and expansion of opportunities for students to work independently in mastering foreign languages, both in the lesson and outside school hours [5].

South Korea is the most widely used country in the world in the use of information and communication technologies in education, and it is now widely used in every classroom. For students, mobile phones and smartphones have been created with educational resources for use in class, out-of-class and at home. There is also an active e-learning system with more than 700 e-learning companies.

In the Russian Federation, a lot of research has been carried out to develop education informatization and its use in the educational process. As a first step, the Russian national network of scientific and educational runnet.ru was formed within the framework of state programs of the Russian universities, uniting universities, large scientific and educational institutions, and the use of scientific educational resources of educational institutions of the world. During the period 2001-2005, several educational portals were created to develop a unified information and educational portal, with over 10,000 educational resources being provided to these created portals, and 42 regional distance learning centers were provided with information and communication facilities for training through the Internet [6].

## ANALYSIS AND RESULTS

Information and communication technologies, which are constantly developing in the education system, serve to raise the educational process to a higher level. Of course, it is advisable to use modern techniques to make the learning process more meaningful. The use of modern means of computer, multimedia, internet, distance learning, a single information environment and information and communication technologies has been yielding tangible results.

The success of the pedagogical experiment performed during the pedagogical experiment testifies to the need to take into account its organizational and pedagogical aspects. Therefore, special attention was paid to these aspects. The organization of the experimental work was organized with the knowledge of the opinions and comments of the faculty at the Navoi State Pedagogical Institute. The experimental work was carried out among students studying in foreign languages at Navoi State Pedagogical Institute. A total of 211 students were selected for the experimental and control groups.

During the experiment, discussions and observations were held with professors and students of computer science on key features of the information and educational environment. According to a survey of students, 45% of teachers believe that e-learning resources should be used in the classroom process, 40.3% believe that it is appropriate to use them independently, 14.4% can use difficult subjects and 0.3% do not contribute to the acquisition of knowledge.

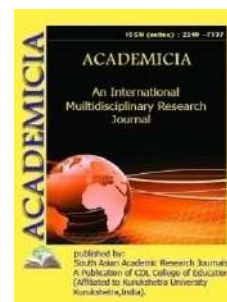
Summary of the pilot phase the results of the number of data obtained in 2019 were analyzed and summarized, and a mathematical-statistical analysis was performed on the basis of the Student-Fisher criterion to verify its reliability. It was found that the mean score of the experimental group was higher than that of the control group, which is 11.7% higher.

## CONCLUSION

In conclusion, where there is no communication, its effectiveness in learning a foreign language is enhanced by the use of innovative technology techniques. We have addressed this in the methods described above in the pedagogical technology. It promotes creativity, diligence, perseverance, independent thinking and so on.

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DOI: **10.5958/2249-7137.2020.00698.9**

## ON THE INTERPRETATION OF NAVOI'S IMAGE AND THE STUDY OF IT

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### ABSTRACT

*This article examines the image of Navoi, its study in world and Uzbek Navoi studies. It also explains how this aspect manifests itself in science and its peculiarities. For example, in the 15th century manuscripts about the life and work of Alisher Navoi, there is a lot of information that the great poet was a great calligrapher and taught calligraphy [2. 54-59]. At Herat's initiative and with his own funds, a number of madrasahs and khanaqahs, such as Khalosiyah, Shifoia,*

*and Nizami, were built in Herat, where famous scholars taught and taught. During this period, many works in the fields of mathematics, science, astronomy, logic, jurisprudence, Islamic theory and others were created. Of course, it is no coincidence that Sultan Hussein Boykaro called him "the pillar of the country, the religion of the state, the property of the nation, the founder of good buildings, the backbone of the Hakan state."*

**KEYWORDS:** *Alisher Navoi, World Navoi Studies, Period Of Independence, Image Of Navoi, Personality Of Navoi, Creativity, Pain, Spirit, Spirituality, Perfection*

## INTRODUCTION

A genius poet and thinker, Interest in the life and work of statesman Alisher Navoi dates back to his time and continues to this day. The image of Alisher Navoi has also been interpreted differently by researchers for more than five centuries.

Amir Nizamiddin Alisher Navoi is a great poet and thinker not only of the Uzbek people, but also of the whole Turkic world, a creator who has a place and status in the history of world artistic thought. His royal works, which were added to the treasury of world art, have already been recognized for their enormous contribution to the development of science and art during the reign of the Timurids in the second half of the 15th century. He devoted his life entirely to the development of the country, the peaceful coexistence of the people and the nation, and the strengthening of the state. Of course, it is no coincidence that Sultan Hussein Boykaro called him "the pillar of the country, the religion of the state, the property of the nation, the founder of good buildings, the backbone of the Hakan state."

Alisher Navoi was able to show the world the rich potential of the Turkish (Uzbek) language, he is a great scholar who has proved that Uzbek is a beautiful language no less than Arabic and Persian. At that time, Persian was the language of poetry and Arabic was the language of science. Formal correspondence consisted of a mixture of both languages. It was a priority to look at Turkish as a common language. Due to the many centuries of statehood experience and rich spiritual and literary heritage of the Turkic peoples, which were destroyed by the Mongol invasion, it was very difficult to restore the glorious history, language and values of the Turkic peoples during the Timur period. Even in the palace of Timur, the work on bringing the Turkic language to the level of the state language was not completed. In such circumstances, Alisher Navoi set himself the goal of restoring the status of the Uzbek language [1. 328]. Scholars of the world equate Navoi's contribution to the rise and development of the Uzbek (Turkish) literary language with the efforts of the great enlighteners in the history of human civilization - the Frenchman Du Belli and the Russian M. Lomonosov, who made a radical change in the nation's culture.

## THE MAIN FINDINGS AND RESULTS

Alisher Navoi was regularly involved in the management of state affairs, as well as art. He created rare works of high art. The Great Five - such works as "Khamasa" and "Khazayn ul-Maoniy", "Muhokamat ul-lug'atayn" and "Mezon ul-avzon", Persian devon and qasida, religious-enlightenment poems and historical memory - "holot" His works are a testament to his incomparable eloquence, great philosopher and scholarship. The idea of human spiritual and

moral perfection is leading in Navoi's works; humanity, tolerance, and goodness form the basis of the poet's philosophy.

Alisher Navoi was the owner of a large estate. In 1481, he gave up all his possessions and formed a charitable foundation. Foundation property - buildings in the Herat area, in particular, Ikhlosiya Madrassah and its buildings, 24 shops, 3-4 tim bazaars, orchards, vineyards and orchards, a certain part of the lands and the income from their use are fully educational institutions, strangers and dervishes, potters, poor needy, aimed at meeting the needs of orphans. Another part was spent on the development of science and literature. Dozens of scientists conducted research with the direct material and spiritual support of Navoi. Particular attention was paid to historical works, the work of masters of fine arts. At Herat's initiative and with his own funds, a number of madrassas and khanaqahs, such as Khalosiya, Shifoia, and Nizami, were built in Herat, where famous scholars taught and taught. During this period, many works in the fields of mathematics, science, astronomy, logic, jurisprudence, Islamic theory and others were created. The sultan created great conditions and conveniences for the development of Navoi's literary environment in Herat. This was an example of the ruler's special attention to the development of science and literature in the Timurid kingdom. Navoi's contribution to the development of science in the country was invaluable. Alisher Navoi also held very important positions at the Hussein Boykaro Palace as Prime Minister - the owner of the cabinet, a statesman. As a just minister, he managed various spheres and sectors of the social life of his time.

Historian Khandamir in his work "Makorim ul-akhloq" gave the names of about twenty important scientific researches created under the leadership and patronage of Navoi, their authors and poets and scientists who created them with his financial support. Many hypothetical scholars ended their works as a token of gratitude for the great services rendered by Amir Alisher. Many critics, historians, poets and scholars have written about Navoi's gratitude. Among them are Davlatshah Samarkandi, Mu'iniddin Isfizari, Abdulgafur Lori, Abdulvose Nizami, Mirkhand, Khandamir, Sultan Ali Mashhadi, Atoullah Hussein, Atoullah Asili, Hussein Kashifi, Mir Hussein Muammal, Shamsiddin Badakhshi and dozens of other Navoi contemporaries. we also meet. It can be said that the hymns dedicated to Navoi coincided with the details of his exemplary life and formed the view of him in various strata of the population as a unique person whom Allah looked at. The study and promotion of his life and work began. Alisher Navoi as an enlightened person is mentioned in historical sources and described in poetic works. In later periods, many sources also provided information about his life and activities. This shows that the peoples of the East, along with the great poets and thinkers - Nizami Ganjavi, Farididdin Attar, Jalaliddin Rumi, Saadi Sherozi, Khusrav Dehlavi, Hafiz Sherozi, Abdurahman Jami, looked at Navoi with great interest. For example, in the 15th century manuscripts about the life and work of Alisher Navoi, there is a lot of information that the great poet was a great calligrapher and taught calligraphy [2. 54-59]. This created the tradition of passing the "school of calligraph" by copying the works of Navoi among the calligraphers of the later period and receiving his "white blessing" in absentia. The fact that more than two hundred of the 254 copies of the book by the hard-working scholar M. Hakimov on the description of the manuscripts of Navoi's works were written in the XIX century also confirms our opinion [3]. Most of the khans who ruled the independent regions of Uzbekistan were poets (for example, Feruz and Amir) and they also copied Navoi's works by order. While the calligraphers improved their calligraphy skills in



copying Navoi's works, on the one hand, they were impressed by how powerful the word Navoi was in the process of copying.

The study of Navoi began in its time. Mirkhand, Davlatshah Samarkandiy, Giyosiddin Khandamir, Zahiriddin Muhammad Babur, Zayniddin Wasifi's prose works, translations of Fakhri and Kazvini's Majlis un-nafois assess the life and activity of the great Uzbek thinker and poet. The attitude of dozens of poets, such as Abdurahman Jami, Ahli Sherozi, to Navoi's work is recorded in dozens of works. Khandamir's work "Makorim ul-akhloq", written especially about Mir Alisher, the owner of great qualities, will serve as an open door for fans who have been trying to reach the essence of Navoi's genius for centuries.

Interest in Navoi's personality is not limited to the East. In the encyclopedia "Library of the East" by the French scholar Artoleme d'Erbelo, published in 1697, The biography of Navoi and the names of his works, as well as the use of the name Navoi in the research of the orientalist Sylvester de Sasi (1758-1838), are evidence that Navoi was officially recognized in the West as a poet and statesman. In 1835, the Russian orientalist P. Savelyev, in an article dedicated to Navoi, gave a correct assessment of Navoi's creative activity and gave a brief account of some of his works [4]. Meanwhile, a study of Navoi's life and work by Mikhail Nikitsky made a significant contribution to Navoi studies. Compiled in 1857 by Professor IN Berezen (1818 - 1896) and published in Kazan, the book "Turkish Chrestomathy" contains excerpts from two works by Alisher Navoi – "Vaqfiya" and "Munshaot". The famous Russian scientist V.V Velyaminov-Zernov prepared and published in 1868 a scientific-critical text of the dictionary based on the works of Alisher Navoi, compiled in the XVI century and known as "Abushka". Another Russian orientalist, N. I Ilminsky, in his book on Turkic-Tatar languages, published in Kazan in 1862, praised Alisher Navoi's contribution to the development of the Uzbek literary language and described him as "a man who fought valiantly for his mother tongue." [5] In 1841, in Paris, Katremer published Navoi's "Muhokamat ul-lug'atayn" and "Tarihi muluki Ajam". Major scholar H. Vamberi provides excerpts and translations from Navoi in his works on Central Asia. He translated the introductory part of "Mahbub ul-Qulub", some chapters of "Farhod and Shirin", and excerpts from other works of the poet into German. In 1861, the French orientalist M. Belen published a large article in the journal "Asian" entitled "On the life and work of Mir Alisher Navoi." [6] At the same time, he wrote a great scientific work on the work "Khamsat ul-mutakhayyirin", Publishes "Majlis un-nafois"; He translated some chapters of "Mahbub ul-Qulub" into French. It should be noted that the works of Nikitsky and Belen are recognized by orientalists of the XIX century and have long been the main source for the study of Navoi, even in the early twentieth century.

On the eve of Alisher Navoi's wedding, which was first celebrated in 1948 during the Soviet era, a number of other studies about the great poet were published. Among the works of the highest level of this period were E.E Bertels, O.Sharafiddinov, A.NKononov, S.Ayniy, AKBorovkov, A.Semyonov, M.A.Sale, A.Yu. Yakubovskiy, A.Sa'diy, M.Oybek, M.Shayxzoda, I.Sulton, A.Boldyrev. V.Zohidov, V.Abdullaev's researches can be shown.

During this period, especially the book "Navoi's Heart Book", created by Izzat Sultan, became an additional guide in imagining the life of the great poet more fully, based on his own confessions. At present, Musa Oybek's literary-critical researches on the life and work of Alisher Navoi, novels and short stories, Suyima Ganieva's "Alisher Navoi", Aziz Kayumov's "Alisher



Navoi" allowed to reconsider the sequence and logical development of events in the complex life of Navoi.

Thanks to independence, our science began to breathe freely. Our thinking is enriched with new ideas. The lives, scientific and literary heritage of our scientists of the past are being studied objectively and deeply. During the years of independence, Navoi studies has also achieved significant success. During the dictatorial regime, a number of studies were created on topics that were forbidden, including the Qur'anic foundations in the works of the great poet, and the Sufi worldview. The first significant works are the researches of N.Kamilov, I.Hakkulov, H.Karomatov, Sh.Sirjiddinov and others. From this period, attempts were made to reconsider Navoi's lyric and epic heritage on the basis of new perspectives. Hundreds of pamphlets and articles, large and small, have been published. The image of Alisher Navoi has faced various interpretations for almost six centuries.

In 2016, the 575th anniversary of our ancestor Navoi is widely celebrated in our country at the level of state policy. This year, Uzbekistan has hosted many scientific conferences and events dedicated to Navoi. In particular, the international symposium held in Kabul in April 2016 symbolizes the aspiration and deep respect of the world community for Alisher Navoi. It is necessary to study the works of Alisher Navoi in detail and seriously. Nothing can replace it. Nevertheless, in order to fully understand the whole scale of Alisher Navoi's life and work, its importance in the socio-spiritual environment of his time, it is necessary to study, analyze and interpret the historical, scientific and artistic works about Navoi. They contain signs to know the boundaries and secrets of history.

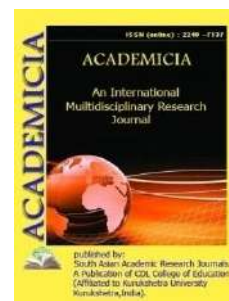
## CONCLUSION

In summary, I can say that Alisher Navoi is a great thinker who has been inspiring innovations and discoveries that are absolutely unique for each period. That is why the works of scientists and artists who lived and worked after Navoi, and not those of his contemporaries, embodied the virtues and gems that were left out of the eyes of others. Their special study plays an important role in the education and upbringing of today's modern youth. Increases interest in Navoi's personality and creativity. Navoi encourages to read and study his work, creates aspiration. This is an inviolable guarantee of success.

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DOI: **10.5958/2249-7137.2020.00699.0**

## THE DEVELOPMENT OF THE IDEA OF THE FORMATION OF COGNITIVE ABILITIES IN PEDAGOGICAL SCIENCE

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### ABSTRACT

*The article shows that there are significant, diverse forms of activating the cognitive activity of students, the ambiguous level of their motivational activity, characterized by a predominance of internal motives for learning, the level of intellectual development of students using the technology of interactive learning was determined.*

**KEYWORDS:** *Abilities, Cognitive Activity, Pedagogy, Psychology, Creative Abilities,*

**INTRODUCTION**

In the conditions of modern society, which is characterized by a focus on the humanization of all aspects of social life, the problem of personality formation, its creative potential, the ability to navigate a huge variety of information and quickly process it based on one's own capabilities and needs is especially relevant. The formation of a new type of person who is able to create spiritual wealth, actively participating in all spheres of society's life, largely depends on the development of the ability to cognize the phenomena of the world, in the formation of the ability to independently find various options for solving problems arising in the course of life, and the willingness to put the knowledge into practice .

The problem of cognitive ability of students is one of the most important areas of the theory and practice of pedagogical science and not only this science. It has long attracted the attention of philosophers, psychologists, and educators, from Socrates to the present day.

In pedagogical practice, observing the activities of schoolchildren in the educational and cognitive process and comparing their educational achievements, comparing the rates of their spiritual growth, we constantly make sure that they noticeably differ from each other in their abilities. The development of abilities in students is accomplished in the process of training and education. Like other abilities, the student's cognitive ability is formed by mastering the content of material and spiritual culture, technology, science, and art in the learning process.

A number of works are devoted to the study of the history of the study of the cognitive activity of young schoolchildren, written, including by L. I. Bozhovich, L. A. Wenger, N. N. Poddyakov, M. Lutfuloev, F. Sharipov and some other scientists.

In pedagogy and psychology, there are such developments about abilities as the works of B. Khayrulloev, B. M. Teplov on musical abilities, the works of E. I. Ignatev and V. I. Peresenko on visual abilities, the work of V. P. Yagunkova on literary abilities , works of V. A. Krutetskiy on mathematical abilities, work of L. I. Umansky on oratory abilities, research by F.N. Gonabalin and N.V. Kuzmina on pedagogical abilities, the works of A.F. Esaulov on inventive abilities, research by M.G. Davletshin on technical abilities and others. In these works, scientists considered ability as a special mental quality of a person. Their idea is united by the fact that these signs are a means of understanding the world.

**Main part.**

Cognitive activity and activity in the educational - cognitive process are a source of the formation of cognitive ability of schoolchildren. Cognitive ability arises on the basis of knowledge and in this process expressed in the interested acceptance of information, the desire to deepen and clarify their knowledge in an independent search, answers to questions of interest; the manifestation of a creative approach, in the ability to assimilate the way of cognition and apply it on other material. The concept of "cognitive ability" is used in those cases when, in addition to proper intellectual ability, there is also a pronounced personality aspect in the form of needs.

The basis for the development of cognitive ability are those principles of personality education and the development of thinking that include stimulating and encouraging the acts of cognitive

activity themselves on the part of another person (teacher, educator, peer). That is why the most significant situations in the occurrence of acts of cognitive ability are situations of “learning, various types of interpersonal interaction, play, learning and life practice” [1, 56].

In the history of pedagogy and school you can find different definitions of the concept of "ability". Therefore, the question arises: what is ability? Many authors gave him detailed definitions. In particular, S.L. Rubinstein understood by abilities “... a complex synthetic formation, which includes a whole series of data, without which a person would not be capable of any particular activity and properties that are only produced in a certain way of organized activity” [7]

Pedagogy gives an unambiguous answer: ability is the individual personality traits that are subjective conditions for the successful implementation of a certain kind of activity. To be more precise, ability is a property of a person's soul, understood as a combination of all kinds of psychological processes and conditions [2]. This is the most widespread and traditional definition of abilities.

To the extent that ability is a psychological phenomenon, many scholars of the past have defined ability as a high level of development of general and special knowledge, skills and abilities, which ensure successful fulfillment by a person of various types of activity. This definition was common in the teacher - psychological science in the XVIII-XIX centuries.

Some scientists are prone to the fact that a person's abilities are not given to him, but are presented in the form of objects that he must master. Ability - these are individual differences of individuals that are not limited to skills, abilities and knowledge, but can explain the ease and speed of their acquisition.

One of the theories of abilities that we examined in our work belongs to B. M. Teplov. He in his work “Problems of Individual Differences” considers the problems of ability, first of all, as individual psychological differences between people. Continuing to define the concept of ability, R.S. Teplov says that “abilities are not limited to knowledge, skills, but explain (ensure) their rapid acquisition, consolidation and effective use in practice” [4].

This definition is currently, although it is the most common, nevertheless, is considered the narrowest of all these. The same idea is emphasized by V.A. Krutetskiy, who writes: “Ability is always the ability to a certain kind of activity, they exist only in the corresponding specific human activity. Therefore, they were identified, perhaps, only on the basis of specific human activities” [5].

According to their psychological mechanism, abilities in general, not only sensory, but also intellectual, are indicative actions. They are formed and manifest in activity. Specific features of the activity determine the features of abilities and lead to the formation of special abilities. The level of development of abilities determines the degree of successful activity. But in psychology it is advisable to consider not any abilities, but human abilities; within this volume of abilities are also psychic. Under mental abilities is understood the property of special images of organized matter (the brain of the nervous system) that implements the reflection function of an objectively existing world. This is the ability to feel, think, feel, etc.

Ability as a category of the psyche is used to determine individually - mental characteristics that distinguish one person from another and are manifested in successful activity. Ability as a

property of functional systems makes it possible to determine the place of abilities in the structure of the psyche. For this, the ability is considered in three aspects: as a property of highly organized matter of the brain; reflects the objective world as a subjective image of the objective world; and how experiences [6]. Comparing the definition of the psyche and abilities, scientists believe that the ability also implements the function of reflection.

The ability to work is a combination of physical and spiritual abilities that the body possesses, a living person. Since the work of a schoolchild is study and the knowledge gained is the result of his work, his cognitive ability is determined by the combination of physical and spiritual potential.

The opinions of scientists who determine ability are united by the idea that ability can be expressed in the speed of assimilation and the correct application of relevant knowledge, skills. They are inclined to the fact that types of abilities manifest and develop only in that activity that requires precisely these abilities. Those. Cognitive ability, it is necessary to evaluate cognitive activity, and knowledge, abilities and skills only then form cognitive ability when they become an instrument of creative activity and are included in its procedure.

The subject of activity is always associated with the assimilation of socially developed modes of activity.

Considering the issues of formation and development of abilities, S.L. Rubinstein [7] pointed out that when a person starts a certain type of activity or begins to prepare for it, there is a selection or selection of those mental activities that this type of activity objectively requires.

The second approach related to the consideration of abilities, in the first place. as generic qualities of a person, based on the theory of L.S. Vygotsky [8] and also has its own history and its continuation in modern research

For example, the abilities on which success in learning depends. They are determined by the speed and quality of knowledge acquired by a person. There are also musical, artistic - visual, literary, linguistic, mathematical, organizational and many other abilities.

Many scientists around the world have touched on the problem of abilities with an empirical approach. The founder of the empirical approach to solving the problem of abilities is F. Galton. He proposed the basic methods and techniques that researchers use to this day, but most importantly, the main tasks of differential psychology, psycho diagnostics and developmental psychology crystallized in his robots, which are still being solved by researchers.

He tried to explain the influence of heredity on individual differences between people, and it was not by chance that his work served as the starting point for the development of differential psychology. Two factors — heredity and environment — influence human development. And, in order to reveal the relative influence of heredity and environment during his life, in 1876 he proposed using a methodology for comparing test subjects — twins who grew up in identical and different social environments (separated twins).

Galton believed that by measuring the parameters of the simplest mental processes, one can determine the level of a person's creative talent. Later it turned out that the connection between creativity, intelligence and the simplest cognitive abilities is more complex than it seemed at first.



The isomorphism of ability and activity, which boils down to a simple formula: there are as many abilities, as many types of activity, is the primary and naive solution to the problem. Other options, primarily the idea of a complex relationship of abilities and activities, are more scientifically based.

The number of human abilities corresponds to the variety of types of his activities, which include people. In addition to the separation of abilities by type of activity in which they appear, abilities are usually divided into general and special.

Common are those abilities that equally manifest themselves in various types of human activity. These include the level of general intellectual development of a person, his learning ability, attentiveness, memory, imagination, speech, manual movements and working capacity. Special - this is the ability to certain types of activities: musical, visual, linguistic and others. Distinguishing special and general abilities, D.N. Zavalishina associates general abilities with more general conditions of leading forms of human activity, and special ones with individual types of activity. In her opinion, abilities are not measured by type of mental functional systems, but by type of activity [10]. According to the majority of scientists [4], there are three types of ability: general, (providing relative ease and productivity of work); special (strictly specialized); and practical (organizational). In addition, there is the concept of "makings", which also play a significant role in the development of cognitive ability.

Inclinations are qualities due to which a person can successfully form and develop abilities. Without appropriate makings, good abilities are impossible, but makings are by no means always guarantees that a person will necessarily have good abilities.

Significant difficulties in defining the concepts of "ability" and "giftedness" are associated with a generally accepted, everyday understanding of these terms. If we turn to explanatory dictionaries, we will see that very often "abilities", "gifted", "talented" are used as synonyms and reflect the severity of abilities. But it is even more important to emphasize that the concept of "talented" emphasizes the natural gifts of man. So in V. Dahl's explanatory dictionary, the word "capable" is defined as fit for anything or inclined, dexterous, suitable, convenient [9].

The basis of all types of ability is cognitive ability, because in the process of development of cognitive ability other types of ability develop. Cognitive ability is the ability to know the world around us, an orientation that is directed towards the field of knowledge. Cognition is a mental category that determines the level of reflection of the world. Cognition requires the active work of thought and the totality of all processes of cognitive activity. Knowledge, filled with deep concepts, acquire personal significance for students and remain in their memory for a long time.

In the "Pedagogical Encyclopedia" [11] the following definition of this word is given. Cognition is a process of reflection of reality by a person. Cognition directed at the most knowing subject constitutes a specific form of cognition - self-knowledge. The initial moment of cognition is a sensation, always included in perception, which is a reflection of objects and phenomena in general, in the whole diversity of their properties. In the process of cognition, cognitive interest and cognitive ability play an important role.

In solving the problems of the formation and development of cognitive ability, an important place is given to the creative use of the classical pedagogical heritage of the East, embodied in the works of the outstanding thinkers Baliami, ArRazi, Rudaki, Firdousi, Abu Ali Ibn Sina,



NosirKhusrava, Hafiz and Saadi, KamolKhujandi and Abdurah-mana Jami, Ahmad Donish and SadriddinAini and others who gave a sufficiently strong impetus to enrich and deepen new aspects of pedagogical science.

According to the most ancient Tajik teacher UnsurulmaoliKaikovus (in the book "Kabusname"), people are different in their cognitive abilities: naturally gifted people who have a natural mind differ in their abilities and rationality from other ordinary people. Although everyone can not have a natural mind, everyone, according to the author, can acquire reason (knowledge) through training. And know that the mind is of two kinds: one is the natural mind, and the other is the acquired.

From the point of view of AbuabdullohRudaki, the living environment plays a leading role in the formation and development of a person's personality and ability. She is a source of knowledge. The poet and exclaims:

Go on Gain a share of life experience

For it is useful in the fight against obstacles.

From all the thoughts of A. Rudaki about the role of the environment in the upbringing of a person, the formation of his personality, a logical conclusion follows that the cognitive abilities and moral qualities of a person are not hereditary, but acquired:

The son does not inherit

Talent and knowledge of the father.

A fundamentally important characteristic of the development of cognitive abilities is the fact that the development of visual modeling actions not only leads to increased success in solving intellectual problems in a school student, but also helps to restructure other mental functions, making them arbitrary and conscious.

## RESULTS AND DISCUSSIONS

All these pedagogical characteristics of the availability of cognitive abilities are directly related to the formation of methods for self-acquisition of knowledge, which is posed as one of the central tasks of the modern school. In this direction, students can be motivated in the educational - cognitive process:

- Interest in the modern content of school curricula and the associated prestige of mastering scientific knowledge;
- students' interest in independent cognitive activity through interactive approaches, which are widely provided for in the modern structure of the lesson and are considered as didactic requirements for the educational - cognitive process;
- the possibility of self-affirmation, the realization of the need for adulthood, in creative, search activity in the lesson and in extracurricular forms of work, etc.

The stimulation of cognitive abilities of students using the content of educational material is provided by: the novelty of the content of educational material, updating of already acquired knowledge, historicism, modern achievements of science, the practical significance of the content of knowledge. The variety of forms of independent work, mastering new ways of

working, problems with research elements, creative work, practical work, etc. also contribute to the stimulation of cognitive abilities of students.

The activation of cognitive abilities depending on the relations between participants in the educational and cognitive process is caused by: "creating an emotional tone of cognitive activity of students, the emotionality of the teacher himself, trust in the cognitive capabilities of students, mutual support in the activities of teachers and students (meeting process), competition, encouragement" [12]. These characteristics of the educational process stimulate the formation and development of cognitive ability of high school students.

Each student has a wide cognitive need, i.e. the desire to find answers to his questions and find out the world. However, the cognitive abilities of different students are not the same and change for each student as it develops. What the general cognitive need turns into depends on the actual activity in which the student is involved. This means that before the student begins, the student may not have the need to master the methods of obtaining knowledge. This new type of attitude towards learning must be specially formed on the basis of the child's wide cognitive need and by including the student in specially organized types of educational activities.

Theoretically analyzing the ideas of the formation of cognitive abilities in pedagogical science, we can conclude that foreign and domestic scientists - teachers have done a lot of work on the study of the term "abilities" and the sources of the formation of cognitive abilities of schoolchildren. Defining the term abilities, they are inclined to believe that abilities include both individual knowledge and the willingness to learn new ways and methods of cognitive activity. Scientists believe that ability and cognition, like other mental components of a person, have their own sources of development that are cognitive: activities, independence, interests, activities, needs, desires, etc., which contribute to the formation of a person's cognitive ability. Each individual scientist worked on these sources. In this direction, all scientists are inclined to believe that abilities need to be assessed by activity, since cognitive ability is evaluated by cognitive activity.

## CONCLUSION

The activation of memory, imagination and thinking in the educational - cognitive process stimulates the development of the creative potential of high school students and, thereby, it gives them the opportunity to feel their importance in the development of their cognitive abilities. Therefore, the determination of the level of cognitive activity is an important process of formation and development of cognitive abilities of high school students in the learning process.

Important factors contributing to the process of development of cognitive ability are the correct pedagogical approach and the motivation of students' needs for cognition by the teacher. Without the use of interactive learning technology and the selection of appropriate educational and cognitive approaches, it is not possible to solve the problem of the formation and development of students' cognitive ability.

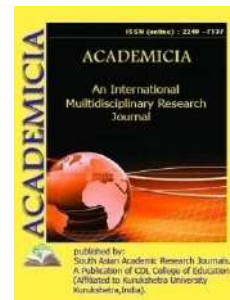
Contribute to this technology of interactive learning. As can be seen from the analysis of practice, for example, students who are prone to natural subjects do not receive the basis for full spiritual development, and students who are not interested in subjects of the natural mathematical cycle cannot develop humanitarian inclinations. But it is especially difficult to learn for those who, according to their abilities, cannot be guided by either one or the other inclination.

Our studies, in particular, showed that there are significant, diverse forms of activating cognitive activity of students, an ambiguous level of their motivational activity, characterized by a predominance of internal motives of learning.

Next, the results of our studies determined the level of intellectual development of students in the context of those tasks that were set using interactive learning technology. To assess the theoretical generalization of the educational material, we used the task for high school students, according to B. Bloom's theory, on the degree of knowledge, understanding and application, analysis, synthesis and evaluation.

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DOI: **10.5958/2249-7137.2020.00700.4**

## PHRASEOLOGISM FORMED ON THE BASIS OF METAFORA IN THE NOVEL “THEOREM”

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### ABSTRACT

*Phraseological units, like lexical and grammatical units, are involved in ensuring the popularity, vitality, emotional and expressiveness of the language of the work of art; serves to create a unique style of the writer, to achieve his artistic goal. Therefore, writers not only use phraseological combinations from the common language fund, but also invent new phrases. In this article, similarly, the occasional phraseological units formed due to the need for figurative expression of new concepts are analyzed on the example of T. Turaboev's novel “Theorem”.*

**KEYWORDS:** *Literary Text, Metaphor, Figurative Renaming, Phraseology, Phraseologization, Individual Phraseology.*

### INTRODUCTION

It should be noted that in phraseological units, when a certain action, the reflection of an event, is expressed, it certainly relies on something. That is, it becomes the basis of any phraseological phenomenon that occurs in our minds. One of these arguments is the metaphorical analogy that occurs in the human cognitive world. In human thought, there is a desire to rename a particular action figuratively on the basis of similarity, and as a result a phraseological unity emerges as a new name. As the researcher B. Boltaeva noted: “Phraseological units are also formed as a result of the transformation of common phraseological units on the basis of the need for figurative expression of simulated images and new concepts. This phraseological formation is the product of speech, of fiction. However, the formation features of the author's phraseological units have not yet been studied in detail. Such phraseological units are created on the basis of defining the image of phraseological units formed in general [1]. Indeed, in the novel “Theorem” we saw that Temirbek Turaboev created his own original phraseology. We can see that most of these phraseological units are based on metaphorical analogies in the process of creation or, in a word,

in phraseologization. For example: *To'sqovul tog'a tog'ining turli tomonlariga tarqalgan tabiblar tabobatning to'riga tushganlar. Tabobatning to'riga tushmang* (21); *tepakal Toshxonga to'r tashlab turgandi. To'riga Tursunboy tushdi. Tursunboyini Toshbuloqda, tepakalning to'riga tushirgan Tangriga tashakkur!* (41). In the emergence of *to'riga tushmoq* (to fall into a net), *to'r tashlamoq* (to cast a net), *to'riga tushirmoq* (to set a trap for somebody) phraseological units in the cited texts, the meaning understood from the free link forming these means, i.e., the action of representing the process of hunting an animal (bird, fish), is copied and the free link is phraseologized on the basis of semantic reconstruction. It is well known that in creating a metaphorical migration, the object of analogy, the image of analogy, is required to be an identification mark. In the formation of this phraseological unit, if the object of simulation is “hunting weapon, fishing with a net”, the simile image is “captivity in the net”, the similitude sign is “the process of hunting with a net”. It should be noted that the image of analogy is the main character in phraseologies formed by metaphorical migration. The writer also used the phraseological units that emerged as a result of comparison and analogy in the novel in its own sense: *To'r to'quvchi tillaqo'ng'izni to'riga tushirgan. Tillaqo'ng'iz to'rga tushganu tushovlangan* (101). In order to increase the artistic, emotional-expressiveness of the work, this free connection has been transformed into phraseological units on the basis of semantic transformation.

## THE MAIN FINDINGS AND RESULTS

There are many phraseological units in the novel that are semantically transformed through metaphor, formed on the basis of a simulated image. For example: – *Taqdir – ter to'ksang, taqdir! Ter to'kmasang – tap-taqir. Ter to'kib topilgan taqdir tillaniyam tillasi, tog'asi! ... tuman tarqadi* (28). The phraseology “*tuman tarqadi*” (fog disappeared) used to describe the state of the character's abstract imagination in the given text is formed by comparing it with the phenomenon of fog in nature. *Tavkarxonada tinchlik, tiriklik to'xtadi. Tovushlar tindi. Tavkarbozlarning tiliga tushov tushdi* (177). The lexeme “*tushov*” (speechless), which is the basis for the creation of the phraseology “*tiliga tushov tushdi*” (went on speechless) in the text, is used to connect an animal, mainly a horse. The meaning understood from this lexeme is used in relation to language on the basis of a simulated image, forming a phraseological unit. *Tursunboyning tepkisi to'rtalasiniyam to'ntardi. Tursunboy to'rtalasiniyam titib tashladi* (107). Based on the “*narsani u yoq-buyoqqa sochmoq* (to scatter something), *ag'darmoq* (to turn in side out), *to'zitmoq* (to scatter)” semantic basis of the lexeme “*titib*” (shuffle), which is a component of the free link “*titib tashladi*” (to shuffle through) of the phraseology “*titib tashladi*” (to shuffle through) in the text, the analogical image is re-formed and a new phraseological unit is formed.

In constructing the phraseologism “*taom to'rvasi to'lmoq*” (float the food bag) in sentence *To'ymasning taom to'rvasi to'lib, tamog'idan toshibdi* (39), he likens the process of filling the sack to the act of satiating the stomach, likening the human stomach to “*taom to'rva*” (he food bag), and has formed a peculiar figurative phraseological unit. The writer's emotional-expressive approach is also evident in the process of making this phraseological unit based on analogy. The writer approached the process of creating phraseological units based on the character traits of the characters. One of the characters in the novel is described as having a negative character due to his insatiable greed and ugliness: *Tortishuv tafsilotlarini to'xtatib, To'ymasning tarixini titkilasak, to'ymas tug'ma tamoqxo'r, tamoqxo'riniyam tamoqxo'ri. To'ymasni tamog'i tavkar*



*tashlayotganda tinch turmasa, tundayam tinmaydi, Tongdayam tinmaydi* (39). We see that the author has created phraseology appropriate to the character of the character. The semantics of the lexeme “bag” in the qop, xalta, to'rva (can, bag, sack) synonymous series of our language have a small (kichkina qopchiq - small sack, oshqozonga yaqin - close to stomach) in relation to them in terms of volume, and a negative ottenka in terms of expression. The writer skillfully uses this to clarify his attitude to the character by copying the meaning of the phraseology “taom to'rvasi to'lmoz” (to get full the food bag), which represents the content of “qorni tuymoq” (to stuff yourself with smth, to get full) in the text, on the basis of figurative analogy.

Tilovoldining tishlari takkilladi. Tili tamg'alandi. Turish-turmushidan tuz to'kildi, tamug'ga to'ndi (81). In the text we observe one of the author's own phraseological "discoveries". The genetic basis of the lexeme “tuz” (salt), which is the basic concept in the construction of the phraseology “turmushidan tuz to'kildi” (salt spilled from his marriage), is the semantics “sho'r” (salty), which describes the depressed, unhappy state of the character through this phraseological unit, which means “peshonasi sho'r” and, “sho'r peshona” (salty forehead - unfortunate) in the vernacular.

In the formation of the phraseological compound “tizginini tutib” (holding the reins) in sentence Tursunoy tosh tashlab, tosh tashlab "Tanovar" tizginini tutib, tan-taniga tumorday taqdi (220) the genetic basis of the lexeme “tizgin” (reins) is found in “ot - horse, eshak – donkey etc. the semicolon “a long ribbon or line, which serves to bind or untie animals”, served as a base, and the phraseological unit “tizgini tutmoq” (to hold the reins) expressed the metaphorical meaning of “tuyg'ularini jolovlamoq” (to restrain one's emotions).

In the novel, the author has made a structural metaphorical adaptation to the phraseological units included in the general language fund in accordance with his own style. For example: Tapa tukini tikkalamoq (37) new structural variants adapted to: tapa sochi tikka bo'lmoq phraseological units, terisiga tuz tiqmoq (41) variants of terisiga somon tiqmoq phraseological units, tavqi tayoq taqilmoq (150) variants of “tavqi la'nat taqilmoq” phraseological units, to'ni teskari turmoq (150) variants of “to'nini teskari kiymoq” phraseological units, taomxonaning to'rni to'ldirib (63) variants of “dastarxonning to'rini to'ldirib” phraseological units, peshonasi tirishmoq (213) variants of the phraseological unit “birligining tirtig'i tirishmoq”, 14 (35) variants of the phraseological unit “to'von tiramoq”, tishlarini tishlari-la tishlamoq (198) variants of the phraseological unit “tishini tishiga bosmoq”, tamog'idan toshibdi (39) variants of the phraseological unit “bo'g'zidan toshibdi”, tiriklik to'rvasi to'lganini of the phraseological units “paymonasi to'lgan” (38) is based on 20 images of metaphor. The author has also made elliptical processing of some phraseological units to adapt to the novel style.

In the game, phraseological units corresponding to the content of some phraseologisms in the general language are also formed. For example, in accordance with the phraseological unit “it tilini it tushundi -birds of a feather flock together” in the folk language, “Tevat understands tevat language” Tevat (175) phraseological unit, “topgan gul, topmagan bir bog'piyoz – some finds flower some a bunch of onion”, “topgan to'rpoqmi taka, topmagan to'rta tuyoq—who found soil or goat, who did not find four hoof”, which is composed on the basis of the phraseological unit “qo'lni qo'lga berib - holding hands” (13) phraseological Unit, “tutamiga tutamini tashlab - throwing a bunch of them” is formed from the phraseological unit (195), leaving the handle of the handle, adjusting to the phraseological unit. In phraseologizing these units, the writer has effectively used the principle of “applying old tools to new functions” as the main mechanism of



semantic change. It should be noted that the semantic connection between the common phraseology and the newly formed phraseological units in the work was preserved and served to ensure the imagery of the work [2]. It can be seen that the writer also effectively used orientation in the formation of such phraseological units.

D.Khudoyberganova studied the phraseology formed in the Uzbek language on the basis of the standard of constant analogy as a language unit [3] that reflects the linguo-culturological features of the language, divided into a number of groups related to human organs, appearance, physical features, and behavior. Indeed, in the novel *Theorem*, in the process of observing the linguistic nature of the phraseologies used by the author to create figurative images in the reader's imagination, we are convinced that the emotional state of man, the scientist refers to all groups of his physical movements. The phraseological units created on the basis of the association of similarities in the work have risen to the level of stereotypical units in the description of a person's strong emotions, behavior and actions, along with the expression of different mental states. Consequently, "the analogy standard plays an important role in figurative representations of the state of the person, and it is preserved as a stable unit in the linguistic memory of the speakers of the language" [4]. For example: *tanasi tirishmoq* – to get strained body (100); *tanasiga tok tarqalmoq* – to spread the vine into the body (213); *tanasining tubi tirnaldi* – the bottom of his body scratched (83); *tanasining tub-tubi to'kilib tushgandek* – as if the bottom of his body was spilled (85); *taroq tashlamoq* – to throw a comb (163/); *tamog'iga tugunchak turilmoq* – to curl into a knot (111); *tamog'idan to-shibdi* – heaped stones at his / her throat (39); *tana torlari taranglashmoq* – to tighten the body (58); *terisini tilmoq* – peel the skin (55); *to'shiga tortmoq* – pull to the chest (62); *tanasini tilkalamoq* – dislocate the body (64); *til tishlamoq* – bite the tongue (52/); *tutqanog'i tutmoq* – to get crazy (124); *tamog'iga toshtalqon tiqilmoq* – to hit one's throat (174); *tanang to'lishadi* – your body will be full (111); *tentak taxlitiga tushmoq* – to act as stupid/fool (81); *tepa tukini tikkalamoq* – straighten the top hair (37/); *tomog'i to'zga to'lmoq* – fill the throat with salt (75/); *tomog'iga tosh tiqilmoq* – to blockage in the throat (43/); *tongday tuni toriklanmoq* – twilight (38); *tongi tugab tuni turmoq* – to get up at night (38); *tongi tunlanmoq* – to rise in the morning (102); *tonglangan tuni tag'in tunlamoq* – to spend the night again (91); *tongni to'sib, tunni tushirmoq* – to block the dawn and dream of the night (182); *tusini tiklamoq* – to take a hue (43); *to'ng'ib turavermoq* – to standstill (194); *to'ni teskari turmoq* – to roll up the sleeves (150); *to'fon turmoq* – to flood (84); *tirik taxlit* – live analysis (166); *tiriklik to'rvasi to'lmoq* – to fill the bag of life (38); *tirtig'i tirishmoq* – to scratch (213); *tuyasi tug'di* – the camel gave a birth (43); *tishini tishlab turmoq* – to clench one's teeth (191/); *tishini tishlab* – bite one's teeth (177); *bite your teeth* (83). These phraseological units are formed on the basis of cognitive metaphors to figuratively express different states of the human psyche in the linguistic thinking of the Uzbek speakers. The Uzbek reader motivates the figurative analogies in these phraseological units on the basis of thinking based on his "linguistic knowledge fund". D.Khudoyberganova explains this situation as follows: "... Shows the figurative way of thinking of the Uzbek language, as well as the existence of hidden analogies, which are stored in their linguistic memory, stereotyped, and at the same time appear implicitly in speech, as a system with its own laws. Identifying the units of this system, which is the richness of the Uzbek language, is of great importance in defining the cognitive models of our language" [5]. We believe that further in-depth examination of such phraseologies on the basis of psycholinguistic and cognitive analysis methods may yield good results in the future.

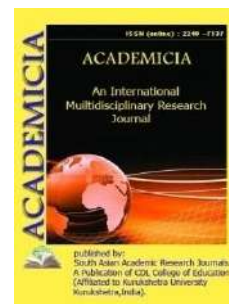
In the novel, many phraseological units are formed on the basis of comparison and analogy of human physical behavior: takrang tashlamoq - throw back (16); takranglab turmoq - to stand proudly (89); tirday tashlanmoq - to castrate (167); terisiga tuz tiqmoq - to put salt on the skin (41); taqalashga tushmoq - to face a ban (125/); tirnoq tegiztirmadi - the nail did not touch (208); toshini termiq - to be busy with own business (25); tuproqqa tiqmoq - to put in the ground (74); tupurib tashlamoq - to spit out (91); tana tortmoq - pull the body (134); tarsakisini tuflab tugmoq - to spit the applause (42/); tegmaganga tegishmoq - to exchange under the jurisdiction of (26); tamg'a taqmoq - to stamp (17); tuzoqqa tushirmoq - to trap (30); titib tashlamoq - to tear at (107); tuproq tishlatmoq - to bite the soil (107); tilkalab tashlamoq - to cut/slit (97); tuzini to'g'rilamoq - to correct the salt (29); tumshug'ingning tagida - under your nose (45); tuzini to'g'rilamoq - to taste meal's salt (29); tushovga tushmay - without falling (36); tarozi tengmasidi - the scales are not equal (220); tovon tiramoq - to ceil scraper (35); tirti topmoq - to find alive (26); tarraday tunashga tushmoq - to fall asleep like a frozen (148); tengini topmoq - to find a partner (in marriage) (57); tirnog'iga tegmoq - to touch the nail (41); tomog'iga tortmoq - to pull the throat (94); tomog'idan tutmoq - to catch in the throat (167); tug'ini tikmoq - to sew the flag (37/); tukini tikmoq - to sew the hair (95); tukini to'kmoq - to shed (163) tunashning tutquniga to'nmoq - to pour into the grip of the night (187/); tuproqning tagiga tushmoq - to fall under the soil (163/); turmaga tashlanmoq - to prison (23); tutami to'lmoq - to fill up (40); tutamiga tutamini tashlamoq - to discard the dross for the essential (195); tutamlari tugilmoq - to handle (163); to'shiga tuflamoq - to spit on the chest (83). These phraseological units, which are the product of the individual skill of the author, are phraseologized on the basis of analogical images. The combinations phraseologized by the writer in the novel point to the mental state of the character through metaphorical depiction of his physical behavior, as well as reveal new facets of meaning in the figurative depiction of experiences related to the realities of the work.

## CONCLUSION

Phraseological units formed on the basis of metaphorical migration are one of the factors that reflect the cognitive-stylistic individuality of the writer, along with the expression of his artistic thinking.

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DOI: **10.5958/2249-7137.2020.00701.6**

## LABORATORY OF CREATIVITY AND ARTISTIC PRACTICE IN LITERATURE

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### ABSTRACT

*The article explores the psychology of creativity and the concepts inherent in it. About the author's laws of creativity, intuition, creative personality are given in detail. The scientific problem is explained by the example of Uzbek and world literature. This topic under study will serve to cover the possibilities of biographic and psychological methods. Makes it possible to conduct a laboratory examination of any work.*

**KEYWORDS:** *Creative, Work, Reading, Subject, Intuition, Memorization, Spirituality, Subject*

### INTRODUCTION

Before putting people's hearts into literature, the writer must achieve unity of heart and pen. A lot of scientific and theoretical issues have been discussed and studied in Uzbek literature. The question of the psychology of creativity, which should be studied, was studied in a relatively narrow circle than others. In the scientific works of Uzbek literary critics, including such scientists as Azad Sharaffiddinov, Umarali Normatov, Matyakub Qoshjonov, Urol Nasirov, Abdulla Sher, we encounter some aspects of the psychology of creativity. In world literature, however, this issue has been studied on a much wider scale. In world literature, there are also works written by a certain creator himself or by his contemporaries or secretaries who walked next to them, as well as works written by the admirers themselves. As an example, it is possible to cite the works of Johann Peter Eckerman "conversations with Gyote", Lev Nikolaevich Tolstoy "confession". Such sources – letters, confession, conversations, memories, esthetics, various copies of hands, creative laboratory, personal archive, memories of contemporaries and,

in general, a number of other factors related to the creator, are very important for studying the laboratory of the creator, the characteristics inherent in the creative process.

Professor Abdug'afur Rasulov, who deals with some aspects of the psychology of creativity, said that his "knowledge is Strange..."[1. A. Rasulov, 27: 1998] describes an important idea in his book and writes: "There is an inseparable connection between the writer's status and his creativity... In any game the writer's soul, holi, heart are reflected. If the works are studied meticulously, they will tell a lot about the state of the writer, about his psyche. In the process of creativity, poets and writers often write on paper the feelings that have passed through their hearts, the events that have happened to them. In the same sense A.Rasulov also explains in his book "criticism, interpretation, evaluation" the comments that remind him of the continuation of his thoughts above: "artistic work – whether it be lyrical, whether it be prose, whether it be drama – the product of the writer's creativity. It is unlikely that the child will look like a parent. When the interpretation, analysis of the work of art, naturally, the mood, mood of the writer is taken into account" [2.A. Rasulov, 75: 2006].

When the creator is examined from the point of view of the psycho-psychological point of view, there are cases when he is mainly immersed in his world, placing his views, aesthetic ideas on the essence of his artistic images. The talented writer Abdulla Qadiri confesses this phenomenon as follows: "it is possible to read the works of the writer, although not personally recognized, to be able to conceive, to be able to ideologically know what kind of person he is. Because in his works he mainly describes his nature, his soul" Indeed, in a number of works by the author of the first Uzbek novel, It is not difficult to observe images that are close to the spiritual world of ADIB. After all, all aspects inherent in the spirit, mood, worldview of great creators are reflected in the image of the images they put on the field. "All my works are pieces of a single confession," writes The Wise German writer, Johann Wolfgangoteote, with emphasis. [3. Total, 249: 2010].

## THE MAIN PART

Another of the problems that are found to be considered in the article is the formation of the creator and his perfection as an individual. Literary critics believe that it is necessary to pay attention to the creator, his emotions, the psychological aspects of his work, the main thing - the spiritual and spiritual world of the author, the process of creativity and the psychological states in this process. According to the psychology of creativity, many landscapes depicted in artistic works, the history of images, individual aspects inherent in the creative person, emphasize the necessity of the artistic work itself. It is worthwhile to research the problem posed mainly on the basis of a biographical method. Because this work requires a closer acquaintance with the personality of the writer.

For writers, in addition to reading, practicing, working on their own, experience is also important. Creative experience is mastered by reading and writing. Although writing is not considered a profession, the role of experience is great. Works built on high experience do not require any editing. The writer does not have problems with making a plan. Therefore, in the process of reading, the places that the mind and heart like a little will occupy a large volume of the notebook. It takes time for the experiment to take shape. And time itself goes to the question of the age of the creator. Therefore, young Penkas refer to the works of experienced writers, enjoy the experience of composing a sentence, forming a work. Mario Vargas, the Nobel Prize

laureate, openly admitted what Losa learned from whom: "there were masters of his work who would set us an example of our happiness, they were worth following in their footsteps. Floberdidor-strict discipline I have long reaped what the fruit of patience is. Folkner taught that while form (writing and structure) –can build a theme or can break up. I learned from Martorel, Cervantes, Dickens, Balzac, Tolstoy, Conrad and Thomas Mann that the size, style and plot for the novel are not inferior in strategy. Sarter noted that words are action, novel, plays or essays can change the flow of history in a favorable time and specific conditions. Kamyu and Uruell helped me to estimate the immorality of dirt literature, and Malro helped me to estimate that courage and epos existed just as today in the days of the Argonauts in Iliad with the Odisseya "[4]. Gazeta, 2017]. By similar examples, we can get closer to the idea of writers.

The factors that make the writer choose the title and subject to the work, how he chooses it, or whether it changes the subject are also a problem within the scope of the creativity laboratory. The chosen topic determines the writer's goal. There are two types of motivation in the choice of the subject, the first is the case of direct selection. Let's say that if the creative person touches on the topic of friendship, then the life experience of the creative person, his attitude to friends, the long-term loyalty and the consequence of a friend will lead to the choice of this topic. That is, the creator creates the idea that overwhelmed the subconscious dream. Directly selected topics will be mainly related to the personal experiences of the writer. Such works can be written at short notice. For example, the story of Isacon Sultan "Monaot " can be shown as proof that he finished writing during one night. In the poems of such zabardast poets as Abdulla Oripov, Erkin Vohidov, the creator's attitude to society, the creator himself feels that he is in the role of a participant in every stage of life, the main reason for the leadership of obyektivlik is the direct selection of exactly the topics. If we look at the example of world literature, we can see that Margaret Mitchell wrote his work "my feelings left in the winds" in order to avoid mental suffering, his subject was initially considered a secret from everyone as a personal livelihood of the writer. The second is indirect selection. There may be some kind of situation or someone's connection. Different motivations are observed: on the subject chosen by the writer, it is possible that before him a work of another creator was created. In the process of observing the creative output of those before him, as a result of inspiration or exposure from them, indirect theme selection occurs. Take as an example the work of Khurshid Dostmuhammad "wise Sizif". Before Khurshid Dostmuhammad, the philosopher gunun, the French writer Alber Kamyu, had also created a work of the same name. All three of you are under heavy work load. But the approaches are three different, the views are different. To be impressed or inspired by those before him does not mean to master the whole idea of the head, of course. Simply, the planetary plot itself, along with the theme, also took the past. It is also possible that a real-life contemporary of the creator will ask him to write a work on some kind of subject, or there were suggestions.

Intuition. According to the classification of the scientist Pavel Medvedev, who studied the subject of the psychology of creativity on a large scale and concentrated his theoretical views on this subject in a special book, intuition (ya'nikim, salqi tábii) is also part of this composition. There are certainly facts that the so-called Western intuition is a psychic process, that is, to foresee and predict the event that will happen in the life of some creators. In particular, Gyote wrote about the existence of a planet Uranus, about 20 years before the discovery of the planet. In Uzbek literature Muhammad Yusuf is in the poem "Iqror"...Bedapoyangga do not get used to



Rome..."he wrote. Look at this, it became known that around 2015-th year in Rome from the thousandth century an ancient city was found. More information about this news was published in" Yoshlik "magazine in the article" treasure under one line " by writer Ulugbek Hamdam. But than the concept of intuition led to the point of view of the Eastern mysticism literature, this is called natural coolness. Coolness naturally manifests itself in different degrees in everyone. Almost everyone experiences a lower level, a middle level in the creators. Creators perceive the world intuitively. This is also felt in artistic works. Psychologists say that intuition signals the brain only once. Everyone does not pay attention to this as seriously or does not notice the cause of the confusion. And the creators are consciously moving all kinds of inner and outer voices, holding ears. Therefore, he is considered a awake person from all sides of a creative society.

Features inherent in the problem of creativity. There are several facets of the problem of creativity: the process of creativity, the creative personality, creative abilities, the creative climate. So far, we have considered creative abilities to be something unusual, belonging only to individual individuals. We thought that there should be some kind of special Psychological Laws for creative personalities. The names invented by the people of creativity, their "I" in the images on the surface, remain unnoticed. In many situations, the works of poets and writers draw a picture of the landscapes of their soul to the essence. This is also done by some later openly confessed. The product of each creativity reflects the attitude of poets and writers to existence, life, social problems. The creator wears artistic dresses in some form to those "attitudes" that lie pinned in his heart. And for such a formation is caused by an all-out motivation in the life of the addicts or in the social environment.

Everyone has the concept of "I", and it turns out two different. The first is "I" in the outer world, the second is "I" in the inner world. Writers refer to the inner "i" in the formation of an artistic image, in the creation of a hero character. The creator "I" Lives I moved from work to work. If we analyze the work in a biographical method, we can see which hero is hiding "I". The fact is that the innate signs of creative abilities are inherent in any person, any normal child. Just need to open it and get development. From large and bright talents to small and inconspicuous talents – there is an indestructible "talent continuum". However, the essence of the creative process is the same for all. The difference is in the concrete material of creativity, in the scale and social significance of achievements. To study creativity, you do not need to study only genial people. Elements of creativity appear in the solution of everyday life tasks, they can also be seen in the process of "usual" thinking. The book "golden roses" by Konstantin Paustovsky, a representative of Russian classical literature, is devoted to the essence of the meaning of creativity. Paustovsky writes: "When I think about creativity, I often ask myself: when did it all begin? In general, how does creativity begin? What forces a person to hold a pen, provided that he does not put it out of his hands until the end of his life? It seems to me that the writer comes to the world as a state of mind, before he drafts the planetary-planetary papers in a person. Maybe in his adolescence, maybe in his childhood " [5. K. Paustovsky, 97: 1988]. Creativity of the writer begins from the pallas, from which the first inspiration came, to the opportunity to plunge into creative work. If we study autobiographies, then most poets either wrote poetry from childhood or from adolescence. Hamid Alimjan, Gafur Gulom, Abdullar Oripov, Erkin Vahidov began to practice writing poetry at the age of 16-18. In the laboratory of creativity, the creative age is considered a separate issue. Because the sooner the talent is manifested and determined, the higher the life experience of the same creator in the future. In the literature there is also a



period of recognition, when the creativity of the writer blossoms. Both the vital and creative experience of the writer accumulates and reaches a point, at which point the mind and talent intersect at an extremely high level. A work of art built on the same Pallas enters the ranks of immortal pearls. Said Ahmad's "Horizon" trilogy, Tahir Malik's "Devil", Murad Muhammad Dost's "Lolazar", Tağay Murad's "remaining fields from My Father" etc. are works written during the flowering of creativity. Does the writer's creativity bloom only once? it is natural to ask the question "What is the difference?" When a person has seen and experienced in life, different moods and different images, he will pass either a lesson, or a test, or a lesson, or a surprise. In a word, they are called the life experience of the creator. The coverage of the life complex will continue to download the responsibility of writing for the truth in the writer. The blossoming period of creativity is actually an opportunity to transfer the burden of truth from the heart to the pen. The most basic feature inherent in the writer is to follow in the footsteps of this true word, to speak the truth. What is in the hearts of the people is the truth, which must be said in fact. The writer shows this by writing initially. When a nation recognizes its writer, it means that the writer is considered to have fulfilled its responsible duty.

Everyone knows that creativity is an innate feature. But the study of the condition and time of manifestation of creativity requires a wide observation of such a work as "golden roses". The biggest difference of creative work from scientific work is that it does not follow general theories, but creates the product of a private worldview. Material is collected both for the work and for scientific work. Preparation for both is certainly different. For scientific work, the idea of another scientist is either to be a hamphicist or to refuse, and at the highest level of science, innovation is brought to the scientific environment. And the writer does not reject the opinion of another writer, the solidarity of his creative novelty takes from a living life, and not from the library. If the interpretation is correct, the writers live in this material –live a life, Grieve, think, rejoice, participate in big and small events. Undoubtedly, every day of life leaves its mark on their consciousness and heart" [5. K. Paustovsky, 110: 1988]. K. Paustovsky in this place, evaluates the writer as the most attentive member of society. A person whose eyes are awake lives every day impressed. Since the events that take place in life leave a mark in the mind and heart, they also express a personal attitude to them. It is possible to read and know that the personal relationships of writers are in a positive or negative sense the works they create. A sober writer is always persistent in the observation chapter of life. K. Paustovsky spoke about the author's observability, emphasizing that even the most successful observations should never be included in the story majorly, if necessary, they themselves will come and find their place. Observation is a method of studying the subject in psychology. The Observer is required to work unnoticed on the subject. A similar writer, as a rule, does not always look at his prototypes about his transformation into an image. Theodore driver was unaware that his sister was the protagonist of "Fortunately Carrie". A little later than the work is written, after it is fully published, "fortunately Kerry" reaches the hands of his prototype. Writers hold special side tambourines for effective observations, conversations, characters to fit into the work. Side daftar has always been a word wardrobe for the writer. Including, memories also serve in the writing of an artistic work in a certain sense. In each memory lives a fairy tale of a lifetime, childhood Reigns, the harmonies draw wet, the boiling overflow of youth, sincerity is heard, the conquered marrows again show a thunderstorm. In Uzbek literature, Oybek ("my childhood memories"), Abdulla Kahhor ("fairy tales from the past"), Adil Yagubov ("Alvido, Mariko") etc. wrote works based on their memoirs. The writers' notebooks remain the foundation of excellence. Without the first

daftar, there is no trace in the account. Moving the work from the notebook to the notebook generates a vision of the work again, the embodiment of shortcomings, the situation of working on it. Keeping a side note returns the writer to live life, real events often. Proverbs in which we are encouraged (including "The Flower of contemplation"), the sets of aphorisms are first written on the side notebook. The side notebook is sealed with genial thoughts that come to extraordinary fantasy. Both plans of the works, important information, impressions from conversations are written, the attitude to the footage of the media or to someone else's creativity, criticism is condemned. In short, the side daftar serves as an assessment given to those and things in society

The mental activity, which consists in strengthening, maintaining and subsequent recovery (recall) of what is reflected in our consciousness, is called memory [6. P. Ivanov, 127: 2008]. The activity of remembering things that are reflected in the consciousness in the creators is faollashad in the means of the side tambourine. The process of forgetting is alien to them. Creators often return to beautiful memories. This is the only feature that unites all creators. This led to the formation of the tradition of creating memories in Uzbek literature. In particular, "in memory of Navoi contemporaries", "in memory of Gafur Gulom "(Fathulla Abdullayev)," in memory of Shukur Kholmirzayev contemporaries", "in memory of Muhammad Yusuf contemporaries", "in memory of Shavkat Rahman", "in memory of Zulfiya contemporaries", as well as "I will come back "(dedicated to Dagay Murad)," Eternal contemporaries " (dedicated to Shukur Kholmirzayev) were written. These works bring the researcher in the laboratory of creativity closer to the period when the writer lived. Memories in a certain sense serve as an object of research

## CONCLUSION

In World Literature, the psychology of creativity and the theoretical concepts inherent in it are studied in a wide range. K.Paustovsky, P.Medvedev, Y.Excellent works of parandovsky in this regard have been published, a certain part of the works have been translated into Uzbek. The theoretical study of the process of creativity facilitates the problem of artistic interpretation. The literature improves the quality of the process and indicates the need for editing is a necessity. Before the editorial editor of the works, it is necessary to edit by the author himself in many stages. It also plays a special role in the issue of elements specific to the laboratory of creativity. Before supporting young creators, they need to be found, sorted and encouraged so that we can grow new era writers in an effective way, in a creative spirit. Creativity in the laboratory of creativity was illuminated by the laws with the help of life examples of writers. Creativity laboratory unsurlari requires the use of direct biographical and psychological method opportunities. As a general conclusion, it can be said that the inner experiences, dreams and sufferings of the writer are reflected in the text psychological, mental factors are studied in the psychological method, the life experiences, skills, diaries of writers are dictated by the biographical method.

In addition, when we say laboratory, we set ourselves the goal not only to emphasize creative perfection, but also to consider scientific, social texts. Since Man and society form one whole integrity and relate to the issue of spirituality, it is worthwhile to undergo a laboratory examination of literature in any relevant way. Therefore, the issue of the laboratory of creativity proposes to be one of the leading topics of the scientific agenda and summarize the thoughts.

The issue being studied is of great importance both for the specialists of the sphere and for the circle of readers with their interest, richness of innovations and liveliness. The laboratory of creativity is the study of our national literature. Therefore, it is our greatest scientific goal to bring our enriched innovations to the world, not limited to obtaining a template from the world literature.

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DOI: **10.5958/2249-7137.2020.00702.8**

## ARTISTIC PICTURE OF THE WORLD IN THE WORKS OF TIMUR PULATOV

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### ABSTRACT

*The article is devoted to the study of the artistic picture of the world captured in the works of fiction by Timur Pulatov. Synonymous terms are stated: artistic model of the world, artistic image of the world, artistic reality, artistic picture of the world. The choice of Timur Pulatov's work to consider the problem of the artistic picture of the world is explained by the fact that he, as a word artist, reflects in his works the creative search for the leading trends in the world literary process.*

**KEYWORDS:** *Artistic Model Of The World, Function Of An Artistic Work, Artistic Image Of The World, Artistic Picture Of The World, Chronotope.*

### INTRODUCTION

Timur Pulatov is a famous writer. The author of the books "Tarazi the Turtle", "the Second journey of Kaip", "Watchtowers", "the Passion of the house of Bukhara", "Floating Eurasia", which brought world fame to the original talented writer. The study of the picture of the world captured in works of literature is one of the most relevant areas in modern philology. According to some scientists, the first generalized view on the world, a man in the form of art, because the artistic picture of the world enters the picture the world as the main binding element of all its parts: without it, it would be impossible for the drafting of a pan-shaped view of the world, because this view always has the character of clarity and descriptiveness and similarity which are present only in art.

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**Main part**

The history of the term "image of the world" dates back to cognitive research in the 1970s and 1980s. In art history and cultural studies used similar terms "world picture" and "world model"; the latter "is defined as abbreviated and simplified display of the entire amount of ideas about the world within this tradition, taken in their systemic and operational aspects"; the tradition bearers reproduce the model of the world subconsciously. [7. P. 161].

Based on the fact that each person and each ethnic group has its own picture of the world, culturologists distinguish ethnic and sub cultural pictures of the world, solve the question of the specifics of the folklore picture of the world, etc. [2.P. 74].

In literary studies, such concepts as an artistic model of the world, an artistic image of the world, artistic reality, and an artistic picture of the world are used.

As the scientist Sheshunova S. V. states: "let's define the national image of the world as a multi-level artistic structure — a complex of interacting components of a literary text that have ethno cultural specificity. Like a language picture of the world, it is a verbal expression of an ethnic mentality. The components that make up the national image of the world in their totality are revealed in the image structure, plot-compositional and spatial-temporal organization of the text. These are interconnected images and motives generated by the cultural tradition of this ethnic group. Due to their relationship in the literary text, there are motivic dyads, triads and multi-part chains of motives that have a national and cultural identity. " [12. P. 12-17].

The term artistic picture of the world was introduced into scientific use by B. S. Meylakh [9]. Currently, several synonymous terms are used in science: an artistic model of the world, an artistic image of the world, and an artistic reality. However, only the term artistic picture of the world (in contrast to the term artistic reality) "is intended not only to emphasize the relative independence and self-worth of the artistic world, but, above all, to reveal the cognitive capabilities of art, its inherent level and depth of comprehension of objective reality." [9. p. 55]

History of literary studies on the creation of the world image shows that he is represented by several concepts, such as "image world", "worldview", "model world", "artistic picture of the world". Developing the idea of B. S. Meylakh about the artistic picture of the world, we want to analyze the artistic picture of the world in the work of Timur Pulatov. The artistic model of the world is an extremely generalized and at the same time concrete picture of reality, recreated from the point of view of universal concepts of being. Symbolism in an artistic context always appears to the reader in a specific visual and expressive means of typifying the phenomena displayed in the work, and the typification is able to raise the typified to the level of universal meaning.

In all times, the artistic picture of the world, in whatever aspect it was not, it interested writers. Based on this, literary studies have also expanded. As noted by us: "in the 2 decades of the XXI century, the subject of literary studies has been partially updated, it is natural that the ideological and political themes that make up these studies have undergone changes: there are changes in the direction of axiology, national mentality, philosophical understanding of the rich heritage of peoples, comparative and comparative study of both individual literatures and the work of individual writers. This is typical for the main Russian studies, as well as for literary dissertations and monographs made in independent Uzbekistan". [11. P. 8; 3.P. 142].

Ideas about the artistic model of the world are accepted as the starting point in the choice of approaches to this research. The choice of Timur Pulatov's work to consider the problem of the artistic picture of the world is explained by the fact that he, as a word artist, reflects in his works the creative search for the leading trends in the world literary process. The name of Timur Pulatov is inscribed in the chronicle of prose writers of the twentieth century. He managed to embody unique pictures of the Motherland in original prose works. One of the features of the poetics of his prose is the syncretism of realism with mythology and oral folk art.

The purpose of the research is to establish the artistic picture of the world in the works of Timur Pulatov, the principles of their realistic typifications, their reinterpretation of the means of artistic expression and figurativeness inherent in national folk poetics, which is expressed through the writer's artistic thinking. The approval in his artistic prose synthesized by realistic symbolism as a method of evaluation of generalization and reflection of actual life problems, global contradictions caused to life, inherent in the overall development of mankind and the spiritual world of the human, the universal nature in its social and specifically historical conditions of artistic model of the world in the works of Timur Pulatov.

The artistic picture of the world in the works of Timur Pulatov is the result of a thorough study of the history of the people, their traditions, their life and culture, axiological approaches, life standards and their special way of reflecting reality, which has long attracted the attention of philologists.

The artistic model of the world has long been the most attractive topic for both philosophers and philologists. Tracing the works devoted to the study of the world picture, we can conclude that it is advisable to use system-synergetic methods in the study of this problem. The art model of the world and the history of art development have been thoroughly studied using a comprehensive approach to the history of art development and various scientific methods in the works of L. P. Grunina, V. V. Ivanov, B. S. Meilakh, Yu. M. Lotman, and others. As a result of these theoretical studies of the artistic experience of mankind in the theory of artistic model of the world there was such a thing as a general (global) art world model, which is a huge fund of pieces of art, literature, cinema, music, theatre, etc., which forms their perception on the basis of artistic studies.

The artistic model of the world in a work is an alternative reality that the artist creates. It has the status of a personal, spiritual reality. In the scientific literature, there are other definitions of this multidimensional phenomenon of creative activity of the writer, his imaginative vision of reality: artistic model – "author's model" (M. M. Bakhtin), "internal model of a literary work" (D. S. Likhachev), "artistic picture of the world" (B. S. Meilakh), "artistic reality" (M. Ya. Polyakov), "national images of the world" (G. D. Gachev).

The concept of "artistic model of the world" is also related to the concept analyzed multilaterally by G. D. Gachev in the work "National images of the world" [3], but the second is broader than the mentality. In the late 80's and 90's, the priority of studying the artistic model over the artistic text is outlined. Indeed, a great writer does not just live in his artistic space (in the system of his characters, images, events), but also opens his universe, a new world. Timur Pulatov created his own universe, his own world.

If you follow the bibliography of the writer's work and build chronologically artistic texts of Timur Pulatov, you will find meta-components as a bright example of compliance with an



interesting tradition in his work. All the images that once appeared are strung from work to work, repeating themselves nominally, but in each subsequent text they turn a new face, on another level, in a new way evolved. This feature distinguishes the artistic model of the world in the works of Timur Pulatov from one work to another, passing characters will also discover new perspectives of the artistic picture of the world for themselves and for readers.

The artistic model of the world in the works of Timur Pulatov in the form of a national picture of the world is represented by images of houses, courtyards, vineyards, bazaars, folklore and Quranic images. Repeated from work to work motives that pop up in the memory of the characters expressing the thoughts of the writer.

## RESULTS AND DISCUSSIONS

As a master of artistic words, who skillfully synthesized the genres of oral folk poetry and mythology with literary genres, Timur Pulatov has always been at the center of acute literary controversies. Timur Pulatov-recognized as a wonderful artist with his own original worldview, has always attracted readers with a unique artistic thinking.

As characters of wandering plots, the characters of Pulatov's prose coexist in many of his works. Let us dare to Express the idea that the writer wants to show the unity of all and all in one unified whole, which are intertwined by roots, whose history, present and future are the same. "The second journey of Kaip", "Watchtowers", "Passions of the house of Bukhara", "Floating Eurasia", "Tarazi the Turtle" - a system of artistic works by Timur Pulatov, which serve as the author's conceptual idea. This is the artistic model of the world of Timur Pulatov's works.

The principle of " force-force "in relation to the work of Timur Pulatov is a metaphor that" works " as a continuation of Muslim, mytho - folklore traditions in modern literature. Religious traditions in cultural discourse are not necessarily a cult, a regulated rule of life, or strict adherence to the precepts of the exercise of faith. Religion (any) is primarily based on moral and ethical precepts, and all religions converge at this point (reserved and cherished), which is why they arouse universal interest as a conglomerate of culture and spirituality. This is the artistic model of the world of Timur Pulatov's works. [11. P. 4].

Family, children, father and mother, nature-the values of all peoples, as meta - understanding passed from generation to generation, the attitude to children and the elderly, the perception of man of nature and its cataclysms, his attitude to natural heat or cold, to the sun and water, to the house, to the guest, to the types of food - all this, being present and filling human life, differs among all peoples. The writer, being in the zone of two or even three languages (and metalanguages), is able to create an artistic model of the world of one people - and this is also the principle of force-force. This is what makes us study the roots of the phenomenon of mythologization in the XX century... take into account such moments as the desire for one reason or another to link the present with the past in a single stream for the sake of discovering their common metaphysical nature... or in the name of preserving and reviving national forms of thought and creativity..." [1].

This principle of creativity and artistic worldview of Timur Pulatov, in our opinion, is inherited from the rich folk art, folk legends. Not only does the author move and develop his text, but the text itself, materializing, moves according to its internal laws, laws of artistic thinking, feeding on the energy of the world literary process. Perception and interpretation of a literary text and an

artistic picture of the world is one of the professional skills of a philologist. "Any conscious and reasonable interpretation that the artist or reader gives to a particular work should be considered as a later rationalization..." [12. P.12].

Eastern literature, and more specifically Uzbek, rather earlier, compared with European and Russian, thanks to the literary masterpieces of A. Navoi received its national status, its ancient existence was syncretic, medieval writers who wrote in Arabic, Persian and later in the Turkic languages, simultaneously belong to different modern peoples. With a reservation, we can call Timur Pulatov an Uzbek writer, since his work is syncretic, but he knows everything about the life of his people from the inside, and the problems that concern both his people and the writer himself are universal and common to all mankind.

## CONCLUSION

Concluding our scientific conversation about the creation of an artistic picture of the world in the work of Timur Pulatov, we join the opinions of Gacheva G. D.: "the Idea of the East as the cradle of humanity is associated with ancient forms of literature: mythology, folklore. They are the main source of creativity and artistic model of the world of Timur Pulatov, they are more clearly represented by national images of the world, so the mythologization is so obvious in the writer's texts" [1].

It should be pointed out that in many respects the artistic model of the world of Timur Pulatov is subjective, it expresses a purely personal perception of the author. The writer does not bind his perception to others, it is applied to the picture of the world that was recreated by the writer Timur Pulatov.

According to one article, we examined the artistic picture of the world in the works of Timur Pulatov, subsequently, which was transformed into the artistic model of the world in the perception of heroes and interpreting the world of a writer. Thus, the artistic model of the world in the works of Timur Pulatov represents a chronotope dispersed in the artistic models of the world, expressing the time and space in which Timur Pulatov's characters live.

Based on the above, we note that the artistic picture of the world of Timur Pulatov consists in its figurative-emotional, ethical and aesthetic way of reproducing reality.

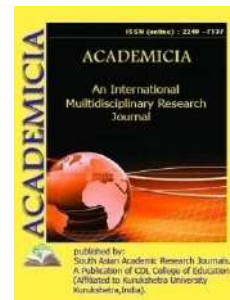
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DOI: **10.5958/2249-7137.2020.00709.0**

## CLINICAL MORPHOLOGICAL FEATURES OF THE ALGORITHM FOR THE ANALYSIS OF SPINE PROTRUSION AND HERNIA

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### ABSTRACT

*The protrusion of the spine and the movement of the hernia now occupy a prominent place in diseases of the musculoskeletal system, which necessitates the development of new modern methods of treating this disease. The spine is the basis of the musculoskeletal system, which is one of the most important organs in human life. The cartilage of the spine works as an example of a curl, which is anointed in a person. Dressing gently while resurgent core of the spine cartilage disc leads to a reduction in the level of tension by facilitating the load on the spine. When we analyze the clinical and path-morphological changes in the protrusion and hernia of the spine, the cartilage disc is in different development in the vertebrae, which is due to the correct evaluation of pathological processes.*

**KEYWORDS:** Spine, Symphysis, Cartilage Disc, Fibrosis Ring, Stubby Core, Cartilage, Protrusion, Hernia.

### INTRODUCTION

*Relevance of the problem:* The protrusion of the spine and the movement of the hernia now occupy a prominent place in diseases of the musculoskeletal system, which necessitates the development of new modern methods of treating this disease. In the health system of the Republic it is necessary to study the topographic, morphological structure of the protrusion and hernia of the spine, which leads to early and excellent diagnosis of patients.

The spine is the basis of the musculoskeletal system, which is one of the most important organs in human life. The cartilage of the spine works as an example of a curl, which is anointed in a person. Dressing gently while resurgent core of the spine cartilage disc leads to a reduction in the level of tension by facilitating the load on the spine. This occupational disease is characterized by protrusion of the spine and the fact that the hernia develops in different professions. There are some such professions; at them it is impossible to completely eliminate this disease. In the era of informatisation and computer technology today, many occupations are experiencing a decrease in the level of activity and working conditions. In the way people live, such low activity in cocktails and heavy loads lead to an increase in the incidence of diseases of the spine.

### THE MAIN PART

This is manifested by the development of protrusion and hernia of the spine. The complexity of the cartilage disc of the spine and the various variations in the locations of its structure diversity requires the creation of a treatment algorithm. To do this, it is necessary to determine the histological structure of the spinal cord with a complete analysis of the morphology and topography of the herniated disc. The data from the study showed that there is no circulatory system in the topography of the spinal cord cartilage disc, which is fed from the side tissues by a diffuse method. To normalize such nutrition of the lumbar disc of the spine, it is necessary to take only when there are movements. As we mentioned above, there are some such professions, in which the camphor leads to degenerative changes in the fibrous ring, and as a result, after the protrusion of the spine, the hernia is removed.

A change in the structure of the cartilage disc after strokes and various loads, that is, a violation of its elasticity, leads to rupture after the thinning of the fibrous ring. When a load that begins to exceed the observed norm appears in patients, the cartilage disc is temporarily deformed. In the process that occurs, the resurrection shrinks from the place of the tissue of the nucleus and returns to the place of contact of the inner fibrosis ring, this is the usual process.

Now the result of the above loads is that over time, the disc becomes dehydrated and breaks down its nutrition, which means that the resurrected core tissues do not return to their place. The fact that the cartilage disc does not return to its place of resurrection core tissue causes damage to the inner layer of fibrous tissue, in which case the overgrowth causes disc protrusion. The cartilage of the spine leads to a significant enlargement of the disc as a result of the deformation of the fibrous tissue, which leads to nerve contraction, which leads to reflexive and muscular tonic syndromes of those organs. Fibrosis of the spine cartilage disc the ring becomes thinner as a result of degenerative changes over time, and then manifested by rupture, which results in disc herniation. In this case, the change in the structure of the cartilage disc aftershocks and various loads, a violation of its elasticity, leads to rupture of the fibrous ring after thinning. When the load begins to exceed the norm observed in patients, the spinal disc is temporarily deformed. In this process, the tissue of the nucleus accumbens displaces and returns to its place by touching the inner fibrous ring, which is a normal process.

Now the result of the above loads is that over time, the disc becomes dehydrated and breaks down its nutrition, which means that the resurrected core tissues do not return to their place. The fact that the cartilage disc does not return to its place of resurrection core tissue causes damage to the inner layer of fibrous tissue, in which case the overgrowth causes disc protrusion. The cartilage of the spine leads to a significant enlargement of the disc as a result of the deformation

of the fibrous tissue, which leads to nerve contraction, which leads to reflexive and muscular tonic syndromes of those organs. The fibrosis Ring of the cartilage disc of the spine becomes thinner as a result of degenerative changes over time, and then manifested by rupture, which results in disc herniation.

When the hernia of the spine is said to be based on the topography and morphology of the cartilage disc, it is characterized by the thinness of the side, which is located towards the nerve roots of the spine. And the thinning of the same surface leads to nerve damage and complications. It is classified and diagnosed depending on the direction and size of the disc hernia exit and its large size. The diagnosis and treatment, based on the path morphology and topography of the cartilage disc, in the treatment of protrusion and hernia of the spine, occupies an important place in the rise of the lifestyle of people in the future.

Material and methods of verification: The Center for Pathological Anatomy of the Ministry of Health of the Republic of Uzbekistan studied the age-specific topography and morphology of the complete disc of the vertebral disc taken from the spine. The materials obtained at the autopsy were studied separately in people aged 30 to 50 years and between 50 and 65 years. Materials obtained in autopsy were studied by separating them in people aged from 30 years to 50 years and from 50 years to 65 years of age. It is specific to the levels of age; our study of mold came to hand in the detection of pathologies of the cartilage disc. Another reason why we are studying the age-related protrusion and hernia of the spine is consistent with the priority areas of scientific research work. With the growing age of patients, the increase in cartilage disc load leads to a violation of the normative morphological condition as a result of factors that predispose to degenerative pathologies in the tissues, the emergence of hormonal changes, disrupting processes. As a result of these processes are dressing different path morphological changes in the cartilage disc of the spine. The constant study of the morphology of the protrusion and hernia of the spine requires us to conduct a scientific analysis of the path morphological processes. Based on this information, we can say that the creation of path morphological bases of the protrusion and hernia of the spine allows the restoration of human health. Thus, depending on the morphology of the spine protrusion and hernia, our conclusion determines the treatment algorithm.

The protrusion of the spine is due to the fact that the fibrous tissues of the cartilage disc fibrosis ring are located in chaos, as a result of various loading and violation of metabolism processes. The fact that the structure of the disc is not the same in patients aged 30 to 50 years, where histological examination of the spinal cord cartilage disc is performed, the tissues directed to the center of the cartilage layer are softer resurfaced to the core. On the middle floor of the disc, the tissue consists of elastic cartilage fibers, on the edge of which the cartilaginous tissue consists of a rather dense round thin band. Standard spine cartilage disc fibrosis ring reduces the volume of the impact loads, keeping the disc in its normal state. The inner and outer layers of the intervertebral disc fibrosis tissue consist of sparse collagen fibers, among some collarbones, edema and intermediate matter were identified, which served to the elasticity of the disc and the nutrition of the disc. We mentioned that the cartilaginous disc is not located evenly on the surfaces of the spine; the same floor is located opposite the back of the body of the spine, that is, the transverse protrusion. This means that the thinner the surface on the back longitudinal side of the disc, the thinner the fibrous layer is twice as thin as the load tension. In the protrusion of the spine, mainly the same sac lesion of the cartilage disc was observed a lot.



Now, if we analyze the mechanism of formation of this process, the loads directed to the spine are mainly applied to the two surfaces of the posterior part of the human spine, that is, the bony tumor of the bone. As a result of these loads, as mentioned above, the fibrous ring on the posterior surface of the vertebral body causes swelling due to tension, which results in protrusion of the disc. When analyzing patients with spinal cord protrusion between the ages of 50 and 65, it was observed that the elasticity of the spinal disc nucleus deteriorated with age. At the same time, in diseases of the spine, it is directly proportional to the change in lifestyle with age, that is, the prevalence of endocrine diseases at the same age and inactivity. The conclusions of histological examination, when examining the causes of insufficient meeting of the protrusion of the spine at an elderly age, clearly indicate that the cartilage disc is not fully supplied with blood vessels on the fibrous floors, and this is only its development through diffuse nutrition. The fact that the process requires effort for nutrition, namely, the camaraderie of people in old age, leads to a violation of disc function, a loss of depreciation.

When we examined the morphological changes in patients with a spinal hernia from 30 years of age to 50 years of age, disc damage was detected as a result of strong loading, based on which the cartilage disc elasticity was maintained. In patients of this age, dehydration of the spinal disc in metabolism is poorly observed, the reason is that people aged 30 -50 years live only with movement and strong loads. When we histological study of the spinal cord of these patients, it was found that there is a fiber-free chondroid substance in the form of islands of different sizes in the areas where bone and cartilage tissue are immersed in one another. The fact that it occupies a relatively large chondrocyte in the cartilage surrounding the archipelago helps to restore the disc configuration again. Over time, as a result of the absorption of some of the archipelago, the archipelago become smaller and cause calcinosis, which is a sign of aging of the cartilage disc. When the contingent of patients aged 50 to 65 years of age is studied, the thickening of the arches of the cartilage tissue filled with calcined substance leads to the loss of the elasticity of the fibrosis ring, which is exactly the same in patients of this age. On the floors of the upper articular surface of the spine, a thin layer of dense cartilage tissue attached to the bone of the femur has been identified, which leads to deformation of the joint surfaces as a result of various loads over the years of young stuttering.

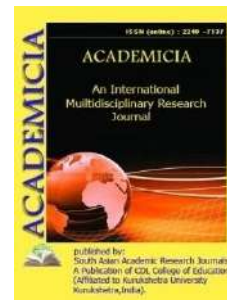
## CONCLUSION

When we analyze the clinical and pathomorphological changes in the protrusion and hernia of the spine, the cartilage disc is in different development in the vertebrae, which is due to the correct evaluation of pathological processes. The results of the conducted scientific research showed that in the study of disease levels in patients and in the diagnosis of bypass, it was determined that the pathomorphological changes should be determined by an individual approach to age, lifestyle and work activities. Diseases of the spine occupy a high place in diseases of the musculoskeletal system, the main causes of which are expressed in the relevance of the topic. The fact that the protrusion and hernia of the spine increase the functional life conditions of people over the next 10 years, that is, the desired level of mobility is reduced, and the elderly are underdeveloped. The problem with this is that damage to the functioning of the cartilage disc leads to an outbreak of diseases, that is, malnutrition. Cartilage disc protrusion and hernia is a disease of people living in modern conditions that requires a well-developed and individual approach to modern methods of treatment.

In the treatment of protrusion and hernia of the spine should be based on the clinical morphological conclusions of the course of the cartilage disc, for this it is necessary to approach an individual to a herniated patient and, accordingly, to diagnose and conduct treatment. We found out that the clinical morphological changes of the scapula disc we studied were different in the different segments of the spine, which as a result of these stresses, the pathomorphology changed from the norm. And at the same time, we found that the increase in age leads to irreversible pathological changes of the disc. Thus, it is necessary to correctly assess the clinical morphological changes of cartilage disc protrusion and hernia. Through this, our excellent diagnosis and treatment in modern methods occupy an important place for the health of people.

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DOI: **10.5958/2249-7137.2020.00722.3**

## **A REVIEW OF THE ROLE OF CULTURE IN ACCEPTING ENTREPRENEURIAL ORIENTATION & BUSINESS PERFORMANCE**

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### **ABSTRACT**

*Entrepreneurial Orientation (EO) is a universally accepted concept that is applied by the small and medium sized organizations. The studies have shown a significant relationship between EO and business performance. One element that connects EO and business performance is 'Culture'. Organizational culture and the culture as a whole have significant place in the modern entrepreneurial firms. Culture refers to national culture, organizational culture, societal culture and also corporate culture. This study contributes to examine the literature to understand the role of culture in Entrepreneurial Orientation (EO) and business performance. Study will discuss the direct and indirect effect of various cultures that have the potential to influence business activities, decision making and productivity. The various dimensions of EO are considered as important source of firm's survival in the competitive market. The success of such firms depends on the culture of the business performance. This shows that EO, business performance and culture, are inter-related as well as inter-dependent. The findings of the study will help to enhance the understanding of this inter-dependence and role of culture in EO and business performance.*

**KEYWORDS:** *Entrepreneurial Orientation, Business Performance, Performance, National Culture, Corporate Culture, Firm's Performance, Organizational Culture*

## INTRODUCTION

Entrepreneurial orientation (EO) can be considered as an important phenomenon and as an important concept for making new strategies. Entrepreneurial orientation (EO) can also be understood as a, crucial factor for the success of business even with many complexities in today's business environment. Many empirical studies have positively associated EO with business performance (Semrau, Ambos, & Kraus, 2016). The modern firms require new opportunities and new ways to for making their business successful. EO includes different dimensions of the behavior that are fostered by the successful entrepreneurs of the world. EO states about the behavior hat entrepreneurs have to reflect, such as innovation risk taking and being proactive (Arshad et al, 2014). The modern firms have to get involved in the continuous process of innovation; they are required to innovate new products, new process and services. The forms are required to be more proactive in comparison to their competitors. This also reflects the risk oriented behavior of the entrepreneurs that impacts the performance of business (Vij & Bedi, 2012).

Business performance can be understood as the set of performance management and an analytic process that helps in enabling the management of the firms to perform according to set standards for achieving success goals (Bulut & Can, 2013). Business performance can also be defined as *"the degree of fulfillment of managerial goals in business practices and realized outputs of these goals by the end of a certain period"* (Bulut & Can, 2013, p. 273). Organizational culture can have significant influence on the firm performance. Achieving the goal as the output of a certain process is determined by the organizational culture, and its influence on implementation of market orientation within the firm (Jogaratham, 2017). Globally, the business environment has become highly competitive, dynamic and unpredictable. Thus, marketing orientation is important element for small and medium sized businesses. The business environment has become more complex due to globalization, technological development and trade liberalization. The global market place has increased the competition for the firms and they have to adopt many new strategies to survive in the market place.

The rapidly increasing scope of the competition in the global market place, has resulted in creating a lot of challenges for the managers and business organizations. The organizations have to display entrepreneurial behavior and have to focus on developing the supportive organizational culture for surviving in complex market conditions. Accepting EO as the major component of the firm's strategic planning and strategic behavior can have positive influence on the firm's performance. The strategic behavior of the firm is determined by firm's culture (Engelen, Schmidt, & Buchsteiner, 2015). Therefore, Organizational culture is also significant for gaining competitive advantages over the competitors and to achieve high performance and productivity. Entrepreneurial activities are considered as the source of competitive advantage and vitality that helps to take the business performance to superior levels. Entrepreneurial or innovative activities have the ability to refresh the activities of the refresh business organizations, irrespective of their sizes and nature (Karacaoglu, Bayrakdaroglu & San, 2012).

The culture within any organization has the capability of influencing entrepreneurial orientation and business performance. The Entrepreneurial Orientation is at the heart of the corporate entrepreneurship and has come up as an important, and powerful tool for making a business successful (Bayarçelik, & Özşahin, 2014). This paper will provided a review of literature related

to the explanation of Entrepreneurial orientation (EO) and Business Performance. The first section of the review will focus on defining both concepts on firm levels. The other sections will discuss the impact and role of culture on Entrepreneurial Orientation and Business performance. Paper will also review the literature related to the concept that how culture can have significant impact on the performance and how cultural differences are accepted through EO. Since, EO is firm based and societal culture is a higher level concept. Therefore, relation between EO and performance will be analyzed in terms of societal culture.

### **What is Entrepreneurial orientation (EO)?**

Entrepreneurial orientation (EO) is the strategy making process used in the firms. The process of making the strategy involves planning, decision making, analysis, and also requires incorporating culture, values and mission in the strategy. Making the strategy is associated with taking actions with the committed resources. EO also includes the procedures and policies of the firm that will be used as the base for the entrepreneurial decision making and action taking. Rauch et al (2009) has define EO as the “*entrepreneurial strategy-making processes that key decision makers use to enact their firm’s organizational purpose, sustain its vision, and create competitive advantage(s)*” (p. 6). EO is considered to be significantly applied to the small and medium size enterprises. The removal of the global trade barriers has increased the completion in the market for the firms. This creates pressure for the small and medium sized enterprises to compete in the emerging economy.

Some of the studies have doubted the effieicnty of EO. Though there is a positive relationship between EO and business performance. However, the evidences could not answer a question that what will be the effect of EO on the business performance in the time economic crisis and uncertain environment (Kraus et al, 2012) SMEs face lot of pressure and from the competition because of the increasing number of the sophisticated customers and difficulty in maintaining and improving business conditions (Kreiser, & Davis, 2010). Such firms require the entrepreneurial mindset for identifying the opportunities and threats to ensure the successful survival of the firm in changing market conditions. Therefore, EO has been a significant approach to survive in global competitive market. EO is divided in five different dimensions or the components. These dimensions are risk taking, proactiveness, innovativeness, competitive aggressiveness and autonomy (Semrau, Ambos, & Kraus, 2016).

### **Dimensions of EO**

Various dimensions of EO can be derived from the entrepreneurship literatures.

#### **1. Risk Taking**

Risk taking mainly involves taking the bold actions that may result in negative consequences for the business. However, for surviving in the global market, companies have to take risk to that may include venturing with the unknown people, borrowing big amount for business and committing ventures in an unpredictable and uncertain environment (Otache & Mahmood, 2015). However, risk taking is the most significant element of entrepreneurship. It mainly understood as the risk that people take for themselves rather than being employed. Yet, this dimension of EO is widely applied to the organizations, where the senior staff members or the managers take the risk of committing to large amount of resources with the uncertain outcomes. Risk taking is significant part of SMEs (Engelen, Schmidt, & Buchsteiner, 2015).



## 2. Proactiveness

Rauch et al (2009) states that “*Proactiveness is an opportunity-seeking, forward-looking perspective characterized by the introduction of new products and services ahead of the competition and acting in anticipation of future demand*” (p. 7). This is the ability of the entrepreneurial actions to anticipate the future opportunities. This proactiveness can be associated with identifying the opportunities related to technological advancement and producing innovative products. The proactiveness is applied by understanding the demands of market and customers (Kreiser & Davis, 2010). According to the early economic and market thinking, proactiveness was the important action taken by the entrepreneurs for identifying the market place opportunities and proactively pursuing them. On the level of firm, it is said that proactive companies work as the market leaders and not followers. Proactiveness has significant relation with business performance. The organization is significantly affected by this dimension, as it affects the organizational structure and life cycle of the firm (Kreiser & Davis, 2010).

## 3. Innovativeness

Innovativeness is the “*The tendency of a firm to engage in and support new ideas, novelty, experimentation and creative processes that may result in new products, services or technological processes*” (Bayarçelik & Özşahin, 2014, p. 825). Innovativeness can be considered as the predisposition to engage experimentation and creativity by introducing new products or services, as well as also displaying the technological leadership. Innovation can be considered as a very complex action, as it involves changes in the process of production (Kreiser & Davis, 2010). Some of the theorists and scholars have considered innovativeness as the integral part of entrepreneurship. This involves the use of varied resources and creating new combinations of the resources to make and produce new products. Innovativeness also refers to the firm’s capability to turn the resources in the innovative capabilities (Bayarçelik & Özşahin, 2014). The continuous process of revenue generation is mainly associated with the involvement of the new methods of production and transportation. Innovativeness is the element in business that is highly researched in terms of organizational and individual entrepreneurship.

## 4. Competitive Aggressiveness

Competitive aggressiveness can be considered as the aggressive response towards the competitive threats. This is also considered as the ability of the firm to outperform the rivals. According to the evidences proactiveness and competitive aggressiveness are highly related to each other (Shan, Song, & Ju, 2016). Proactiveness also encourages the business owners to proactively take part in identifying the opportunities and threats for preparing the better strategies for business. The researchers also believe that proactiveness and competitive aggressiveness are same dimensions and they have similar impact on the firm’s performance. Competitive aggressiveness also refers to directly engaging with the competitors for getting a position in the competitive market (Lechner & Gudmundsson, 2014). It is also found as the most significant part of EO in current global place.

## 5. Autonomy

The evidences have shown that firms with more significant EO are likely to perform better in market. The magnitude of the relationship between EO and performance may vary, still their relationship can’t be denied (Covin & Miller, 2014). Autonomy has also significant impact on



the business performance. It refers to the actions taken by the individual or the team for bringing new ideas and vision without being held back by the organizational constraints (Lechner & Gudmundsson, 2014). It also refers to make decision without any predefine supervision. This enhances the business performance and is considered as a part of organizational culture. Autonomy can also be considered as the dimension that refers to the ability or the willingness of the employees to take the self directed actions and to grab opportunities in their self directed manner (Lumpkin, Coglisier, & Schneider, 2009). Autonomy allows the entrepreneurs to feel free and make decisions and work according to these decisions.

### **Business Performance**

Business performance can be referred to as the subjective and objective, financial and non-financial achievements attained by an organization (Sibiya, Sandada & Mago, 2016). These achievements are evaluated in terms of business performance and in relation to all the stakeholders, shareholder and employees of the organization. The capability of the organization is directly associated with the performance of the company (Franco-Santos et al, 2007). Studies have also found that knowledge management capability and organizational capability have significant impact on the business performance. The capabilities of the organization importantly rely on the EO of the company (Daud & Yusoff, 2010). Therefore, it can be said that organizational performance and EO are inter-related.

The business performance is affected by the various internal and external factors. These factors are the business activities, forces or institutions. Nasiripour, Raeissi, & Hosseini-Fahraji (2012), found that internal factors that can affect the performance of business are controllable. However, the external factors affecting business activities and performance are uncontrollable. The internal environment affecting business performance are strategic planning, decision making, which is controlled by the management and managers. Otache & Mahmood (2015) argues that external factors also have the significant impact in determining the business performance of an organization, because these factors are uncontrollable and can affect the performance in a significant manner. External factors could be as, unpredictable market and stiff competition (Rosenbusch, Brinckmann & Bausch, 2011).

### **Entrepreneurial orientation (EO) and Business Performance Relationship from the Perspective of Organizational Culture**

According to the evidences, a firm can be benefitted by applying the new ideas and concepts, by applying the innovative approach, displaying boldness through risk taking, proactiveness to identify opportunities before the competitors do and responsiveness. The relation between firm's performance and entrepreneurial orientation has received considerable attention from the research studies (Rauch et al, 2009). The studies have displayed that firm level entrepreneurial behaviour displays the relative engagement of the firm in risk taking, innovativeness and proactiveness. Such behaviour of the firm is positively associated with the growth and profitability of the firm. The magnitude of this relation and level of firm's performance vary from place to place. This can be associated with the degree of applicability of the EO dimensions (Vij & Bedi, (2012).

López-Gamero, Molina-Azorín, & Claver-Cortes, (2009) have found that business performance is also affected by the collaborative practices of the HRM. The uniqueness of the knowledge is increased by the HRM activities that also change the firm's knowledge to positive knowledge.

The innovative activities therefore, have important influence on the firm's performance (López-Nicolás & Meroño-Cerdán, 2011). Business is also affected by the customer relationship performance and market orientation. The evidences have shown that business performance is affected by the various internal and external factors. The internal factors are those which are associated with the organizational culture. However, EO deals with the internal as well as external factors to enhance business performance (Rosenbusch, Brinckmann & Bausch, 2011).

The business environment in the global market place is rapidly changing that also influence the business models. For attaining profit with the existing operations, the organizations have to constantly look towards the new opportunities and innovations. Rosenbusch, Rauch & Bausch, (2013) the there is a strong relation between business performance and Entrepreneurial orientation. Walter, Auer, & Ritter, (2006) have also analyzed the relation of strategic EO and firm's performance. Study has shown that international performance of the firm can also be affected by EO. García-Morales, Lloréns-Montes & Verdú-Jover, (2007) has established the relation between innovativeness (a dimension of EO) and business performance and has established that innovativeness and dynamic organizational learning capabilities have significant influence on business performance.

Some of the studies have also proposed lower correlation between EO and business performance (Baker & Sinkula, 2009). Studies have also explains the relation of EO with business performance in an inverted position. This means that high degree of EO is not always considered being desirable for business and performance. They are also, not always desirable for the structural conditions and certain market. Thus, there is high variation identified in the reported relationship between EO and business performance. The variations in the results of the various studies are mainly due to some important factors. These factors can be "*difference in the scales of entrepreneurial orientation being used, difference in methodology being adopted, opinion regarding moderating variables and different indicator components of performance being measured*" (Vij & Bedi, 2012, p. 23). According to these evidences it can be said that Entrepreneurial Orientation is still a useful tool for predicting the performance of the business.

The performance of the business or the style of the business is understood as the culture of the organization. Culture can be considered as the way according to which it can be determined that how the firm do things and what are the unique qualities of the people in the firm (Shihab, Wismiarsi, & Sine, 2011). The interest in understanding the organization culture and its relation to business performance and EO has increased, as it is believed that certain organizational cultures have the capability of improving the firm's financial performance García-Morales, Lloréns-Montes & Verdú-Jover, (2007). The various kinds of organizational culture can promote financial performance, market share and can also help to gain competitive advantage. Culture has the capability to influence the competitive position for the firm, and this is the reason that it has steamed the interest of the scholars in the business studies. The competitive position of the firm is developed and enhanced through EO therefore, culture have significant role to play in EO and business performance (Basu, 2015). Research studies have also found that culture strength of an organization can improve the financial performance in terms of both, long term and short term benefits. Culture also boosts the competitive position that is important for EO because, the highly motivated employees are often dedicated to their goals that influence the organizational performance (Basu, 2015).

Culture also helps in developing the organizational competences and winning the competitive advantage. With the supportive and encouraging organizational culture, the employees of the organization are inspired to work hard and to improve the well fare of the customer that helps to gain competitive advantage (Engelen, 2010). This explains that organizational culture is determinant for the entrepreneurial orientation and this refers to all aspects of the organizational activities, including decision making, practices and processes (Jogaratham, 2017). Kraus et al (2012) finds that though there is a positive relationship between EO and business performance, the cultural contingences can display the variance between EO and performance relation.

### **Entrepreneurial orientation (EO) and Business Performance and Role of Organizational Culture**

In the changing business world and market place, small and medium sized business has created many innovations for maintaining the competitiveness and making a place in the global market. EO can be considered as a significant framework that enables the firms to identify new opportunities and turn these opportunities in a new revenue generation process. Various dimensions of EO displayed that business performance is based on these dimensions. If the risk taking behaviour of the entrepreneurs is correct according to the business environment, then business performance can be improved. Culture also has significant impact on EO and business performance. It has been found that different cultural variables can modify the dimensions of EO. Different dimensions of culture have significant impact on EO and business performance.

#### **1. Entrepreneurship and National Culture**

The national entrepreneurial activities are not considered as recent. The scholars have given the central role to the culture. Bouchard et al (2008) states that '*culture is the conductor, and the entrepreneur is the catalyst of entrepreneurial activity* (p. 5). The influence of the institutional activities such as legal, financial, technological and political, can't be denied. Yet, the informal institutions also have significant role to play in national culture and EO. This means that socially transmitted information are also the part of national culture. Therefore, the entrepreneurial activities and orientation are also influenced by the informal institutions such as regulating bodies, political parties and financial system. Engelen (2010) had stated that "*Culture consists in patterned ways of thinking, feeling, and reacting, acquired and transmitted mainly by symbols, constituting the distinctive achievements of human groups, including their embodiment in artifacts; the essential core of culture consists of traditional (i.e., historically derived and selected) ideas and especially their attached values*" (p. 355).

The essential elements of culture are derived from the traditions, which are the historically selected and derived ideas. It also gives importance to the values that are attached to the traditional ideas (Engelene, 2010). This example displays the two significant element of the national culture; first is that the national culture refers to the group of people and not just individuals and second characteristic of the national culture is that it is divided in several layers and each layer has their own values that influence the behaviour and interaction of the people in society (Kreiser et al, 2010). The third significant aspect of culture is that, it is not acquired by any means, but it is learned over time. Kreiser et al (2010) also found that national culture have significant impact on the various levels of entrepreneurship in the society, while Engelen (2010) explains that national culture affects the way in which the entrepreneurial orientation is adopted by the organization.

National culture enters the organizations through the individuals. Socialization is the key process of personality development and acquisition, so the values and personality of the people are developed before they come to organization (Schneider, Ehrhart & Macey, 2013). However, as national culture is considered as a social phenomenon, the process of socialization is significantly influenced by national culture. This influence is reflected through the culture of the organization, which is formed by the values, individual perception, behaviour and interactions with each other. All these aspects of the personality are influenced by the national culture which people bring to organization (Petrović et al, 2015). *Cultural values indicate the degree to which a society considers entrepreneurial behaviours, such as risk taking and independent thinking, to be desirable*” (Bouchard et al, 2008). Therefore, the culture also influences the business performance of the organization.

National culture can also have significant impact on the level of innovation applied by the organizations. Since, the level of innovation describes the business performance; innovation can also explain the importance of cultural factors (Strychalska-Rudzewicz, 2016). The culture that supports the individuals to develop strong working skills and strong innovative skills are tend to avoid uncertainty and improve business performance.

## 2. Uncertainty in Business and Organizational Culture

In the disciplines like economic history, sociology, anthropology, the researchers have found the variation in the economic performance of the various companies being affected by their national culture. One of the significant example of the France's weak financial performance in 19<sup>th</sup> century displayed that the entrepreneurs of France lack boldness and innovativeness in their approach. The entrepreneurs of France based their business activities on their patrimonial logic, due to which they were unable to survive the change (Landes, 2015). It was found that people from different culture exhibit difference in the pattern of their perception and attention.

Entrepreneurship is associated with risk taking, which means to take risk, when the market is uncertain or there is a perceived environmental uncertainty (McKelvie, Haynie & Gustavsson, 2011). Uncertainty can also be considered as the salient feature of entrepreneurial. The study found that 'cultural consequences' always remain present within the organization in the form of uncertainty due to the presence of different cultures in international organizations (Liu & Almor, 2016). It was also found that entrepreneurial orientation, stress and personal attitude of people are the significant differences found in organization culture that defines uncertainty (Liu & Almor, 2016). It is also significant for the entrepreneurs to evaluate the various evidences from the cultural influence on business performance, individual recognition, personal reasoning and logic for developing a comparative perspective of the influence of various aspects of culture on performance and EO.

EO focuses on defining and finding the measures of environment uncertainties in business. Culture is also considered as a very significant element that has been analyzed by the entrepreneurs for developing a perception of uncertainty. The study of Telman (2012) focuses on defining the relationship with culture and entrepreneurial processes. He finds that culture is a collective programming of the mind that impacts the various activities and decisions taken by entrepreneurs. Culture defines the underlying values as well as the behaviour of the people that will further define the business performance (Telman, 2012). The question arises about the

family business, where the same cultural values are passed on and the uncertainties of the culture remain a question in such cases.

Cruz, Hamilton, & Jack, (2012) focused of finding the entrepreneurial activities, by understanding the culture in the family businesses. Earlier concept behind the family business was that funder centric entrepreneurial approach is applied for decision making in family business, which significantly overlooked the development of the entrepreneurial culture Cruz, Hamilton, & Jack, (2012). Therefore the researcher focused their research on understanding this process in family businesses. Duh, Belak, & Milfelner (2010) found that '*non-family firms, family firms are different in their set of goals because of the controlling family's influence, interests and values which provides firms with a stronger culture*' (p. 475). It is also found at family ownership of the firm allows the members of the family to control the values and belief within the family business that could help in controlling the uncertainties to some level (Duh, Belak, & Milfelner, 2010). The activities and behaviour displayed by the entrepreneurs align with the external complexities and display business performance in balanced form (Seaman, Bent & Unis, 2016).

### 3. Entrepreneurial climate and Impact on Business Performance

The modern companies are more focused on the entrepreneurial behaviour, this is the reason that entrepreneurs are approaching towards creating an appropriate culture or climate. EO is considered as a very important tool for the modern firms in terms of industry culture, performance behaviour of employees and also internal organizational factors (Fu, & Deshpande, 2014). The relation between business performance and EO has been widely analyzed by the scholars, but effect of culture on business performance has been underrated. The corporate entrepreneurship requires the appropriate application of Entrepreneurial orientation that consists of the organizational culture (Gertsen & Söderberg, 2011). The external and internal environment of the organization poses challenge in front of the managers to balance them through their risk taking capabilities and innovativeness. Climate or culture of the organization not only depends on the culture of the employees, but it is also influenced by the efforts of the managers. The organizational climate has to be created by understanding the culture, and such environment must encourage employees to display innovativeness and creativity. Creativity is very important for successful business performance (Fu, & Deshpande, 2014).

Business performance is the analysis of the success of the firm, which is affected by EO and its various dimensions. It is also affected by the financial factors, market, decision making and organizational culture (Kotter, 2008). Organizational culture also has significant association with productivity. Culture helps to understand the level of cooperation among the employees, conflict resolution strategies and also interaction between the employees and management of the organization. If the culture is beneficial for the employees and management then, productivity increases (Awadh & Alyahya, 2013). The commitment o the employees towards the organization increase with encouraging climate and cultural satisfaction. The perceived organizational support tend to influence business performance (Fu, & Deshpande, 2014). The business activities and performance of the employees also depend on the external factors of uncertainty, dynamism and change. Therefore, the EO decision making has to be more influential.

Chuang, Morgan, & Robson (2012) found that organizational behaviour also defines that way through which organization is going to control the external factors. Therefore, it is very



important for the firms to display entrepreneurial culture. Such culture encourages the organizations to be innovative, creative and risk taking in their approach, which is also important for the entrepreneurial activities. These activities positively influence the business performance (Idar, Yusoff & Mahmood, 2012). The culture of change and innovation is necessary for positive organizational performance and to retain the cultural capital in the organization (Michael, 2017). For this purpose the business owners and entrepreneurs have to behave entrepreneurially and should display innovativeness and proactiveness, to form a valuable culture within organization. The direct and indirect effect of the external factors can be seen on the business performance. Therefore the culture of organization can help in understanding and effectively addressing the internal and external factors (Michael, 2017).

#### **4. The influence of corporate culture on Entrepreneurial Orientation and Business Performance**

Corporate culture has very high influence over the entrepreneurial orientation and business performance. The national and industry culture could explain the entrepreneurial behaviour in the firm. However, corporate culture is also of great significance for an organization. The studies have shown culture as the internal factor that has the capability of influencing the entrepreneurial behaviours (Bouchard et al, 2008). It is also found that every organization has their tangible and intangible traits that help to establish their unique identity and culture. The effective corporate culture can work as an asset for the organization and can also be determinant of the strategic behaviour of the firm. Corporate culture has significant place as national or industry culture. Therefore, broader understanding of the corporate culture is significant to determine its influence on entrepreneurial orientation and business performance (Krueger, 2007).

Corporate culture has several dimensions. The first dimension is that it acts like a pervasive context for everything that individuals do in the organization. The corporate culture is also manifested in the business standards, principles, values, ethical standards and various approaches of personnel management (Eccles, Ioannou, & Serafeim, 2012). It is also used to develop the policies and procedures for enhancing performance and strategic orientation. Corporate culture also helps to develop a standard organizational environment that facilitates better interaction and relationships among the managers and employees. *‘Corporate culture defines what is expected by others, what behaviors are rewarded by the community, how and what things are valued, be they a dress code, the office space, work habits, or anything else’* (Bouchard et al, 2008, p.12).

#### **CONCLUSION**

Culture plays very significant role in the personal and professional life of individuals. Culture has the capability of defining the failure or success of the organization. paper discussed the various aspects of culture that can influence Entrepreneurial Orientation and Business performance. Paper provides the review of literature to illustrate the various factors of national, industrial and corporate culture and its role in influencing EO and performance. Organizational culture has significant relation with corporate entrepreneurship and business performance. It can be concluded that by understanding the various entrepreneurial activities, the culture of organization and performance can be determined. Every individual in the organization has their own values and belief. When the people come to join an organization, they also bring their values and belief to organization that forms the organizational culture.



Culture has been investigated by various researchers in different aspects. However, it is found that culture impact EO in terms of decision making, risk taking, innovativeness and also autonomy to some levels. Culture also influences the performance of the employee as well as performance of business. With the adoption of organizational culture, employees can enhance their performance and capabilities and it will also influence the strategic orientation of the organization. Therefore, it can be said that role of culture is embedded in the concept of entrepreneurial orientation and business performance and it can take entrepreneurship to very high levels.

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DOI: **10.5958/2249-7137.2020.00728.4**

## LINGUOCULTURAL ASPECT OF INTERRELATION OF LANGUAGE AND CULTURE

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### ABSTRACT

*The article which we investigate, in comparison with other fields of linguistic study is comparatively new. Investigations show that linguo cultural aspect of linguistic science appeared at the beginning of the XX century and gradually ousted country study. Despite the fact that linguoculturology is comparatively a new field of investigation, methodological foundations of study of problems of language and culture interactions are continuously being formed, a part of which, we have intended to embrace in this work.*

**KEYWORDS:** *Linguoculturology, English Teaching, Language, Culture.*

### INTRODUCTION

The given article covers determination of the criteria of complex consideration of the problem, including the necessity of determination of the borders of linguo culturology and teaching this subject at schools and higher educational establishments, because linguocultural information becomes an necessary communicative part of the competence of the student, specific manner, realized in these mantics of language unit. As it is known, linguoculturology studies inter relation of language and culture, but being different from culture-oriented linguistics, the main attention is



focused on the linguistic aspect in this article. In this research work attempts have been made to determine the object of investigation of culturology and discover types of culture, its layers, its ties with other fields of sciences, including humanitarian sciences among which are psychology, sociology and others. A special attention in the study of culturology is paid to cultural, social state and national features of peoples speaking this or that language and possessing the culture with all its self- belonging peculiarities. As it is known culture is the object of investigation of many branches of science, but different from culture-through- language studies, here attention is focused on the linguistic aspect. Linguo-culturology is associated with culture- oriented linguistics as a system of solving ruling principles of general education and human it a task, but beside it linguo-culturology possesses a number of specific peculiarities.

### Main part

Beginning with the XX century, linguo-culturology gradually ousted country study in the didactic plan as well. Since the last two decades of the XX century the term “linguoculturology” has been often used in association with the term “culture through-language studies”. Linguo culturology focuses attention on to the reflection of spiritual state in the language of man in the society. This is just fully mentioned in the works of Bashurina in which she demands changing of shape of system of didactic coordination: instead of systems of “teaching a language – acquaintance with culture” in the centre of attention stands interrelation between communicative competence with linguoculturology and culture- oriented linguistics in the system of “teaching a language –acquaintance with culture – teaching a language”. Teliya, Maslova and the works of others serve to create these sources. As to Teliya methodological basis of linguo culturology serves “semiotic presentation indications of this interaction, considered as cognitive contents of mental procedures, the result of which is cultural equalization of mental structures” [Teliya, 2008]. Supporting this view point, at any rate it is necessary to mention that such vision of object of linguoculturology does not sufficiently distinguish its contours from adjacent scientific subjects. In any case it is necessary to consider object of culturology: language as a means of representation of cultures or culture, considered in the light of language. Despite their obvious “relationship”, it is necessary to distinguish cognitive culturology from cognitive linguistics. Different from “pure” cognitive science, culturology, as so the fields of science, studying humanitarian meaning “cannot develop at the cost of ideals of “scientific character” and objective character of natural sciences, leaving alone formalized knowledge”. However, linguoculturology is a science which can’t the doing a thing without principles of scientific understanding of the world. Accordingly, there exists nonformalized “bastions” of scientific character, where ‘a certain portion of methodology is taken place and analytics successfully coordinate narrative character of “story” with free way of thinking and this takes place on the intersection of different “horizons” of culture, science and art [Mikeshina, pp499-500,2002]. For the linguoculturology such an approach is quite natural, because on the determination of Ricker “from the point of view of narration, life in the world is just the life in the world, being already marked with the language practice, linked with this understanding before hand” [Riker P, p 99, 2002]. Necessity of combinative approach to the objects of culture, in which narrative, literary thinking and elements of methodological analysis are organically supposed to exist, are conditioned by the demand of linguoculturology in an indefinite discourse – thinking space; between strict scientific character and free fantasy. The first is unacceptable as to its abstractness and as to the



reason in which exists methodological constraint on the products of discourse understanding and the second as absolutely non restricted imagination – as it is also unacceptable. The last example of harmonic combination of mentioned approaches is considered by the well-known “Fall of middle ages” of Heising, containing in itself, not only stylistics of “narration”; poetry, but also elements of deep methodological analysis. Never the less, Heising himself was not welcomed by “historical works written in belles- lettres style”. But his longing for free and creative thinking may serve to linguoculturology as a certain example of mutually completion of science and narrative.

## CONCLUSION

Having investigated linguocultural aspect of interrelation of language and culture we have come to the conclusion that linguoculturology is a new aspect of complex approach to language and culture, their interrelation with each other, mutual influence on the development of culture and language, their links with social life, psychology, and philosophy.

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DOI: **10.5958/2249-7137.2020.00729.6**

## THE IMPORTANCE OF ONLINE LESSONS IN THE PANDEMY PERIOD

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### ABSTRACT

*This article provides some insights into the history of the origins of online lessons, their benefits, changes in online lessons during the pandemic, and the expected changes that follow. Where did it all start? 1960 - Although the University of Illinois has not created the Internet for nine years by the Department of Defense, the University of Illinois created the Intranet in 1960 for its students. It was a system of connected computer terminals where students could take course materials and listen to recordings. The benefits of online reading are fully realized. Thus, to minimize the negative impact of online education, education can be provided at all levels of mixed education. However, let us be consumers of quality education even in such a pandemic era.*

**KEYWORDS:** *Pandemic, Online Education, Distance Learning, Social Networking, Internet, Educational Programs, Educational Institutions.*

### INTRODUCTION

Online education is nothing new. The technology is relatively new. However, this concept is more than 170 years old and originated in a part-time course in the UK, where the teacher sent classes and received assignments sent to students by mail. Distance learning was born and today online courses are modern versions of their predecessors. Online learning overcomes the biggest shortcomings of part-time, email time and allows students to communicate in real time not only with the teacher, but also with other students in the class. Where did it all start? 1960 - Although

the University of Illinois has not created the Internet for nine years by the Department of Defense, the University of Illinois created the Intranet in 1960 for its students. It was a system of connected computer terminals where students could take course materials and listen to recordings. This becomes a PLATO (programmed logic for Automatic Learning Operations). At its height, PLATO has operated thousands of terminals around the world. Interestingly, PLATO is used to create many of the social networking concepts we know today: message boards, chat rooms, screen sharing, and even MMORPGs (source). 1984 - The Electronic University Network (EUN) is established to help colleges and universities expand the availability of online courses. In 1986, EUN offered its first online course to use DOS and Commodore 64 computers. However, this was before the invention of the World Wide Web, and students were required to use private applications and communicate via telephone lines. EUN began working with America Online in 1992 and served as its higher education coordinator.

### **Main part**

#### **1994 – CALCampus**

This year has been a year when Internet access, with companies like America Online, Delphi, CompuServe, and many other local providers, is turning people's personal computers into the windows of the world. Most people with access to the Internet have been able to convert CALC (Computer Assisted Learning Center), formerly a small, offline adult learning center, into CALCampus. This offered the first courses that we recognize as "online" in real time. Instructions and interactions were made over the Internet.

#### **1997 Journal of the Virtual University of California (CVU) and Asynchronous Education Networks (JALN)**

CVU was established in 1997 as a clearing house to provide information on all online courses available at accredited colleges and universities in California. While this increased for political reasons in 1999, the concept has created many online resources that provide students with information about online learning opportunities, such as the California Virtual Campus (Source). Despite the publication's very confusing title, The Journal of Asynchronous Learning Networks (JALN) was a sad period in online education. Created by the prestigious Sloan Consortium, JALN is an analytical journal dedicated exclusively to research focused on online education. This set it apart from other publications, including research on other sources of distance learning.

#### **2002 - OpenCourseWare project**

MIT began offering lectures and textbooks online in 2002 through its OpenCourseWare project, many of which are available free of charge to anyone in the world. The goal is to invite all materials to MIT courses. However, the legal logistics of the intellectual property materials are not at the discretion of the teachers - there are barriers as the materials are produced under a Creative Commons license. Nevertheless, in 2010, MIT provided online materials for more than 2,000 undergraduate and graduate courses.

#### **2009 - Floods occur.**

As we approach the end of the first decade of the new century, the impact of online education on education can no longer be denied. The number of students enrolled in online courses increased

by 187% and there were at least 5.5 million students worldwide. They are taking at least one online course. More than a quarter of CEOs and small business owners confirm that they consider the quality of online training programs to be the same as traditional degree programs, and that these online courses and programs are not recognized by employers. The task previously assigned to additional universities or associate professors, prestigious faculties in traditional universities, will begin to recognize this opportunity and begin teaching online courses.

### **2014 is the future and the present**

So what is the future of online reading? Predictions that online learning would completely replace traditional software turned out to be unfounded. However, there is no doubt that the number of students expected to take at least one online course in their course schedule will quadruple over the next decade. The biggest change since the first online correspondence course to date has been with our understanding. Now that the student has given up on what he or she chose because it was not possible to take classes under normal circumstances, online reading has triumphed as a self-motivated educational choice. Every student who chooses an online course or online program should play a small role in this evolution and form an online learning course for tomorrow's students.

Especially during the epidemic pandemic that is now spreading its seeds everywhere, a temporary radical change has taken place in the education system. That is, it created convenient opportunities for all learners. For example:

#### **1. Flexibility**

Students have the right to discuss their careers and schools because they are not tied to a set schedule. In a traditional classroom setting, class meeting times are set, and the student is unable to do so by forcing them to work their schedules around these dates. Most people who choose to study online have other responsibilities and prefer this method of teaching because it shows them how to devote their time to their various projects.

#### **2. Reduced costs**

Online education can come cheap for a variety of reasons. For example, there are no switching costs. Transportation-related expenses such as fuel, parking, car maintenance, and public transportation costs do not affect the online student.

#### **3. Network capabilities**

Online education allows students to connect with their peers from different countries or even different continents. This often leads to other opportunities in terms of collaboration with other individuals in project implementation. At the same time, this makes them culturally sensitive and easily adapts to other environments when exposed to other cultures.

#### **4. Documents**

All the information you need is securely stored in an online database. This includes things like live discussion documents, training materials, and emails. This means that if anything needs to be clarified, the student will have valuable time and quick access to these documents. This is especially useful for individuals who need to conduct research on a project and submit their findings to the panel.

#### **5. Enlarged teacher-student time**

In traditional classrooms, students may not receive the personal attention needed to define concepts. Although the classes at CCA are small, many colleges have hundreds of students. This is not a problem for this type of education, as online conversations and personal chat time with teachers and educators are an integral feature of online lessons. This increases the student's chances of playing well because of the time the teacher gives them. It also improves problem solving and communication skills. They also know how to defend their arguments if necessary.

#### **6. Use of expertise**

Teaching at an online college may give students access to specialized degree courses, but they are not easily accessible or available at local educational institutions. For example, at CCA, you can get a degree in marketing or a certificate in C++ programming because you don't live near an institution. Online sessions allow more people to share experiences that help them access information that is not readable in certain geographic locations. This type of education has evolved over the last few years and has undergone basic adoption. With an online classroom, you need to manage your learning environment, which in turn helps you gain a deeper understanding of your level. New models of teaching are always emerging in the market, offering students a variety of opportunities to turn their education into something that suits them, not in any other way. It also gives people the opportunity to finish their academic degrees that they started and could not continue studying for one reason or another. The prospects for online education look bright and provide education to a larger segment of the population than ever before.

In addition to such conveniences, in the current pandemic period, further changes are being made in online education. In order to improve and maintain the quality of winter, mainly to ensure the employment of citizens and the efficient use of time. For example: The Organization for Economic Co-operation and Development (OECD) supports the adoption of the following decisions in the field of education by states to develop and implement an effective response to the COVID-19 pandemic: appropriate support for students and families in need of social protection in the implementation of alternative education programs; establishing a strong communication system with each student by schools and shaping daily monitoring of each student's skills; training teachers and school principals to work remotely; organizing teachers and working groups to support parents and students and train them in new work systems; pay special attention not only to those who are physically fit, but also to those who are in a state of dexterity and depression;

Achievements in this area are that all professors, regardless of age, have formed or developed knowledge and skills in working with educational platforms, distance learning and its implementation. The work to be done in the future to further develop distance education is being analyzed. It is safe to say that distance education is now an experiment for the future. One of the achievements of distance learning, I think, is the diversity of communication with students. The student will be able to present the answer in text, audio or video. This is a convenient form for students who are unable or unwilling to express themselves in public in an audience setting. Distance education saves teachers and students the time they spend going to and from university. The time saved will allow you to learn new knowledge from other sources. We know, the positive side of online learning, but the harm it can do to a person or to him should be discussed in society as a whole. For now, we want to conclude. Emphasizing that online learning is the best opportunity in education, especially when it interferes with traditional learning situations.

For example, some people want to pursue formal education but do not live under the segregated gap of a college or university and do not find it possible to get a job every day. In an e-learning environment, students can maintain the relationship between teacher and students only at different times. Teachers of e-learning programs are trained in information technology and the Internet to stay in touch, while their students are in virtual classrooms. In addition, they must have the ability.

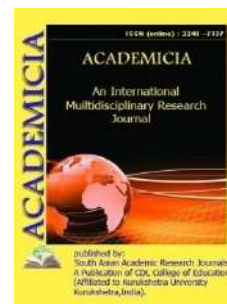
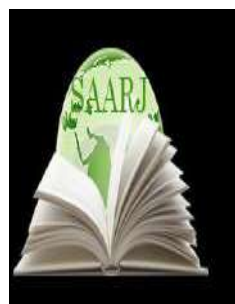
## CONCLUSION

Successfully manage all applications and monitor the development of developing countries in the areas of e-learning and distance learning. The exclusion of face-to-face contact may have limited prospects, but mixed learning. Students offer great opportunities both on and off campus, and if so, they should be followed. The benefits of online reading are fully realized. Thus, to minimize the negative impact of online education, education can be provided at all levels of mixed education. However, let us be consumers of quality education even in such a pandemic era.

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DOI: **10.5958/2249-7137.2020.00730.2**

## FORMATION AND ACTIVITY OF JOINT-STOCK COMMERCIAL BANKS IN THE TURKESTAN REGION (LATE XIX - EARLY XX CENTURIES)

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### ABSTRACT

*This article covers the process of banking system formation in the Russian Empire and the spread of its activities in the Turkestan region. Joint-stock commercial banks played an active role in this project. The article describes not only the participation of banks in lending to various spheres of economic life in Turkestan, but also the direct participation of these banks in the management of other production and trade operations in the economic life of the region.*

**KEYWORDS:** *Joint-Stock Commercial Banks, Credit, Management, Dividends, Branch, Capital, Entrepreneurs, Company.*

### INTRODUCTION

It is known that the Russian Empire in the second half of the XIX century conquered the Turkestan region. From this period, the banking system began to form in Turkestan. In the Turkestan region, joint-stock commercial banks mainly operated. Joint-stock companies in the sphere of credit (banking direction) were the same joint-stock companies in industry or trade, but in the sphere of credit, they had more working capital, which reached 20 million rubles. When this figure in industry and trade did not exceed 10-15 million rubles .<sup>1</sup>

**Main part.** In Russia itself, the first banks appeared in 1733. The first banks were established in Moscow and Saint Petersburg. In the Russian Empire, Moscow banks were heavily dependent on Russian investors (although there were cases of foreign capital inflows). Banks in Saint Petersburg were heavily dependent on investment from leading Western countries.

During the last 130 years since the creation of the banking system in Russia, only the State Bank<sup>2</sup> has functioned as a commercial Bank. In 1861, three years after the abolition of serfdom, the first joint-stock commercial Bank was established in Saint Petersburg in 1864{3}.<sup>3</sup> In addition, the government should not have received dividends from the Bank for ten years.<sup>4</sup>

In the 70s-80s of the XIX century, because of the development of capitalist production in Russia, the activity of banking structures also expanded. Only after five years of operation of the state Bank in Turkestan began to operate joint-stock commercial banks. With the construction of many industrial enterprises in the province, the Russian government, in order to control the flow of capital and regulate the exchange of money, began to give permission to open a banking institution in the country. On December 23, 1874, Tsar Alexander II authorized the opening of a branch of the State Bank in Turkestan. On May 10, 1875, the branch of the State Bank began its work in Tashkent.<sup>5</sup>

Until the 90s of the XIX century, the Tashkent branch of the State Bank served the entire Turkestan region, and then its branches were opened in other cities of Turkestan, including Samarkand (1890), Kokand (1891), Bukhara (1892) and Ashgabat (1895).<sup>6</sup> Bills registered with the state Bank for Turkestan in 1875, on January 1, 1876, amounted to 46, 1 thousand rubles, and by 1895 reached 1,6 million rubles.<sup>7</sup>

The state Bank, in accordance with its Charter, acted as a strict intermediary and based on accounting bills. The Bank served larger merchants and Industrialists, satisfying the demand for credit in the country's markets.<sup>8</sup>

Since the 80s of the XIX century, joint-stock commercial banks began to operate in Turkestan. One of the first was the Central Asian Bank, which was formed in 1881.<sup>9</sup> In 1891, branches of the Moscow Bank of International trade were opened, and in 1893, the Saint Petersburg branch of the Volga-Kama joint-stock commercial Bank<sup>10</sup> was opened. Later, the Moscow account Bank, Merchant Bank, and from St. Petersburg, Azov-don, Siberian and others began to operate.

The Central Asian commercial Bank was established on October 6, 1881 in Tashkent, and was smaller in terms of capital, which was 500,000 rubles.<sup>11</sup> The Minister of Finance N. Bunge approved its draft Charter. In the same year, the Chairman of the Board of the Bank was N. I. Ivanov, a merchant of the first Guild.<sup>12</sup>

In accordance with the Charter of the Central Asian joint-stock commercial Bank, the following operations were authorized:

- 1) Accounting of Russian and foreign trade bills;
- 2) Loans and credits up to 9 months;
- 3) Receiving payments on bills and other securities;
- 4) Sale and purchase of government interest-bearing securities, shares and bonds through third parties;
- 5) Sale of products to individuals and trading houses.<sup>13</sup>

According to the Bank's internal procedure, holders of 20 shares had 1 vote at the meeting, and 300 shareholders had 5 votes. However, no one had more than 10 votes at the meeting.<sup>14</sup> The Bank was closed in 1911 due to the inability to increase its capital.<sup>15</sup>

In 1910, a branch of the United Bank was opened in Kokand.<sup>16</sup> The Bank financed and benefited most from the sale and processing of cotton. So for example, the trading house of L. Knop, the commercial and industrial company "Potelyakhov" and others.<sup>17</sup>

The United Bank did not hesitate to allocate funds to its subsidiary, and even in 1910, when the company requested funds from the Bank to buy cotton, the United Bank allocated twice as much (4,000,000 rubles). In 1912-1913, the Aushev brothers received a loan of 400,000 rubles from the Bank. Through the company, the Bank was engaged not only in the sale of cotton, but also in the sale of leather and industrial goods, as well as trading operations. In 1912, the working capital of the United Bank decreased from 194,000,000 rubles to 111,000,000 rubles. It is believed that this was due to the spread of the influence of St. Petersburg banks in Central Asia.

In 1915, the Bank founded the Moscow trading company. In order to prevent the company from operating independently, the Bank purchased 60% of the issued shares for 1,000,000 rubles.<sup>18</sup> The Bank carried out cotton operations through this company. According to N. B. Khotamov and V. Vekselman, in 1910-1911 the Bank financed the trading house of L. Knop and the partnership of R. sh. Potelyakhov for 11.3 million rubles.<sup>19</sup>

Moscow accounting Bank was also one of the major joint-stock commercial banks. The Bank's Charter was approved in 1869 and began operations in this year. The founders of the Bank were the trading house "Vogau" and K and Peter Botkin, as well as entrepreneurs A. P. Shiling, S. I. Sazikov and others. The Bank's fixed capital amounted to 2,000,000 rubles, and 10,000 shares were issued at 200 rubles each. The Bank had 5 branches and one Agency in Turkestan. Branches were opened in Kokand in 1904, in Andijan, Namangan, Samarkand, Bukhara and Tashkent in 1910.<sup>20</sup> The Bank's branch in the Turkestan region was opened in 1893 in the city of Tashkent.<sup>21</sup> However, according to the final report of 1894, the work of the Bank was not very good, this year the Bank issued a loan for kopecks, while at the end of the year the balance was 10,287,495 rubles 03 kopecks.<sup>22</sup> Apparently, the Bank lost 133,630 rubles and 60 kopecks. However, the Bank's activities were not stopped, but rather supported by the government. But in the following years, the Bank's activities expanded, and by 1907, the Bank opened another branch in the city of Kokand.<sup>23</sup> Branches were also opened in Samarkand in 1910 and in Namangan in 1911.<sup>24</sup>

In 1915, the Bank agreed with the Kraft trading house to purchase half of the warehouse owned by the trading house for 150,000 rubles to purchase cotton fiber for five years.<sup>25</sup> This year, the Bank had a large profit, only the Tashkent branch received 5,299,619 rubles in March and 6,341,501 rubles in December.<sup>26</sup> Not content with this, the Bank decided to issue an additional 24,000 shares. In April of the same year, with the permission of the Minister of Finance, 24,000 shares were issued for 6,000,000 rubles.<sup>27</sup> The Bank's operations expanded, and its revenues increased significantly: if in January 1915, the Bank's fixed capital was 18,000,000 rubles, in January 1917, it reached 21,000,000 rubles, and in April of this year, it reached 24,000,000 rubles.<sup>28</sup>

Until the 1990s, the main reason why these banks did not have a significant impact on the economic life of Turkestan was the lack of industrial enterprises in the country, restrictions on joint-stock companies, and the financial policy of the Imperial government. In

1892-1903. Minister of Finance S. Yu. Witte authorized the issuance of large amounts of loans. Banks were more interested in issuing large loans,<sup>29</sup> which led to an increase in lending to large commercial and industrial companies and joint-stock companies.

Because of economic reforms in the Russian Empire in the early twentieth century, the number of branches of joint-stock commercial banks in Turkestan began to increase. The Russian-Asian Bank alone had 12 branches.<sup>30</sup> State-owned and joint stock commercial banks sought to lend mainly to cotton and oil companies. In Russia, textile factories made huge profits, which led to an increase in the number of enterprises in this area. In the 90s of the XIX century, they accounted for 1/10 of Russian industry, and by 1910-50 %.<sup>31</sup>

At the beginning of the twentieth century, banks began to form subsidiaries and affiliates, rather than just lending. Banks also bought out a controlling stake in companies and joint-stock companies and owned a controlling stake. In many joint-stock companies, a representative of the Bank held the position of Chairman of the management Board or one of the managing Directors of the company. This helped raise capital as a reliable tool for banks.

One of the largest joint-stock commercial banks in the Russian Empire is the Russian-Chinese Bank, which not only operated in Russia, but also conducted financial transactions with China, Mongolia, Japan and India. In 1895, the Bank's Charter was created. Part of the Bank's shares were owned by French capital. With the opening of the Bank's branch in San Francisco, the influence of American capital increased. This refers to the time when American magnates Herbert Hoover and Vandellip worked in Siberia and the Altai.<sup>32</sup>

Because of the merger of Russian-Asian and Northern banks, the Russian-Asian Bank was formed. It was based on the investments of Russian and American financial magnates Herbert Hoover and P. Batolin.

The Russo-Chinese Bank (Russian-Asian Bank since 1910) also conducted large-scale financial operations in Turkestan. In 1900, a Bank branch was opened in the country. In the period from 1900 to 1910, the Russian-Chinese Bank opened branches in 12 cities of Turkestan.<sup>33</sup>

The Bank quickly became one of the largest joint-stock commercial banks in Russia. This is one of the largest financial institutions that operated in Central Asia. The Bank had branches in Kokand, Andijan, Namangan, Samarkand, Tashkent, Margilan, Ashkhabat, Merv, Bukhara, Urgench, Karshi and Vern in almost all major cities of Turkestan.<sup>34</sup> According to the data of 1913, the heads of the Bank's branches are given: Ivanov S. A. in Tashkent, Rudnev P. S. in Margilan, Knabe S. A. in Kokand, Komarovskiy V. Ya. in Andijan, etc.<sup>35</sup> This year, the Bank's working capital amounted to 30 million rubles.<sup>36</sup>

Unlike many other banks in Central Asia, Russian-Asian Bank provided financing for all sectors in the mining, cotton, railway, joint-stock companies in various fields, commercial and industrial companies, trading houses and individual entrepreneurs. The Bank was not only limited to financing, but also directly controlled the production and trade of many joint-stock companies by purchasing shares. Because of holding shares in the largest joint-stock companies of the Empire, they received large profits from the dividends received from the shares. For example, in 1911, Lena<sup>37</sup> bought a controlling stake in a gold mining company in Russia.

In the Turkestan region, the Bank actively collaborated with Andreyevskiy and Potelyakhovskiy, in the mining industry with the joint-stock company Santo and Cheleken Dagestan, and with other companies.

The Moscow merchant Bank influenced the Potelyakhov commercial and industrial company until 1915, and from 1915 to 1917 by the Russian-Asian Bank. Vedyayev was previously a customer of Volga-Kama joint-stock commercial Bank, and later was financed by the Russian-Asian Bank. In addition, the Bank's representative held the position of Executive Director of the Vadyaevs ' company.<sup>38</sup> This indicates that the Bank has purchased a controlling stake in the company.

The Bank invested heavily in companies or joint-stock companies that sought to capture the cotton market. For example, during the First World War, the Bank actively financed the partnership of Staheyev and K., which was active in buying cotton in the Fergana region and in the Emirate of Bukhara. Since 1905, when it was given permission to use private funds in the construction of Railways in Turkestan, the Russian-Asian Bank provided loans for the purchase and sale of land allocated for the construction of Railways. The Bank not only provided loans for the construction of Railways such as Kokand-Namangan and Tokmak, but also co-owned shares in many companies and owned a number of shares.<sup>39</sup> From 1910 to 1914, Russo-Asiatic Bank became the leader among Russian joint-stock commercial banks that were active in Central Asia. In the period from 1914 to 1916, the main capital of the Russian-Asian Bank increased from 73.3 to 87 million rubles.

Azov-don joint-stock commercial Bank, was established in 1871, the founders of which were I. Skaromanga, Ya. Polyakov, L. Rokshental and others. The initial capital of the Bank was 3,000,000 rubles, and its management was located in Saint Petersburg. In the report of the 1909 shareholders ' meeting, the Bank's financial turnover increased. In the same year, the Bank's net profit amounted to 201 3 180 rubles 66 kopecks.<sup>40</sup> Of these, 2,800,000 rubles were paid as dividends to shareholders, and the profit from the dividends was 35 rubles per share.<sup>41</sup>

The Azov-don Bank opened its branches in Tashkent in 1910,<sup>42</sup> and later in Samarkand and Bukhara. In the same year, the working capital of the Bank reached 27,248,477 rubles.<sup>43</sup> Yu. Davidov and the trading houses of the Aushev brothers were the main clients of the Bank. The Bank also provided loans to individual entrepreneurs. The Bank's Turkestan branch collaborated with mining, commercial and industrial companies and joint-stock companies.

In 1913, the Azov-don Bank tried to turn the trading house of Yu. Davidov to the Tashkent commercial and industrial joint-stock company. The Bank's Chairman, M. M. Fedorov, was the founder of the company. However, the Ministry of War and the Governor-General of Turkestan did not consent to the formation of a joint-stock company, citing article 262 of the law (Prohibition on the ownership of real estate and land use) in the Turkestan region. In the same year, the Bank acquired a controlling stake in the joint-stock company "Labored the Wax-oil@. The founders of joint stock Company A. E. lyubomirskiy and K. V. Radkevich in July 1913 received a loan from the Bank in the amount of 100,000 rubles, at that time this amount was 32% of the company's authorized capital. Most of the shares registered in the names of Lyubomirskiy and Radkevich were subsequently transferred to a special Bank account. As a result, at a meeting of members of the joint-stock company "Lyuborad" on February 5, 1914, Lyubomirskiy and Radkevich received two votes, having only 50 shares. The remaining 900



shares were issued on behalf of other shareholders with 13 votes, while the Bank of Azov-don with 34,000 shares of the company became the owner of the joint-stock company.<sup>44</sup>

In 1913, the total income of the Azov-don Bank amounted to 9 100 627 rubles. The Bank issued shares with a par value of 487 rubles each.<sup>45</sup> In the same year, total capital assets of the Bank amounted to 32 387 576 rubles. The Kokand branch of the Bank was headed by D. S. Gershson, and the Tashkent branch by F. N. Dmitriyev.<sup>46</sup> According to the 1914 report, the Bank's net profit was 7,498,931 rubles 31 kopecks, of which 5,000,000 rubles were paid to shareholders. General working capital of the Bank for the year amounted to 258 018 30 rubles.<sup>47</sup> According to the inspector of the State Bank I. S. Butarevich, who in 1917 conducted an audit of the Azov-don Bank noted that the main profit of the Bank was carried out at the expense of an increased interest rate on the loan.<sup>48</sup>

In 1911, branches of the Siberian joint-stock commercial Bank (Established in Saint Petersburg in 1872) were located in the cities of Andijan, Bukhara, Kokand, Samarkand and Vernom.<sup>49</sup> Initially, the Bank issued loans for the trade in leather, Doodie, and provided loans to private entrepreneurs. Later, it began lending to more profitable industries, such as the cotton trade. From 1911 to 1912, the Bank provided loans to trading houses in the Karakul trade, which subsequently increased interest rates. As a result, trading houses that did not pay their loan debts were forced to present their products to the Bank at a lower price.

The Bank carried out a number of operations through the Turkestan commercial and industrial company, and then transferred the company to its sphere of influence. In 1912-1913, the head of the Samarkand branch of the Bank was a.m. Ursklyans, in Andijan D. L. Aronson and in Verny V. Ya. Kuznetsov.<sup>50</sup> The Bank has many large clients, including Yu. Davidov, the Aushev brothers, and individual entrepreneurs Abram Fuzailov and MaliyahFuzailov. In 1915, engineer Sobansky reported that Yu. They say that the trading house Yu.Davydova, as well as Abram and MaliyahFuzailov are in debt to the Bank.<sup>51</sup> Of course, the number of borrowers could increase due to the subsequent increase in interest rates on loans, but there were also those who borrowed from the Bank and could not use them for their intended purpose. About such people, MakhmudkhojaBekhbudi said: "Why can't we use the money properly like others? Instead of borrowing money from the Bank and multiplying it, we build houses and other things and get into debt."<sup>52</sup>

In 1894, the majority of land and reclamation joint-stock banks in Russia applied to the Ministry of Finance for permission to open branches for mortgage operations in the Turkestan region. The State Council considered this issue for a long time, and finally, on May 18, 1898, with the personal signature of the Emperor, they were allowed to operate in the Turkestan region. The charters of branches of these banks in the Turkestan region were amended. Accordingly, unlike other Russian provinces, in Turkestan loans from land banks were mainly issued for real estate, only if the territory was located near the city, the borrower could not repay the debt within 1 year, the Bank could sell the debtor's property.

According to article 263 Of the law on the administration of the Turkestan province, the land owner had to have a special permission to own the land.<sup>53</sup> Although when the decree on granting permission for land banks to operate in the Turkestan region had not yet been issued, Kharkov joint-stock-land Bank Bank, asked the government to open a branch in the country.<sup>54</sup> However, the Bank was refused to conduct its activities in Turkestan.



On March 17, 1872, the draft Charter of the don joint-stock land Bank was approved. Its founders were the retired rotmasters S. Ilovayskiy, and M. Plyatov. At the time of its creation, the Bank had deposits capital of 1 million rubles and issued 4,000 shares. On July 18, 1898, the Bank received permission from the government to open branches in Turkestan.<sup>55</sup> However, information about the activities of this Bank is not provided in the sources. Only two joint-stock land banks operating in Turkestan have data.<sup>56</sup> These were Poltava and Nizhny Novgorod-Samara joint-stock land banks. A branch of Poltava Bank was opened in Turkestan in 1902 and operated for some time. From July 1, 1910 to July 1911, the Bank issued 53 land loans in the amount of 355,000 rubles and 1,014,900 rubles for the construction of real estate in 181 cities. Nizhny Novgorod-Samara Bank also operated in Turkestan since 1902. In 1902-1911, the Bank issued a loan for 421,300 rubles, which were not included in the loans they provided. For example, the average is 180 land plots and 4,891,000 rubles for city loans.<sup>57</sup>

As mortgage banks, these banks could provide loans directly to the population without intermediaries. However, the local size of the loan in the Bank Nijnegorodsk-Samara Bank was 2,300 rubles, and the average size of the loan in the Bank of Poltava-7,000 rubles. For the majority of the population, real estate that they could provide as collateral cost less than the loans provided. As a result, the problem of crediting the rural population with cheap loans remained unresolved.

To solve this problem, one of the officials of the tsarist government, Massalskiy, proposed to create a land Bank in Turkestan itself, rather than branches of joint-stock land banks in Russia.<sup>58</sup> On this basis, attempts were made to open land banks in Turkestan itself. For example, in 1913, the railway engineer S. I. Chayev appealed to the Governor-General of Turkestan for approval of the draft Charter of the Turkestan land Bank, and in 1914, the commercial adviser of the Turkestan land reclamation Bank A. I. Siegel<sup>59</sup> appealed. But the Governor-General did not consent to the creation of these banks.

Engineer Sobanskiy tried to justify the need to create a special Bank in Tashkent to conduct financial transactions in all sectors of the economy of Turkestan. In this regard, he said: "to expand trade with Iran, the Bank of Accounts and loans of Iran was created, and in Mongolia, in the interests of Russia, the Bank of Mongolia was created. Recently, the development of the gold mining industry has become important for Russia. In this regard, the Finance Minister count Witte and Cora were supporters of the development of the gold mining industry. At the same time, Central Asia is rich in resources, bordered by the khanates of Bukhara and Khiva, China, Afghanistan and Iran, and is an ideal place for growing Russian cotton. Various fruits, silk, cattle, leather, raw materials, oil, coal, various metals, sugar, tea, grain, as well as the market for the production of finished products, land use in a certain way, Ethnography in terms of the composition of the population, they have a specific commercial and industrial way of life. There are 3,500,000 acres of irrigated land in the country "{66}. These ideas show that in the future, unlike other Russian banks, this Bank should have been a universal Bank that would Finance not only cotton processing enterprises and trade, the oil and coal industry, the construction of Railways, but also all other sectors of the economy. However, the beginning of the First World War and the subsequent events of 1917 did not allow the tsarist government to implement these plans.

**CONCLUSION**

Thus, tsarism sought to establish a financial system by increasing the number of Bank branches in the country. The main reason for this was the processing of raw materials (mainly cotton) in the country and its export to European and Central regions of Russia, as well as the financing of individual entrepreneurs, trading houses and companies engaged in its sale. It was limited mainly to creating only branches of banks in the Turkestan region, almost isolated cases of opening banks in Turkestan itself, the management of which was in Central Asia.

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DOI: **10.5958/2249-7137.2020.00731.4**

## PROBLEMS OF ENSURING PROFESSIONAL MEMBERSHIP IN THE CONTINUOUS EDUCATION SYSTEM (BASED ON EDUCATION CLUSTER)

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### ABSTRACT

*This article scientifically analyzes the importance of choosing a profession in human life, the development of our society in assurance with the abilities and interests of people, the existing shortcomings in vocational guidance in schools, the world experience of career guidance and the advantages of career guidance and the advantages of a cluster approach.*

**KEYWORDS:** *Integration, Innovation, Innovative Cluster Of Pedagogical Education, Social Partnership, Career Indicators, "Innovative Coach" Project, Freedom Of Career Choice, World Experience*

### INTRODUCTION

**Research methods:** Methods of pedagogical observation, analysis, conversation, mathematical analysis, generalization were used.

**Relevance of the topic:** In Uzbekistan, at a time when market relations are developing, high demands are placed on the process and quality of training. As the development of each sector of society depends on qualified specialists who can fully meet modern requirements, it is important to find a solution to this problem on the basis of an innovative cluster of pedagogical education, which is being tested in the experience of Uzbekistan.

On October 24, 2017, the Cabinet of Ministers of the Republic of Uzbekistan adopted Resolution No. 868 "On measures to establish specialized educational and production complexes for vocational education of students of 10-11 grades of general secondary education." However, it should be noted that there are serious shortcomings in the general education system in vocational guidance and vocational education.

**The purpose of the topic:** The most important stage of training qualified personnel is career guidance. In this regard, the subjects of the education cluster emphasize the importance of cooperation between coaches, parents, higher education and various enterprises and institutions, general conclusions and recommendations on the topic. development.

Choosing the right way of life has always been one of the most difficult issues for young people. Finding one's place in life is a very responsible step and should be thought through in all aspects from a personal and social point of view. "Who should I be?" Is the most important issue facing every age, and whether it is solved correctly or incorrectly will be tested throughout its life and tested by its successes and failures in life. As Uzbekistan moves towards building a market economy, the demand for highly qualified personnel and modern professionals is growing.

In our country, every opportunity has been created for every young man and woman to choose a job in accordance with their interests, inclinations and health, to engage in this work with all their strength and abilities, and to bring more benefits to our society. However, secondary schools do not train young people in a particular profession, but provide them with general information, as well as general training, general secondary education, necessary for the acquisition of one of the professions and specialties. Many boys and girls can't even imagine exactly what career they will choose, even before they graduate from school, and some are hesitant to say if they made a mistake. Some of our young people, on the advice of their parents or close people, do not understand or take into account their interests, abilities, and turn to the profession, taking into account the financial capabilities of a particular profession. No matter what profession they have, they are trying to get a place in a university, to become a student. This situation has a negative impact on the development of our society. Because a person who does not love his chosen profession, does not get full satisfaction from his work, his life, can not feel a creative approach to his work. In this regard, we considered it appropriate to focus on the importance of the education cluster, which is just entering the experience of Uzbekistan, which can provide a positive solution to this issue.

The concept of "cluster", which has been used in the world for almost a quarter of a century, has been used only as a method. The issue of introducing the cluster into education as a whole system awaits research and studies. The practical significance of the cluster is to increase the competitiveness of the economies of countries, industries and enterprises and to achieve high efficiency. A cluster is interpreted as an independent system with its own characteristics, consisting of several similar elements[1].

**In pedagogy, cluster means the following concepts:** Cooperation of employers and educational institutions with the help of educational and production complexes. As mentioned above, a cluster (from a cluster - a cluster) is a connection within which the concept refers to several elements, associations, which have certain characteristics that can be considered independent. The term "cluster", which is widely used in the field of information technology, has recently been widely used in the economy and is now widely used in modern pedagogy[2].



A pedagogical education cluster is a strengthening mechanism of an integration of equal entities, technologies and human resources in close contact with each other to meet the needs of a competitive pedagogy of certain geographical area[3]. Based on the research conducted to ensure the quality of the regional education system, a platform of the Innovative Cluster of Pedagogical Education has been created in Tashkent region of the Republic of Uzbekistan, and several programs are being developed and implemented in cooperation with relevant authorities[4].

**School cluster:** For each cluster, the base school has pedagogical partners (accompanying schools), social partners (higher education institutions, libraries, media).

**Vocational cluster:** Is a cultural-educational system that combines interconnected educational, cultural, scientific, social, technological and production systems[5]. If we look at the experience of developed countries in training, the economy in Japan is largely associated with the implementation of the integration of education, science and industry. Japanese universities train staff in almost all specialties in the world. The process of integration with industry in Japanese universities is carried out on the one hand by conducting research in conjunction with production and applying their results in the educational process, on the other hand through the development of technopolises in close contact with universities and industry. Texnapolis is a specialized scientific production association that establishes links with production through research and, on the other hand, through the training of specialists[6]. Such associations establish links through the training of university students and college students as well as the training of specialists directly in continuous production practice. Mixed education, ie industrial education, is widespread abroad. A significant part of the management training program is built on a certain principle, that is, the periods of short-term courses are alternated with the stages of work in enterprises. That is, he applies not only theoretical knowledge but also practical knowledge.

Education in Bulgaria starts at the age of 6. In the first stage, extensive general training is provided, interest in labor is formed. The duration of the second and third stages is 2 years (11th and 12th grades). At the same time, students learn the basics of the profession in a broad polytechnic direction, gradually acquiring certain specialties. Upon completion of the stage, students are issued special documents: after the first stage, a certificate of completion of the student's professional orientation is issued; upon completion of the second stage, a certificate of the level of general education preparation is issued.

In Italy, vocational education is provided in two types of educational institutions, namely 2- and 3-year vocational schools and secondary technical staff, as well as five-year technical institutes that train administrative staff. Graduates of the institute will have access to universities. They train in nine areas.

The British education system, as in other countries, reflects the economic situation.<sup>1</sup> Since 1980, a national vocational qualification project has been developed and approved in Britain.

The project includes five levels: level 1 - the ability to perform the same work; level 2 - higher component than the profession: the employee performs more complex tasks; level 3-high component: the employee performs more complex tasks. level 4 - high component in the performance of complex and structured work; level 5 -top category specialist.

Students in their chosen major can study for one to five years. Training is based on three technologies: through instruction (low level), teacher-led education (intermediate level), independent learning (high level)[7]. The orientation of vocational education in the experience of foreign countries shows that in them it is carried out mainly in close connection with the production of vocational training, and the result is positive. When we look at the foreign experience, a legitimate question arises? So, how is the work on vocational guidance in Uzbekistan?

According to statistics, every year more than half a million graduates in Uzbekistan need employment assistance. There is also a disparity in labor supply and demand[8]. Therefore, we need to develop measures to direct our youth to the profession. Students' interests become unstable. The book he reads, the movie he sees, the grade he receives daily, and even whether or not a science teacher likes it, causes the student to change. In secondary schools, the differentiation of interests and abilities in high school students increases. These changes in students should be analyzed by a science teacher and a tutor who is in constant contact with the student's parents.

As a student gets older, the form of the coach's methods of working with them also changes. A coach's knowledge and upbringing is his ideological conviction and spiritual maturity, the key to his success. Many questions arise about personal social life, especially in high school students. These questions should receive reasonable answers from the class teacher. Student learning is an integral part of the educational process. The level of social development of school students is very dynamic, so the process of leading this development should ensure that teachers achieve the most appropriate results in this work, and encourage students to actively develop themselves. There is a need for new methods of cooperation between cluster entities in preparing the child for independent living and career guidance.

**Criteria for vocational guidance technology:** subjectivity; value orientation; systematic; freedom of choice; the mentioned criteria complement and develop each other[9].

**The criterion of subjectivity** implies that the student is given the opportunity to express his or her opinion.

The student's focus on values in choosing a career requires a highly developed analytical quality from the coach. The reason is that the coach must be able to explain how positive each profession is in human life.

**Systematization.** There are several complex aspects to the implementation of this criterion. In particular, the feelings of the student, the professional traditions he has accumulated over the years, hinder this criterion.

**Freedom of choice** should be exercised by the teacher not in the sense of persuasion, but in the form of advice, explanation.

Every aspect of coach-student communication should be considered important in career orientation. One's desire alone is not enough when choosing a career. It will be necessary to turn the passive state in the choice of profession into the active state, that is, to put it into practice.

Therefore, when choosing a particular profession, each student should take into account their real capabilities. As we mentioned above, the cooperation of cluster entities in this regard gives good

results. One of the main tasks of parents is to prepare our youth for socially useful work from an early age so that they have the opportunity to choose the right profession. In choosing a career, in most cases, our young people and their parents pay more attention to its material aspects than to their interests and abilities. But if a person engages in a profession he or she does not like or has no ability to do, there will be no development in his or her career. Some of our young people in our country, regardless of their professional interests, work in any way, or in any direction, as if "... I want to study in higher education." Too often, our young people confuse curiosity with inclination. Determining ability in children is a complex issue. One should not be in a hurry to conclude whether any student has the ability or not. The great Russian writer Gogol was once considered by elementary school teachers to be incompetent in Russian. The famous physicist Newton was expelled from school because his teachers had no ability to read. There is not enough information on career choice in school. Many young people make mistakes in choosing a career because they do not get the advice they need in a timely manner. Establishing targeted partnerships between general education teachers and education cluster subjects can help solve the problem in determining the life paths that suit the personal and social interests of our students[10].

**What measures should we take to overcome this problem?** Of course, one side of the problem is related to the family, and the other side is that the school does not provide enough information on career indicators, our young people do not know their abilities and can not make accurate assessments. In the first half of the 2019-2020 academic year, the Department of Social Sciences of Chirchik State Pedagogical Institute of Tashkent region on the basis of the project "Innovative Coach" studied 8A -, 8-B-grade students as an object of research in school laboratories. The analysis of the essay on "My interests", "My lofty dreams" revealed that students do not have enough information about the existing career indicators in Uzbekistan. Because 90% of our students have chosen the professions of teacher, military, lawyer, doctor. Our students do not have information about the current career indicators in Uzbekistan. **The question rightly arises? Who should give this information to the reader. Is it a school psychologist, a coach, or our parents?** But do the subjects listed above have enough information on the subject itself? The next question arises. The theoretical basis of the issue of career choice and ways to implement it are not covered. Even the specific cycles and specific forms of the concept of referral to career choice have not been defined. Russian professor **N.D Levitov** envisages three types of activities in the concept of career choice: a) career promotion (it is recommended to start this work from the beginning of school); b) career counseling (involving a preliminary study of which profession students are interested in); c) assistance in choosing a profession (it is recommended to prepare students for work in the field of their choice[11]).

Russian Associate **Professor Golomshtok** distinguishes two types of activities in the context of career guidance in school: regular observation of students in order to know their interest, inclinations and abilities in their development; provides consultations organized by schools for students and their parents on the interests of young people in the profession and their future studies.

Only through the proper organization of career guidance will it be possible to successfully help young people in choosing the right way of life and profession. Proper organization of career guidance is important in the development of all sectors of society. Career referrals are organized on the basis of the following requirements:

1. In the process of educational work at school, it is necessary to arouse in children an interest in general work, including, first of all, mental and physical work;
2. General labor training should begin in the primary school class. It is necessary to change the content and method of general labor training based on the age characteristics of students, and thus to achieve compatibility in the level of growth of the child;
3. The preparation of students for work and career choice should be based on regular and comprehensive study of their personality. This process, in turn, allows students to focus their interests on a particular profession and to interact with them individually in determining ways to choose a career;
4. The work of sending students to choose a profession at school should be based on the requirements of the national economy of our country, the real opportunities for employment and continuation of education of young people. At the same time, students should be able to make career choices based on their interests and inclinations. Therefore, it is necessary to acquaint them with the types of work and professions and show them how to choose a profession.

Career orientation requires the collaboration of the school team, especially coaches, parents, businesses and other organizations. Children's interests in choosing a profession should be not in an abstract way, but in a concrete, practical way. If the student's interest in the profession is in conflict with his personal characteristics, it is necessary to change his interests by exerting a pedagogical influence on such a student.

Their participation in social work creates great opportunities for students to make the right career choices. It should be an active process for students to decide their own destiny, to choose their own way of life. The open day, various activities and school psychologist's work organized for the vocational guidance of students cannot be considered satisfactory. Because the issue is considered superficially, not on the basis of a clear plan. The content of the organized work does not meet the requirements. Ideological and political education plays an important role in preparing students for the choice of future life paths. At this point, the coach should inculcate in spirituality classes that the main task of young people is to take into account the needs of the state when students choose a profession. Having studied the above problems, we have developed the following recommendation.

№	Existing problems in career guidance	Recommendations for solving the problem
1	The fact that students have a superficial view of career choice does not feel that a particular skill and ability is required	Vocational training should be linked to production membership
2	Not being able to choose the right profession	The family should be prepared for socially useful work from an early age
3	Not having free choice of profession	Not superficially looking at the child's abilities
4	Not having enough information about the available occupations	Establish targeted and mutually beneficial cooperation between the subjects of the education cluster (school, higher education, etc.)
5	Personal interests are not taken into account when choosing a profession	It is necessary to develop patriotic feelings in our teenagers

6	That the economic aspects are taken into account, not the skills and opportunities in the direction of the profession	Organize seminars and roundtables on how important a person's right career path is in life
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Establishing targeted cooperation between general education school coaches and education cluster subjects in identifying ways of life that meet the personal and social interests of our youth can solve the problem. In this regard, the study of the effective aspects of the experience of countries that have been using the education cluster effectively for almost a quarter of a century and its introduction into the education system can have a positive effect.

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DOI: **10.5958/2249-7137.2020.00732.6**

## THE EVOLUTION OF THE SYSTEM OF SPIRITUAL PROPAGANDA

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### ABSTRACT

*The article goes on to say that the structure of spiritual propaganda did not appear in the short-term or extraordinary, it was formed thousands of years ago and evolved and improved over the course of human history. From the very first sermons of Jesus, the socio-political situation, inequality and injustice that prevailed in the Roman Empire were strongly condemned, and it was soon emphasized that this situation would change and that the will of God would be decided. The so-called building, propaganda, especially spiritual propaganda, existed at the dawn of human history, but it was not until thousands of years later that it was renamed. In particular, the content of spiritual propaganda did not appear in the short term or in an emergency. The propaganda of certain ideas and doctrines has been central in each period, and the spiritual propaganda of each period has been carried out on the basis of specific methods and techniques, factors and means of propaganda.*

**KEYWORDS:** *Condemned, Propaganda, Inequality, Extraordinary*

### INTRODUCTION

There is no single approach in the comments about the emergence of propaganda. Some sources acknowledge that propaganda and its specific type of spiritual propaganda originated in the late Middle Ages thanks to missionary activity. [1] In fact, by the end of the Middle Ages (more precisely in the XVII century), the word "propaganda", an alternative to the concept of "propaganda" in the West, was introduced into scientific circulation.



Other sources state that propaganda and spiritual propaganda originated in Western Europe in the eighteenth and nineteenth centuries, when the religion was in crisis. [2] According to the authors, by this time a layer of intellectuals capable of forming different social views as a whole doctrine had emerged. Such an approach leads to the absurd conclusion that no ideas and doctrines were disseminated until the eighteenth century, public opinion was not influenced in any way, and no attempt was made to form any socially important position in life. Logically, as long as there is an idea in society, there will be a mechanism for its dissemination and public awareness, as well as a group of people who will act on the basis of this mechanism. With this in mind, the American sociologist Ch. Simman points out that propaganda came into being as soon as people began to use speech in society. [3] The so-called building, propaganda, especially spiritual propaganda, existed at the dawn of human history, but it was not until thousands of years later that it was renamed. In particular, the content of spiritual propaganda did not appear in the short term or in an emergency. It originated thousands of years ago and has been shaped and perfected throughout the historical development of mankind. This analysis of the evolutionary process provides a basis for a deeper understanding of the nature of the phenomenon under study.

First of all, spiritual propaganda is a specific political, legal, moral, religious, philosophical, scientific, artistic, aesthetics and the process of disseminating other thoughts and ideas, facts and arguments.

In our view, the evolution of the spiritual propaganda system has gone through several epochs. These periods can be divided into five in proportion to the stages of human civilization:

- a) Spiritual propaganda of the ancient world;
- b) Medieval spiritual propaganda;
- c) Spiritual propaganda of the Renaissance;
- g) Spiritual propaganda of the new age;
- d) Modern spiritual propaganda.

These periods are distinguished by the ideas propagated from each other, by the means of spiritual propaganda.

The spiritual propaganda of the ancient world was mainly concerned with inculcating in the public consciousness the ideas of goodness, social equality, and justice. This period covers the period from the third millennium BC to the VI-VII centuries AD. Of course, the buds of spiritual propaganda that existed in the ancient world cannot be called a holistic system. Nevertheless, during this period, the works created in order to form public opinion, to instill in it a certain idea, had a great impact on the worldview and psyche of the people.

Since the spiritual propaganda of the Middle Ages was as theocentric in nature as it was in its time, it became a means of explaining and substantiating the essence and content of religious beliefs and teachings, and of inculcating it in the public. This period covers the period from the VI-VII centuries AD to the XIV century. By the end of the Middle Ages, spiritual propaganda was fully formed as a holistic system.

The formation of a system of spiritual propaganda in the West coincided with the emergence and spread of Christianity. [4] Christianity emerged as a religion that protected the needs and

interests of the poor and needy. From the very first sermons of Jesus, the socio-political situation, inequality and injustice that prevailed in the Roman Empire were strongly condemned, and it was soon emphasized that this situation would change and that the will of God would be decided. Naturally, a large group of people who had no hope of changing their social status followed him. Soon, the teachings of Jesus began to become an ideology with serious social power, and the number of its adherents increased dramatically. Even the first work to promote Christianity, the Apocalypse, appeared.

From the earliest days of the formation of Islam in the East, special attention was paid to the promotion of Islam. The first sermons of our Prophet Muhammad (saas) on the content of Islam were in themselves an example of spiritual propaganda. Later, all Muslim churches, religious-philosophical teachings began to develop their own systems of spiritual propaganda. For example, the teachings of the Ismailis, formed in the VIII century, had such an effective propaganda apparatus. It is known that the teachings of the Ismailis are divided into external (external, overt) and internal (internal, secret) teachings. The apparent teachings of the Ismailis were widely propagated among the common people. The secret imams were engaged in this propaganda work. As a result of their call, the Fatimid caliphate was established in North Africa, and a century later Ismaili rule was established in the West, Egypt, Syria, Palestine, and the Hijaz. [5]

In the middle of the VIII century - the beginning of the IX century the stream of asceticism called Sufism began to form. Among the representatives of this sect, qussos (preachers) had a special place. The call and sermons of the Qussas aroused feelings of sincere love and aspiration for Allah. They were propagandists of spirituality who mastered in detail the methods of sharply influencing people's worldview and psyche. [6]

In general, da'wah or preaching was the main method of Islamic spiritual propaganda. In the Middle Ages, it became customary to preach in public before Friday and Eid prayers. In this regard, the science of theology, which teaches the art of preaching, was formed. This science teaches that special attention should be paid to three issues in the implementation of spiritual propaganda:

- a) One should not err in choosing a preacher to preach; such a person must be kind, influential, persuasive;
- (b) sermons should be classified according to the characteristics of the various classes; theology calls a speech prepared for the upper classes a sultanate, a speech prepared for the military a khutubu jihad, and a speech prepared for the common people a foreign status;
- c) Sermons should also be classified in terms of content; in science, the writing and reading of correspondence of state importance is called nidabirlik, the oratory of religious or political inclination is called khatib, the interpretation of religious and moral issues is called debating.

By the end of the Middle Ages, a system of spiritual propaganda was formed on the basis of both Christianity and Islam, operating on the basis of strictly defined rules, with its own theory and methodology. Through Pope Gregory XV, he founded the Catholic organization Congregatio de Propaganda Fide (Congregatio de Propaganda Fide). For the first time, the type of social activity associated with -rish got its name (propaganda).

The spiritual propaganda of the Renaissance was mainly concerned with the assimilation of the ideas of humanism into the collective consciousness. This period began in the late fourteenth century and ended in the sixteenth century. During the Renaissance, the process of secularization began in a number of European countries. This process had an impact on all aspects of social life, reducing the impact of religion on people's worldviews. As a result, the character of the spiritual propaganda of the period also changed. On top of that, arts such as sculpture, theater, and literature have become powerful tools of spiritual propaganda.

The spiritual propaganda of the new age was mainly concerned with inculcating enlightenment ideas into the public consciousness. This period began in the late sixteenth and early seventeenth centuries and lasted until the early twentieth century. The spiritual propaganda of the new age has radically changed the worldview and psyche of the people, creating new methods and techniques, factors and means in terms of the nature of spiritual propaganda.

Modern spiritual propaganda is characterized by its pluralistic nature, the diversity of ideas propagated. This period covers the period from the beginning of the twentieth century (the years of the First World War) to the present day. During the twentieth century, spiritual propaganda became an important system capable of exerting a mass influence, a powerful force capable of resisting destructive forms of propaganda, and a peculiar theory of propaganda was formed. The development of science and technology, the arts, and the media has greatly expanded the sphere of influence and possibilities of the system of spiritual propaganda.

In the second half of the twentieth century, many theories of propaganda began to be put forward. Although these theories are generally devoted to the essence of propaganda systems, they can also be applied in the process of spiritual propaganda, taking into account its organization. Therefore, we consider it appropriate to dwell on the most important of them. One of these theories was developed by Harold Dwight Lasswell, former director of the Center for Political Science in New York. According to the scientist, propaganda has a neutral meaning, it can be both positive and negative, depending on the purpose for which it is set. Any civic will be very prone to propaganda, and social problems, economic crises, and the escalation of political conflicts will exacerbate this feature in them. People begin to see propaganda as a source of peace of mind. Therefore, it is necessary to use propaganda effectively and purposefully. G. Lasswell believes that the purpose of propaganda is to unite people around a single goal. The scientist argues that the means of propaganda should strive to influence the minds and emotions of citizens. To this end, it proposes the subordination of the media to scientific technocracy, the widespread use of political myths and political stereotypes in the process of propaganda. [7]

Writer and journalist Walter Lippman notes that the social and political processes of his time were extremely complex. The processes have become so complex and industrial that the average citizen cannot understand its essence independently. Therefore, the destructive propaganda of the developing period can easily deceive him and mobilize him for inhumane ideas.

Therefore, it is necessary to pay special attention to the issues of spiritual propaganda. U. Lippman supports Harold Lasswell's views on the subordination of the media to scientific technocracy, arguing that it serves to increase the effectiveness of spiritual propaganda. The author also proposes the establishment of a Research Bureau. In his opinion, this bureau should be engaged in analyzing various data, presenting its results to the elite, and determining the scope of information that the population should know or not know. [8]

The American philosopher and pragmatist John Dewey proposed his own theory of propaganda. According to him, the main purpose of propaganda should be related to the dissemination of enlightenment. Only through the spread of enlightenment can citizens be protected from inhuman, deceptive goals. He considers it expedient to reform education and the media, to use them to discuss social issues. [9]

**In conclusion**, like other types of propaganda, the evolution of spiritual propaganda involves a process that has lasted more than 5,000 years. It can be studied in the conditional period as the spiritual propaganda of the ancient world, the spiritual propaganda of the Middle Ages, the spiritual propaganda of the Renaissance, the spiritual propaganda of the new age, the spiritual propaganda of the modern age. The propaganda of certain ideas and doctrines has been central in each period, and the spiritual propaganda of each period has been carried out on the basis of specific methods and techniques, factors and means of propaganda. Theoretical and epistemological knowledge of the evolution of spiritual propaganda is useful in gaining a deeper understanding of the genesis and original purpose of today's propaganda technologies.

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DOI: **10.5958/2249-7137.2020.00733.8**

## COMMUNICATIVE APPROACH IN WRITING

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### ABSTRACT

*In learning language reading, listening, speaking and writing aspects are important. Communicative activities are dealt with in a large number of methodology books and their classification is distinguished according to each author's point of view. Moreover, Chomsky's own model of language quickly came under fire from people who were at least sympathetic to his attack on behaviorism. This was because Chomsky's model appears to construct an ideal, and unreal, image of the language user. The teacher organizes activities in such a way that the students can initiate and control the interaction. The teacher functions as a facilitator. According to Larsen-Freeman, the principles of CLT emphasize the importance of using a language to communicate in order to learn it. A class of high school students preparing to study at universities in America will not be interested in the studying the same material used to teach adults studying English at a continuing education class so they can use English when they travel on vacation or vice versa. Hence, without writing a little difficult to show the work. A majority linguists asked in this field was how an individual's knowledge of first language rules for communicative competence affected his or her ability to competently communicate in his or her learning language.*

**KEYWORDS:** *Approach, Self-Confident, Curiosity, Attitude, Willingness, Accuracy, Suggestopedy, Communicative Techniques, SWOT Analysis.*

### INTRODUCTION

Communicative approach is an eclectic collection of emphases in the teaching of language that tend to promote or lead to the teaching and learning of a language as and for communication. The communicative approach stresses the importance of using the language rather than learning



the rules of usage. The goal of communicative approach is to increase learners' communicative competence that is the ability to use language appropriate to a given social context.

Learning a language is the combination of four skills: listening, speaking, reading and writing. Out of these skills, writing is considered more difficult than the others by many English learners. There are several reasons that make writing seems difficult. Firstly, writing requires good grammar and vocabulary (especially the spelling) since everything has to be written down. Secondly, learners seem to spend less time practicing this skill than the others, which makes writing becomes the weakest of the four skills. Thirdly, many English learners with good foundation of vocabulary and grammar still find writing a tricky task since they don't have any idea about what to write. However, all of them mention the same or similar communicative tasks but in different extent. Supported by a sufficient amount of literature, I created the following categorization of prevailing communicative activities. So they help us to improve our learning language.

There are many ways to help the students to improve their speaking skill. One of the ways is through communicative language teaching (CLT) approach. CLT is the approach in which the students are asked to use the language for communication in real situation. Applebaum states that using CLT will allow students the opportunity to use the target language in an authentic and meaningful way. The approach focuses on the students. The teacher organizes activities in such a way that the students can initiate and control the interaction. The teacher functions as a facilitator. According to Larsen-Freeman, the principles of CLT emphasize the importance of using a language to communicate in order to learn it. He stresses, "Being able to communicate requires more than linguistic competence; it requires communicative competence". Language (oral and written) functions to serve authentic purposes by facilitating meaningful communication. Relating to some facts above, two types of speaking activities in CLT can be used. They are information-gap and role-play. Harmer states that in line to CLT the pedagogical solution to the problems of getting students to speak the target language in large EFL classrooms is to engage learners in meaningful activities such as information-gap and role-play activities. This approach has been previously successful in ESL situations. However, in introducing these activities into the EFL classroom, the pedagogical solution presents two quite sharp challenges: to create meaningful situations for language use and to overcome affective barriers within the activity on the classroom.

Information-gap and role-play activities can be applied to all level of students and they can be applied based on the level of difficulty of the materials. Pair and group activities are purposed to be used because they gave learners gave opportunity to use the language and to develop fluency. CLT will allow students to have the opportunity to use the target language.

In the early 70's a new approach was developed to focus more on student production based on a different theory of language acquisition. The theory states that students want to communicate and that dialogues should be based on real life situation The material used should be authentic and meaningful. It is also believed that in order to communicate in the target language the speaker should have more than just linguistic competence but also communicative competence. This theory produced the approach that we know today as Communicative Language Teaching.



There are basically five characteristics that make CLT different from other approaches like Audio-Lingual Method or traditional approaches like Grammar-Translation Method. They are as follows:

1. Taught in the target language;
2. Introduction of authentic text and materials in the lesson. An emphasis on learning to communicate through interaction with other students;
3. opportunities for learners to focus, not only on the target language, but also on the learning process itself;
4. Learner's experiences are an important part of the classroom learning situation;
5. An attempt to link learning in the classroom to authentic usage outside the classroom.

The teacher must keep these principles in mind when planning and teaching a lesson using the CLT approach. There are many activities the teacher can use incorporating CLT. He/ She can find them on websites, in activity books or from other teachers at conferences and workshops. However, when choosing or creating an activity the teacher must keep three things in mind. The activity must use

- (1) Authentic language, materials and language situations,
- (2) Have a purpose that the teacher can state and be achievable and
- (3) Allow for freedom and unpredictability.

In using authentic language and materials the teacher must consider the students he/she is teaching. The teacher must consider what students will be using English for. This will dictate the choice of materials used. A class of high school students preparing to study at universities in America will not be interested in the studying the same material used to teach adults studying English at a continuing education class so they can use English when they travel on vacation or vice versa. The teacher must also incorporate activities using situations students might actually find themselves in after accomplishing their English study.

The teaching must be purposeful. Students must be in a situation in their learning and activities where they need to communicate with each other in order to accomplish their task in the activity. This will also allow them to use each other as resources and learn from each other. Use will not be unlike what their situations could be in real life. In real life they will learn through practice in using the language in purposeful way. They will also learn from their experience through interacting with other English speaker. In having freedom and in predictability in the classroom student have the freedom to make their own choices in using the target language. Often, when traditional teachers do interactive activities they allow students to only to use specific answers, for example either affirmative or negative response to a specific statement or question. Allowing unpredictability, the activity becomes more interesting and challenging and much more like real life. The activities do not have to be acting out a real life situation but can also be light and fun like a game. This could appeal to adult learners as well as young ones. There are many choices the teacher can make in selecting activities for use in the classroom. As Littlewoods pointed out, "one of the most characteristic features of communicative language teaching is that it pays systematic attention to functional as well as structural aspects of language". Language is for

communication and communicative approach may be a better way to achieve this purpose. Now more and more teachers of English have realized the importance of the communicative approach. As educational policy calls for the necessity and improvement of teaching foreign languages for communicative purposes, we are sure the ultimate goal of communicative language teaching will be achieved some day. Communicative language teaching makes use of real-life situations that necessitate communication. The teacher sets up a situation that Learners are likely to encounter in real life. Unlike the audio-lingual method of language teaching, which relies on repetition and drills, the communicative approach can leave Learners in suspense as to the outcome of a class exercise, which will vary according to their reactions and responses. The real-life simulations change from day to day. Learners' motivation to learn comes from their desire to communicate in meaningful ways about meaningful topics.

In a communicative classroom for beginners, the teacher might begin by passing out cards, each with a different name printed on. Using a combination of the target language and gestures, the teacher conveys the task at hand, and gets the Learners to introduce themselves and ask their classmates for information. They are responding to a question. They do not know the answers beforehand, as they are each holding cards with their new identities written on them; hence, there is an authentic exchange of information.

Later during the class, as a reinforcement listening exercise, the Learners might hear a recorded exchange between two English freshmen meeting each other for the first time at the Gymnasium doors. Then the teacher might explain, in English, the differences among greetings in various social situations. Finally, the teacher will explain some of the grammar points and structures used.

Instructions to Learners: Listen to a conversation somewhere in a public place and be prepared to answer, in the target language, some general questions about what was said.

- Who was talking?
- About how old were they?
- Where were they when you eavesdropped?
- What were they talking about?
- What did they say?
- Did they become aware that you were listening to them?

The exercise puts Learners in a real-world listening situation where they must report information overheard. Most likely they have an opinion of the topic, and a class discussion could follow, in the target language, about their experiences and viewpoints.

Communicative exercises such as this motivate the Learners by treating topics of their choice, at an appropriately challenging level.

Another exercise taken from the same source is for beginning Learners. In "Listening for the Gist," Learners are placed in an everyday situation where they must listen to an authentic text.

**Objective:** Learners listen to a passage to get general understanding of the topic or message.

**Directions:** Have Learners listen to the following announcement to decide what the speaker is promoting.

(The announcement can be read by the teacher or played on tape.) Then ask Learners to circle the letter of the most appropriate answer on their copy, which consists of the following multiple-choice options:

- a. a taxi service b. a hotel c. an airport d. a restaurant

Gunter Gerngross, an English teacher in Austria, gives an example of how he makes his lessons more communicative. He cites a widely used textbook that shows English children having a pet show. "Even when learners act out this scene creatively and enthusiastically, they do not reach the depth of involvement that is almost tangible when they act out a short text that presents a family conflict revolving round the question of whether the children should be allowed to have a pet or not". He continues to say that the communicative approach "puts great emphasis on listening, which implies an active will to try to understand others. This is one of the hardest tasks to achieve because the children are used to listening to the teacher but not to their peers. There are no quick, set recipes. That the teacher be a patient listener is the basic requirement".

The observation by Gerngross on the role of the teacher as one of listener rather than speaker brings up several points to be discussed in the next portion of this digest. How do the roles of the teacher and student change in communicative language teaching? Teachers in communicative classrooms will find themselves talking less and listening more, becoming active facilitators of their Learners' learning. The teacher sets up the exercise, but because the Learners' performance is the goal, the teacher must step back and observe, sometimes acting as referee or monitor. A classroom during a communicative activity is far from quiet, however. The Learners do most of the speaking, and frequently the scene of a classroom during a communicative exercise is active, with Learners leaving their seats to complete a task. Because of the increased responsibility to participate, Learners may find they gain confidence in using the target language in general. Learners are more responsible managers of their own learning

Traditionally, teachers' responsibilities are to follow the guidelines set in language courses, which rely on textbooks containing grammatically sequenced materials, and to present the structures of the target language and let Learners grasp them by drills and exercises. The relationship between teacher and learner is that of the classical teacher-centered methodology. In the early 1970s, there were a number of changes in second language teaching.

Some of it had produced perfectly acceptable results, some others was not satisfactory. In language teaching today, although courses based on structures are still very widely used, other aspects of language are receiving increasing attention in the classroom.

One of the basic problems in language teaching is what language the proficiency learners should achieve.

There are three famous figures we should be familiar with in order to understand the second language proficiency: Chomsky, Hymes and Halliday. Chomsky made a distinction between linguistic competence and linguistic performance. He claimed that linguistic competence meant that the rules of grammar were internalized in the head of the speaker, and provided the basis for the speaker understands of linguistic relations. Some linguists assumed that linguistic theory was integrated with theory of communication and culture. In his theory, competence includes interactional competence, which is called "communicative competence". We can use this competence in writing. Individuals involve in language development. "Grammaticality is only

one of four factors of communicative competence, whereas for Chomsky, grammaticality was competence". The methods such as AL, based upon a behaviourist theory of learning, and on Bloomfieldian linguistics, were challenged by the theories of language and language-learning of Noam Chomsky. Chomsky argued that it was impossible for people to acquire a language by simple repetition and reinforcement. Children, he said, do not learn a language this way, for they do not, in fact, repeat what adults say, but produce their own sentences, and create phrases which they have never heard before. They also make systematic errors, and no amount of correct input or of error- correction will stop them from doing so. Children do not so much learn the grammar of a language, as they construct it.

It should be said that even if this was the case for children learning their mother-tongue, we could not simply assume that adults and adolescents learn a FL in the same way. Nevertheless, the idea that over-learning of typical structures would lead to mastery of an FL seemed to be very dubious in the light of Chomsky's critique of Behaviorist approaches to language learning. However, Chomsky himself did not feel that linguistics could do much to help language teachers. Indeed, he wrote that neither linguistics, nor psychology could do or say much to further the cause of classroom learning.

Moreover, Chomsky's own model of language quickly came under fire from people who were at least sympathetic to his attack on behaviorism. This was because Chomsky's model appears to construct an ideal, and unreal, image of the language user. Chomsky, extending Saussure's distinction between 'langue' and 'parole', differentiates between competence and performance. The proper object of study for the linguist, he says, is not language as it is produced in everyday situations - that is performance - but the inner and ultimately innate knowledge of grammar that everyone has in their minds - that is competence.

To study language, then, we need to turn away from real usage, in which the actualization of grammar is always partial, interrupted and likely to be over-ridden by other concerns, and look to the prior knowledge of grammar that all speakers possess, and which has nothing to do with the social situation within which they happen to find themselves. From the start, this conception of the linguist's task aroused criticism, and one of the most telling critiques was made by the sociolinguist Dell Hymes.

Hymes first of all draws attention to the image of the ideal speaker that Chomsky's model draws:

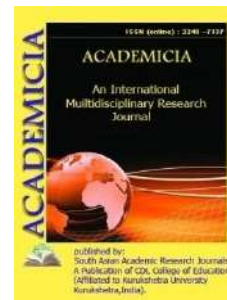
The image is that of a child, born with the ability to master any language with almost miraculous ease and speed; a child who is not merely moulded by conditioning and reinforcement, but who actively proceeds with the unconscious theoretical interpretation of the speech that comes its way, so that in a few years and with a finite experience, it is master of an infinite ability, that of producing and understanding in principle any and all grammatical sentences of language. The image (or theoretical perspective) expresses the essential equality in children just as human beings. It is noble in that it can inspire one with the belief that even the most dispiriting conditions can be transformed; it is an indispensable weapon against views that would explain the communicative differences among groups.

Overall, when we compare learning skills all of them are important. Hence, without writing a little difficult to show the work. A majority linguists asked in this field was how an individual's knowledge of first language rules for communicative competence affected his or her ability to competently communicate in his or her learning language.

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DOI: **10.5958/2249-7137.2020.00734.X**

## ANALYSIS OF THE BIOTECHNOLOGICAL COTTON PLANT POPULATION FOR GENOMES FREE OF NPT II GENE

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### ABSTRACT

*The article deals with the modern technologies and methods for breeding transgenic plants free of selective marker genes (SMG). The classification of the widely applicable methods in the world is given in the paper. The bio-prospecting methodology is presented to identify kanamycin-resistant genotypes from the Porlock-1 cotton population. The plasmid vectors designed for transformation including genes for identifying transformants. As a rule, they are antibiotic resistance genes (for example, non-metallophosphotransferase genes (npt) and hygromycin-phosphotransferase genes (hpt)), which products provide transformed plant tissue growth in selective environment. They have been named as selectable marker genes (SMG) due to their basic function performed in the process of the genetic engineering works. However, after transformed cell screening, the genes lose their value, but remain in human genome transformants. Since such sequences started to be called the “genetic burden” and even “genetic debris”, it has become urgent to remove these genes from a plant genome. This kind of research of a*



*cotton plant is carried out for the first time in our country, just as the RNA interference technology for cotton plant, which has changed the qualitative characteristics of the fiber, is used for the first time.*

**KEYWORDS:** *Biotechnological Cotton Plant, DNA, Primers, PCR, Selective Marker Genes (SMG), Npt II, Verification.*

## INTRODUCTION

Biotechnology has firmly entered human life and activity. By means of the biotechnology methods, in particular by the genetic engineering methods, various types of products, as well as strains, varieties and breeds, demanded for our existence, began to be bred. One of the main results of biotechnology method application is breeding of new varieties of agricultural plants. In view of this, RNA interference method has begun to be used in the world recently. The plants - new valuable metabolite and industrial raw materials producers have been bred by means of this method. The need to create new lines and varieties is dictated by many reasons associated with the gradual aging of varieties, land depletion, ecological turnover, coming global warming, as well as the emergence of new, more aggressive species of fungi and microorganisms that adversely affect current crops. Along with that, new varieties of crops are created to meet the needs of an ever-growing world population, as well as light and food industries.

As a rule, in the genome of biotechnological plants, in addition to its set of genes, there is some certain amount of introduced genetic materials that is unnecessary after performing its functions. They are selective marker genes (SMH), which have been definitely used for selection of transform ants. Recently, such SMGs have been called even “genetic burden”. And as a result of this, the public, a direct consumer of biotechnological products, has begun to show concern regarding transgenesis. The presence in the genome and the constitutive expression of plant genes that are alien to plants, such as antibiotic and herbicide resistance, is deprecated, especially by commercial companies. On the basis of this, a new direction in genetic engineering has appeared - the development of methods for marker-free transgenic plant breeding and its innovative varieties is the first step towards bringing genetic engineering technology closer to the innovative breeding and genetic process.

At present, it is fundamentally possible to obtain biologically safe marker-free (without selective genes) transgenic plants. Currently, the available strategies for transgenic plant breeding that do not contain potentially dangerous selective markers depending on the implementation tool, are systematized into several groups. These are co-transformation, transposition (Ac / Ds), site-specific recombination, and methods of direct screening of transform ants [1, 2]. For instance, during co-transformation, the specific and marker genes are located in two independent T-DNAs in one or two agro bacterial strains [3, 4]. Double transform ants cross and select offspring without a selective gene. Another strategy involves moving any of the genes, specific or marker, using transposition, in particular, the Ac / Ds mobile element system of maize, and then removing the marker gene from the plant genome [5, 6, 7]. The third strategy for marker-free plant breeding is based on the site-specific recombination system from bacteria. This is the Cg / lox technique [8, 9]. The fourth group includes methods for direct screening of transform ants, grouping the FLP / FRT system, direct screening of transform ants, and the R / RS system using PCR [10, 11, 12, 13].

We are interested in direct screening of transformative the presence of the specific gene expression product appears. This method is based on the identification of genotypes without alien nucleotide fragments in the genome. It has been discovered by the researchers that the genotypes without selective genes are found in large populations of the transformed plants. In our studies, we applied this technique to the biotechnological *G. hirsutum* cotton plant (variety of Porlock series) obtained as a result of RNA interference.

In the basis creation process for Porlock series variety, the vector design pHellsgate-8 :: PHYA1 has been used, into which the kanamycin resistance gene (npt II) was introduced. We set the task - to identify genotypes that do not carry a selective marker gene (SMG) in their genome, that is, to select the non-kanamycin cotton plants formed by a natural process.

## MATERIALS AND METHODS

Object of study: Porlock1- a biotechnological variety of cotton plant.

Isolation of genomic DNA. Genomic DNA was isolated from leaves by the CTAB method with modifications for cotton [14].

### PCR record

A reaction mixture for PCR in a volume of 10 µl was prepared according to the scheme: 15 ng of genomic DNA, 1 µl of 10 x Taq buffer, 0.2 µl of dNTP (10 mM each), 5 pM / µl primer, 0.07 µl of Taq polymerase (5 units /µl AmpliTaq Gold, Applied Biosystems), water up to 10 µl. PCR was carried out under the following conditions: 1 cycle - 940C, 3 min; 35 cycles of 940C, 1 min; 550C, 1 min; 720C, 2 min; 1 cycle - 720C, 7 min. For PCR, the following primers were used: 35S-F / 35S-R, PDK-F / OST-R and Kan F / Kan R Kan F / Kan R

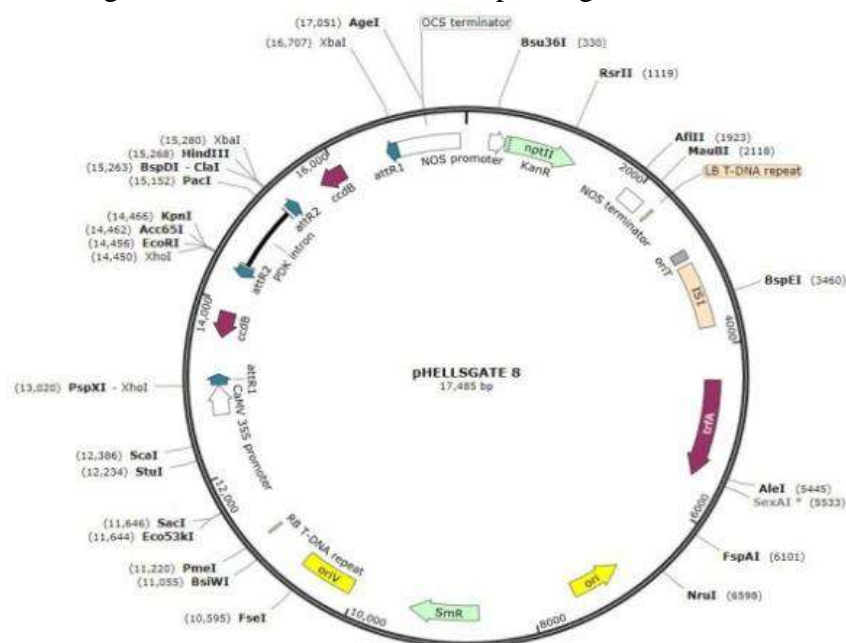
## RESULTS OF THE EXPERIMENT AND S AND DISCUSSION

The researchers are working on the accelerated production of new genotypes, which along with high yields and early maturity, are also resistant to pests and diseases, to the ecological turnover. In industrial crops, attention is paid to updating valuable economic features, among which the quality of the cotton fiber is of primary importance. Medium fiber cotton (*G. hirsutum* L.) is a precocious and high yielding variety; however, fine fiber cotton (*G. barbadense* L.) has the highest quality fiber, but is relatively low yielding and late ripening cultivar. Using the RNAi - RNA interference method, a new variety of cotton plant has been bred, which fiber is close in characteristics to the fine-fibrous *G. barbadense* L variety.

The RNA interference for cotton plant is the result of introducing a specially designed plasmid construct (Figure 1.) into the Coker-312 cell culture (Coker-312), and further, by means of the traditional hybridization method with its domestic variety, AN-Bayavut-2, and subsequent selection a gene knockout variety Porlock-1 has been obtained.

We hasconducted the pilot study to exclude consumers' questions about the presence of a "foreign genetic burden" in the genome of the biotechnological varieties.

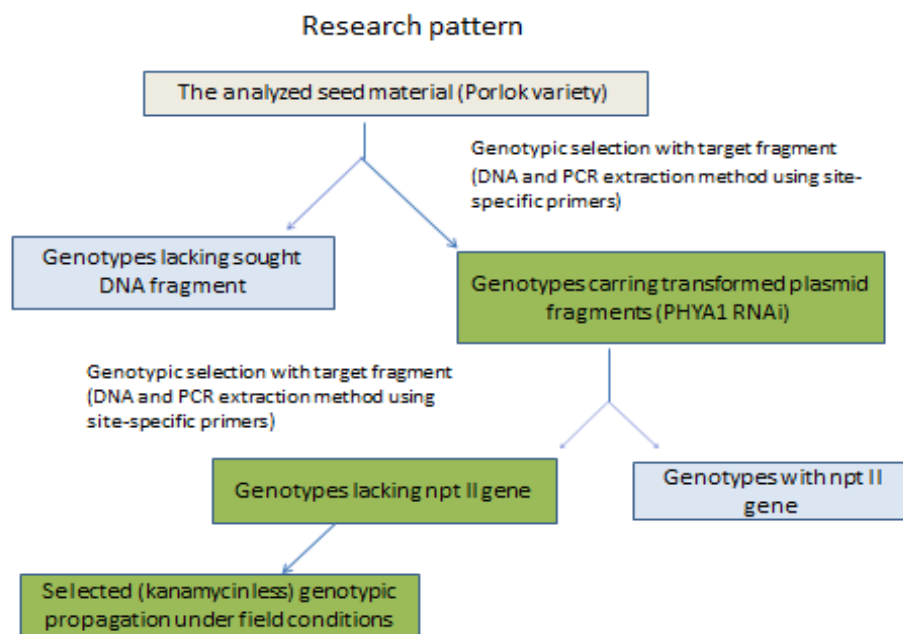
Figure 1. Vector construction of pHellsgate-8 :: PHYA1



A randomized selection of genotypes has been carried out from the cotton crop of 2017, which DNA was initially analyzed for the plasmid sequence presence in them (using a number of primers 35S-F / 35S-R, PDK-F / OST-R). Having obtained positive results, the same DNA samples were used in PCR with a pair of Kan F / Kan R primers. In this case, only negative results were taken into account, that is, we were interested in those DNA samples in which amplification hadn't occurred.

### The scheme of the experimental research work

As a result of the study, we obtained 90-93% amplification results with primers 35S-F / 35S-R, PDK-F / OST-R among randomly selected plant materials. This is the evidence of the plasmid construct presence causing an interference effect in the genome of the Porlock variety. Whereas the results of PCR with a primer for a selective marker gene (npt II) were 3-4%. The variants of the PCR results with the different combinations of primers are presented schematically.



Thus, we have selected the plants that had negative amplification results with a primer to detect the kanamycin-resistant gene. The seeds of these plants were sown in 2019 in the field for propagation and recurrent molecular genetic verification for the presence of the selective npt II gene in their genome.

**TABLE THE RESULTS OF PCR ANALYSIS OF SOME GENOMES OF PORLOCK-1 BIOTECHNOLOGICAL COTTON CULTIVAR FOR THE PLASMID SEQUENCE PRESENCE AND NPT II SELECTIVE GENE IN THEIR GENOME.**

Primer combination	Biotechnology Cotton DNA Sample Number											
	1	2	3	4	5	6	7	8	9	10	11	12
<b>35S-F&amp;35S-R</b>	+	+	+	-	+	+	+	-	+	-	+	+
<b>35S-F&amp;PDK-R</b>	+	+	+	+	+	+	+	+	-	+	+	+
<b>PDK-F&amp;OST-R</b>	+	+	+	+	+	+	+	+	-	+	+	-
<b>Kan F &amp; Kan R</b>	+	+	+	-	+	+	-	-	-	+	+	-

Amplification results during PCR with different primers.

(+) - a PCR product was detected in a 1.5% agarose gel; (-) - no PCR product was detected;

In the field, after the necessary agronomic measures had been taken, 259 plants were cultivated by the flowering period in 4 working plots. Leaves were taken from these plants and DNA was extracted for PCR analysis. According to the electrophoresis of the results of amplification products, it is concluded that more than 55% of the plants with a positive response to 35S-F /

35S-R, PDK-F / OST-R do not synthesize amp icons with Kan F & Kan R primer. That is, they give negative PCR -result with a pair of Kan F / Kan R primers, which is the most obvious evidence of the npt II fragment absence. The seeds of these plants will be prepared for sowing next year and the plants grown from them will be again subjected to molecular genetics verification in order to detect the mechanism of appearance of marker-free genotypes.

Understanding the mechanism of inheritance and excision of SMH npt II in natural populations is of certain importance for us since it is recommended for use as the least labor-intensive molecular genetic verification tool in comparison with the co-transformation, transposition, site-specific recombination techniques, or the removal of selective genes from the plant genome using recombinases (Cre, FLP, R) [16, 17, 18].

## CONCLUSION

The presented work has been carried out due to the fact that the presence of resistance to antibiotics and other marker genes in genetically modified plants causes concern in society because of the alleged, potential risks to the environment and human health. The application of the antibiotic resistant genes is the subject of controversy and intense discussion by both scientists and the average man. In this regard, biotechnological plant breeding that do not contain foreign genetic material, especially of bacterial and viral origin, significantly reduces the tension among consumers. Therefore, today, such direction of genetic engineering as marker-free transgenic plant breeding is actively developing. In addition to selective marker genes, the creation of transgenic plants often uses the so-called reporter genes, whose products make it possible to immediately judge the expression of the built-in genetic construct and evaluate the success of plant transformation [15]. The expansion of the list of reporter genes available for practical use will increase as far as new chromomeric and fluorogenic substrates will be developed for various enzymes.

At the same time, despite the growing number of selective and reporter marker genes, only a few of them have found application in transgenic plant breeding. This is due to the complexity and duration of even primary experiments to test their expression. At the same time, the disadvantages of many of the marker genes remain insufficiently obvious. The answer to the question about the biological safety of the marker genes is ambiguous, as the impact of their distribution in the environment can occur only many years after their application.

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DOI: **10.5958/2249-7137.2020.00764.8**

## **DIVIDEND ANNOUNCEMENT AND SHARE PRICE BEHAVIOUR: A STUDY OF SELECTED INDIAN COMPANIES**

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### **ABSTRACT**

*Dividend policies of companies and their impact on market share prices have been important topic for debate worldwide. The announcements of dividend amount and time of payment by Indian companies is done at different dates by different companies. The opinions and views of financial experts and researchers regarding the effect of dividend announcements on the market share prices vary from each other. According to some studies, dividend announcements by companies do lead to fluctuation in their share prices, while others are of view that dividend payout policy does not affect market share price and company value, leading to hypothesis that dividend policy is irrelevant. This study makes an attempt to understand the effect of dividend announcements on their share prices, number of trades number of shares, and total turnover by top BSE index companies by market capitalization. The findings of the study with the help of event study methodology reveals that the dividend announcements by the sample companies have significance influence on the market Share Prices, Number of Shares, Number of Trades and Total Turnover.*

**KEYWORDS:** *Dividend, Share Prices, Number of Shares, Number Of Trades, Total Turnover.*

### **1. INTRODUCTION**

Dividend policy of a company involves a major financial decision with regard to the distribution of a part of the earnings of the company to its shareholders and the amount to retain from the earnings for further investments. Different companies adopt their own dividend policies and these decisions may be influenced by many determinants like the earnings level, development and investment portfolios, economic and taxation policies of the country, the life cycles of the

organizations, etc. Whenever companies announce their next dividend, the share prices generally might be affected depending on the amount of the announcement. To some extent, the overall demand for share has influence on the market price of the shares. There are numerous opinions and debate on the core issue of dividend policy influencing other variables like Miller and Modigliani (1961), who say that in perfect world, the value of the firm is not affected by its dividend policy decisions, so there should not be any wealth effect as a result of dividend announcements by the firms. However, the studies of Walter (1963) and Gordon (1963), are in contradiction to this hypothesis, which say that dividend decisions do affect the value of the firm and hence the share holders wealth.

In any economy, capital market is considered as an important platform for investment. However, before investing in any security the investors consider several things like past returns from such investments, dividend records of companies, dividend-share price relations, share price movements, etc. Dividend policy is important for investors, managers, lenders and other stakeholders. Dividend is important for the investors not only as a source of income but as a way to access to the company and be a part it. For companies, selecting a suitable dividend policy is an important decision because the flexibility of investment in future projects significantly depends on the amount of dividends that they pay to their shareholders. Often lenders are also interested in the amount of dividend that a company announces; as more amounts is paid as dividend means less amount would be available with the companies for servicing and redemption of their claims. Finally it is important for other stakeholders especially for claim holders to help them in reducing agency cost. The main objective of dividend policy is to maximize shareholders wealth by maximizing their purchasing power. Maximizing shareholders wealth depends on the dividend policy of the company as the shareholders would satisfy their purchasing and consumption patterns (Anmol, 2008). In the long term perspective, the important decisions regarding investment, financing and dividends are expected to create value to the company and its stakeholders. Market capitalization is one of the measures of company value which is influenced by share price value attached to the market. The overall performance of the company, growth prospects, strategic direction and potential for long term sustainable results have significant impact on its market share price.

Indian is emerging as in prominent investment platform with a highest number of transactions among all the stock exchanges of the world (World Federation of Exchanges, 2013). Equity Market is a lucrative field for investors, with stocks profitable not only for long and medium-term investors but for the position traders, short-term swing traders and for very short-term intra-day traders and speculators too. A landmark achievement was made by the Indian stock market by crossing Rs. 100 lakh crore at US\$ 1.66 trillion in market capitalization as on 28<sup>th</sup> of November, 2014. As per the financial experts, debt market in Indian developing economy is very important and it constitutes as the largest debt market in whole of Asia.

## 2. REVIEW OF LITERATURE

The study of Shukla (2011), "An Investigation to review the impact of Dividend on share prices of Indian Companies", concluded that the dividend declaration by the sample companies has neither significant increase nor significant decrease in share average prices, high prices and low prices of the selected sample companies. According to the study of Singh and Sapna, (2011), on the stock price behaviour around dividend announcements made by BSE-'A' group listed

companies and the changes occurred in liquidity on account of these announcements, found that there are significant differences in average number of transactions before and after the dividend announcements; and also their study showed a mixed result regarding the turnover and average traded quantity. Abidin et al., (2009), examined the effect of dividend announcements on the stock prices of companies listed in Kuala Lumpur Stock Exchange. The result of their study showed that increase in dividend amount declared by the companies is greeted positively by the investors.

Dividend per share has been considered as an important variable that influenced the share prices. Sharif et al., (2015), examined various factors affecting share price in Tehran Stock Exchange and found that dividend per share along with other factors to have positive impact on share price of the companies. The study of Botchewy, (2014) on the impact of dividend payments on share price of some companies that are listed in Ghana Stock Exchange, concluded that as dividend per share amount increases, the market share prices of those companies rise due to pressure on the shares. A study on the effect of dividend policy on share prices of companies in Nairobi Securities Exchange by Waithaka et al., (2012), found that dividend payments affected the share prices and stock trading volume of the companies. Their study also recommended that companies should always strive to pay dividend consistently for their shares to perform well at the stock exchanges.

In recent times, some studies have found Dividend Yield to be an important determinant that influences the stock prices of companies. The studies of Nazir et al., (2010) on the effect of dividend policy on stock prices have found a positive relationship between dividend yield and stock price behaviour. It signifies how much a company pays dividend in relation to its stock price. The studies of Ammihud and Li, (2002); Rashid and Rahman, (2009); and Suleman, (2011) on the effect of dividend policy on stock prices have found a positive relationship between dividend yield and stock price behaviour. As per the study of Asghar, (2011), the share price volatility has a strong positive correlation with dividend yield. Asghar considered different sectors in Pakistan for four years for the study. Likewise, Zulkifli et al., (2012) in their study on construction companies of Malaysia, taking share price volatility as dependent variable and dividend yield, dividend payout ratio, leverage, growth, size, and earnings volatility as independent variables, found that dividend yield have positive effect on share prices of the sample companies. The study of Maharishi and Malik, (2015) on 30 BSE companies concluded that the price volatility and dividend yield have strong positive correlation but price volatility is negatively correlated with growth in assets.

Dividend is by far a single important determinant affecting stock prices, (Sen and Ray, 2003). In their study on BSE index companies in India over a period of 1988-2000, they have found that dividend payout ratio has high impact on the stock prices of the selected companies. Mokaya and James (2013), in their study explained about how dividend policy affects the share prices in banking industry in Kenya. Their study showed that an increase in dividend payout ratio leads to increase in share prices. Lashgari and Ahmadi (2014) studied the impact of dividend policy on stock price volatility in Tehran Stock Exchange. They found that dividend payout ratio, leverage, earning volatility, and company size have negative effect on stock price volatility. Ponsian et al., (2015), examined the relationship between dividend policy and share price of 13 companies listed in Dar Es Salaam Stock Exchange (DSE) for the period of five years. The independent variables considered for the study were dividend yield, dividend payout ratio, earnings per share

and price-earnings ratio. The findings of the study showed that the dividend yield or price-earnings ratio has the most significant relation with the share price. The further empirical findings also stated that dividend payout ratio and earnings per share have positive effect on share price while dividend yield is negatively associated to share price.

### 3. Statement of the Problem

Dividend payout policy has to undergo crucial decisions about 'when' and 'how much' per cent of the company's profits should be declared as dividend. The dividend decision of a company has to be approved by its shareholders. The shareholders may have diverse opinion on and expectation of the amount and time of dividend payments, which makes it difficult for the company Board of Directors to decide. Some shareholders may prefer regular dividends while others may prefer future capital gains due to tax related problems, insecurities and fear of loss, etc.

Speculation is a common practice in Indian Stock Market which is dominated by Foreign Institutional Investors (FIIs). Over-speculation in stock markets leads to constant fluctuation in the stock prices. In fact the investment experts say that Indian Stock Market is one of the most volatile stock markets in the world. This highly volatile nature of Indian Stock Market affects the investment decision making of the common investors. Investors are confused whether to go by the rising share prices or base their investments on the past dividend records of companies. Some National and Foreign Institutional Investors purchase maximum amount of share of few companies, making an artificial share price rigged to gain in the short-run. They do not pay attention to the company's wealth maximization motives. When the share price of a company rises due to speculation or due to higher dividend announcements, the common investors also purchase the shares with the hope of getting short-term income from trading. Often very small portion of shares will be available for the individual investors. The bad effect of excessive speculation is that it creates surplus liquidity for few companies and little or no liquidity for other companies. Whenever there is liquidity problem, the companies have shortage of working capital and the profit earnings as well as dividend decisions are affected. As a result of low dividend payouts the share prices of those companies will be low.

In secondary market, insider trading is a common unfair practice in which traders who are insiders to an organization manipulate and misuse the unpublished sensitive information. This unfair practice is quite common in India in which share prices are artificially rigged so as to profit the insider. Also the insiders to the companies know about the profits and the future dividend amount to be declared much before the general public. If higher dividend is expected from their companies, these insiders purchase maximum amount of shares through various accounts, through their relatives and friends. This leads to loss to the common investors. There is no clear cut idea that an investor can have about the right company to invest. Some investors reflect on the company's net profit or on its dividend history before investing. But the fact is that no single determinant review can lead the investor to good dividends earnings. The question is whether dividend declarations significantly affect the share prices of companies, and to what extent?

### 4. Significance of the study

Dividend payout policy influences the growth of the company and the price of its equity shares in the market. It has both micro and macro level of significance in companies. At the micro level,

it is crucial for investment and financial decision making. At macro level, corporate dividend payout policy helps in formulating appropriate policies for achieving the national aggregate savings and sector-wise distribution of those savings in keeping with priorities of National Credit Plan (Bhole, 1980). It also plays an important role in creating a healthy investment climate and influences the saving pattern in an economy for rapid economic growth of a country. Distribution of dividend has a great impact on savings of household sector too. All these savings thus generated, helps in the process of capital formation and is of great importance to economic planners in the long run. Dividend declaration of companies serves as a signal to shareholders and investment community about their future expectations, and helps the companies to attract and hold the type of buyers that will result in a stable shareholder base and the share price. There are significant differences between dividend policies in developed, developing and underdeveloped countries. Glen et al., (1995) in their studies showed that dividend payout rates in developing countries are approximately two-thirds of those in developed countries. Moreover, in emerging market like India with certain competitive natures, corporations may not be able to follow a stable dividend policy and different variables may affect and influence the same. Many companies try to retain their profits, which minimizes the borrowing of the capital from outside sources that bear high interest rates. But the investors expect current earnings rather than future earnings which is uncertain both in amount and time. Dividend payout policy is a crucial financial decision making process and is affected by many factors and such decisions affect market share prices. Thus, the main focus of the proposed study is to examine the effect of dividend payout policy on market share price, volume of shares, total trades and total stock turnover in selected companies in India. This study has considered the top BSE-500 index companies by market capitalization, whose shares are mostly traded in the stock market. These companies represent more than twenty major sectors in India that have significant contributions to the GDP growth of the economy. Thus, the findings of this study could provide reliable information to investors and to the company policy makers in making important decisions. Also, this study will examine whether and to what extent the results of previous researchers are relevant particularly to companies in India.

**5. Objective of the study:** The study has been undertaken to fulfil the objective given below:

- 1) To examine the impact of dividend announcements on the share price, number of shares, number of trades and total turnover of the selected companies.

**6. Hypothesis ( $H_0$ ):** There is no significant impact of dividend announcement on share price, number of shares, number of trades, and total turnover of the selected companies.

## 7. RESEARCH METHODOLOGY:

**Population:** For fulfilling the objective of the study, the researcher considered the top BSE index companies by market capitalization. Top BSE-500 index companies by market capitalization represent nearly 93% of the total market capitalization on BSE. BSE-500 index companies cover more than twenty major sectors of the economy. (Source: [www.wikinvest.com](http://www.wikinvest.com))

**Sample frame:** The study considered top 10 BSE companies by highest market capitalization as on 28<sup>th</sup> of June, 2016. Judgment sampling method is used to select the sample size. Here, the companies with top market capitalization having a *consistent flow of profits, continuous dividend payout records, and with continuous trading and operations* throughout the study period (2009-2017) are considered for the study. The sample companies selected for the study include Tata



Consultancy Services Ltd. (BSE-532540), Hindustan Unilever Ltd. (BSE-500696), State Bank of India (BSE-500112), Maruti Suzuki (BSE-532500), Infosys (BSE-500209), Oil and Natural Gas Corporation of India (BSE-500312), Indian Oil Corporation (BSE-530965), ICICI BANK (BSE-532174), Kotak Mahindra Bank (BSE-500247), and National Thermal Power Corporation Ltd. (BSE-532555).

**Period of coverage:** The data for this study is collected from Bombay Stock Exchange Official Directory and through websites- [www.capitaline.com](http://www.capitaline.com); [www.bseindia.org](http://www.bseindia.org); [www.moneycontrol.com](http://www.moneycontrol.com); [www.shine.com](http://www.shine.com); [www.yahoo!finance.com](http://www.yahoo!finance.com) and [www.wikinest.com](http://www.wikinest.com); covering a period of 9 years from 2009-2017. This study period has been chosen in order to identify the impact of dividend announcement on share price, number of shares, number of trades, and total turnover during the recovery period after the World Economic Crisis in the years 2007-2008.

**Data collection:** The study is based on secondary data. The major source of secondary data is the annual reports of selected BSE-500 index companies in India which are listed in Bombay Stock Exchange (BSE). The researcher has considered the published and unpublished research papers, dissertations, books, articles and journals for collecting secondary data for the study.

**Event Study Methodology:** In order to analyze the impact of dividend announcement on share's price, number of shares, number of trade, total turnover and return in the selected top 10 BSE companies by top market capitalization, event study method have been applied. An event study is an attempt to measure the valuation effects of a corporate event, such as earnings or dividend declaration, by examining the response of the stock price around the announcement of the event (dividend). The following steps will be considered to perform even study, in relevant to the studies of Kapoor, (2009); Singh and Sapna,(2011).

- ✓ Find out different dividend declaration dates in each of the company respectively from 2009 to 2017.
- ✓ The event window of 10 days before the event day zero and 10 days after the event day has been taken.
- ✓ As per Market Model (Mackinlay, 1997), daily closing prices of 10 day before the event day zero and 10 days after the event day zero were considered for calculating returns, expected returns, abnormal returns with the help of Microsoft excel.
- ✓ Cumulative abnormal returns has been calculated with the help of average abnormal returns to examine the reaction of share price on dividend announcements over a period of time for the selected 10 companies.

To examine the effect of dividend declaration on share price, Returns ( $R_{it}$ ), where the time 't' on security 'i' will be calculated as:-  $R_{it} = (P_{it} - P_{it-1}) / P_{it-1}$ ; where  $P_{it}$  is the daily closing price of the stock 'i' on the day 't'.  $P_{it-1}$  is the closing price of the stock 'i' on the day 't-1'. The expected return is estimated by employing the market model parameters prior to the event window-  $E(R_{it}) = \alpha + \beta \times R_{mt} + E$ . Where, E is the expected return of stock 'i' on time 't'; while  $\alpha$  and  $\beta$  are the parameters of the regression equation.  $R_{mt}$  is the daily return on stock market index (top 10 BSE index companies by market capitalization) at time 't';  $R_{mt} = (I_t - I_{t-1}) / I_{t-1}$ , where  $I_t$  is the value for the market index at time 't';  $I_{t-1}$  is the value of the market index at time 't-1'.

The abnormal return is defined as the difference between actual return and expected normal return on a stock 'i' at time 't'. The abnormal return ( $AR_{it}$ ), will be calculated for 10 days before



the event and 10 days after the event in the event window according to the equation as follows:-  
 $AR_{it} = R_{it} - E(R_{it})$ .

The average abnormal return ( $AAR_{it}$ ), will be calculated across the sample companies from different sectors by using the formula:-  $AAR_{it} = (1/N) \sum AR_{it}$ ; where N is the number of observation. Thus, the abnormal returns will be divided by the number of days to find out average abnormal returns.

Then, cumulative average abnormal return for the sample companies will be calculated as under:-  $CAAR = \sum AAR_{it}$ ; where 't' is the total time period i.e., 9 years in this study.

Finally, the 't-test' will be computed to examine the statistical significance of AARs and CAARs related to dividend announcement, are standardized as under:  $t = AAR / \sigma(AARs)$ ; where AAR is the average abnormal return for each event window;  $\sigma$  is the Standard error of the Average Abnormal Returns;  $t = CAAR / \sigma(CAARs)$ ; where CAAR is the Cumulative Average Abnormal Returns.

**8. Analysis and Interpretation of Data:** In order to identify the effect of dividend announcements on the market share prices of the selected top companies by market capitalization, listed in Bombay Stock Exchange, different dividend announcement dates were obtained from [www.moneycontrol.com](http://www.moneycontrol.com). Against each dividend announcement date by the companies, the market share prices of the companies were obtained from the official website of Bombay Stock Exchange for 9 years (2009-2017). For each company, the average close share prices were calculated for the study period. By applying event study methodology in Microsoft excel, the abnormal returns of the selected 10 companies were analyzed. In order to know the reactions of share prices on dividend announcement (event day), the researcher considered 10 days prior to the event day and 10 days after the event day.

**a) Result based on t-test:** The t-test analysis can be used when the samples of the study are dependent i.e., when there is only one sample which has been tested twice (repeated measures) or whenever there are two samples that have been paired. Researchers like Sukhla (2011), and others considered the t-test analysis to measure the effect of before and after the event date such as dividend announcements. In this study, various data before ten days and after ten days of dividend announcements have been collected and tabulated in such a manner so that proper calculations can be made with the help of t-test to know if there is any significant change is observed before and after announcement of dividend by the selected companies. Following is the equation of paired t-test (Sukhla, 2011):

Test Statistics:

$$t = \frac{D - \bar{D}}{(S.D) / \sqrt{n}}$$

Where, D= Mean of Difference; S.D. = Standard Deviation of Differences; n= Number of matched pairs.

$$\text{In which, S.D.} = \sqrt{\frac{\sum D^2 - (\sum D)^2}{n - 1}}$$

**Significance level:** 5% Level of Significance

**Degree of Freedom:** n-1

**Decision rule:** In case the calculated value of 't' is less than the tabulated value, the  $H_0$  is said to be significant and accepted.

1. Evaluation of Average SHARE'S PRICE Before and After Announcing Dividend (for 9 Years)

Table 1: t-Test: Paired Two Sample for Means		
	<i>Variable 1</i>	<i>Variable 2</i>
Mean	1086.116989	1101.138371
Variance	674691.6045	687798.7684
Observations	10	10
Pearson Correlation	0.999344861	
Hypothesized Mean Difference	0	
Df	9	
t Stat	-1.536617644	
P(T<=t) one-tail	0.079381711	
t Critical one-tail	1.833112923	
P(T<=t) two-tail	0.158763422	
t Critical two-tail	2.262157158	

$\bar{D}$	n	S.D	$t_c$	$t_T$
-15.02	10	30.9	-1.54	$\pm 2.262$

**Statistical Decision-** Since the tabulated value of 't' in the table at 5% level of significance and with degree of freedom n-1=9, is more than the calculated value in case of Average Share Prices before and after dividend announcements of selected companies, hence the  $H_0$  is significant and accepted.

**Conclusion-** From the above calculations, it is clear that dividend announcements do not affect the Average Share Prices of the sample companies. In other words, there is no significant change in the Average Share Prices before and after announcement of dividend in the selected companies.

2. Evaluation of Average NUMBER of SHARES Before and After Announcing Dividend (for 9 Years)

Table 1.1: t-Test: Paired Two Sample for Means		
	<i>Variable 1</i>	<i>Variable 2</i>
Mean	392076.1226	452026.9298
Variance	1.47151E+11	1.62414E+11
Observations	10	10
Pearson Correlation	0.996607378	
Hypothesized Mean Difference	0	

Df	9		$\bar{D}$	n	S.D	$t_c$	$t_T$
t Stat	-5.021334818		-59950.81	10	37,755.11	-5.02	$\pm 2.262$
P(T<=t) one-tail	0.000358892		<b>Statistical Decision-</b> Since the tabulated value of 't' in the table at 5% level of significance and with degree of freedom n-1=9, is less than the calculated value in case of Average Number of Shares before and after dividend announcements of selected companies, hence the $H_0$ is insignificant and rejected.				
t Critical one-tail	1.833112923						
P(T<=t) two-tail	0.000717783						
t Critical two-tail	2.262157158						

**Conclusion-** From the above calculations, it is clear that dividend announcements do affect the Average Number of Shares of the sample companies. In other words, there are significant changes in the Average Number of Shares before and after announcement of dividend in the selected companies.

### 3. Evaluation of Average NUMBER of TRADES Before and After Announcing Dividend (for 9 Years)

Table 1.2: t-Test: Paired Two Sample for Means			$\bar{D}$	n	S.D	$t_c$	$t_T$
	Variable 1	Variable 2	-2268.45	10	3503.19	-2.687	$\pm 2.262$
Mean	7545.784887	9814.237662	<b>Statistical Decision-</b> Since the tabulated value of 't' in the table at 5% level of significance and with degree of freedom n-1=9, is less than the calculated value in case of Average Number of Trades before and after dividend announcements of selected companies, hence the $H_0$ is insignificant and rejected.				
Variance	39622020.7	70945974.51					
Observations	10	10					
Pearson Correlation	0.975512127						
Hypothesized Mean Difference	0		<b>Conclusion-</b> From the above calculations, it is clear that dividend announcements do affect the Average Number of Trades of the sample companies. In other words, there are significant changes in the Average Number of Trades before and after announcement of dividend in the selected companies.				
Df	9						
t Stat	-2.687151146						
P(T<=t) one-tail	0.012456251						
t Critical one-tail	1.833112923		<b>4. Evaluation of Average TOTAL TURNOVER Before and After Announcing Dividend (for 9 Years)</b>				
P(T<=t) two-tail	0.024912502						
t Critical two-tail	2.262157158						

Table 1.3: t-Test: Paired Two Sample for Means		
	<i>Variable 1</i>	<i>Variable 2</i>
Mean	249741495.3	329477049.3
Variance	6.41336E+16	1.13723E+17
Observations	10	10
Pearson Correlation	0.989971594	
Hypothesized Mean Difference	0	
Df	9	
t Stat	-2.69310653	
P(T<=t) one-tail	0.01233533	
t Critical one-tail	1.83311292	
P(T<=t) two-tail	0.02467066	
t Critical two-tail	2.26215715	

$\bar{D}$	n	S.D	$t_c$	$t_T$
-79735553.9	10	93626433.9	-2.69	$\pm 2.262$

**Statistical Decision-** Since the tabulated value of 't' in the table at 5% level of significance and with degree of freedom  $n-1=9$ , is less than the calculated value in case of Total Turnover before and after dividend announcements of selected companies, hence the  $H_0$  is insignificant and rejected.

**Conclusion-** From the above calculations, it is clear that dividend announcements do affect the Total Turnover of the sample companies. In other words, there are significant changes in the Total Turnover before and after announcement of dividend in the selected companies.

#### b) Analysis of Data with the help of 'ANOVA'

For the present study, the researcher has considered 10 companies from Bombay Stock Exchange which has highest market capitalization as on 28<sup>th</sup> of June, 2016. In order to ensure if there exists any significant variations among the sample companies and also variation during the study periods (2009-2017) of the study, the researcher has applied 'Anova' technique and tested the significance of the differences at 5% level of significance with the help of Microsoft Excel. For the purpose, the researcher has taken the data for (10 days before the dividend announcements and 10 days after the dividend announcements) of the variables such as- daily average Share Prices, Number of Shares, Number of Trades and Total Turnover of the randomly selected 10 BSE companies.

### Calculation of Average Share Prices with the help of ANOVA

**Hypothesis:  $H_0$** :- There would not be any significant difference in Average Share Prices among the selected companies and over the study periods.

Table 2: ANOVA TABLE (Average Share Prices)					
Source of Variation	SS	Df	MS	$F_C$	$F_T$
Among the Companies	16699.972	22	759.089	2.078	1.596
Over the Years	141109742.7	9	15678860.3	42929.622	1.927
Error	72314.038	198	365.222		
Total	141198756.8	229			

**Conclusion:** From the above calculations of Average Share Prices, it can be seen that the Calculated Value of 'F' is higher than the Tabulated Value of 'F' in both the cases, i.e., among the companies and over the years. Hence, the hypothesis stands rejected, which means there exists significant differences in the average share prices among the selected companies and over the study periods (2009-2017).

### Calculation of Number of Shares with the help of ANOVA

**Hypothesis:  $H_0$** :- There would not be any significant difference in Number of Shares among the selected companies and over the study periods.

Table 2.1: ANOVA (Number of Shares)					
Source of Variation	SS	df	MS	$F_C$	$F_T$
Among the Companies	2.88E+12	24	1.2E+11	6.497031	1.567906
Over the Years	3.68E+13	9	4.09E+12	221.6857	1.923412
Error	3.99E+12	216	1.84E+10		
Total	4.37E+13	249			

**Conclusion:** From the above calculations of Number of Shares, it is observed that the Calculated Value of 'F' is higher than the Tabulated Value of 'F' in both the cases, i.e., among the companies and over the years. Hence, the hypothesis stands rejected, which means there exists significant differences in the Number of Shares among the selected companies and over the study periods (2009-2017).

### Calculation of Number of Trades with the help of ANOVA

**Hypothesis:  $H_0$** :- There would not be any significant difference in Number of Trades among the selected companies and over the study periods.

Table 1.2: ANOVA (Number of Trades)					
Source of Variation	SS	df	MS	F	F crit

Among the Companies	1.65E+09	24	68829268	8.28881	1.567906
Over the Years	1.22E+10	9	1.35E+09	162.5901	1.923412
Error	1.79E+09	216	8303879		
Total	1.56E+10	249			

**Conclusion:** From the above calculations of Number of Trades, it can be seen that the Calculated Value of 'F' is higher than the Tabulated Value of 'F' in both the cases, i.e., among the companies and over the years. Hence, the hypothesis stands rejected, which means there exists significant differences in the Number of Trades among the selected companies and over the study periods (2009-2017).

### Calculation of Total Turnover with the help of ANOVA

**Hypothesis:  $H_0$ :** There would not be any significant differences in Total Turnover among the selected companies and over the study periods.

Table 2.3: ANOVA (Total Turnover)					
Source of Variation	SS	df	MS	$F_C$	$F_T$
Among the Companies	1.86E+18	24	7.77E+16	4.820749	1.567906
Over the Years	1.95E+19	9	2.17E+18	134.4974	1.923412
Error	3.48E+18	216	1.61E+16		
Total	2.48E+19	249			

**Conclusion:** From the above calculations of Total Turnover, it can be seen that the Calculated Value of 'F' is higher than the Tabulated Value of 'F' in both the cases, i.e., among the companies and over the years. Hence, the hypothesis stands rejected, which means there exists significant difference in the Total Turnover among the selected companies and over the study periods (2009-2017).

### c) Findings based on Event Study Method

The table (below) shows the Average Abnormal Return (AAR) and Cumulative Average Abnormal Returns (CAAR) of Share price, Number of Shares, Number of Trades and Total Turnover, in percentage (%), with the event day as zero, ten days before the event day and ten days after the event day.

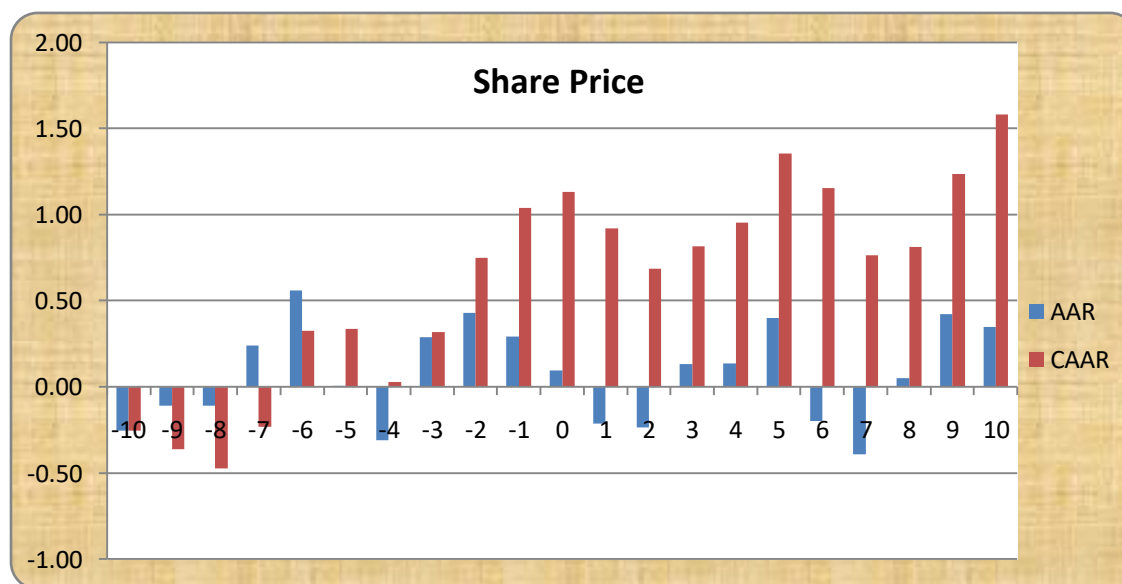
Table 3: Event Time	Share Price		No. Of Shares		No. Of Trades		Total Turnover	
	AAR	CAAR	AAR	CAAR	AAR	CAAR	AAR	CAAR
-10	-0.253	-0.253	23.042	25.155	4.970	4.970	14.420	14.420
-9	-0.110	-0.363	-19.054	6.101	-4.418	0.552	-9.234	5.186
-8	-0.108	-0.471	13.940	20.041	3.144	3.696	11.540	16.726



-7	0.239	-0.232	-4.152	15.889	1.649	5.345	-2.975	13.751
-6	0.560	0.327	19.242	35.131	2.509	7.854	10.985	24.736
-5	0.008	0.335	-12.381	22.750	-4.762	3.092	5.046	29.782
-4	-0.308	0.027	-8.922	13.828	2.424	5.516	-9.528	20.254
-3	0.290	0.316	13.534	27.362	5.001	10.517	1.707	21.960
-2	0.431	0.748	-2.256	25.106	0.780	11.297	-7.182	14.779
-1	0.290	1.038	-1.895	23.211	2.225	13.522	9.293	24.072
0	<b>0.093</b>	<b>1.131</b>	<b>115.749</b>	<b>138.961</b>	<b>141.007</b>	<b>154.528</b>	<b>147.630</b>	<b>171.702</b>
1	-0.213	0.918	-34.909	104.052	-32.438	122.090	-33.000	138.702
2	-0.234	0.684	-22.495	81.557	-22.047	100.043	-24.253	114.449
3	0.132	0.816	-1.608	79.948	-5.241	94.802	-2.286	112.164
4	0.137	0.954	-1.348	78.600	-3.640	91.162	16.374	128.538
5	0.399	1.352	-6.109	72.491	1.990	93.153	-10.881	117.657
6	-0.198	1.154	-4.646	67.845	-4.799	88.354	-3.864	113.793
7	-0.392	0.762	1.200	69.045	10.367	98.721	3.478	117.272
8	0.052	0.814	-5.369	63.676	-14.978	83.742	-13.921	103.351
9	0.421	1.235	-3.316	60.360	0.923	84.665	0.187	103.538
10	0.347	1.582	8.470	68.830	-0.511	84.155	8.421	111.958

It has also been depicted with the help of a bar diagram as shown below

*Figure 1: Bar diagram showing Share Price Average Abnormal Return and Cumulative Average Abnormal Return in percent for the 10 companies (2009-2017).*

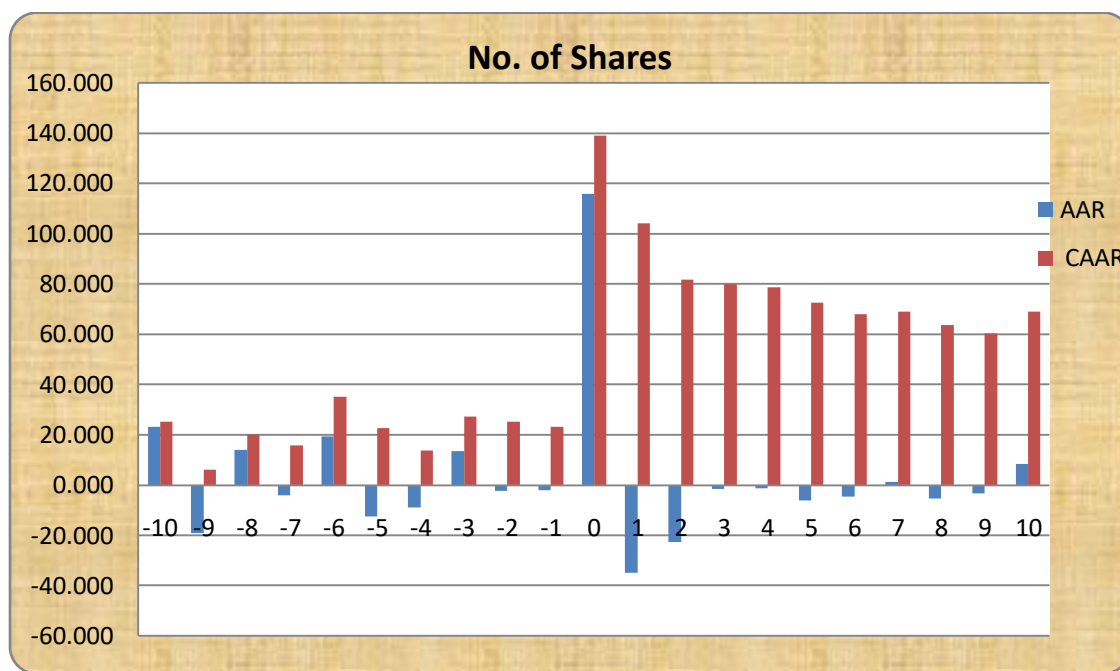


It can be seen from the table that both the AAR and CAAR of the ten companies showed a significant increase on the event date (0) when the dividend announcements were made by these

ten companies (AAR=0.6% increase from the day  $-1$  and CAAR=1.4% increase from the day  $-1$ ). Further increase on the percentage of CAAR can be observed after the announcement of dividend by these top companies of Bombay Stock Exchange. From -1.6% on the day  $-10$ , the CAAR has significantly increased to 12% on the day  $+10$  of the event window.

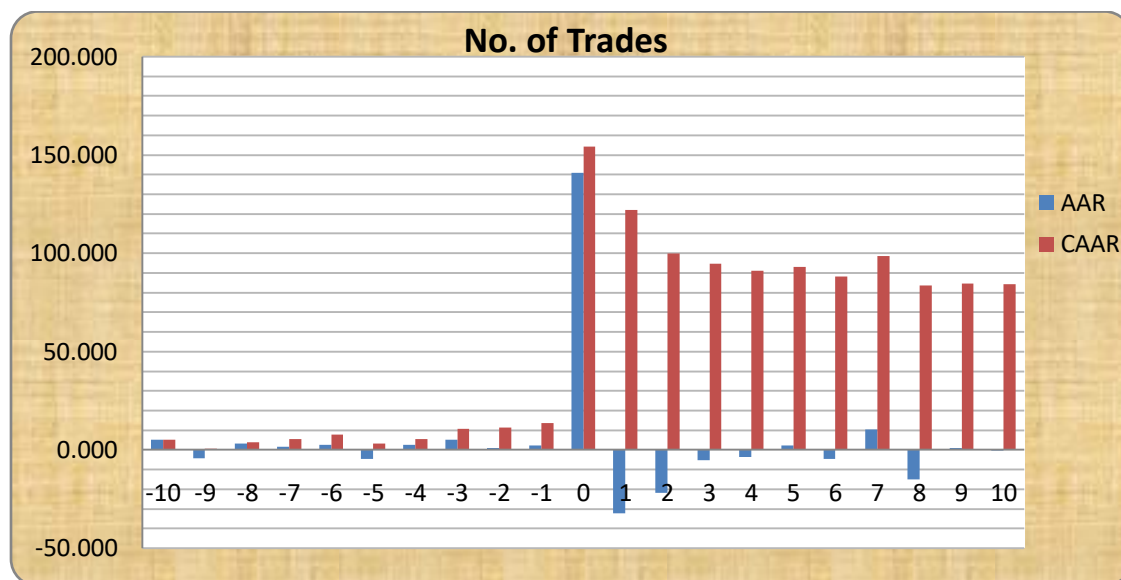
From the above bar diagram it can also be seen that from the day -3, -2, -1 and on the day '0' of the event window, both the Average Abnormal Returns and Cumulative Abnormal Returns are significantly high. This reveals that there is possibility of asymmetry information of the companies' policies among the insiders of the companies. While on the day +1 and day +2, the average Abnormal Return showed negative.

Figure 2: Bar diagram showing Number of Shares Average Abnormal Return and Cumulative Average Abnormal Return in percent for the 10 companies (2009-2017).



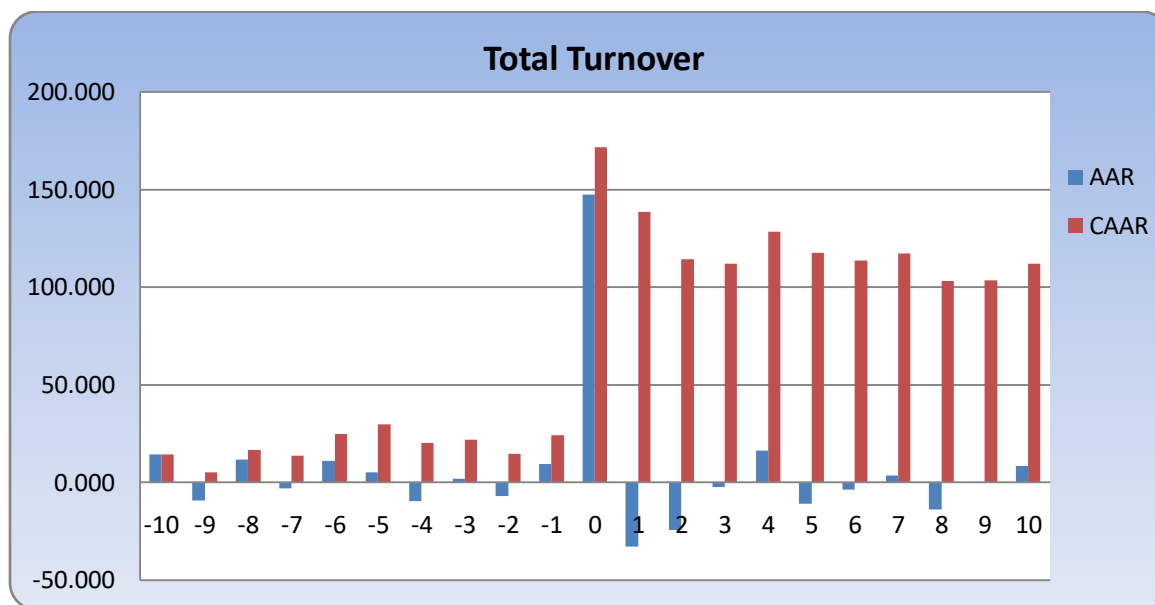
From the above bar diagram of number of shares, it can be observed that both Average Abnormal Returns (AAR) and Cumulative Average Abnormal Returns (CAAR) are high on the event window day 'zero', which reveal that the investors purchased most number of shares on the event day i.e., on the day of dividend announcement. On day +1 and day +2, the AAR showed negative.

*Figure 3: Bar diagram showing Number of Trades Average Abnormal Return and Cumulative Average Abnormal Return in percent for the 10 companies (2009-2017).*



From the above bar diagram of Number of Trades, it can be observed that both Average Abnormal Returns (AAR) and Cumulative Average Abnormal Returns (CAAR) are high on the event window day 'zero', which reveal that the investors purchased or sold the shares of the sample companies highest on the event day i.e., on the day of dividend announcement. On day +1 and day +2, the AAR showed negative.

*Figure 4: Bar diagram showing Total turnover Average Abnormal Return and Cumulative Average Abnormal Return in percent for the 10 companies (2009-2017).*



Likewise the above bar diagram of Total Turnover showed AAR to be high on the event day 'zero' and negative on the day +1 and day +2. Thus, the maximum numbers of investors do the stock trading on the day of dividend announcement.

## CONCLUSION

There are few researches that have been conducted on the impact of dividend announcements on share prices of different companies from Bombay Stock Exchange and have come out with different results in their study areas. Companies with high profits level can distribute more amount of dividend to their shareholders. Depending on their earnings and other financial considerations, the companies announce the dividend amounts. Several literatures of the similar studies reveal that higher the dividend announcements by companies, higher will be the demand for their shares and hence increase the share prices. This in turn can have positive influence on the general investors. This particular study was conducted to investigate the effect of dividend announcements on the market share prices of 10 BSE companies with highest market capitalization as on 28.06.2017. The t-test result shows that there is no significant difference between the share prices before and after the dividend announcements by the selected companies. But significant differences before and after the dividend announcements were observed in case of Number of Shares, Number of Trades and Total Turnover. Based on event study methods, among the selected companies, the average abnormal return (AAR) and the cumulative average abnormal return (CAAR) showed high on the zero day (event date) and the CAAR showed high increase from the day -10 to the day +10 of the event window. There is

significant increase in AAR and CAAR from the day -3 to the day '0' which reveals about the possibility of asymmetry information among the insiders of the sample companies. Also there is sudden turn of negative with respect to average abnormal returns. This reveals that the investors wait for the companies to announce their dividend and purchase or sell the stocks mostly on the day of dividend announcement, event day 'zero'. The amount of dividend announcements made by these companies provide favourable signal for the investors in making important decisions about the purchase and sale of shares.

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DOI: **10.5958/2249-7137.2020.00772.7**

## HISTORICISM IN THE POETRY OF ERKIN VOKHIDOV

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### ABSTRACT

*This article discusses the changes that have occurred in all sections of the language, including its vocabulary, during the historical development of the language. It has been suggested that some words in a language may become obsolete, out of date or appear as new concepts. Due to the disappearance of an object or concept that represents a word in life, or the appearance of other words that express their meaning, some words are gradually forgotten without use.*

**KEYWORDS:** *Historicism, Written Texts, Oral Texts, Printed Texts, Palaeographic Records, Archaism.*

### INTRODUCTION

Historicism is the idea of emphasizing space and time, such as the historical period, geographical location, and local culture. ... The term "historicism" was coined by the German philosopher Karl Wilhelm Friedrich Schlegel. Over time, it acquired different and slightly different meanings.

Creating any text has specific practical goals. Texts vary in purpose. In this regard, the texts can be divided into four types: a) oral texts, b) written (manuscripts), c) printed texts, d) texts characteristic of public communication. Each of these texts, in turn, is divided into several subtypes. For example, an oral text consists of such types as a monologue, dialogue (conversation), voices (rumours), folklore.

Manuscripts are divided into four types:

- a) Epigraphic texts - these include prefaces, indexes. For example, mineral extraction tax, National Library of Uzbekistan named after Alisher Navoi, airport, hostel.

- b) Sphragmatic texts are texts attached to seals.
- c) Numismatic texts - inscriptions on money, coins.
- d) Paleographic records - a) a letter, b) a document, c) creativity.

Printed texts are an ideal form of manuscripts, which in turn are divided into literary texts and scientific texts. Literary texts include works of art, and the types of scientific texts are diverse.

The media is the fourth type of text. The role of technical means (radio, television, cinema) in the dissemination of this text is invaluable. These texts will be published once, and if they are restored, additional information needs to be added. Such texts provide the public with the latest news (newspapers, magazines, radio, and television).

## MATERIALS AND METHODS

During the historical development of the language, changes occur in all its parts, including vocabulary. In this case, some words in the language become obsolete, out of date, or new words appear. These events require the division of the lexical structure of the language into 2 layers:

1. The modern layer (neutral layer).
2. Worn layer.
3. A new layer.

Modern layer. This layer is the main layer of the lexicon of the Uzbek language, which consists of words related to national vocabulary - a dictionary with unlimited scope, as well as terms and words related to the profession. The words in this layer have neither the colour of novelty nor the colour of obsolescence.

At the present level, the use of words more or less in speech, the use of all people or the use of only a certain group of people in speech is not taken into account. Thus, words that do not have the colour of novelty and obsolescence are an obsolete layer. Due to the disappearance of an object or concept that represents a word in life, or the appearance of other words that express their meaning, some words are gradually forgotten without use. They are rarely used in speech. Some of them are understandable, some are not understood by many, and if they are used in fiction and scientific literature, they require explanation. Old words are called obsolete vocabulary. The obsolete dictionary is divided into 2 types:

1. Historical words or historicisms.
2. Archaic words or archaisms.

Historical words are words that were the names of things and events in the past but are now obsolete. Historical words are used when it comes to things that have disappeared in society, about individuals. They have no synonyms in the modern language. For example chaise, yasovul, throne, concubine, dinar (gold coin), mile (1 km), stone (8–8 km), gas (71 cm), batman (176, 128 kg), miscal (4.25 g.), Miri (5 tiyin). Some words become different in the process of language development. Although one meaning of such words is outdated, another meaning is used in the modern layer.

For example: compare the meaning of the word rich: a rich man secretly watched the road (Oybek). What did you not do to become rich, and what was the result?

Archaic words. Outdated names of existing things are called archaic words. Many archaic words are called archaisms. Archaism is a Greek word that means "ancient."

Since the things that an obsolete word expresses exist in modern life, there will be a word belonging to the modern layer that cannot change its obsolete name. If something has more than one name, it is stored in a language that can meet the laws of language development, and one that does not answer has the colour of antiquity and becomes obsolete. For example, a secretary is a secretary, mirza, secretary. Among them, the word "secretary" is widely used today. The word "secretary" is outdated and archaic. Archaic words are words that are outdated in the speaker's eyes: revolution (revolution), district (district), region (region), international (international). For example bitik (book), ulus, budun (people), omiz (chest).

Words may be archaic in their entirety, or their meaning may be archaic. Accordingly, these are a) lexical archaisms; b) in the form of semantic archaisms.

In lexical archaism, the word becomes obsolete: gulgun, simo (image).

In semantic archaism, the meaning is out of date: the flower is out of date in the sense of "flower", the station is out of date in the sense of stopping the caravan, the liver is out of date in the sense of "liver", the state is out of date in the sense of "wealth". ,

Archaization occurs both in expressions and in the context of grammatical events. There are many cases of archaization of phrases, but there is also archaization of grammatical phenomena: printing a collar (phrases) using the alif-lam, gardoni pen; -din, -mish adjectives, -bon, -ibon adjectives, -dur are obsolete grammatical forms.

There are also phonetic archaisms in which the sound becomes obsolete: soap, pumpkin (soap, pumpkin).

Neologisms. Neologisms are words that arise because of the need to express new things in our daily lives, their signs, new relationships, new concepts in general or old words used in a new sense. Neologism is a Greek word meaning neos. Neologisms are words that have novelty. For example bachelor, master, computer, computer technology, marketing, supermarket. When neologisms appear, they are included in the vocabulary, which is limited in volume. If the meaning of neologism is clear, it can become popular. At the same time, it loses the colour of novelty and becomes a popular word. For example brigade, television, tractor, astronaut, astronaut, etc.

Some neologisms may remain new, taking the place of limited vocabulary. So neologism is a relative concept. Because each period has its neologism.

The word or meaning of the word may be a neologism. If the word is a neologism, it is called a lexical neologism: broker. Lexical neologisms are completely new words that have not yet been mastered. These words are: 1) new words formed in the Uzbek language with existing words and adjectives: seven years; 2) new words that came from another language and have not yet been included in the native language: master, bachelor. If one of the lexical meanings is new, it is called semantic neologism. For example satellite (satellite), welder (metal connector).

Historicism The old lexical unit currently used to denote the past is called historicism (Greek history - "research, research"). For example, qozi, ellikboshi, torus. It is necessary to distinguish anachronism from historicism. Anachronism is the process of designating the reality of another

period as a lexical unit, which calls the reality of one period. Such a mistake is often found in works on the past, therefore, if we ignore the task of the embodiment of the period, there is no single basis between archaism and historicism. is a lexical unit of history and is now used because of the need to name past events.

Historians are mainly used to describe the realities of the past. Historians use historians to give a realistic picture of historical events and give a work of art a historical spirit. Mahmoud Toir used historicisms to achieve images:

The result is a flower in your heart,  
 Ignorance is the slave of the devil in your body  
 Do not forget your past  
 Grow well in the air  
 Better to be free from jealousy!  
 (Patience, p. 121)

When the poet speaks of patience, he compares compassion between people with the flower of the human soul and ignorance with the slave of the devil in the human body. Historiography in these lines is the word "slave", which actually means "a servant who in the early years of an exploiting society was sold as private property and did not have the property completely dependent on its owner". It means "dumb" in a figurative sense. Nalam pierced the stone and did not reach his servant,

Netai laughter did not reach the mouth of the stream,  
 My condition did not reach the souls of the potters.  
 ("I Wanted Vaslin," p. 107)

The main character of the lyrics regrets that his moan shook the stone, but he did not reach the man, his laughter did not look like a stream, and his condition did not reach the cauldron. Two historians are involved in this: Kalandar (in Arabic) - "a wandering Sufi who reads religious gazelles and promotes the Muslim religion."

Janda (Persian-Tajik) is the "goat's nest of dervishes and calendars."  
 I don't need a translator to read through the eyes,  
 You need a plow to plant flowers in your heart  
 Don't let the burner burn, you don't need a razor  
 Isn't that enough for your lover to burn?  
 ("No need to translate," p. 219)

Unique metaphors and unique images. This is exactly what happened with Mahmoud Toir. The artist perfectly described the state of love. Moreover, he skillfully used not only historicism (hammer) but also archaism (tilmokh). In fact, a hammer is "the name of the simplest ancient wooden or iron tool with metal teeth that plowed with an animal."

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**CONCLUSION**

In conclusion, it should be noted that archaism and historicism play an important role in poetry. Thanks to them, speech becomes more vivid and beautiful images are achieved. Muhammad Erkin Vakhidov, involved in the analysis process, is a vivid example of the study by the lexicological department of outdated words (archaisms, historicisms) and their role in revealing the meaning of the text.

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DOI: **10.5958/2249-7137.2020.00773.9**

## **SOME ISSUES OF RE-UTILIZATION OF CASING STRINGS, UNUSED WATER INTAKE WELLS (FOR EXAMPLE, SOME COUNTRIES IN THE SOUTH-WESTERN SAHEL)**

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### **ABSTRACT**

*The article discusses some issues of extraction and reuse of casing strings of unused wells in tropical countries. The results of pilot work are presented to solve the above issue. In particular, the consistency of liquefied clay rocks located in the annulus of wells, which in turn depends on the equipment of the strings with drainage pipes, significantly affects the success of the extraction of casing pipes. Optimum arrangements for small diameter drainage pipes and hole sizes were established. The possibilities of applying the results of these works in other regions with a similar characteristic are indicated.*

**KEYWORDS:** Well, Column, Pipe, Consistency, Drainage, Rock, Clay, Sandstone, Lens, Hose, Diameter, Limit, Ductility, Water Resistance.



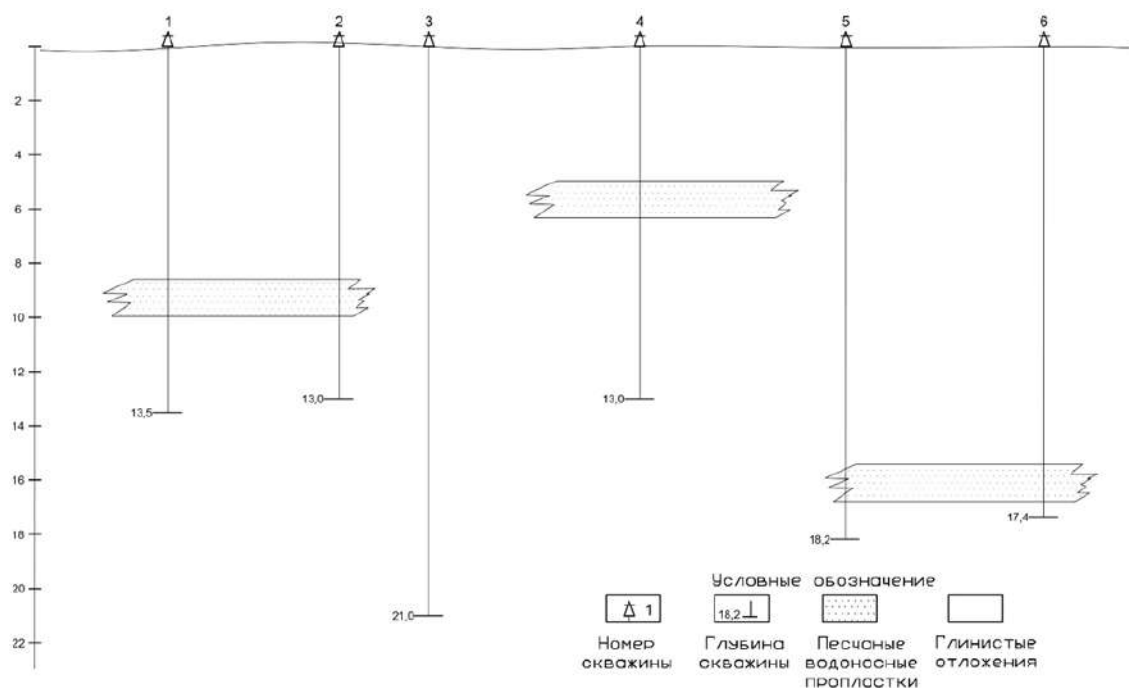
## INTRODUCTION

The territory of the countries bordering the southwestern part of the Sahara Desert (Senegal, Guinea Bissau, Republic of Guinea, Mali, Niger, etc.) is characterized by a dry and hot climate. In these vast territories, the population density is extremely low, and they are inhabited by nomadic tribes engaged in animal husbandry (mainly sheep breeding). These nomadic tribes constantly migrate with their herd in search of pastures and water sources. It often happens that there is grass, but there is no water and its natural sources are far away. Existing wells are currently unable to meet the needs of people and herds.

In recent years, as mobile drilling equipment developed, in regions with abundant grass for the needs of people and livestock, water wells began to be drilled into groundwater horizons. Unstable low yields within 1.5-5.0 m<sup>3</sup>/day were obtained from these wells. and after 4-6 days, some of them dried up, forcing people to look for other pastures and drill new wells.

## MATERIALS AND METHODS

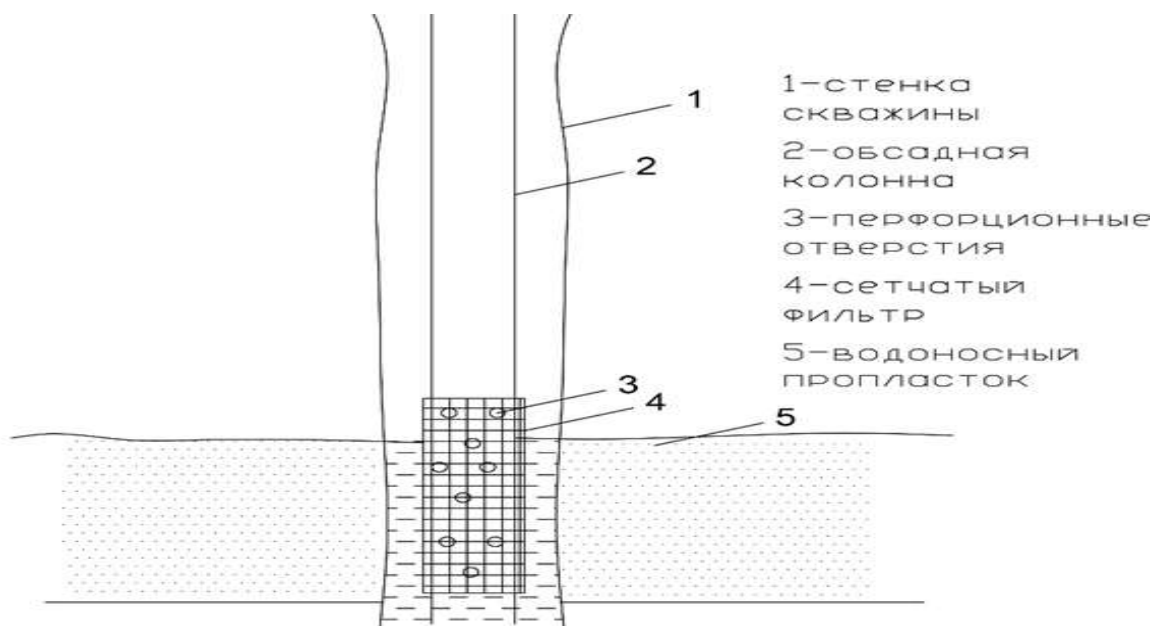
In the geological structure of the specified region, the covering rocks of the earth's crust are composed of clay-sandy rocks of Quaternary age. In the middle of clayey rocks, there are sandplates that have a lens-like structure, which hydrogeologically serve as natural groundwater collectors. These splines are limited in both capacity and area, resulting in a low production rate of drilled wells and their rapid depletion in a relatively short period of time (Figure 1).



**Fig. 1.** Geological section of wells.

As can be seen from this figure, the aquifers are discontinuous and are not hydraulically connected. In some cases, this is confirmed by the results of a chemical analysis of groundwater conducted by a mobile field laboratory. The chemical composition of groundwater according to the degree of mineralization refers to weakly mineralized and soft waters that meet the requirements of the WHO (World Health Organization) and are suitable for drinking.[2]The

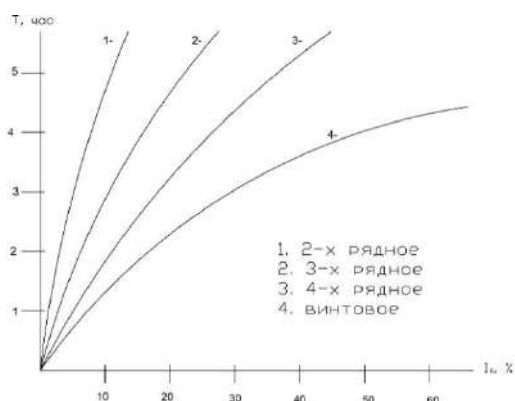
location of water wells is sometimes determined by geophysical studies (depending on the financial condition of the customer), but most often it is determined at random (depending on the reserves of the aft base). Drilling of wells is carried out by mobile wheeled drilling rigs equipped with a set of equipment, including pipes for fastening the walls of the well from collapses. Since the 90s of the last century, in order to reduce the cost of water wells, attempts have been made to attach the walls of wells with PVC plastic pipes. However, the viscoplastic properties of the clays, which make up the geological section, caused the crushing of the columns and closed the passage of water-lifting pipes, which caused the rejection of the further use of plastic pipes.[3] Instead, conventional steel pipes coated with an anticorrosive protective layer based on synthetic resins began to be used.



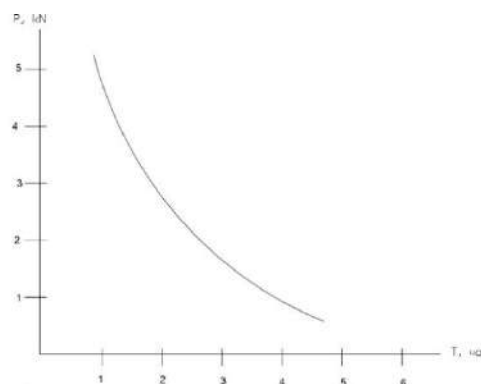
**Fig. 2.** Typical design of water wells.

All wells were drilled by the rotary method, by blowing air (dry season). During the rainy season - by washing with water and adding foragon to the drilling mud, in order to avoid the mudding of the aquifer of the well. (Foragon is a carbon-alkaline powder added by the drilling mud) Then casing pipes descended, in the lower part of which there are round holes that play the role of a filter. A plastic mesh was wound around the outside to hold particles of sand entering the well with water. After the casing was lowered into the well, the interval of the aquifer was filled with quartz sand with a diameter of 2-4 mm to create a natural filter (Fig. 2). The annulus between the outer wall of the pipes and the surrounding rocks, according to the Rules for maintaining rocks, was filled with drill cuttings consisting of clay rocks. Wells were operated either by a bailer or by submersible electric pumps for several days (weeks), until the depletion of grass and water. After moving the herd to other pastures, the wells remained ownerless and were lost. Arriving at new pastures, the farmers were forced to order the drilling of new expensive water wells in search of new sources of water. The most valuable element of abandoned wells is steel casing. There were attempts to reuse them, but they were unsuccessful. When lifting casing pipes due to the pressing of clay material in the annulus and corrosion, there were cases of pipe breakdown, violation of their integrity and lack of capacity of the lifting equipment, which led to the

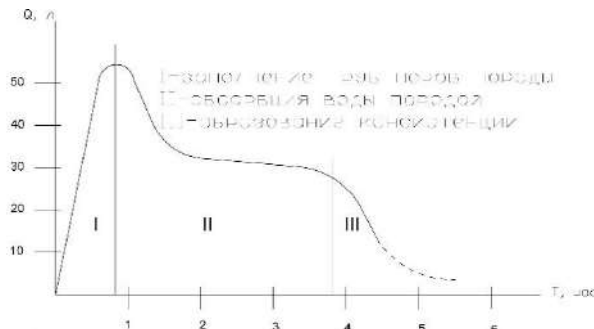
cessation of such work. To solve this problem, the author of this article, who worked for many years in the Sahel, proposed encircling casing strings before being lowered into the well with perforated steel pipes of small diameter ( $d = 10.2-15$  mm) attached to the body of the latter. Water is injected into the well, where it is planned to raise casing, into the annulus through drainage pipes (most often water is supplied by gravity from a tank installed on the mouth). At the same time, water leaving the holes moistens the clay material of the annulus, turning their pasty consistency depending on the length of time the water is pumped (Fig. 3, 4, 5).



**Fig. 3.** The dependence of the index of water injection.



**Fig. 4.** The dependence of the weight of the casing string on the duration of the water supply to the wells.



**Fig. 5.** The dependence of the flow rate of injected water from time to time.

This proposal was based on a change in the Atterberg limit [1], which depends on the water content of clay rocks (clay, loam) and covers two states:

- ductility limit  $W_P$ , water content separating ductility and fluidity;
- Consistency index  $I_c$ .

These limits, in turn, define:

a) Plasticity Index  $I_p$

$$I_p = W_L - W_P \quad 1.)$$

b) Index of consistence  $I_c$

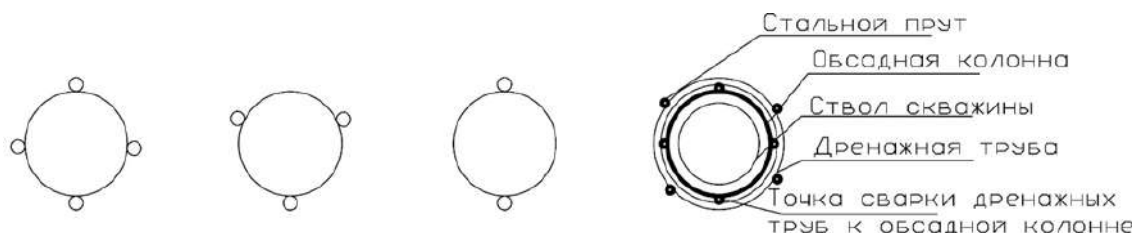
$$I_c = \frac{W_L - W}{W_L - W_p} \quad 2.)$$

where - W – water content in clays under natural conditions.

$W_L$  – water content in clays in a liquid state.

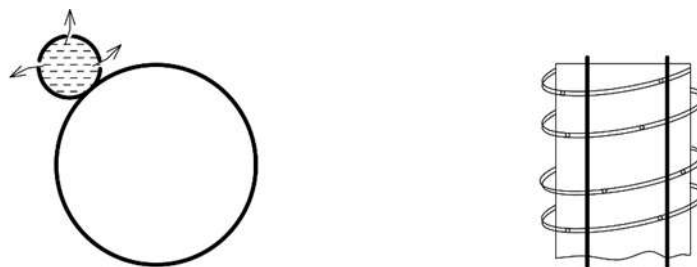
Litho logical analysis of the drilling mud showed that the upper part of the geological section consists mainly of clay, as it deepens, it is replaced by loam, then sandy loam and sand (aquifer). Laboratory studies conducted by us at the Mining and Geological Institute (Boke) to determine the water-resistance of rocks showed that the rocks of the lower part of the section (loam and sandy loam) are less resistant to water and easily destroyed. In other words, it can be said that the rocks of the lower part of the incision quickly lose their consistency in the water and pass into a flowing state. It was this circumstance that allowed us to propose a scheme for fixing casing strings in order to further extract them from non-working wells. It should be noted that in remote desert-steppe terrain, the price of casing pipes is 50-60% of the total cost of the well.

According to the proposed scheme, metal pipes with a diameter of 10.2 mm with pre-drilled holes on the body, the diameter of which is from 2.0 to 5.0 mm, were installed on the outer wall of the casing pipes (Figure 6). Note here that small holes are arranged at the bottom to make larger hole diameter as well depth decreases. This arrangement of holes is made to uniformly distribute the injected water along the wellbore. For each linear meter of the pipe, 10 rows of holes are drilled. On each row, there are 3 holes located at an angle of 900 and cover the angle of 1800 (Figure 7). Note the arrangement of the holes in this order: sandy loam  $d = 2.0\text{mm}$ , loam  $d = 3\text{-}4\text{mm}$  and clay  $d = 4\text{-}5\text{ mm}$ . 2, 3, 4 in-line and screw-shaped (distance between the pitches of the screw 20 cm) attachment of small pipes to the casing was used. (fig. 6).



**Fig. 6.**Diagram of drain pipe installation to the casing string.

An analysis of the results of extraction of the casing from abandoned wells showed that among all 4 circuits, despite the increased flow rate of small pipes, 4 circuits turned out to be the most successful. (Fig. 7). Of the 27 lifting cases, there was not a single case of damage to the raised pipes, despite the relatively large depth of the wells (from 17 to 36 m). In our opinion, this is due to the wetting of the clay material in the annulus by the injected water and the formation of a liquid consistency that has little shear resistance and has a little obstacle to the lifting of the pipes.[4] It should be noted that the use of the 4th scheme in three cases was marked by the breakdown of small pipes from the casing, which was caused by the irregularity of the borehole. To eliminate this problem, welding (outside small pipes) of steel rods ( $d = 7\text{-}9\text{ mm}$ ) was proposed, which subsequently eliminated all complications when lifting casing strings.



**Fig. 7.**Diagram of the drainage holes in the drain pipe.

Drain pipes are connected as casing strings grow in the well. At the same time, the casing pipe, which is in hanging position, by means of easy rotation approaches the joint of the drainpipe, then, at the end of the latter, rubber-plastic branch pipes are put on, fixing them with the help of metal clamps. When the column is lifted, these nozzles are again released from the clamps for their further use.

In order to determine the influence of the rate of liquefaction of clay material of wells filling the annular space on the energy intensity of pipe lifting, a number of experiments were carried out in laboratory field conditions, the results of which are presented in the form of graphs (Figure 5).[6, 7] It can be seen from the graph that the yield strength of the clay material in the well depends, along with the wetting time, also on the arrangement of equipping the casing with drainage pipes, i.e., the greater the drainage coverage, the greater the wetting. In the vertical arrangement of the drain pipes due to the gravity of the water, the water exiting the holes is preferably filtered in the vertical direction, delaying the wetting time. With the helical arrangement of the drainage pipes, the coverage of the rocks between the two rows of the spiral is carried out by the incoming water from the above holes, providing a relatively wide coverage, in a relatively short period of time. Increasing the consistency index, affecting the improvement of the rheological properties of the clay material, contributed to a decrease in the weight of the casing pipes due to the manifestation of Archimedean forces [5], which further contributed to the selection of lifting equipment with corresponding characteristics.

The work described in the article was carried out in 7 countries from 1996 to 2017 in the countries of the Sahel, West Africa, Mali, Niger, Senegal, Guinea Bissau, the Republic of Guinea, Liberia, Sierra Leone indirect participation of the author (Table 1).

Thus. The extraction of the casing from abandoned water wells has been effective in view of the fact that the location of farmers in the search for new pastures is unstable. This allowed farmers to avoid the cost of buying pipes when drilling new water wells. It should be noted that part of the territory of Uzbekistan is an analogic geological characteristic and the use of such a practice would save a lot of money in the construction of shallow drainage and other water wells.

## CONCLUSION

1. The consistency of the clay aggregate between the casing and the surrounding rocks depends on the mineralogical composition of the rocks and the retention time of the supplied water in the wells. In order to obtain optimal consistency, the continuous water supply time to the wells must be at least 4 hours.

- For successful lifting of casing string from wells, it is necessary to equip the external part of casing string with perforated drainage pipes with a diameter of 10.2 mm. Note here that perforated holes diameter must increase from bottom to top.

Some data on casing lifting for selected Sahel countries

TABLE 1.

Country	The number of wells, with the rise of the pipes	Average depth of wells, m	Number of wells		Pipelength, m	
			With a damaged column	With the column intact	with damages	no damage
Mali	87	12-45	9	78	120	1802
Niger	64	15-40	7	57	77	1500
Sinegal	53	15-30	4	29	60	520
GuineaBissau	22	16-32	-	22	-	560
RepublicofGuinea	36	12-25	2	34	27	602
Liberia	18	12-20	1	17	14	296
Sieraleone	15	15-20	-	15	-	268

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DOI: **10.5958/2249-7137.2020.00774.0**

## RESEARCH OF TRAFFIC SAFETY CONDITIONS ON THE ROADS OF THE FERGHANA VALLEY

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### ABSTRACT

*This article is devoted to the study of traffic safety conditions on roads to ensure traffic safety on roads of the Ferghana Valley. It examined and provided relevant conclusions and proposals on such current tasks, as an improvement in road network performance to ensure traffic safety in the Ferghana Valley road network, organization of works on timely repair and maintenance of roads, ensuring compliance of road equipment level with standard requirements, and their current state using statistical, mathematical and other similar methods.*

**KEYWORDS:** Roads, Traffic Safety, Traffic Accident, Road Network, Roadside Zoning, Motor Vehicles, Accident Rate.

### INTRODUCTION

Ferghana Valley is the territory between two mountain ranges, Tian Shan and Alai. The valley covers an area of 19.2 thousand. Km<sup>2</sup>, covering the Ferghana, Namangan and Andijan regions. The population of the valley is 9535.8 million people. [7] The total road network in the Ferghana Valley is 44,674 km, and the density of the road network is 2,326,8 km/1000 km<sup>2</sup>. [1] The following table provides information on the density of the total road network in Ferghana Valley (Table 1, Figure 1). [2]

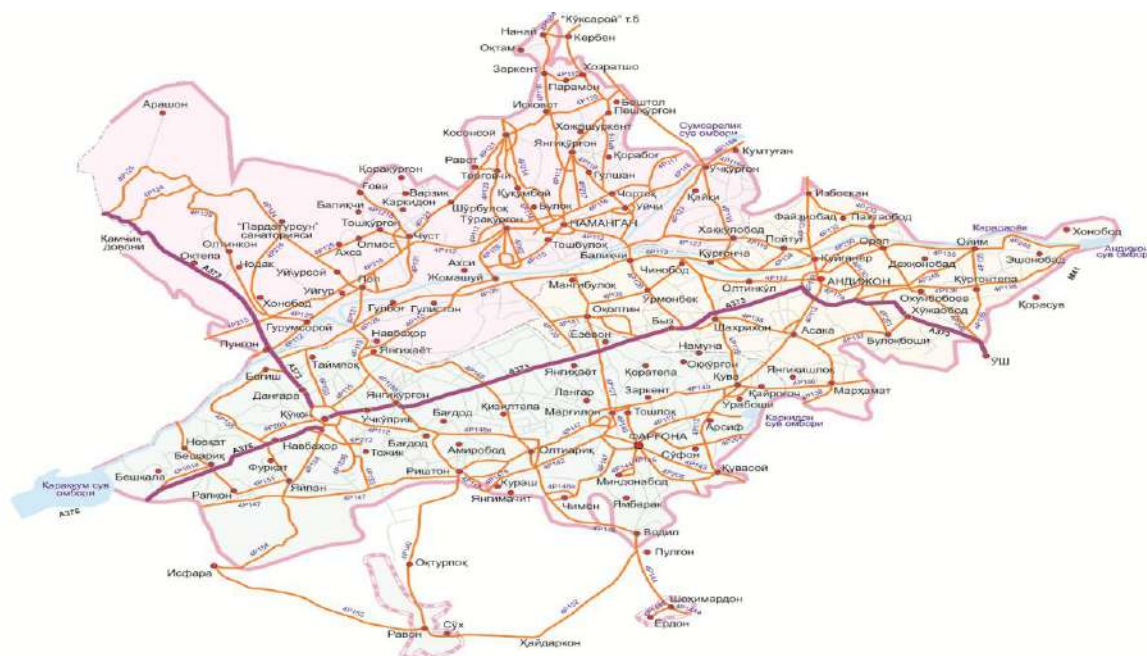
**TABLE 1. INFORMATION ON THE DENSITY OF THE ROAD NETWORK IN THE FERGHANA VALLEY.**

Republic, province	Territory thousands of km <sup>2</sup>	Length of road network, km	The density of the road network, km/1000 km <sup>2</sup>
Andijan	4,2	12525	2982,1
Namangan	7,9	13302	1683,8
Fergana	7,1	18847	2654,5
In the valley	19,2	44674	2326,8

Ferghana Valley is the most populous area of the country with 497 thousand people/1000 km<sup>2</sup>. The total number of accessible vehicles in the valley is more than 680.6 thousand, Of which 80.0% are cars, 11.6% are trucks, 2.7% are buses, 1.6% are special cars and 4.1% are cars. (Table 2) [2]

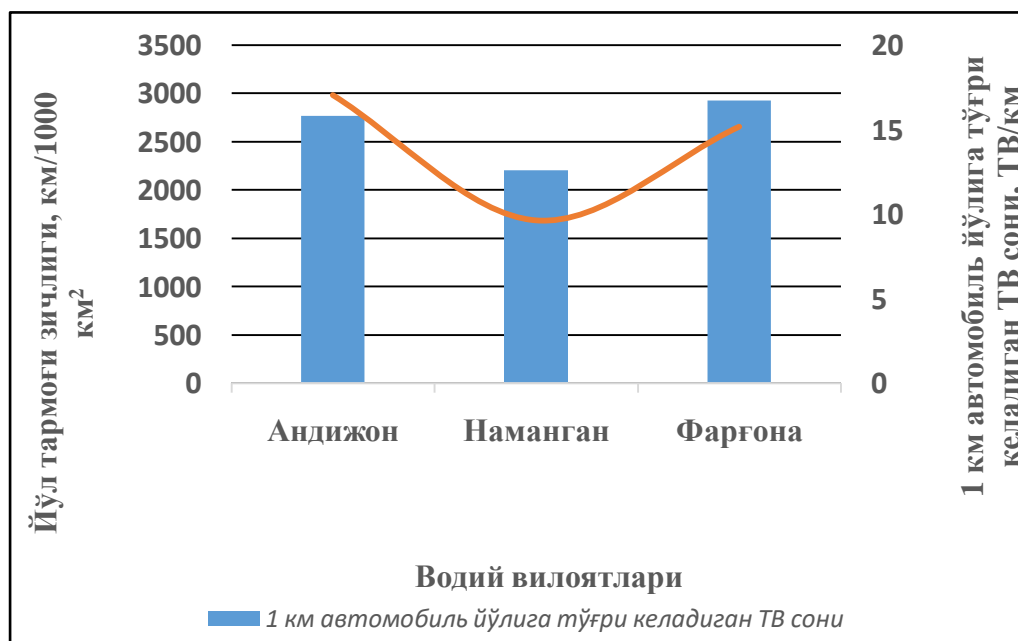
**TABLE 2. INFORMATION ON REGISTERED VEHICLES IN THE VALLEY OF THE REGION.**

Regions	Types of transport (pcs.)					Total
	Truck	Bus	car	special equipment vehicle	motor-transport	
Andijan	24333	5259	161171	3240	4344	198347
Namangan	23292	4005	130735	2126	7658	167816
Fergana	31540	9559	252902	4020	16463	314484
On the valley	79165	18823	544808	9386	28465	680647

**Figure 1. Map-diagram of the Ferghana Valley highway network.**

## MATERIALS AND METHODS

From studies conducted on public roads, it follows that over the past 10 years the number of cars in the composition of traffic flows has been growing rapidly, accounting for 65-80% of the total number on roads of international importance, 75-90% on roads of state and local importance. [3] Today, in the Ferghana Valley, the number of vehicles (TV) corresponding to 1 km of the highway is 15.2 TV/km. When analyzing this indicator by valley regions, a different situation arises (Fig. 2).



**Figure 2.** Distribution of vehicles by valley area and density of road network

An increase in the percentage of passenger cars in the traffic flow, an increase in the average flow speed and, as a result, a sharp increase in the number of accidents in areas where road conditions are unsatisfactory. As a result of the conducted researches, the condition of highways of general use and the road accidents (RA) in the Fergana Valley (Andijan, Fergana, Namangan regions) is analyzed. The length of roads of the Andijan region is 12525 km, of which public roads-2463 km, roads of the Ferghana region-18847 km, of which public roads-3468 km, roads of the Namangan region-13302 km, of which public roads-3043. (Table 3) [4]

**TABLE 3 PUBLIC ROADS OF THE VALLEY REGIONS.**

All roads, km		By the importance of roads, km			On the surface of the road, km				
by category		the international	state	local	c/concrete	a concrete	black covering	gravel	soil
<b>Andijan region</b>									
I	212	70	133	9		103			
II	263	28	233	2		735	59		6
III	445	5	292	148		984	549	25	2

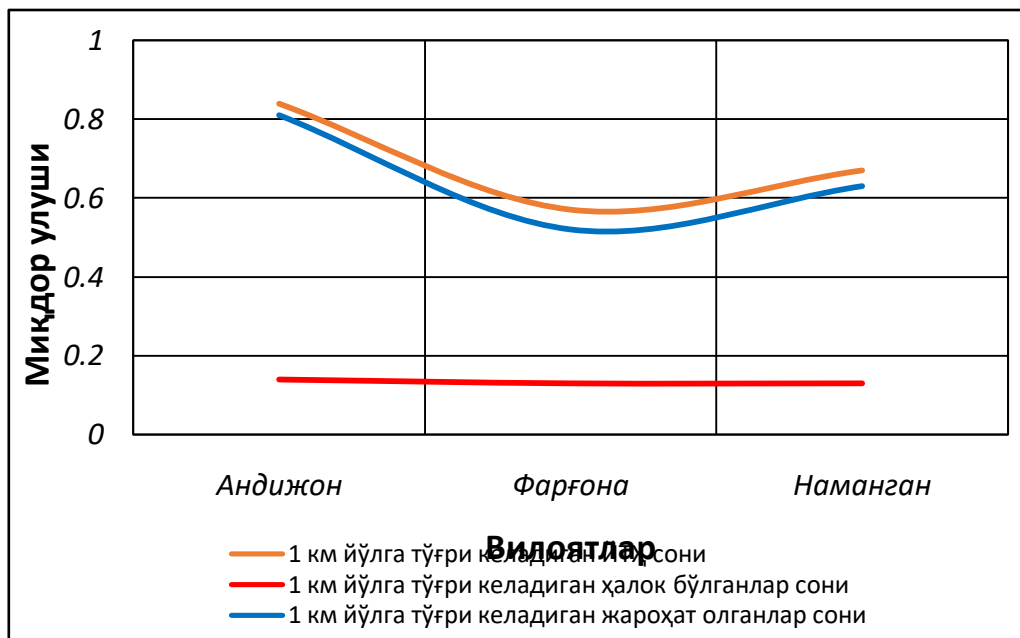
IV	1017		127	890					
V	526		15	511					
Total	2463	103	800	1560	0	1822	608	25	8
<b>Fergana region</b>									
I	189	52	127	10	0	149	53		
II	189	189	189	189		855	18		
III	533		190	343		2425	421		
IV	1671		71	1600					
V	886		10	876				80	30
Total	3468	202	873	2956		3429	492	80	30
<b>Namangan region</b>									
I	135	69	56	16		69			
II	189	189	189	189		931	114		3
III	474		311	163		1505	329	217	20 9
IV	871		163	708					
V	1374		44	1330					
Total	3043	69	1048	2260		2505	443	217	21 2

Based on the above data, the Ferghana Valley currently has an area of 15.2 V/km of vehicles (V) per 1 km of road and a population density of 497 thousand people/1000 km<sup>2</sup>. The number of accidents in the Ferghana Valley over the past 10 years per km of road was analysed (Table 4).

TABLE 4.

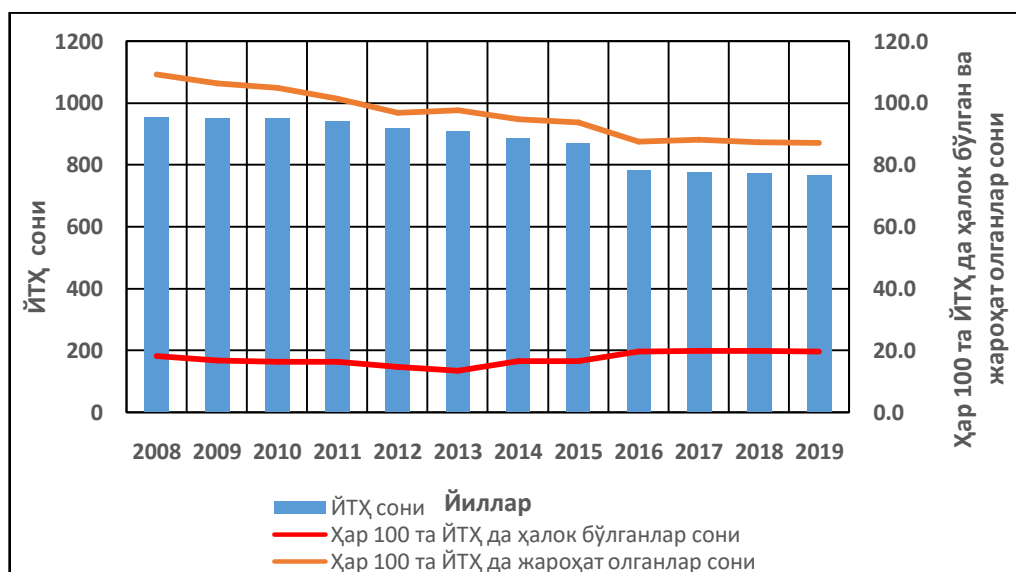
Province	Length of the highway, km	Number of accidents per 1 km of road	The number of victims per 1 km of the road	Number of injuries per 1 km of road
Andijan	12525	0,84	0,14	0,81
Namangan	18847	0,57	0,13	0,52
Fergana	13302	0,67	0,13	0,63

The analysis shows that the total number of road accidents per 1 km of the Ferghana Valley in the Andijan region is the highest in terms of the number of deaths and injuries (Figure 3).

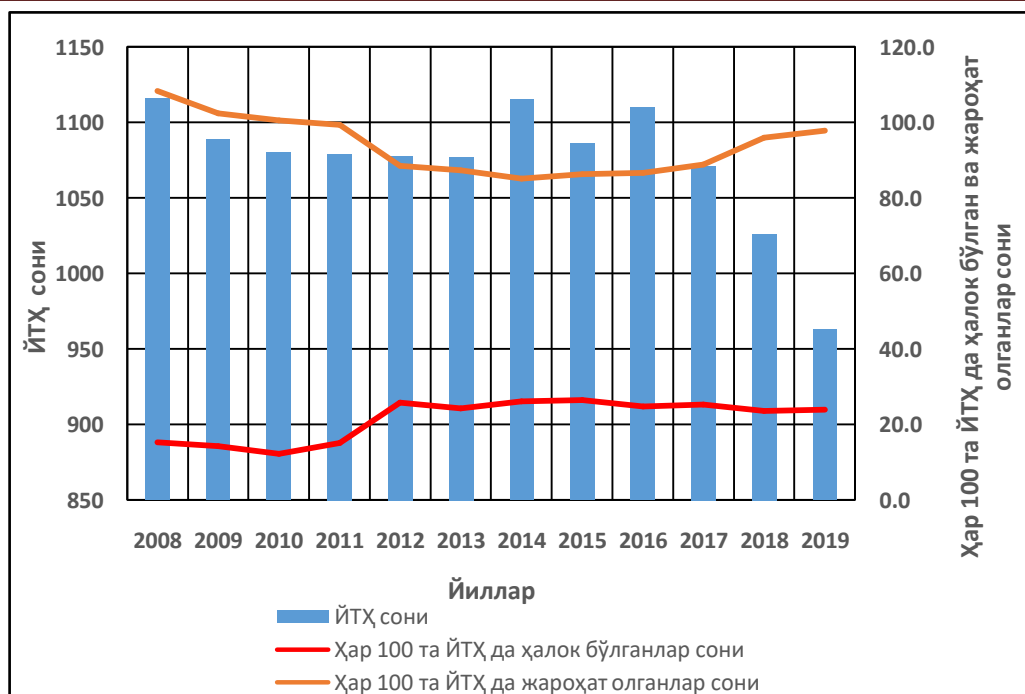


**Figure 3.** Analysis of the number of road accidents per 1 km of road by region.

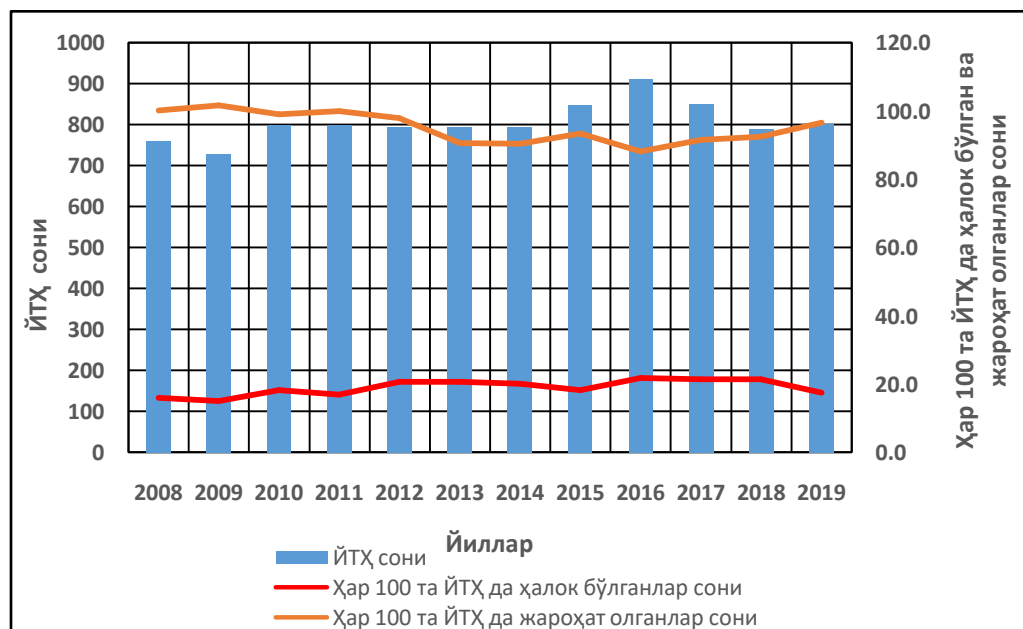
In the Ferghana Valley, the length of the Andijan regional road network was smaller than in other regions, but the number of traffic accidents, deaths and injuries were high. An analysis of road accidents in the Andijan region over the past 10 years has revealed a high mortality rate on international roads A373 and 4R112 of national importance. [5] Highway 4R112 is a ring road in the Ferghana Valley, which connects the Balikchi district with the Namangan region, the Asaka district with the Ferghana region. Studies have been conducted to assess traffic safety on highways such as A373, 4R112, 4R115, 4R126, 4R140, which are the main arteries of the Ferghana Valley.



**Figure A.** Analysis of traffic accidents in the Andijan region over the past 10 years.



**Figure B.** Analysis of road accidents in the last 10 years in Ferghana region.



**Figure C.** Analysis of road accidents in the Namangan region over the past 10 years.

**Figure 4.** Analysis of road accidents on Ferghana Valley roads over the past 10 years.

When analyzing road safety by the number of road accidents on Ferghana Valley roads over the past 10 years, Figure 4 (Figures A, B, C) concludes that the number of road accidents and the number of deaths and injuries per year can be seen, which decreases during. [6] However, this conclusion does not prove that road safety is ensured on the roads. This is due to the fact that in



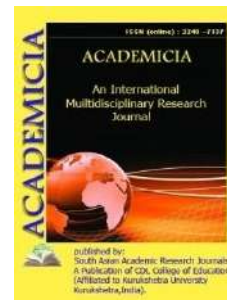
recent years the number of roads in need of repair in the network of valley roads has been growing, the condition of internal roads is unsatisfactory, the number of vehicles is growing sharply. The sharp increase in the number of cars in the traffic flow is accompanied by an increase in average speed and an increase in the number of accidents occurring on unsatisfactory sections of the road. Especially in the Andijan and Ferghana regions (figures A, B), it is clear that the death toll in road accidents has not decreased in recent years.

## CONCLUSION

To ensure road safety in the Ferghana Valley road network, it is important to improve the transport and performance characteristics of the road network, organize timely repair and maintenance of roads in order to ensure that the level of the pavement meets the equipped standard requirements. To improve the effectiveness of this work, it is important to zone road safety in order to assess the level of road safety in the road network.

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DOI: **10.5958/2249-7137.2020.00775.2**

## PRINCIPLES OF FORMING A GARDEN-PARK LANDSCAPE DESIGN AROUND HISTORICAL MONUMENTS OF THE FERGANA VALLEY

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### ABSTRACT

*The article analyzes the problems of formation, the principles of development and the modern state, features and some restrictions on the use of garden and park landscape design around historical monuments to identify the features of the formation and harmonization of garden and park landscape design around historical monuments, as well as give conclusions and recommendations.*

**KEYWORDS:** *Landscape Art, Shrines, Landscape Design, Recreational Opportunities, Historical Monuments.*

### INTRODUCTION

Over the past 20 years of independence of our republic, our views on our identity, national traditions and values have changed. Attention to our values and traditions in Uzbekistan is growing. Its various aspects are currently being studied and analysed by scientists and experts in the field. The Uzbek people are restoring their national values, rich historical heritage and culture in their traditional architecture. It is known that national architecture and traditional urban planning, which for centuries preserved the heritage of our people, were formed during a long historical process. Our national values in architecture are characterized by a predominance of features characteristic of this civilization: internal and external courtyards, porches and other summer rooms, pools, fountains, landscaping of courtyards and gardens, organization of

premises and ventilation routes for courtyards, the use of patterns. Complex water supply structures built in the distant past, our historical monuments, which have not lost their splendour and grandeur to this day, testify to the high level of craft culture, architecture, gardening and urban planning in our country since ancient times. [1] Unfortunately, insufficient attention is paid to the in-depth study and analysis of this area, the introduction of its effective principles into our life today. Except the memorial gardens and avenues built in Tashkent and the regional centres of the republic on the occasion of the jubilees of great scientists and figures, the desired scientific and creative work to create and restore the national concept of this art is not carried out.

## MATERIALS AND METHODS

Restoration of historical monuments, holy places, mosques, madrasas, historical parks and other unique historical monuments on the territory of the republic without prejudice to their historical value, their improvement, popularization in the world and increasing the tourist potential of Uzbekistan, as well as the creation of modern and new parks. this is one of the most important issues. There is a sharp difference between the exemplary farm gardens created in the regions during the years of independence and the ancient architectural and historical gardens of the Uzbek people and the national art of gardening. I think that the time has come to eliminate this discrepancy and revive the medieval national art of gardening, raise it to a new level of universal human values, restore a worthy place and the role of this art in world civilization, show it to the peoples of the world. This is an urgent problem of the country, which arises in connection with our urgent needs today. Now we see examples of garden and park art in many of our cities and villages. Many of them have been renovated and serve the community. But most gardens need attention. Today, it is important to preserve, reconstruct and effectively use existing historical monuments, shrines, mosques, madrassas, mausoleum, historical parks and other unique historical monuments in our country. Of course, in this regard, our government has adopted many decrees, decrees and other regulatory acts.

In particular, the laws of the Republic of Uzbekistan on architecture and urban planning, protection and use of cultural heritage objects, Decrees of the President of the Republic of Uzbekistan of January 16, 2018 “On the protection and improvement of the use of material objects of cultural and archaeological heritage,” Ministers of the Republic of Uzbekistan Decision of the Cabinet of Ministers of the Republic of Uzbekistan of December 29, 2010 No. 322 “On approval of the Program of measures to strengthen the material and technical base of cultural and entertainment parks and further improve their activities in 2011-2015” and many other regulatory documents. is the legal basis for large-scale work and contributes to its development. [2] In general, a systematic approach to the development of the art of garden and park landscape design becomes a requirement of time. It is time to look at parks not as a green island in urban areas, but as a recreational complex of green spaces, which are part of the master plans of cities and agglomerations. This requires a serious approach to the development of integrated plans for the organization of the recreational landscape of cities. [3] In the higher education system of recent years, it is clear that the issue of training landscape architects-landscape designers is receiving increasing attention. The task of landscape architects, city planners and other officials is to create new examples of garden art that can be passed on to future generations, incorporating rich many years of experience in gardening in Asia and Europe in accordance with modern requirements. Restoration of historical monuments, holy places,

mosques, madrasas, historical parks and other unique historical monuments on the territory of the republic without prejudice to their historical value, their improvement, popularization in the world and increasing the tourist potential of Uzbekistan, as well as the creation of modern and new parks. this is one of the most important issues. Based on the above considerations and considerations, it can be noted that it is important to create harmonious national and modern parks around historical monuments and widely use the possibilities of landscape design. Historical data about the gardens and parks of the peoples of Central Asia are presented in a number of written sources: in such books as "Baburnoma", "Zafarnoma", "Ubaydullanom", "history of Bukhara", as well as in the book of ancient Arab geographers who arrived in Central Asia, and other foreign historians, ambassadors and travellers.[7, 8, 9, 10] However, it should be noted that these works and historical sources contain information about the garden and Park art of Central Asia and its various styles, mainly in brief written form and in the style of data describing palaces and courtyards. They are written about what kind of garden or attic, when and by whom, for what purpose and only, in some cases, in what order it was built. This is the architectural layout of gardens, information about gardens and flower beds, birds and palaces planted in gardens. In particular, the work of Muhammad Zahiriddin Babur "Baburnoma" presents interesting facts about the gardens built by Babur himself, as well as about the gardens created by Temur and the Timurids in Samarkand and Girota "The wonders of fate in the history of Temur" Ibn Arabshah and the "Zafarname" of Sharafiddin Yazdi, as well as the gardens built by Emir Temur around the city of Samarkand. [8, 11] Images of medieval gardens can also be seen in the thumbnail made on the "Baburnama" and "Zafarnoma". After seeing them, we present the first ideas about the structure of the gardens of the medieval Islamic East, their shape. Historians and archaeologists have also found in this area not only written, but also evidence materials, valuable information about bird palaces in parks, their decorations, and in some cases even managed to graphically recreate the landscape of these gardens and palaces.

For example, doctor of architecture, academician M. S. Bulatov in his article the epic "Garden and Park of Temur and Timurids" on the example of gardens built by Amir Temur and Timurids, as well as in Northern India during the Baburid era, developed a kind of classification system of gardens of that time. [4] The scientist M.S. Tukhtakhodzhaeva also came close to her work "General in the architectural and planning techniques of the garden and park art of Central Asia of the XIV-XV centuries and India of the XVI-XVII centuries." in his article, he noted that among the gardens and gardens built by Baburi during the Timurid period in Central Asia, in particular in Kashmir and Lahore, there is a kind of historical and cultural continuity and tradition, and also managed to determine the existing differences between them, that is, the specifics of architectural and landscape solutions. [5] Candidate of Architecture N.V. Drobchenko wrote a dissertation on the topic "History of the formation and development of landscape architecture in Uzbekistan," in which, along with the justification of the development and development of landscape architecture of Uzbekistan, he focused on the idea of reviving the landscape design style of the garden-park. It should be noted that the information given above in the historical written sources known to us and the available scientific literature can be used for the implementation of the medieval National Eastern Garden and Park Art. But I am not mistaken to say that modern scientific research and creative research in this area is developing in our republic now. Because, as a huge change being made in all areas of our lives, the art of landscape architecture and landscape design of the park feels a deep spiritual need to return and restore our advanced historical national heritage. Over time, in the relations between man and

nature, in particular, in the landscaping of settlements and garden and park art, unique styles, landscape compositions, traditions and devices were formed and applied. The fundamental, reliable and practical tests of this style and tradition were the rules and laws of garden and park art, which laid the structural foundations of the science and practice of landscape architecture in this area. This means that modern landscape architecture has been formed and developed since ancient times, includes the art of garden and park art, its various traditions and styles, landscape devices and design elements. In the cultural, educational, climatic, socio-economic conditions of different regions and peoples, these methods are adapted, improved, changed and updated. For example, not only the usual horizontal landscaping, but also the vertical (vertical) landscaping technique, the cultivation of trees and shrubs not only in natural forms, but also the method of giving them various artificial green forms with admixture and colour, and so on.

However, two main planning styles have come down to us since ancient times and are widely used in modern garden and park art and landscape architecture: the first-ordered regular (regular) style in landscaping and planting trees and shrubs, flower beds. This style is also written in literature as classical, that is, classical style, geometric or French style.

The second is free, that is, a style in the form of nature, which in literature is also called a landscape or landscape style. A regular planned style in landscape architecture means a holistic composition of trees and shrubs, flower beds, squares, paths and landscape structures located symmetrically, in an orderly manner, along a stream, parallel and transverse straight lines to each other when landscaping gardens, alleys, sidewalks, territories. Trees and shrubs used in this method can also be given artificially green forms with impurities. Water pools, fountains and other beautiful architectural garden and park structures also process the layout and forms. The formation of a landscape in this style was widely developed in the countries of Ancient Iran and Turan, and in the Middle Ages in Maverannahra, Afghanistan, India, Iran, Arab countries. In Samarkand and Herat, during the era of Amir Temur and the Timurids, in Kabul and Northern India, the Chorbog style was widely used and improved - this is also a geometrically ordered style. Its geographical formation is characteristic of regions with a hot and dry climate, with a lack of water and moisture. This style is still widely used in the garden and park art of Islamic countries. There are two types of landscape formation in this style: the first is if the territory of the regular layout is flat, these are parks, alleys, squares, and the second is the territory of the regular layout-squares and alleys. And the style of forming and landscaping a landscape with a view of free nature is the opposite of an ordered regular style, that is, how trees and shrubs, flower beds, fields, corridors and other elements of the landscape are formed and located in the wild. In this style, everything is natural, the forms and arrangement of plants, mountains and rocks, reservoirs, architectural forms are free, only they are created by the human mind and hand. In this style, it is customary to use open, semi-open and closed green zones, lawns and flower beds of free layout, shady forests, ponds, streams, convex bridges, alpinaries. In this style, you can create different views and landscapes of free nature even in small areas. Around, behind the hills, you can see fresh green landscapes, perspectives, squares and accents: separately planted beautiful trees, landscape compositions made from a group of trees and shrubs, pools, fountains and sculptures. Giving them artificial green forms by observing trees and shrubs is not typical of this style, on the contrary, they need to be planted and grown freely and naturally. In modern landscape architecture, you can also find a combination of two different planning styles described above: the usual style in places where public visits and events are held, and a freely



planned landscape style in areas of peaceful recreation and travel. In the regions of Uzbekistan, most parks are formed in such a mixed style.

Take, for example, the park around the Horde in Kokand, Ferghana region. (Figures 1, 2)

Landscaping around the entrance to the garden, the main alley of the garden and sights is decorated in the usual style, and the recreation area and walks in the garden are made in a landscape style. It would not be a mistake to claim that the orderly planting of trees and shrubs in rows was created taking into account hot and dry climatic conditions. Since plants do not germinate without water, they do not give the desired stage result. Therefore, the easiest and least time-consuming way to water them is to water them with the right moats.



**Figure 1.** Kokand Horde.

This linear, geometric style is the "oriental method" - created from conditions, the planning style has long been used in gardens and similar compositions. Skilled architects and landscape designers prefer to use the geometric style in relatively flat areas and the landscape method in relatively relief areas.



**Figure 2.** Horde Square (entrance).

The third mixed-method came from their only, parallel application. Just as symmetry is one of the gold means of composition, since the geometric style is also a gold method of landscaping,



applying them to all compositions will make it boring at the end. Therefore, although they are not equal, after a few months the created compositions become more picturesque and bright if an asymmetric, that is, landscape method is also used. It is especially useful to use a mixed style when creating garden or park compositions where the relief is interesting, where multi-coloured trees and shrubs are present. Trees are planted on streets and alleys for several purposes. Firstly, they provide a good view, secondly, they create shadow and cool in the current scorching heat, and thirdly, they do not block street noise and dust in buildings. Coniferous trees give a good view at any time of the year, but it is not very nice to give cool in the shade. They cannot compare with large-leaved trees in blocking noise and dust. It provides a thicker tint than maple, chestnut, poplar, maple, linden (sage), alder (spruce), pine and spruce, leaves retain noise and dust 2-3 times more.

With the height of maples and poplars, splendour, the size of the surface of the leaf, the summer months create peculiar cool microclimatic conditions. Given this, I would recommend using more native trees to plant different types of trees without mixing when landscaping the city. Of the local species of trees, Sadakairagoch (Gujum) is not cultivated.

As a decorative species of this tree, which forms a beautiful round spherical shape of branches and gives a dark shadow from thick leaves, extremely resistant to cold weather, it is recommended to plant in parks, on the hillsides, on the sides of ditches, arrange separate maple plantings, poplars and willows, maple, chestnuts in parks, including juniper and pine. In landscape design solutions, when forming garden and park plantations around historical monuments, its relief, climate, water-irrigation capabilities, the presence of correct roads and alleys, ditches and canals, ponds and ponds, irrigation fountains, so-called flowing water and shaded environment are important. The garden should have national "chorpoya" or "tahti ravon," intended for rest sitting or lying on a bed, and most importantly, the water "zhannat ариклар" flowed out from under them. If gravel accumulates under the ditch or canal, then the water block will please the person even more. Beds of garden beds have flat pegs and frames, drawn from natural stone or brick, cane on cages suspended from the eyebrows of beds, give a person a pleasant appearance. It is advisable to build garden castles in higher, elevated places above the Garden Zone and be located as far south as possible. At the same time, they will provide a good view of the garden landscape and landscape. Water in garden apricots is not good under sunlight but under the shadow. Preferably, there is a spacious pond in the garden, around which shadows planted without falling leaves. Then the face of the pool is covered with a shadow, the water remains clean, a healthy closed green environment is created. Behind the trees planted in the garden, flower beds are formed, composed of various varieties of roses, which, in accordance with previous trees, form a contrasting light green environment.



**Figure 3.** Flowerbed.

And after the flower garden, green ornamental trees are always planted. It turns out well if flowering vines are planted along the perimeter of the garden, which will crawl and grow.

In the narrower part of the garden, if fruit trees are planted, they will protect the garden from the northern winds and give beautiful fruits. It is advisable to plant simple pomegranates among fruit trees. It is necessary to build a garden pavilion in the centre of the garden so that it opens up a beautiful view of the entire garden. The creation of beds with roses and merits in the pavilion and beds around the garden gives it special beauty (Figure 3). The garden itself and the garden equipment are considered important components of the garden, and their composition should be in interconnected and harmonious relations in accordance with their history and size. It is this architectural integrity, that is, the harmony between the garden and its devices or elements of the garden, that should become the main principle of garden design.

To do this, the parts of the garden, the geometry of all elements must be linear, methodologically similar to each other, based on the law of regular axial symmetry. All these gardens (palaces, ordained gardens, suburban monumental gardens, courtyard gardens, mausoleum gardens) are gardens with a regular geometric planning solution. In addition to the above architectural integrity, geometric regularity and symmetry, the concept of their creation include the "law of water and shadow" and natural restrictions.

## CONCLUSION

In general, the formation of a garden and park landscape around the historical monuments of the Ferghana region should be based on in-depth research and development of our city, based on the many years of experience of our people. Its location, climate, water supply and irrigation opportunities, the presence of direct roads and alleys, canals and ponds, pools and ponds, fountains, in short, running water and shady environment play an important role in landscape design solutions when forming parks around historical monuments.

Fergana's modern landscape architecture is influenced by modern European landscape practices, and some risk is allowed in this area. This is evident from the loss of trees and other plant species used in all new gardens, the loss of traditional drainage systems, the fact that irrigation is often associated with the urban drinking water network, and, unfortunately, the widespread use of landscape groundwater design. The public and entertainment parks of the city of Ferghana, the

natural foothills that the city, streams, pools and swimming pools can provide, the gardens are formed fragmentary. The formation of a garden and park landscape design around the historical monuments of the Ferghana region will be advisable, taking into account the natural presence in the structure of a single anthropometric landscape project. It is advisable to map irrigated land and areas using apricots, basins, fountains, artificial lakes, with a balance of the corresponding target part of the land and underground reserves. Because unconventional partner greens, intended for watering without scientific justification, excess waterfalls, can lead to environmental degradation by increasing groundwater and evaporation due to excessive water consumption. Every element of the landscape that we do in the Ferghana region must have an artistic character that corresponds to national consciousness. Summing up, we believe that during the period of work on the implementation of the main architectural plan of the city of Fergana, its departments should study the nature of the environment and draw up a single landscape map covering its mountains, slopes, hills, canals, springs, parks, historical caravan routes.

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DOI: **10.5958/2249-7137.2020.00723.5**

## ORGANIZATIONAL INTELLECT IN ACQUAINTANCE BASED PHARMACEUTICAL COMPANIES IN IRAN

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### ABSTRACT

*Organizational intelligence was defined as an organization's capacity and potential in mental power and focusing this power on the realization of the organization's mission. Organizational intelligence is a low standard for the efficiency of organization in releasing information, decision-making and implementation. Intelligent organizations enhance their mental power like their physical power. This study is aimed to identify different levels of organizational intelligence in the knowledge based pharmaceutical companies in Paradise Technology Park, Tehran. In this regard, the components of organizational intelligence were determined for identifying, investigating and measuring. The method applied in this study is descriptive survey and the population is the knowledge based pharmaceutical companies in Paradise Technology Park. The statistical population is 220 personnel of the companies having diploma or higher degrees among whom 140 were chosen using sample Cochran formula. Data collection tool was Carl Albrecht questionnaire including 49 questions whose validity was verified by experts of the field. Its reliability was obtained 0.7 using Cronbach's Alpha. For analyzing data, descriptive statistics including frequency percentage and inferential statistics including mean test of population were used. The results reveal that organizational intelligence of the study population with the experimental mean of 3.49 was higher than the theoretical mean of 3 and the highest mean was the component of alignment and congruence and lowest one was appetite for change.*



**KEYWORDS:** *Organizational Intelligence, Strategic Perspective, Shared Fate, Appetite Forchange, Alignment And Congruence, Enthusiasm, Applying Knowledge, Performance Pressure.*

## INTRODUCTION

Organizational intelligence is a low standard for efficiency of an organization in releasing information, decision-making and implementation. The IQ of organizations is measurable like human beings'. Intelligent organizations enhance their mental power along with physical power. Today, those who are familiar with the competitive state of organizations are well aware of the fact that organizations are changing dramatically. The major pressure for all organizations is the high speed of the introduction of new products to the market and imitation of the same product by the competitors. Organizations that don't haste, they will be removed. Lack of long-term agreements among organizations and employees is also a factor leaving them in the concern about their job status. Today, delegation of authority is different from the past and it is not time for ordering and controlling strictly. All of such challenges made a quite different position for organizations even way different from the last ten years. Why some companies remain in the arena of competition while others are expelled? Why some companies make progress quickly while others can't continue their activity? Why some companies adapt themselves to the changeable conditions of environment while others are disabling to do so? The notion of organizational intelligence is a case in the path of today's organizations and for sure it is going to be critical in the future and attracting and maintaining intelligent people seem necessary in an organization (Albrecht, 2009). The simple fact is that the success of businesses is contingent upon intellectual power of a few of staff with high capability and knowledge. Such people are those who are able to plan, organize, lead, manage, analyze, make concept, make strategies, make decisions, be innovative, teach, recommend and explain ideas. In surviving in the competition with other organizations, this point ought to be taken into account that heads of companies must pay attention to the instructions of management and apply them. One of the vital concepts for this kind of organizations is organizational intelligence. The aim of this study is to enhance the level of organizational intelligence in knowledge based pharmaceutical companies in order to enhance competitiveness and pursue and achieve organizational goals. Enhancing the level of organizational intelligence result in competitiveness, efficiency in releasing information, decision making and proper implementation in the knowledge based companies.

## REVIEW OF LITERATURE

Today, we talk about different kinds of intelligences one of which is organizational intelligence. It makes us competent for decision-making. Organizational intelligence means having a comprehensive knowledge about all the influential factors on organizations. Having a deep knowledge of all the factors such as customers, competitors, economic environment, organizational processes and operations have high influence on the quality of management decisions in the organization (Abzari et al. 2006, P.25). We often witness a significant difference between the staff's performance. Some of them do their job eagerly and persistently and have better job performance compared to others, while the others must be pressured for doing minimum work. The quality and effectiveness of management and its function are determining and vital factors for development and welfare in the society.

Presently, there are various factors influencing survival of service and industrial units, such factors change quickly and the changes are unpredictable. Most of the organizations work under the same conditions. Organizations must always adapt themselves to the changes. An organization not only changes its situation from time to time but also it is aware of the fact that the phenomenon of change is permanent and its survival will depend upon this procedure in the competitive world (Al Daft, 2011, P. 20). One of the most important capabilities of an organization is the organizational intelligence enhancing the capacity of changing the organization. Organizational intelligence is an ability using all intellectual abilities of organization to attain goal and the mission of organization (Albrecht, 2003, P. 25). The concept of organizational intelligence which is introduced in the recent years attracts scholars' and researchers' attention to the areas of knowledge including management and authorities of the organization. In other words, people who enjoy higher intelligence are more successful than others. Organizational intelligence is a new concept in the management and organizational books.

Researchers investigated organizational intelligence in different views of epistemology such as cognitive, behavioral, social and emotional. Each of these approaches leads to a path to recognize this complicated phenomenon and each of them are complementary for the other approaches for example, while cognitive view emphasizes inner processes and structures such as ability to process information, behavioral view investigates behavioral-environmental connections leading to the conformity of organizational behavior to the environment (Nasabi, 2008, P. 14). In addition to epistemological views, ontological basis of intelligence (whether individual or organizational) causes bewilderment in terms of who or what is in the area of organizational intelligence, as a result of this phenomenon, organizational intelligence is reduced. Organizational intelligence is related to individual intelligence with integration mechanism (organizational intelligence is formed by the accumulation of individual intelligence), transition between surface (individuals' intelligence is interpreted as organizational intelligence) and distribution (organizational intelligence appears in the structural patterns of thought and the interaction between the members of organization) (Sattari, Ghahfarrokhi, 2006, p. 15). Organizational intelligence is a social and group outcome, this means this intelligence is the result of group function of individuals serving as a unit (William, 1998, P.790).

Another definition of organizational intelligence, organizational intelligence defines the process of troubleshooting of data collection, processing, interpreting and relating the required technical-political information in decision-making (Wilensky, 2000). The idea and concept of organizational intelligence includes other minor paradigms such as organizational learning and knowledge management (Yolles, 2005, P. 100).

Pundits found out that individuals and organizations enjoying high organizational intelligence variable have superiority over others in innovation and understanding organizational problems (Macgilchrist, 2004, P. 190). Recent studies in the field of human resources have revealed that the five characteristics of personality, aptitude, interest, intelligence and skill are effective on the advancement of the objectives of organizations, creating job satisfaction, organizational learning, tendency to knowledge, creativity coefficient and evaluating the staff. Today, it can certainly be claimed that identifying and using organizational intelligence can increase the power of competitiveness in an organization and make it distinctive from other organizations. The necessity to investigate organizational intelligence is now responding the current conditions and



needs of managers. Taking advantage of organizational intelligence, organizations increase effectiveness of using current information structures along with their goals and the information will be developed from limited and operational form to be used in the executive layers of organizations for managers. Considering the fact that managers work in the organizations that are affected by internal and external environments and they are in need of the power of learning in accountability to their problems like other people. Therefore, the issue of organizational intelligence can help managers in this regard and enable them to be accountable to needs, problems and on time reaction to environmental changes with regard to their organizational memory. Thus, managers need organizational intelligence for the advancement of their organizational goals and achieving them so that they can improve their function by relying on them. Albrecht (2002) introduces organizational intelligence as the capacity and potential of an organization in improving its mental power and focusing that on the realization of the mission of organization. He considers this intelligence as an ability improving mental power of the organization and focusing it on achieving the mission. Albrecht (2003) provides an organizational model (figure 1) having seven dimensions that include: strategic vision, shared fate, appetite for change, alignment and congruence, spirit, knowledge deployment and performance pressure (Albrecht, 2003, P. 25). Knowledge based pharmaceutical companies are the ones that are active in using innovation and inventing as well as commercializing the results of research and development including (design and production of items and services) in the field of high pharmaceutical technologies with high added value). Such companies are concerned about enhancing organizational intelligence that finally turns into the study issue in this paper. The aim of this study is to investigate components of organizational intelligence in knowledge based pharmaceutical companies using the seven dimension model of Albrecht. In Albrecht's view organizational intelligence falls into the following seven dimensions that are illustrated in the figure:



**Organizational intelligence:** capacity of an organization in integrating all mental abilities available and focusing them on achieving the mission. **Strategic vision:** ability to create, deduce and expressing a goal for an organization. **Shared fate:** feeling to

Figure1: conceptual model of research (Albrecht, 2003)

have the same goal among all the members for attempt and function in synergistic form. **Appetite for change:** adaptability and inclination to change for the realization of strategic vision. **Enthusiasm:** psychologists consider that as the optional attempt as extra energy of the members in higher level than what is going to be carried out. **Alignment and congruence:** existence of systems and series of specified regulations for implementation for people and groups. **Applying knowledge:** effective use of knowledge, information and data. **Performance pressure:** each of the executives must have their own executive position (Albrecht, 2003, P. 26).

Intelligence as an attractive concept has attracted lots of attention in many fields even the ones outside the area of individual and cognitive psychology. One of the areas showing high interest in intelligence is management and organization. However, this concept is ambiguous for the researchers of organization and management. One of the reasons is lack of strong and coherent theoretical frameworks in this field. On the other hand, despite passage of one decade from the introduction of organizational intelligence, few researches conducted in the knowledge based companies on the aforementioned area. Organizational intelligence is a low standard for efficiency of the organization in releasing information, decision-making and implementation. IQ of organizations is measurable like IQ of people. Intelligent organizations enhance their mental power along with their physical power.

The importance of this study is that if the level of organizational intelligence is low in knowledge based companies, the possibility for development, commercialization and competitiveness will be decreased. Now that we realized the importance of the issue and no research conducted in knowledge based companies, we investigate components of organizational intelligence in such companies.

#### Main hypothesis

Components of organizational intelligence are higher than average among the staff of The knowledge based pharmaceutical companies (considering the five option spectrum of Likert mean is 3).

#### Subsidiary hypotheses of the study

- H1. The factor of strategic vision is higher than average.
- H2. The component of shared fate is higher than average.
- H3. The element of aptitude for change is higher than average.
- H4. The component of spirit is higher than average.
- H5. The factor of alignment and congruence is higher than average.
- H6. The component of application of knowledge is higher than average.
- H7. The factor of performance pressure is higher than average.

#### Method of research

Since the aim of study is to determine amount of organizational intelligence components among the staff, hence, the study is applied one in terms of aim and descriptive and correlational in

terms of collecting data for testing hypotheses. The method is survey, the most important advantage of which is ability to overgeneralize the results. After collecting data through a standard questionnaire having validity and reliability as well as a statistical population being chosen through at simple random, SPSS software was used for inferential statistics and generalizing the results to the population and LISREL version 8.8 for validity of the construct. For collecting qualitative and library data we used library information of universities, relevant theses, ISI articles as well as valid Internet journals and sites in the country and around the world. Quantitative and field information: one of the most important levels of research is collecting quantitative information, thus, we used questionnaire which is the most common method for data collection. In this part statistical analysis, we will discuss distribution of statistical sample in terms of organizational position, salary, education, work experience, gender and age.

**TABLE 1. DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS**

Work experience	1 to 5	6 to 10	11 to 15	16 to 20	21 to 25	Higher than 26	Total
Percent of frequency	6	34	48	8	2	2	100
Education	Diploma	A.A	B.A	Higher than M.A	Total		
Frequency	18	18	50	14	100		
Gender	Male	Female	Total				
Frequency	76	24	100				
Age	Under 30	Between 31 and 40	Between 41 and 50	Above 51	Total		
Frequency	8	82	8	2	100		

**Testing main hypothesis of the study**

Main hypothesis of the study: intelligence of the staff of knowledge based pharmaceutical companies of Paradise Technology Park is more than average. Therefore, the statistical hypotheses can be written as following:

$$H_0: \mu \leq 3$$

$$H_1: \mu > 3$$

**TABLE (4) SHOWS THE RESULTS OF ABOVE-MENTIONED HYPOTHESIS:**

TABLE (7) SHOWS THE RESULTS OF ABOVE MENTIONED HYPOTHESES:						
Confidence interval at the confidence level of 95 percent		Mean difference	Level of significance		Level of freedom	T
High line	Low line					
0.632	0.552	0.495	0.000	149	11.667	Organizational intelligence

As the results of test reveals, the value of t is significant in the significant level of 0.05 (higher than 1.96). Therefore, null hypothesis is rejected with 95 percent certainty. Thus, the research hypothesis is verified.

### Testing one to seven subsidiary hypotheses

First hypothesis: vision of the staff of knowledge based pharmaceutical companies of Paradise Technology Park is higher than average.

Second hypothesis: shared fate of the staff of knowledge based pharmaceutical companies of Paradise Technology Park is higher than average.

Third hypothesis: appetite for change is higher than average for the staff of knowledge based pharmaceutical companies of Paradise Technology Park.

Fourth hypothesis: sprit of the staff of knowledge based pharmaceutical companies of Paradise Technology Park is higher than average.

Fifth hypothesis: alignment and congruence of the staff of knowledge based pharmaceutical companies of Paradise Technology Park is higher than average.

Sixth hypothesis: application of knowledge by the staff of knowledge based pharmaceutical companies of Paradise Technology Park is higher than average.

Seventh hypothesis: performance of the staff of knowledge based pharmaceutical companies of Paradise Technology Park is higher than average. For all hypotheses: the following statistical hypotheses can be considered:

$$H_0: \mu \leq 3 \quad H_1: \mu > 3$$

Single sample of the test						
Theoretical mean-3						
Row	T	Level of freedom	Level of significance	Mean difference	Confidence interval at the level of 95 percent	
The results of the first hypothesis: vision	1 0.627	148	0.000	0.521	0 .642	0.7 60
The results of the second hypothesis: shared fate	1 1.333	148	0.000	0.684	0 .555	0.7 93
The results of the third hypothesis: appetite for change	4. 567	148	0.000	0.342	0 .152	0.3 85
The results of the fourth hypothesis: sprit	7. 556	148	0.000	0.278	0 .256	0.4 85
The results of the fifth hypothesis:	1 3.345	148	0.000	0.752	0 .640	0.8 64

The results of the sixth hypothesis: application of knowledge	5. 345	148	0.000	0.28	0 .149	
The results of the seventh hypothesis: performance	4. 475	148	0.000	0.480	0 .353	0.6 07

As the results of test reveals for all hypotheses, the value of t is significant in the significant level of 0.05 (higher than 1.96). Therefore, null hypothesis is rejected with 95 percent certainty. Thus, the research hypothesis is verified.

## DISCUSSION AND CONCLUSION

The results revealed that the mean of intelligence was 3.49 which was higher than theoretical mean of 3, in addition, SaipaPlasco Car Company was higher than average with the mean of 4.52 compared to the theoretical mean of 4 and the intelligence of the Organization of Research and Planning Education was less than average of 3 with the mean of 2.82.

Components of the intelligence of the company	Results of researches in the Organization of Research and Planning	SaipaPlasco Car Company	Knowledge based pharmaceutical companies of Paradise Technology Park
Strategic vision	3.17	4.66	3.64
Shared fate	2.99	4.59	3.67
Appetite for change	2.66	4.46	3.26
Sprit	2.69	4.39	3.37
Alignment and congruence	2.66	4.68	3.75
Applying knowledge	2.73	4.30	3.28
Performance pressure	2.73	4.56	3.48
Company intelligence	2.82	4.52	3.49

With regard to the results, the component of alignment and congruence in the staff of knowledge based pharmaceutical companies of Paradise Technology Park and SaipaPlasco Car Company has highest mean and appetite for change in knowledge based pharmaceutical companies and applying knowledge in SaipaPlasco Car Company have the lowest mean.

The results of the subsidiary hypotheses of the study were indicated as following:

1. First subsidiary hypothesis: the company intelligence of the staff of knowledge based pharmaceutical companies of Paradise Technology Park in the strategic vision is more than average.

This hypothesis was verified using mean test of a population by providing mean of company intelligence as 3.64 that had been mentioned among the staff of knowledge based pharmaceutical companies of Paradise Technology Park. In fact, strategic vision is the ability to provide and

implement goals and prepared strategies and the results suggest revision and continuous investigation of such strategies in the staff of knowledge based pharmaceutical companies of Paradise Technology Park.

2. Second subsidiary hypothesis: intelligence of the staff of knowledge based pharmaceutical companies of Paradise Technology Park in shared fate is higher than average.

This hypothesis was measured using mean test of a population and the results of test (3.67) show its verification. The aim of this hypothesis was the importance of encouraging the staff to have supportive vision toward organization and investigation of goals. Supportive vision is created for attempting synergistically as a result of shared goal among the members. On the other hand, one of the outstanding characteristics of the committed people is emphasizing the fate of organization which is the main area of discussion in shared fate. Results of the study reveal that the staff of knowledge based pharmaceutical companies of Paradise Technology Park put the principle of interference and sharing of the staff in the affairs and their participation in determining and achieving goals of the company, creating successful business teams and strengthening cooperation among the members, creating job security and the sense of belonging to organization as the radical steps in reaching shared fate.

3. Third subsidiary hypothesis: the company intelligence of the staff of knowledge based pharmaceutical companies of Paradise Technology Park in appetite for change is more than average.

This hypothesis was verified by attaining the mean of 3.26 from testing the mean of a population, as it is observed it has the lowest mean among the components. The aim of this hypothesis also was encouraging progress in high levels that is summed up in appetite for change, interest in taking risk and curiosity and it is the feature of talented and potentially competent people to see to what extent it is available in the staff of knowledge based pharmaceutical companies of Paradise Technology Park. The outcomes of this study manifest that supporting the teams of developing and improving products and services, promoting business processes, encouraging the staff to make familiar and apply new technology and the proposition committees are for getting in line with the changes in the workplace in the staff of knowledge based pharmaceutical companies of Paradise Technology Park.

4. Fourth subsidiary hypothesis: company intelligence is more than average in the staff of knowledge based pharmaceutical companies of Paradise Technology Park in spirit.

This hypothesis was measured using the mean of a population and the results were verified with the mean of 3.37. In this hypothesis the aim was to give spirit to the staff of knowledge based pharmaceutical companies of Paradise Technology Park so that they function with more energy. They have tendency to use this component and their success depends on the success of the organization. Besides, optional attempts of the members of organization in achieving goals of the company are the effect of the above-mentioned encouraging factors.

5. Fifth subsidiary hypothesis: company intelligence is more than average in the staff of knowledge based pharmaceutical companies of Paradise Technology Park in alignment and congruence dimension.

This hypothesis was measured using the mean of a population and the results suggest its verification. With regard to the obtained mean (3.75), it is observed that the state of bank was



described favorably in the above cases, but it is still far from the ideal. This hypothesis was mentioned so that it can be the cause of alignment and congruence, the presence of systems and series of specified laws to implement commands for individuals and groups. The outcomes of study reveal that lack of codified laws for executing commands will make lots of problems and disagreement for the working group.

6. Sixth subsidiary hypothesis: company intelligence is more than average in the staff of knowledge based pharmaceutical companies of Paradise Technology Park in the dimension of applying knowledge.

This hypothesis was measured using the test of mean of a population and the results of test (3.28) suggest that the component of applying knowledge has the lowest degree after appetite for change. While acceptable grade was obtained in this regard, it is far from ideal and requires more attempts of authorities to realize management strategies of knowledge to have a successful organization. The aim of this hypothesis was to investigate the importance and enforceability of knowledge and specialty. No one will be able to do so unless he has what it takes in that field. Assets of knowledge, systems and information technology are useful in the development of company intelligence in the staff of knowledge based pharmaceutical companies of Paradise Technology Park, intelligence is a God-given feature that needs to be strengthened and this requires technical knowledge and applying new and evolved knowledge in the organization.

7. Seventh subsidiary hypothesis: company intelligence is more than average in the staff of knowledge based pharmaceutical companies of Paradise Technology Park in the dimension of performance pressure.

This hypothesis was measured using the mean of a population and the results (3.48) manifest its verification. In this hypothesis we wanted to know if clear understanding of roles and responsibilities by the staff, proper working relationship among the unites, abrupt measures of directors for solving problems, receiving feedback and feeling of being effective for the organization can be factors for developing and promoting company intelligence.

Therefore, recognition and promotion of company intelligence must be taken into consideration as a new subject whose reinforcement leads to the success of organization, and then we will succeed in making organization attain its vision and mission.

## CONCLUSION AND PROPOSITIONS

According to the findings of research, to develop organizational intelligence the managers of knowledge based pharmaceutical companies must continuously focus on the seven intelligent dimensions of organization. By the same token, the following eight steps are recommended to promote knowledge based companies into intelligent ones:

√ Findings of the study reveal that the main verified hypothesis of organizational intelligence with the mean of 3.49 is higher than the theoretical mean of 3. Paying attention to the component of organizational intelligence results in the promotion of company intelligence and finally it leads to the formation of an intelligent company. Thus, it is proposed that the managers of knowledge based pharmaceutical companies put all components of company intelligence, its measurement, periodic investigation and its reevaluation in their agenda.

√ Findings of the study reveal that the first verified subsidiary hypothesis with the component of strategic view with the mean of 3.64 is higher than the theoretical mean of 3. This finding manifests that emphasizing strategic vision can contribute to the enhancement of ability to provide and achieve goals and prepared strategies. In this regard, we propose that the managers of knowledge based pharmaceutical companies emphasize the development of this component among the staff. To perform this important task in the dimension of strategic vision: revision and rearrangement of structures compatible with the missions of company and the existence of a compiled plan are necessary for identification and promotion of managers.

√ Findings of the study reveal that the second verified hypothesis has the same fate with the mean of 3.67 which is higher than theoretical mean of 3. Thus, emphasizing this component in the knowledge based companies can cause sympathy among the staff, formation of contribution among them and finally success. Therefore, it is proposed that the managers of such companies take measures to provide a vision to achieve this goal.

√ Findings of the study reveal that the third verified subsidiary hypothesis of appetite for change with the mean of 3.26 is higher than theoretical mean of 3. The component of appetite for change has had the lowest amount compared to the other components of organizational intelligence. However, this component has a determining role in the survival and development of organizations. Thus, it is proposed that to develop the component of appetite for change in such companies we should consider developing capabilities such as having inclination to change, creating the situation for accepting change and new ideas at the part of managers, avoiding haste in expelling the managers that don't function well and giving permission to the managers to question current accepted methods. The main priority in this regard is to provide a proper atmosphere and employ leaders who are change-oriented.

√ Findings of the study reveal that the fourth verified subsidiary hypothesis with the mean of 3.37 is higher than theoretical mean of 3. Sprit is a component that is in the third place in terms of amount and its promotion is recommended. In the dimension of sprit we need enthusiastic planners who apply all their power to create a good quality for working life and create the opportunity for promotion of the staff for the young generation of the staff of knowledge based pharmaceutical companies of Paradise Technology Park.

√ Findings of the study reveal that the fifth verified subsidiary hypothesis with the mean of 3.75 is higher than theoretical mean of 3, this component has the highest amount compared to the other components of company intelligence among the staff and this advantage can be used to enhance ability of the staff. In terms of alignment and congruence it is proposed that the managers give enough responsibilities to deputies and there must be coordination among the goals of different deputies rather than conflict.

√ Findings of the study reveal that the sixth verified subsidiary hypothesis with the mean of 3.28 is higher than theoretical mean of 3. Applying knowledge is the lowest component after appetite for change. It is proposed that the managers of knowledge based companies increase that with more emphasis and making the culture. In general, despite measures taken in the dimension of applying knowledge, it is still far from the desirable level. The process of identifying, classifying, knowledge distribution, power to learn from experiences and memory of the company are weak, so the proper methods of saving and recovery of data has a determining role in improvement of this component.

√ Findings of the study reveal that the seventh verified subsidiary hypothesis with the mean of 3.48 is higher than theoretical mean of 3. In the dimension of performance pressure despite the staff's proper understanding of the roles and responsibilities, lack of receiving feedback and on-time action of managers in solving problems are counted as important factors in the reduction of performance and to strengthen this dimension it is proposed that the pharmaceutical companies take the processes of decision-making, policy-making and taking measures for reaching goals serious.

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DOI: **10.5958/2249-7137.2020.00782.X**

## EVALUATION OF THE WEAR OF THE TIRE WHEEL PAIR AT ROLLING FRICTION

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### ABSTRACT

*Traffic safety and the main technical and economic indicators of the rolling stock largely depend on the interaction of the wheel and rail, so it is extremely important to determine the intensity of wear on the wheel surface at various stages of the wheelset operation. The article offers modeling of wheel rolling surface wear under rolling friction by the method of maximum contact stresses. The regularity of changes in deformations, stresses and wear intensity of the wheel rolling surface in the area of contact with the rail is established. The method given in the article is tested based on statistical data of the electric locomotive repair shop in the locomotive depot "Uzbekistan" of the joint-stock company "Uzbekistan Temir Yullari".*

**KEYWORDS:** *Wheelset, the Tires of Wheel Pairs, The Wear And Tear Of The Formula Of Hertz.*

### INTRODUCTION

In Uzbekistan, as in the whole world, despite many years of various studies, the issue of wear of wheelset bandages remains not fully studied. Theorists and practitioners are finding more and more reasons for this phenomenon every year. One of them is the replacement of sliding box bearings with rolling bearings, or, for example, an increase in the mass of trains and longitudinal

loads in the composition that lead to additional friction forces. It is not possible to change these causes, so today, the main task is to study the phenomenon of friction and wear, as well as modeling these processes to be able to predict them. A large number of papers have been published on this problem, which suggest forecasting models, taking into account the abrasive wear of the Archard [1], for new [2], in-service [3] and improved profiles [4].

The durability of the wheel is determined by the property of the band to maintain its performance until its maximum wear in thickness with the installed maintenance system. The service life of the bandage is set so that it is replaced, as a rule, at factories, with the established frequency. The thickness of the band depends on the intensity of wear, which is influenced by the following factors: wear around the skating circle (rolling); wear of the ridge; reduction in the thickness of the band from technological wear during windings [5].

### Method of calculation

When calculating the wear of the wheel surface when rolling over the surface, we introduce the assumption that the surface layers of the bandage material are destroyed in the contact zone, both on straight sections of the rail track and in curves. On straight sections of the track, the contact spot is an ellipse with diagonals  $2A$  and  $2B$ , and on curved sections of the track, another ellipse is added to it – the contact surface of the rail ridge and the bandage ridge. First of all, we determine the dimensions of the semi-axes of the elliptical platform, the contact of the wheel and the rail using the Hertz formulas [6, p. 328]:

$$a = mA, b = nA, A = \sqrt[3]{\frac{(1-\mu^2)R_K R_P P_C}{E(R_K + R_P)}} \quad (1)$$

where:  $E$  – modulus of elasticity of the material of rail and wheel;

$R_P$  – radius of curvature of the rail in the range  $R_P=300\div 6000$  mm;

$R_K$  - wheel radius ( $R_K=625$  MM.  $R_K=475$  MM.  $R_K=504$  MM.);

$\mu = 0,3$  – coefficient Poisson's ratio for rail and wheel materials;

$m$  and  $n$  - coefficients determined by the corner

$$\varphi = \arccos \frac{|R_K - R_P|}{R_K + R_P} \quad (2)$$

The next stage of forecasting determines the maximum stress on the contact surface of the wheel and rail:

$$\sigma_K = \frac{1,5 \cdot P_C}{\pi \cdot a \cdot b} \quad (3)$$

where  $P_C$  – set value for the static load from the wheel to the rail.

As experiments show, the value of contact stresses is unevenly distributed over the contact spot. According to Hertz's theory, the maximum contact stresses increase towards the center of the ellipse. Conditionally, we divide the area of the ellipse into two parts by the property of the

material from which the wheelset is made. The partition boundary parameter will be the yield strength. In the inner ellipse, where the maximum contact stresses exceed the yield point, it is obvious that the wear of the wheel and rail material will be much greater than in the remaining area from the borders of the small ellipse to the borders of the large one. The width of  $2b_1$ , the contact area on the surface of the wheel, within which the maximum contact stresses exceed the yield strength of the wheel material, is calculated by the formula:

$$2b_1 = 2b \frac{\sigma_K - \sigma_T}{\sigma_K} \quad (4)$$

where:  $b$  – half-axis of the width of the ellipse, full contact spot of the wheel and rail;

$b$  – half-axis of the width of the ellipse, full contact spot of the wheel and rail;

$\sigma_K$  – maximum contact stresses in the contact area of the wheel and rail;

$\sigma_T$  – yield strength of the wheel material, selected for steel 60, St1 and St2 according to GOST.

When moving in curved sections of the track other than vertical, the values of the maximum horizontal loads  $N$  are calculated, which occur at the contact area of the ridge band with the rail heads, and depend on both the speed and the radius of the curve and are determined by the formula:

$$N = \frac{G}{3g} \cdot \frac{V_k^2}{R_p} \quad (5)$$

where:  $G$  – weight of the electric locomotive;

$V_K$  – is the specified linear velocity of the wheel center;

$R_p$  – radius of the web profile curve, on the specified polygon;

$g$  – the force of gravity.

The wheel-rail coupling coefficient is determined using the formula:

$$\Psi_K = 0.25 + \frac{8}{100 + (20/3,6)V_K} \cdot (6)$$

The average sliding speed of the wheel surface relative to the rails is calculated:

$$V_{CK} = \frac{V_K \Psi_K}{800} \sqrt{\frac{P_C}{R_K}} \quad (7)$$

The average coefficient  $K_n$  of surface wear is determined rolling the locomotive wheel set along the rails using the formula:



$$K_H = \frac{e_1 \cdot d_a \cdot V_K \cdot}{2\pi \cdot B_K \cdot R_K \cdot \sigma_K \cdot V_{CK}} \quad (8)$$

where:  $d_a$  – the diameter of the iron atom, that is, the wheel material;

$\sigma_K$  – the maximum stress on the contact surface of the wheel and rail is determined by the formula (3),

$B_K$  – the width of the wear surface of the wheel.

The average  $L_n$  value of the rolled surface is calculated by rolling the wheelset along the rails after a given run

$$H_K = \frac{e_1 \cdot d_a \cdot L_n}{\pi \cdot R_K \cdot B_K} \quad (9)$$

where:  $L_n$  – the specified mileage.

We determine the estimated mileage of the locomotive, after which the rejection size of the rolled product  $H_{\sigma} = 7 \text{ mm}$  will be reached according to the operating rules:

$$L_K = 10^4 \frac{H_{\sigma}}{H_K} \quad (10)$$

When determining the inter-repair mileage for a specific rolling stock, the selected polygon is segmented into sections and grouped by curvature for calculations with individual input parameters. The results are combined into one, and the inter-repair mileage is adjusted for it.

## CONCLUSION

The described method is universal, since it can be used for calculating the wear of the surface of the bandages of both new wheel pairs and those already in use, when rolling along the rail of any design. The method given in the article has been tested for several years based on statistical data of the electric locomotive repair shop in the locomotive depot "Uzbekistan" of the joint stock company "Uzbekistan Temir Yullari". According to the results of concise calculations, the period of repairs and replacement of wheel pairs is adjusted, which gives an economic effect of 10% -15% and increases traffic safety.

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DOI: **10.5958/2249-7137.2020.00783.1**

## THE ROLE OF SCIENCE IN SHAPING THE WORLDVIEW

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### ABSTRACT

*This article discusses the important role of science in shaping the human worldview. The questions and problems of science, the innovations of which show new aspects of human thinking, have been debated. The truth of knowledge is verified here directly in existing practice, because knowledge is built on objects that are included in the processes of production and available social experience. But since science constantly goes beyond this framework, it can only partially rely on the cash forms of mass practical development of objects. In the 19th century the function of being a productive force has been added to the worldview function. In the first floor. 20 century N. began to acquire another function - to turn into a social force, introducing itself into various spheres of social life and regulating various types of human activity. The artistic image always acts as a unity of the general and the individual, the rational and the emotional. Scientific concepts, on the other hand, are rational, highlighting the general and essential in the world of objects. Reflecting the world in its objectivity, science gives only one of the sections of the diversity of the human world.*

**KEYWORDS:** *Science, Worldview, Human Thinking, Philosophical Approach, Development*

### INTRODUCTION

SCIENCE is a special type of cognitive activity aimed at the development of objective, systematically organized and substantiated knowledge of the world. A social institution that ensures the functioning of scientific cognitive activity. As a form of cognition, science interacts with its other types: ordinary, artistic, religious-mythological, philosophical. It arises from the needs of the practice and in a special way regulates it. Science aims to identify the essential connections (laws), in accordance with which objects can be transformed into human activity. Since any objects can be transformed in activity — fragments of nature, social subsystems and

society as a whole, states of human consciousness, etc., to the extent that they can all become objects of scientific research. Science studies them as objects that function and develop according to their natural laws. It can also study a person as a subject of activity, but also as a special object.

The objective and objective way of looking at the world, characteristic of science, distinguishes it from other methods of cognition. For example, in art, the mastery of reality always occurs as a kind of gluing together of the subjective and objective, when any reproduction of events or states of nature and social life implies their emotional evaluation. The artistic image always acts as a unity of the general and the individual, the rational and the emotional. Scientific concepts, on the other hand, are rational, highlighting the general and essential in the world of objects. Reflecting the world in its objectivity, science gives only one of the sections of the diversity of the human world. Therefore, it does not exhaust the whole culture, but is only one of the spheres that interacts with other spheres of cultural creativity - morality, religion, philosophy, art, etc. The sign of objectivity and objectivity of knowledge is the most important characteristic of science, but it is still insufficient to determine its specificity, since individual objective and objective knowledge can also give ordinary knowledge.

But unlike him, science is not limited to studying only those objects, their properties and relations, which in principle can be mastered in the practice of the corresponding historical era. It is capable of going beyond the limits of each historically defined type of practice and discovering new subject worlds for humanity that can become objects of mass practical development only at future stages of the development of civilization. Leibniz characterized mathematics as the science of possible worlds. In principle, this characteristic can be attributed to any fundamental science. Electromagnetic waves, nuclear reactions, coherent radiation of atoms were first discovered in science, and these discoveries potentially laid a fundamentally new level of technological development of civilization, which was realized much later (the technique of electric motors and electric generators, radio and television equipment, lasers and nuclear power plants, etc. . d.). The constant desire of science to expand the field of the studied objects, irrespective of the current possibilities of their mass practical development, is the backbone feature that justifies other characteristics of science that distinguish it from ordinary knowledge.

First of all, this is the difference in their products (results). Ordinary knowledge creates a conglomerate of knowledge, information, prescriptions and beliefs, only individual fragments of which are interconnected. The truth of knowledge is verified here directly in existing practice, because knowledge is built on objects that are included in the processes of production and available social experience. But since science constantly goes beyond this framework, it can only partially rely on the cash forms of mass practical development of objects. She needs a special practice, with the help of which the truth of her knowledge is checked. This practice becomes a scientific experiment. Part of the knowledge is directly verified in the experiment. The rest are interconnected by logical connections, which ensures the transfer of truth from one statement to another. As a result, the characteristics of her knowledge inherent in science arise - their systemic organization, validity and evidence.- A special type of cognitive activity aimed at developing objective, systematically organized and substantiated knowledge of the world. It interacts with other types of cognitive activity: ordinary, artistic, religious, mythological, philosopher. comprehension of the world. Like all types of cognition, N. arose from the needs of practice and regulates it in a special way. N. aims to identify the essential connections (laws), in

accordance with which objects can be transformed in the process of human activity. Any objects that can be transformed by man are fragments of nature, social subsystems or society as a whole, states of human consciousness, etc. - may become subjects of scientific research.

An artistic image is always the unity of the general and the individual, the rational and the emotional. Scientific concepts, on the other hand, are rational, highlighting the general and essential in the world of objects. Reflecting the world in its objectivity, A. gives only one of the sections of the diversity of the human world. Therefore, it does not exhaust the whole culture, but is only one of the spheres that interacts with other spheres of cultural creativity - morality, religion, philosophy, art, etc. The sign of objectivity and objectivity of knowledge is the most important characteristic of N., but it is still insufficient to determine its specificity, since ordinary knowledge can give individual objective and objective knowledge. In contrast, N. is not limited to studying only those objects, their properties and relations, which in principle can be mastered in the practice of the corresponding historical era. It is capable of going beyond the limits of each historically defined type of practice and discovering new subject worlds for humanity that can become objects of mass practical development only at future stages of the development of civilization. In due time G.V. Leibniz characterized mathematics as N. about possible worlds. In principle, this characteristic can be attributed to any fundamental N. Electromagnetic waves, nuclear reactions, coherent radiation of atoms were first discovered in physics, and these discoveries potentially laid a fundamentally new level of technological development of civilization, realized much later (the technique of electric motors and electric generators, radio - and television equipment, lasers, nuclear power plants, etc.). N.'s constant desire to expand the field of the studied objects, irrespective of the current possibilities of their mass practical development, is the backbone feature that justifies other characteristics of N. that distinguish it from ordinary knowledge.

First of all, this is the difference in products (results). Ordinary knowledge creates a conglomerate of knowledge, information, prescriptions and beliefs, only individual fragments of which are interconnected. The truth of knowledge is verified here directly by actual practice, since knowledge is built on objects included in the processes of production and available social experience. But since N. constantly goes beyond this framework, it can only partially rely on cash forms of mass practical development of objects. She needs a special practice, with the help of which the truth of her knowledge is checked. This practice becomes a scientific experiment. Part of the knowledge is directly verified in the experiment. The rest are united by logical connections, which ensures the transfer of truth from one statement to another. As a result, such inherent characteristics of N. arise as the systematic organization of her knowledge, their validity and proof. Further, N., unlike ordinary knowledge, involves the use of special means and methods of activity. It cannot be limited to using only the ordinary language and those tools that are used in production and everyday practice. She needs special means of activity - a special language (empirical and theoretical) and special instrument systems. It is the constant development of these tools that ensures the study of ever new objects, including and those that go beyond the scope of available production and social practices. This also triggered N.'s needs for the constant development of special methods that ensure the development of new facilities regardless of the possibilities of their practical development today. The method in N. often serves as a condition for fixing and reproducing the object of study; Along with knowledge of objects, N. systematically develops knowledge of methods. Finally, there are specific features of the

subject of scientific activity. The subject of ordinary knowledge is formed in the process of socialization. For N., this is not enough: special training of the knowing subject is required, which provides his ability to use the means and methods peculiar to N. in solving its problems and problems. N.'s systematic studies also involve the assimilation of a special system of values. The foundation is value attitudes towards the search for truth and the constant building up of true knowledge. Based on these attitudes, a system of ideals and norms of scientific research has historically developed. These value attitudes constitute the basis of N.'s ethics. N.'s system of ideals prohibits willful distortion of truth for the sake of one or another social purpose, the system of norms of scientific research requires constant innovation and prohibits plagiarism.

Fundamental value orientations correspond to two fundamental and determining signs of scientific research: objectivity and objectivity of scientific knowledge and its intention to study all new objects, regardless of the available possibilities for their mass practical development. In the development of scientific knowledge, pre-science and N. can be distinguished in the proper sense of the word.

Natural science, based on the combination of the mathematical description of nature with its experimental study, was formed as a result of cultural shifts that occurred in the Renaissance, Reformation and early Enlightenment. The formation of technical and social N. was caused by intensive industrial development, stimulated by the introduction of scientific knowledge in production and the emergence of the needs of scientific management of social processes.

At each stage of development, scientific knowledge complicated its organization. All developed N. have their own levels of theoretical and empirical research with methods and forms of knowledge specific to them (the main form of the theoretical level is scientific theory; the empirical level is a scientific fact). To ser. 19 century a disciplinary organization of N. is being formed; a complex system of interrelated disciplines arises. Each of N. (mathematics, physics, chemistry, biology, technical and social N.) has its own internal differentiation and its foundations - its characteristic picture of the reality being studied, the specifics of the ideals and norms of research, and philosophical and philosophical ideas typical for it. N.'s interaction forms interdisciplinary research, the proportion of which increases as N. develops. Each stage of N.'s development was accompanied by a special type of its institutionalization, determined by the organization of research and the method of reproduction of the subject of scientific activity. As a social institute, N. began to take shape in the 17th and 18th centuries, when the first scientific societies, academies, and scientific journals arose in Europe. In the 20th century. N. has turned into a special type of production of scientific knowledge, including diverse associations of scientists, including large research teams, targeted funding and special expertise of research programs, their social support, a specific industrial and technical base serving the scientific search, a complex division of labor and targeted training.

In the process of historical development of N. its functions in social life changed. In the era of the formation of natural sciences, N. defended the right to participate in the formation of a worldview in the fight against religion. In the 19th century the function of being a productive force has been added to the worldview function. In the first floor. 20 century N. began to acquire another function - to turn into a social force, introducing itself into various spheres of social life and regulating various types of human activity. In the modern era, in connection with global crises, the problem of searching for new worldview orientations of mankind arises. In this



regard, N.'s functions are also rethought. Its dominant position in the cultural value system was largely due to its technical application. Today, it is important to combine the values of scientific and technological thinking with those social values that are represented by morality, art, religious and philosophy. Comprehension of the world. Such a combination is a new type of scientific rationality. In N.'s development since the 17th century. Three main types of rationality can be distinguished: classical (17th - early 20th century), neo-classical (first half of the 20th century), non-classical (late 20th century). Classical N. suggested that the subject is distance from the object and, as it were, from the side learns the world; the condition of objectively true knowledge was considered the elimination of the explanation and description of everything that relates to the subject and means of activity. Nonclassical rationality is characterized by the idea that the object is related to the means and operations of the activity; explication of these tools and operations is a condition for obtaining true knowledge about the object. An example of the implementation of this approach is quantum relativistic physics. Finally, post-non-classical rationality takes into account the correlation of knowledge about an object not only with means, but also with value-targeted structures of activity, suggesting the explication of intrascientific values and their correlation with social goals and values.

The appearance of each new type of rationality does not eliminate the previous type, but limits its field of action. Each of these types expands the field of the studied objects. In modern, post-nonclassical N., complex, historically developing systems, including humans, are taking an increasingly important place. These include objects of modern biotechnology, primarily genetic engineering, biomedical objects, large ecosystems and the biosphere as a whole, human-machine systems, including artificial intelligence systems, social objects, etc. In a broad sense, this can include any complex synergetic system, the interaction with which turns the human action itself into a component of the system. The research methodology of such objects brings science and humanitarian knowledge closer together, forming the basis for their deep integration.

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DOI: **10.5958/2249-7137.2020.00784.3**

## PHOTO GALVANIC CHARACTERISTICS OF THE ELEMENTS OF THE SUN AND THE NONIDEALISTIC COEFFICIENT OF THE PHOTOVAC

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### ABSTRACT

*The theoretical study of the links of the main photovoltaic characteristics of solar elements to the non-idealistic coefficient of photovoltaic ampere characteristic (photo VAC) was carried out in the article. The solar element photo VAC's nonidealistic coefficient is determined to have different values for different points of photo VAC. Photovoltaic characteristics have been shown to be very strong in the no-ideality coefficient at the point at which the short-circuit current density of the photovoltaic is determined, and linear dependence on the point at which the effective values of photovoltaic characteristics are determined.*

**KEYWORDS:** *Solar Elements, Photovoltaic Ampere Characteristic, Photovoltaic Ampere Characteristic No-Idealistic Coefficient, Photo galvanic Characteristics, Short Circuit Current Density, Effective Values Of Photo galvanic Characteristics.*

### INTRODUCTION

As the main properties of solar elements (SE) on the basis of hydrogenated amorphous silicon (a-Si:H): it is possible to show that they can be prepared on large surfaces and that the optical absorption coefficient and photosensitivity of this material to the monocrystalline Semiconductors of the working layer are greater. These properties are determined by the irregularity of the structure a-Si:H and the presence of hydrogen in it [1]. The implementation of targeted scientific research in this regard, including the theoretical research of photogalvanic characteristics of geogenated amorphous silicon-based SE, is one of the pressing problems of semiconductor physics.

[2] the study showed that SE's are not interrelated with the salt processing voltage ( $U_{cu}$ ), short-circuit current density ( $j_{km}$ ), and photoVAC's nonidealistic coefficient ( $n'$ ), and that it is possible to study them separately for this purpose.

Therefore, in this study, it was theoretically investigated the correlation of these parameters to the non-ideal coefficient of photoVAC, based on the new expression that came out to connect SE's short-circuit current density, effective voltage ( $U_{\phi}$ ), effective current density ( $j_{\phi}$ ) and effective power ( $P_{\phi}$ ) to temperature.

[3] in the study, a-Si:H was chosen as a SE model based on amorphous silicon for the saturation current density ( $j_0$ ).

$$j_0 = j_{00} \exp \left( \frac{q\varphi}{k} \left( \frac{1}{T_0} - \frac{1}{T} \right) \right), \quad (1)$$

for salt processing voltage:

$$U_{cu} = (U_{cu0} - n'_1 \varphi) \frac{T}{T_0} + n'_1 \varphi, \quad (2)$$

for short circuit current density:

$$j_{km} = j_{00} \exp \left[ \frac{q(\varphi_0 - \gamma T)}{k} \left( \frac{1}{T_0} - \frac{1}{T} \right) \right] \left[ \exp \left[ \frac{q(\varphi_0 - \gamma T)}{n'_2 k T_0} \left( \frac{U_{cu0}}{(\varphi_0 - \gamma T)} - 1 + \frac{T_0}{T} \right) \right] - 1 \right] \quad (3)$$

expressions are obtained. Where  $j_{00} - T_0 = 300 \text{ K}$  is the density of the saturation current at the temperature,  $\varphi$  - the height of the potential barrier of SE and the  $U_{cu0}$  - salt processing voltage,  $k$  - Boltzman constant,  $q$  - electron charge,  $\varphi_0 - T_0 = 0 \text{ K}$  is the height of the potential barrier at the temperature,  $n'_1$  is the coefficient of nonideality of the photoVAC at the point at which the, - The potential barrier of  $\gamma$  - SE is the temperature coefficient of the height, the value of which is the same as the temperature coefficient of the energy width of the energy zone of the band of amorphous semiconductors. Its value is located in the  $\gamma \approx (5 \cdot 10^{-4} - 10^{-5}) \text{ eV/K}$  range for semiconductors [4].

This can be seen from the formulas, since the density of the saturation current of SE does not depend on the non-ideal coefficient of the photoVAC.

[5] in the study, however, a simple-looking following formulas were obtained that determined the effective voltage, effective current density, and effective power temperature dependence according to the method of determining the value of the filling coefficient ( $ff$ ) using photoVAC, determined from SE experiments, and that allowed to interpret the results obtained from the experiments well enough:

$$U_{\phi} = \frac{n'_3 k T}{q} \ln \frac{j_{km}}{j_0} \frac{n'_3 k T}{q U_{cu}} \quad (4)$$

$$j_{\phi} = j_{km} \left( \frac{n'_3 kT}{qU_{cu}} - 1 - \frac{j_0}{j_{km}} \right) \quad (5)$$

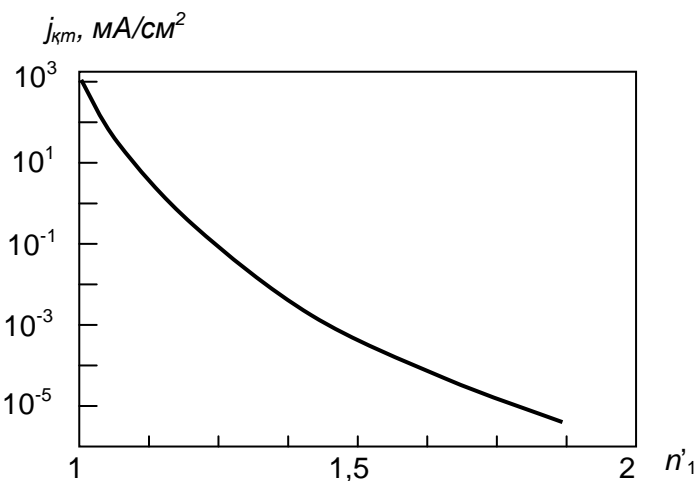
$$P_{\phi} = \frac{n'_3 kT j_{km}}{q} \left( 1 + \frac{j_0}{j_{km}} - \frac{n'_3 kT}{qU_{cu}} \right) \ln \frac{j_{km}}{j_0} \frac{n'_3 kT}{qU_{cu}} \quad (6)$$

Here  $n'_3$  is the nonidealistic coefficient of photoVAC at the point at which effective values of photographic characteristics are determined.

[6] in the study, the experiment obtained to correlate the above parameters to the temperature from the above (2) formula to explain the results of the calculation, the temperature correlation of the salt processing voltage is very strongly correlated with the change in the non-ideal coefficient of photoVAC, in these variations, the value of the salt processing voltage of SE is greater than

$${}_1\varphi_0 = \frac{E_{g0}}{q}, \quad (7)$$

determined to remain. Here is the energy width of the mobility slit of the  $E_{g0}$  – ideal SE. You can not have it while. Therefore, it can be concluded that the non-ideal coefficient of SE at the point at which the salt processing voltage in the photoVAC is determined will be equal to 1 ( $n_1=1$ ), or the salt processing voltage will not be connected to the non-ideal coefficient of photoVAC at all. It was determined that the short-circuit current density is very strongly dependent on the non-ideal coefficient of the photoVAC at the point at which it is determined. (3) It is shown that the calculations performed to determine the short-circuit current density using the formula and the results of the experiment should be equal to  $n_2=1,006$  based on the comparison. From their compatibility it was determined that the coefficient of nonideality of SE in photoVAC  $n_1$  does not depend on the temperature from the practical application. Because, when determining the connection of the short-circuit current density to the temperature, the effect of temperature on the coefficient of nonideality of the photoVAC is not taken into account. From these results, it can be concluded that the coefficient of nonideality of the photoVAC  $n_1$  at the point at which the



1-picture. The results of the calculation obtained from the formula for determining the effect of the non-ideal coefficient of photoVAC on the short-circuit current of SE (3.11). Performed for  $U_{ocu}=0.31$  B,  $\varphi=1.16$  B,  $j_{00}=1.28 \cdot 10^{-4}$

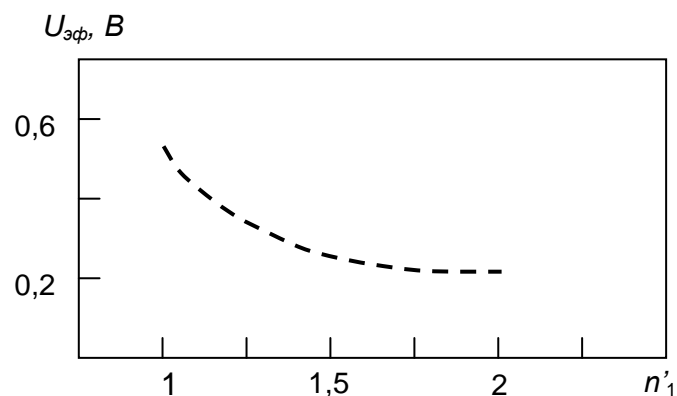
density of the short circuit current is determined is  $n'_2$  suddenly slightly larger ( $n'_2 > 1$ ) and its value will not depend on the temperature.

In order to determine the value of the non-ideal coefficient  $n'_3$  of the photoVAC at the point at which the effective values of the photogalvanic characteristics of SE are determined, it is shown that the experiment obtained to correlate these parameters to temperature (4), (5) and (6) should be  $n'_3 = 2,54$  in order to ensure that they are compatible by Therefore, it was concluded that the value of  $n'_3$  should be greater than 2 ( $n'_3 > 2$ ). At the same time, the effective value of the voltage emitted from SE may not depend on  $n'_3$ , because if ( $n'_3 > 1$ ), the effective value of the voltage is determined to remain greater than the value of the Salt performance voltage. From the results obtained for Salt performance and effective voltages, it can be concluded that the value of the voltage, which is determined at all points SE photoVAC, will not depend on the non-ideal coefficient of photoVAC. The results obtained above show that SE values have different values at different points of photoVAC, the non-idealistic coefficient of photoVAC. It is known that SE determines the height of the potential barrier a wide-axis of the energy zone in which the semiconductor is prohibited. Therefore, it can be assumed that the potential barrier height of SE will be at the same sight as the connection of the energy zone width to the temperature, where it is forbidden to connect to the temperature:

$$\varphi = \varphi_0 - \gamma T \quad (8)$$

The non-ideal coefficient of shott barrier SE's, which is prepared on the basis of semiconductors, lies in the range  $n' \approx 1,0-2,5$ , while p-n and p-i-n-based SE's lie in the range  $n' \approx 1,0-3,5$  [1].

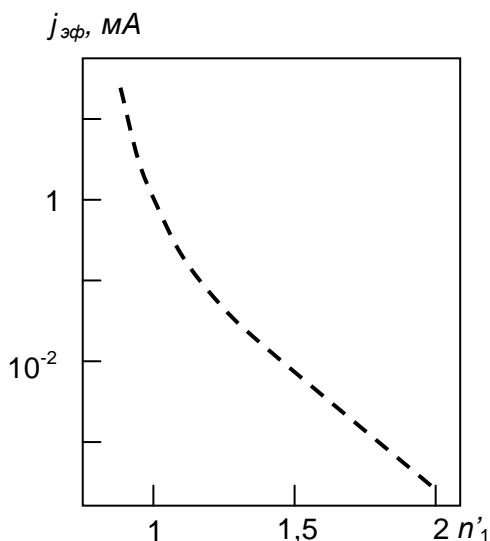
Figure 1 shows the results of the calculation obtained from the formula (3) on determining the effect of the non-ideal coefficient of photoVAC on the density of a short-circuit current of SE's. Performed for  $U_{ocu} = 0.31$  B,  $\varphi = 1.16$  B,  $j_{00} = 1.28 \cdot 10^{-4}$  mA. Calculations have shown that this connection decreases the density of the short circuit current with an increase in the coefficient of nonideality of the photoVAC, and this connection is very strong.



2- picture. The correlation of the effective voltage of SE to the non-ideal coefficient of the photoVAC at the point at which the short-circuit current of the photoVAC is detected. Calculations performed for  $T_0 = 273$  K,  $T = 300$  K,  $j_0 = 1,5 \cdot 10^{-10}$  A,  $U_{cu} = 0,65$  B,  $\varphi_0 = 1,12$  B and  $\gamma = 5 \cdot 10^{-4}$



As we have seen above, the salt processing voltage of SE's will not be entirely dependent on the non-ideal coefficient of photoVAC. Effective voltage, however, will not depend on the photoVAC nonideality coefficient at the point where the effective power of SE's photoVAC sin is detected, but since there is a short circuit current density in the Formula (4), which is proposed for this parameter, This parameter will also depend on the photoVAC nonideality coefficient at the point where the short circuit



3- picture. The effective current of SE's is attributed to the non-ideal coefficient of the photoVAC at the point at which the short-circuit current of the photoVAC is detected. Calculations performed for  $T_0=273\text{ K}$ ,  $T=300\text{ K}$ ,  $j_0=1,5\cdot 10^{-10}\text{ A}$ ,  $U_{cu}=0,65\text{ B}$ ,  $\varphi_0=1,12\text{ B}$  and  $\gamma=5\cdot 10^{-4}\text{ B/K}$ . Calculations performed for  $T_0=273\text{ K}$ ,  $T=300\text{ K}$ ,  $j_0=1,5\cdot 10^{-10}\text{ A}$ ,  $U_{cu}=0,65\text{ B}$ ,  $\varphi_0=1,12\text{ B}$  and  $\gamma=5\cdot 10^{-4}\text{ B/K}$ .

As can be seen from the picture, the effective current of SE's would be very strong to be attributed to the non-ideal coefficient of the photoVAC at the point at which the short-circuit current of the photoVAC is detected. When the value of the non-ideal coefficient of effective current exponentially decreases, as the coefficient of nonideality increases in size, the value of the current varies in the range from 140,1 mA and  $9,05\cdot 10^{-4}\text{ mA}$ .

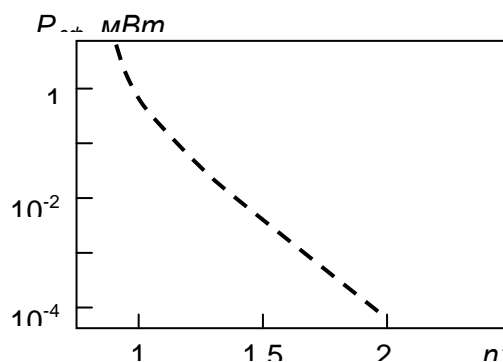
In Figure 4, the results of the calculation obtained from the formula (6) for linking the effective power of SE to the non-ideal coefficient of the photoVAC at the point at which the short-circuit current of the photoVAC is detected are given. This link is

depend on the photoVAC nonideality coefficient at the point where the effective power of the SE's is detected, as well as the photoVAC nonideality coefficient at the point where the short-circuit current is detected.

2-picture. The correlation of the effective voltage of SE's (4) from the formula to the non-ideal coefficient of the photoVAC at the point at which the short-circuit current is detected is given. It turns out that this connection is very weak, as the effective voltage decreases with the increase in the non-ideal coefficient of photoVAC at the point where the short-circuit current of the photoVAC is detected. When the coefficient of nonideality changes from 1 to 2, the effective voltage varies from 0,6 to 0,2. Calculations performed for  $T_0=273\text{ K}$ ,  $T=300\text{ K}$ ,  $j_0=1,5\cdot 10^{-10}\text{ A}$ ,  $U_{cu}=0,65\text{ B}$ ,  $\varphi_0=1,12\text{ B}$  and  $\gamma=5\cdot 10^{-4}\text{ B/K}$ .

In Figure 3, the effective current of SE's (5) is calculated from the formula by linking the photoVAC to the nonidealistic coefficient of the photoVAC at the point at which the short-circuit current is detected.

Calculati



4- picture. The connection of the effective power of SE's to the point of nonideality of the photoVAC at the point at which the short-circuit current of the photoVAC is detected. Calculations performed for

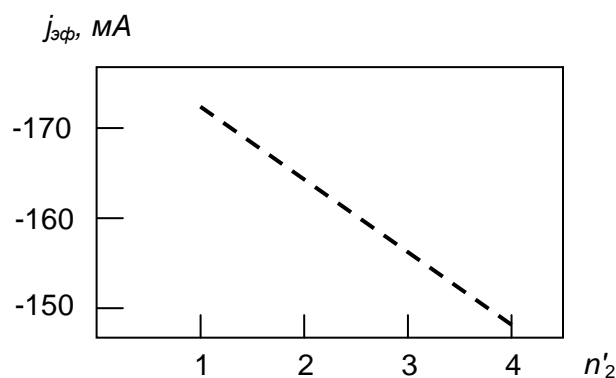
very strong, too, and when the coefficient of nonideality changes in the range of 1 and 2, the value of the coefficient of nonideality decreases exponentially, effectively increasing the coefficient of nonideality changes in the range from 75,1 мВт to  $2,08 \cdot 10^{-4}$  мВт. Calculations performed for  $T_0=273$  K,  $T=300$  K,  $j_0=1,5 \cdot 10^{-10}$  A,  $U_{cu}=0,65$  B,  $\varphi_0=1,12$  B ва  $\gamma=5 \cdot 10^{-4}$  B/K. Бу ҳисоблашлардан кўринадики, фотоВАХ нинг ноидеаллик коэфффициенти катталашганда ҚЭ ларининг фотогальваник характеристика-ларини эффектив қийматлари камайар экан. Бу эса ҚЭ ларининг ФИК ларни камайишига олиб келади.

Figure 5 shows the effective current of SE's (5) the correlation of the calculated photoVAC to the nonidealistic coefficient of the photoVAC at the point at which effective power is detected using the formula. This link is linear while the value of  $N_2$  decreases in the range of  $j_{\phi}=(173,8 - 146,48)$  мА increased from 1 to 4. Calculations performed for  $T_0=273$  K,  $T=300$  K,  $j_0=9 \cdot 10^{-9}$  A,  $\varphi_0=1,12$  B,  $U_{cu}=\varphi_0/2$  B,  $\gamma=5 \cdot 10^{-4}$  B/K and  $n_1'=1,00239$ .

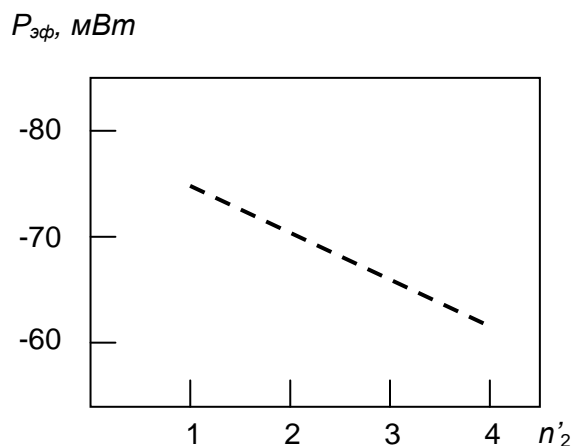
And in Figure 6, the link of the effective power of SE's (6) to the non-ideal coefficient of the photoVAC at the point at which the effective power is determined by the formula is given. This link is also linear when the coefficient of nonideality is increased from 1 to 4, while the effective capacity of SES decreases in the range of  $P_{\phi}=(76,6 - 64,54)$  мВт. Calculations performed for  $T_0=273$  K,  $T=300$  K,  $j_0=9 \cdot 10^{-9}$  A,  $\varphi_0=1,12$  B,  $U_{cu}=\varphi_0/2$  B,  $\gamma=5 \cdot 10^{-4}$  B/K ва  $n_1'=1,00239$ .

Thus, in this study, it was determined that the non-ideal coefficient of SE of photoVAC has different values at different points of photoVAC. It was found that any increase in the nonidealistic coefficient of SE of photoVAC leads to a decrease in the values of photographic characteristics, which leads to a decrease in the Fik of SE.

Based on the new expressions that came out to correlate SE's short-circuit current density, effective current density and effective power to temperature, it was theoretically investigated that these parameters correlate photoVAC to the



5-picture. The Binding of the effective current of SE's to the non-ideal coefficient of photoVAC. Calculations performed for  $T_0=273$  K,  $T=300$  K,  $j_0=9 \cdot 10^{-9}$  A,  $\varphi_0=1,12$  B,  $U_{cu}=\varphi_0/2$  B,  $\gamma=5 \cdot 10^{-4}$  B/K ва  $n_1'=1,00239$ .



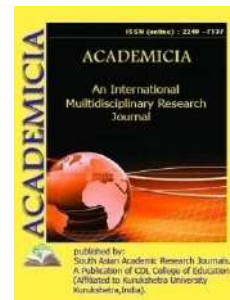
6-picture. Linking the effective power of SE's to the non-idealistic coefficient of photoVAC. Calculations performed for  $T_0=273$  K,  $T=300$  K,  $j_0=9 \cdot 10^{-9}$  A,  $\varphi_0=1,12$  B,  $U_{cu}=\varphi_0/2$  B,  $\gamma=5 \cdot 10^{-4}$  B/K and  $n_1'=1,00239$ .

nonidealistic coefficient. It was determined that these parameters are very strong to be attributed to the non-ideal coefficient of the photoVAC

sini at the point at which the short-circuit current density of the photoVAC is determined. It was shown to be linear while linking photoVAC to the nonidealistic coefficient at the point at which effective values of photogallic characteristics would be determined. It has been shown to be very weak to link the effective voltage to the non-ideal coefficient of photoVAC at the point at which the short-circuit current density is determined.

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DOI: **10.5958/2249-7137.2020.00703.X**

## FEATURES OF THE INTERACTION OF POLYVINYL CHLORIDE WITH AMMONIA UNDER HETEROGENEOUS CONDITIONS

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### ABSTRACT

*The aim of this work is to obtain new anion exchangers based on polyvinyl chloride. Determination of the optimal reaction conditions for the modification of granular polyvinyl chloride with ammonia and the study of the physicochemical properties of the obtained anion-exchange materials.*

**KEYWORDS:** *Polyvinyl Chloride, Ammonia, Ion-Exchange Materials, Hydrometallurgy, Heterophase Processes, Dioxane, Potentiometric.*

### INTRODUCTION

In the world with the development of industries, as well as their capacities and population growth, the need for ion-exchange materials is correspondingly growing. The number of ion exchangers used in various industries, otherwise ion-exchange substances and materials is very large and diverse, and the ion process quickly and comprehensively enters into various spheres of human activity. The successful solution of the problems of obtaining ion-exchange materials and their use as various sorbents is important for creating new effective ion-exchange technologies in hydrometallurgy. They can also be used for the disposal of wastes containing

harmful components, such as heavy metal ions. Sorption properties of materials depend on their structure and physic-chemical properties. Consequently, when using new anion-exchange materials for the development of various technologies, targeted synthesis and study of their physicochemical properties is relevant.

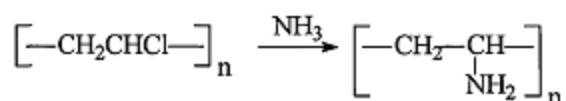
## MAIN PART

Modification of polyvinyl chloride with ammonia produced anion-exchange granular materials. It was shown by potentiometric titration and measurement of IR spectra that the obtained polymer contains primary and secondary amino groups. The influence of various factors on the modification process was studied, and the conditions for the production of ion exchangers with a high exchange capacity and chemo resistance were found. It was found that the kinetics of the reaction is described by the patterns observed for heterophase processes.

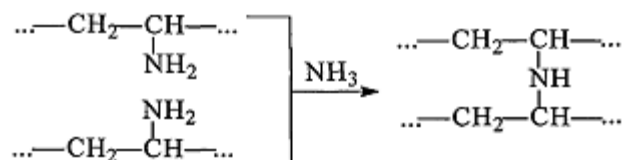
In order to obtain anion exchangers, many chemical transformations of PVC were carried out, accompanying its dechlorination: chemical approaches such as substitution, reduction, grafting, crosslinking and decomposition were used [1-7].

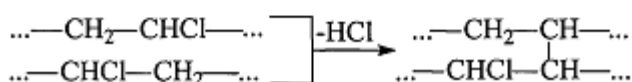
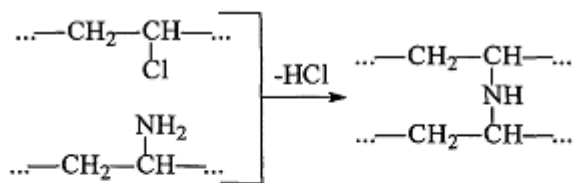
It is known that in alkyl halides, the halogen enters a nucleophilic substitution reaction with reagents such as amines, thus forming primary, secondary and tertiary alkyl amines [8]. Such halogen atom exchange reactions characteristic of haloalkyls are also possible for polyvinyl chloride (PVC) [9].

So, when PVC is treated with liquid ammonia [10] under pressure at a temperature of 100-140°C in an environment of dioxane or dimethylformamide, dichloromethane or methanol, insoluble polymers of various degrees of amination are formed (nitrogen content varies from 1 to 9%). The amination process is accompanied by partial dehydrochlorination of PVC. In this case, a brown polymer containing 9% nitrogen is formed. The reaction of PVC with ammonia proceeds according to the following scheme:



Moreover, along with primary amino groups, secondary and tertiary are formed, which leads to the appearance of cross linked structures. Cross bonds are also formed as a result of dehydrochlorination of PVC:





When PVC is treated with liquid ammonia at low temperatures in the presence of alkali metal amides, only dehydrochlorination of the polymer occurs: the formation of cross linked structures is not observed. Primary aliphatic amines can interact with two macromolecules, forming cross-links, which leads to an increase in the specific viscosity of the polymer. However, when this modification is carried out under the above conditions, gel-like polymers are formed [11] and to use them as ion-exchange materials it is necessary to carry out a number of operations such as drying, crushing, etc.

In this regard, to obtain ion-exchange materials, it is of interest to modify suspension polyvinyl chloride by introducing amino groups into the macromolecule of the polymer. In this work, suspension polymer-grade S70 PVC polyvinyl chloride, which contains functionally active chlorine in its composition, was used as a modified polymer. In order to obtain a granular sorbent, a chemical modification of PVC was carried out using aqueous ammonia solutions.

## RESULTS AND DISCUSSION

The anion exchange resin was synthesized by reacting the initial polyvinyl chloride with 5, 10, 15, 20, 25, 30% aqueous ammonia solutions at a temperature of 160 ° C for 6 hours.

The first sign of the formation of ion exchangers is the appearance of ion-exchange properties in polymers. So, to check the existence of ionogenic groups in the modification product, the static exchange capacity (COE) was determined by HCl. The results of studying the effect of the concentration of ammonia on COE of modified PVC are presented in Fig. 1.

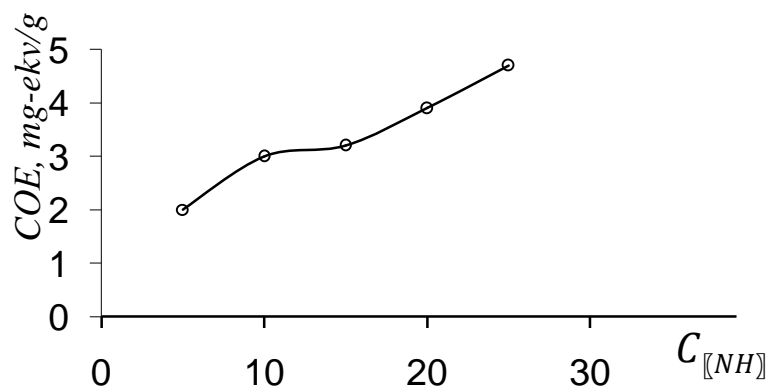


Fig. 1. Dependence of COE on ammonia concentration



( $\tau = 6$  hours,  $T = 160^{\circ}\text{C}$ , bath module 1:15)

As can be seen from fig.1, with an increase in the concentration of ammonia, the SOE value of the obtained anion exchangers increases. The most suitable ammonia concentration for the PVC modification reaction is a 25% ammonia solution. The reaction of modifying PVC with ammonia is heterogeneous and, as is known in such processes, the reaction rate depends only on the concentration of the substance in the liquid phases. Based on the data shown in Fig. 1, a logarithmic dependence of the degree of conversion on the concentration of ammonia was constructed, from which the order of the rate of this reaction on the concentration of ammonia was calculated, and the slope of this curve was 0.6. The obtained value ( $n < 1$ ) corresponds to the literature data on the classical conduct of the reaction under heterogeneous conditions.

The next stage of the research was to identify the most optimal reaction temperature for the modification of PVC with ammonia. The reaction was carried out by reacting the initial polyvinyl chloride with a 25% ammonia solution at  $T = 140, 155, 160, 165, 170^{\circ}\text{C}$  for 6 hours. The results are shown in table 1.

**TABLE1 THE EFFECT OF TEMPERATURE ON THE CHEMICAL MODIFICATION OF PVC WITH AMMONIA ( $C_{\text{NH}_3} = 25\%$  ;  $\tau = 6$  hours, bath module 2:30)**

$T, ^{\circ}\text{C}$	140	155	160	165	170
SOE, mg* equiv / g	1,70	3,11	4,7	4,38	4,28

As can be seen from the table. 1, with an increase in the reaction temperature to  $160^{\circ}\text{C}$ , the static exchange capacity of the synthesized ion exchangers increases, which means that the percentage of modification of PVC also increases. The decrease in polymer modification at a temperature higher than  $160^{\circ}\text{C}$  is apparently due to the process of destruction of PVC above  $160^{\circ}\text{C}$  [12]. This assumption is confirmed by a decrease in the SOE of the products obtained with an increase in the reaction temperature over  $165^{\circ}\text{C}$ .

Based on the results obtained, a graphical dependence of the degree of conversion on the inverse temperature was constructed and the activation energy ( $E$ ) of the studied system was calculated, which was equal to 1.537 kJ / mol. The established value of the activation energy of the investigated reaction indicates a small steric factor.

To determine the most optimal conditions for obtaining ion-exchange substances, it is necessary to study the effect of the duration of the reaction on the modification process. The effect of the duration of the reaction on the degree of conversion of PVC chloride groups to amine groups during its interaction with ammonia is shown in Fig. 2. The degree of conversion was monitored by determining the COE of the reaction product.

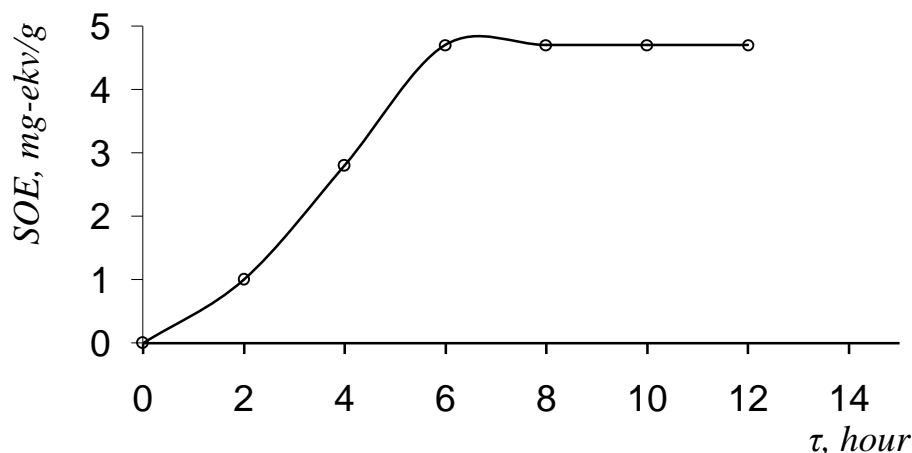


Fig. 2. Dependence of SOE of anion exchange resin on the duration of the reaction.

( $C_{NH_3}=25\%$ ;  $T=160^\circ C$ , bath module 1:15).

It can be seen from Fig. 2 that with an increase in the reaction time, the modification of PVC with ammonia COE of the obtained anion exchangers increases and after reaching 6 hours its further increase insignificantly affects the value of the COE of the anion exchange resin.

It is known that the solvent acts as an active participant in the chemical process, having a significant effect on the speed, selectivity, and sometimes the direction of the reaction. And for a century, the problem of the influence of a solvent (the effect of the medium) on the course of a chemical reaction has been the main content of research in various areas of chemistry.

We also studied the influence of the nature of the solvent on the reaction of the modification of polyvinyl chloride with ammonia and, accordingly, on the value of the static exchange capacity of the obtained anion exchangers. As the studied solvents were chosen: water, ethylene glycol and glycerin. The highest value of SOE was found when using glycerol as a solvent (Table 2).

**TABLE 2 INFLUENCE OF THE NATURE OF THE SOLVENT ON THE COE OF PVC MODIFICATION PRODUCTS WITH AMMONIA ( $C=25\%$ ;  $\tau=6$  hours,  $T=160^\circ C$ , bath module 1:15)**

Solvent	water	tylene glycol	glycerol
COE, mg экв/г	4,7	5,10	5,35

The data in the table indicate that an increase in the hydrophobicity of the solvent has a positive effect on the reaction of modifying PVC with ammonia, which, apparently, can be explained by an increase in the availability of functional groups of the macrochain due to loosening of glycerol molecules between them.

One of the technical indicators of the modification reaction is the bath module. In this regard, the effect of the bath module on the process of modifying polyvinyl chloride with ammonia was studied in the work. The data obtained are given in table3.

**TABLE 3 THE EFFECT OF THE BATH MODULE ON THE CHEMICAL MODIFICATION OF PVC WITH AMMONIA**  
*(C=25% ;  $\tau$ =6 hours, T=160°C, bath module 1:15)*

<i>bath module</i>	3:8	1:5	2:15	1:15
COE, mg*ekv/g	3,64	3,75	4,09	4,7

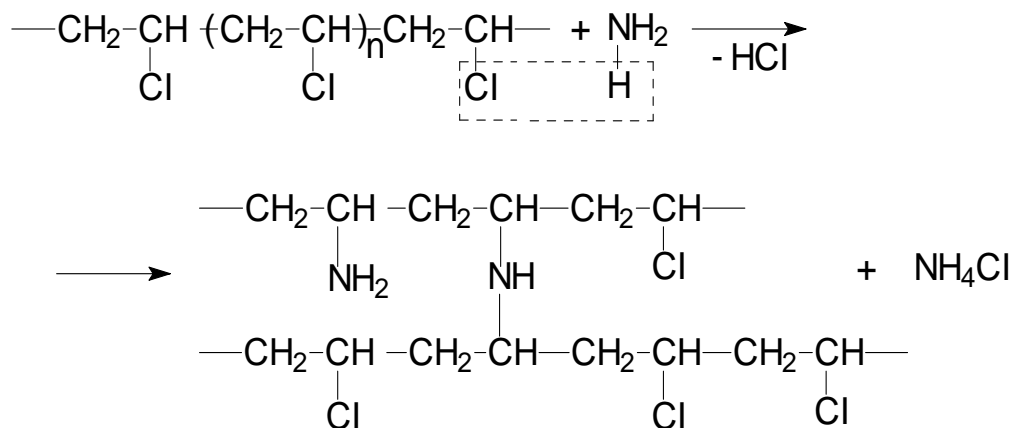
Thus, the studies showed that the most optimal conditions for the production of anion exchange materials when modifying PVC with ammonia are: carrying out the reaction at a temperature of 160°C, a duration of 6 hours, with an ammonia concentration of 25% and a bath modulus of 1:15. In this case, the maximum value of COE by HCl was 4.7 mg\*ekv/g.

To identify the obtained anion exchange substance, IR spectroscopic studies of the initial and modified PVC were carried out. In the IR absorption spectra of ammonia-modified PVCs, the stretching vibrations of the C-Cl groups at 550-850 cm<sup>-1</sup> are noticeably reduced, which indicates a decrease in these groups in the macromolecule. From the literature data [13], it is known that the absorption bands corresponding to stretching vibrations of -OH and -NH groups coincide and appear in the region of 3200-3600 cm<sup>-1</sup>. The absorption bands in the 3200-3600 cm<sup>-1</sup> region broaden due to the formation of intermolecular hydrogen bonds between the hydroxyl group of the water molecule and the >N-H or -NH<sub>2</sub> groups, which were formed as a result of the modification of PVC with ammonia.

Potentiometric titration was performed to characterize ionogenic groups in the obtained ion-exchange material. There is a clear jump on the titration curves, indicating the presence of basic groups in the polymer. To evaluate the basicity of these groups, titration curves were processed in the coordinates of the Henderson-Hasselbach equation.

The pK<sub>a</sub> values for primary amino groups is 5.5, and for secondary ones formed by cross linking of primary polymer amino groups with other polyvinyl chloride macromolecules it is 6.7.

Thus, according to IR spectroscopic studies and potentiometric titration of the functional groups of the product of the modification of polyvinyl chloride with ammonia, the alleged chemical structure of the polymer was established:



In order to recommend sorbents for the treatment of wastewater and technological solutions from chromium ions, a technical regime was developed for the dynamic sorption of chromium ions

from artificial solutions. For this, the sorbents obtained by modifying PVC with ammonia with  $\text{COE} = 4.7 \text{ mgekv/g}$  were filled into a column and activated with a 0.1 M HCl solution and a  $\text{K}_2\text{Cr}_2\text{O}_7$  solution was passed with a concentration of 1 g / L at a rate of 1-4 vol / h. In this case, the dynamic exchange capacity (DOE) of the sorbent for chromium (VI) ions reached 350 mg / g (Table 4).

**TABLE 4 THE EFFECT OF SORPTION-DESORPTION ON THE DOE OF THE SORBENT  $\text{IONCr}_2\text{O}_7^{2-}$**

№ cycle	Before regeneration	After regeneration with a 2% aqueous solution of KOH									
		1	2	3	4	5	6	7	8	9	10
DOE, mg/g $\text{pyCr}_2\text{O}_7^{2-}$	364	352	354	357	351	352	354	353	356	355	357

Sorbents were desorbed with a 2% aqueous NaOH solution. It was found that sorbents exhibit high chemical resistance and can be used repeatedly. During the tenfold sorption-desorption process, the DOE of the sorbents changed only by  $2 \pm 2\%$ . Thus, the sorbing capacity of the developed sorbents with an increase in the rate of transmission of the solution through its layer from 1 volume / h to 3-4 volumes / h practically remains high and can meet the conditions of water treatment.

Thus, it is shown that the developed sorbents can find application in the wastewater treatment processes of the galvanic shops of chromium plating from Cr (VI) ions and the concentration of technological solutions.

## CONCLUSION

Modification of polyvinyl chloride with ammonia yielded anion-exchange sorbents with COE from 2 to 5 mgekv/g

Studies have shown that the optimal preparation of anion-exchange granular sorbents in the modification of polyvinyl chloride with ammonia are temperature  $160^\circ\text{C}$ , reaction time 6 hours, ammonia concentration 25% with a bath modulus of 1:15.

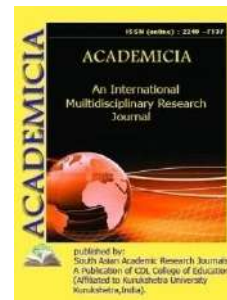
It was found that the kinetics of the reaction of the modification of polyvinyl chloride with ammonia is described by the laws observed for heterophasic processes and is of the first order in ammonia concentration.

It was shown by potentiometric titration and removal of IR spectra that the obtained polymer contains primary and secondary amino groups. The anion-exchange nature of the obtained sorbents is confirmed by the sorption of chromium (VI) ions from aqueous solutions.

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DOI: **10.5958/2249-7137.2020.00751.X**

## **DIDACTIC REQUIREMENTS FOR FUTURE ECONOMISTS TO DEVELOP EDUCATIONAL CONTENT IN THE ELECTRONIC INFORMATION ENVIRONMENT**

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### **ABSTRACT**

*The article describes the issues of improving the content and quality requirements for skills training of economists in the electronic information environment on the basis of modern approaches, periodic and continuous methodological training during their professional activities. It also discusses the forms of distance learning, the organization of the distance learning process, the content, methods, tasks of didactic teaching, teaching methods and the importance of these methods.*

**KEYWORDS:** *Forms Of Distance Learning, Preparation Of Distance Learning Curricula, Didactics, General Didactics, Pedagogy, Teaching Methods, Distance Learning, Tutor, Teaching Materials, Moodle, Module, Portal, Teaching Technologies, Distance Learning Methods, Summary*

### **INTRODUCTION**

The introduction of education of future economists in the electronic information environment is a set of complex problems, consisting of didactic, technical and organizational-economic issues.

Didactics serves as a means of providing social experience on the basis of education, that is, preparing young people for life through education.

In the organization of educational activities there is a relationship between teacher-student, student-learning material, student-other students.

At present, didactics is understood as a field of pedagogy that scientifically substantiates the content, methods and organizational forms of teaching. Pedagogy, on the other hand, studies the process of education and upbringing on the basis of their integrity and unity.



In addition to general didactics, there are also didactics called private didactics or teaching methods for specific subjects. The subject of general didactics is the interdependence and interdependence of teaching and learning

The tasks of didactics are:

- Identify, analyze and describe the general laws specific to the learning process;
- Better organization of the educational process, ie the development of educational systems and technologies;
- Describe and explain the learning process and the conditions for their implementation

An important issue is not the introduction of technology in the educational process in the first place, but the organization of the educational process of future economists in the electronic information environment and the development of the content of training courses. The organization of the educational process, initially distance learning requires the preparation of curricula, the choice of teaching technologies, the development of control materials.

The development of e-learning courses for future economists is one of the most complex issues in the development of teaching materials. - cannot develop in isolation from the educational environment "[3].

The quality level of distance learning courses is one of the key factors in ensuring the quality and effectiveness of distance learning courses.

Development of educational and methodical support of distance learning course is carried out on the basis of modular principles [2, 5, 6, 7]. Because in a distance learning course, the trainee must clearly understand and be aware of his or her ability to move from module to module. Special care should also be taken to ensure that the size of the modules does not increase. This is because large-scale modules are dangerous as they lead to a significant decrease in listeners' interest in reading [5, 1 b].

This procedure is based on the rules - the general components of the educational and methodological support of the course of training of future economists in the electronic information environment consists of a modular curriculum, teaching materials, pedagogical technologies, methods and teaching aids, control materials (Figure 2).

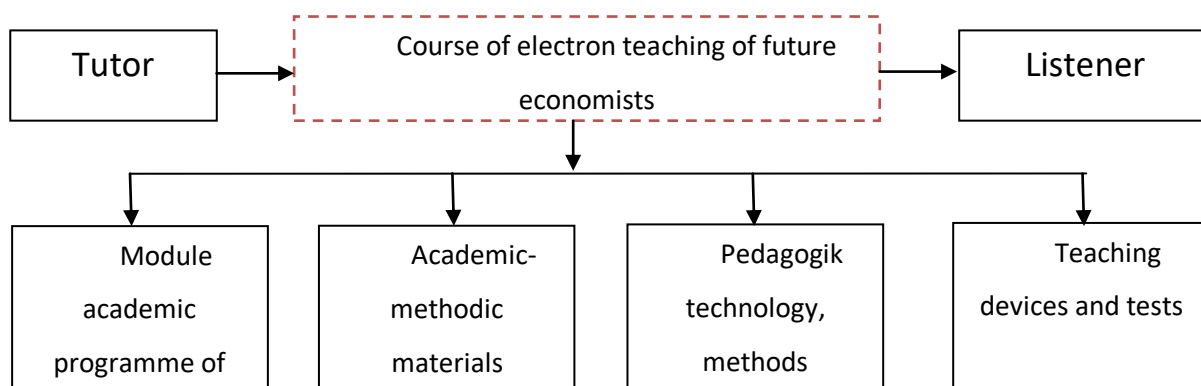


Figure 2. Components of the educational and methodical support of the course of training of future economists in the electronic information environment.

Modular curriculum - "it will be composed of didactic paradigms and modules, each module will have its own specific didactic purpose. Achieving the desired goal is based on the content of specially developed training materials, the mastery of the content of training materials is checked with specific tasks "[7].

Assignment of different tasks is one of the important elements for effective mastering of the content of each topic in the study materials. Independent performance of thematic tasks by the listeners is to determine to what extent they have mastered the knowledge, skills and competencies related to the topics. The quality of a learning material depends not only on its content but also on the quality of the assignments, as fully structured assignments are an effective assessment strategy.

Based on the nature of the teaching methodology for the preparation of tasks in the research process was developed on the basis of the following didactic requirements: the diversity of course modules, assignments on topics is aimed at the formation of knowledge, skills and competencies; assignments of different levels of difficulty, based on the rules of acquisition of knowledge of teaching methods from simple to complex; clear and understandable terms of assignments aimed at improving teaching methods; inextricable link of assignments with theoretical materials on teaching methods; the volume of assignments on each topic is commensurate with the hours allocated in the curriculum and the time norms allocated for independent study; that all assignments are adapted for future economists to perform in an electronic information environment and that there are no organizational difficulties.

Based on these requirements and the capabilities of the distance learning portal, assignments were developed in the following types: give a brief comment or essay on the questions structured based on the content of the topics; choose the correct, appropriate one from several options of answers and opinions given to the question; fill in diagrams or tables given as questions or assignments; rules, basic concepts, opinions of scientists, including substituting omitted words; write a correct description of the given key phrases and concepts; continuing to fill in incomplete points; selecting points of particular importance from the texts of the topics; write answers to questions.

Assessing the performance of these exercises and tasks is done in two different ways: automatically by the computer and by the tutor.

Assignments that are automatically evaluated by a computer are composed of appropriate types of tests according to the content of the question. These types of tests include sequencing, matching, multi-value, complementary, and other tests, making it possible to use different types of tests. The use of a variety of tests encourages listeners not only to perform tasks of the same form to find the correct answer among several answers, but also to think, reflect, analyze them.

Using these types of assignments, tests for initial diagnostic questions or assignments, self-assessment exercises, assignments, and control work were developed based on the content of theoretical training materials on the relevant topic.

Interim control works are carried out on the basis of the following established requirements:

Acquisition by the student of the basic knowledge, skills and competencies required by the State requirements for educational modules;

Mastering the skills of the student to use the main and additional resources on the training modules;

Mastering ICT by the student;

The level of students' knowledge of legal documents;

The assessment of intermediate control tasks is carried out on a 100-point scale. A trainee who achieves less than 70% of the maximum score set for intermediate control tasks is considered to have failed to score sufficient points in the intermediate control tasks, which are defined in the normative documents on the organization and conduct of final control work.

During the study, the distance learning course teaching materials were placed on a MOODLE platform mounted on a special server, and the learning process was based on case, network and mobile technologies.

“MOODLE” is an acronym derived from the English words “Modular Object-Oriented Dynamic Learning Environment” and means an object-oriented modular dynamic learning environment in Uzbek. The MOODLE platform was created by Martin Daugimas, a talented UK educator and computer programmer.

An analysis of the literature shows that MOODLE is widely popular due to its functional capabilities and belongs to the class of LMS (Learning Management System). MOODLE is a free software developed under an open source GPL license, which allows you to use this system for free and make changes to it easily, safely and integrate it with other products in accordance with the needs of the educational institution. Today, MOODLE is used in more than 40,000 educational institutions around the world and has been translated into almost 90 languages, including Uzbek, by our staff.

Educational-methodical support differs from traditional education in that it uses a complex of specific methods, techniques, tools and forms of teaching. First of all, ICT-based methods are used.

Therefore, in the distance learning course, first of all, it is necessary to use ICT in education and to have the skills and abilities to use e-textbooks, e-learning manuals, virtual laboratories, computer-assisted problem solving.

In order to meet these requirements, requirements and a special program have been developed to determine their professional competence in the practical use of ICT.

In order to provide methodological assistance to the students admitted to the course to work independently in the distance learning process, opportunities were created in the research process to develop skills and abilities to work independently with the learning elements in distance learning courses.

A competency-based approach was also used in the development of teaching materials. This will increase the effectiveness of distance learning courses. At the same time, opportunities were created in the research process to apply the knowledge gained from the course materials in practice without delay.

Thus, the following advantages of organizing a distance learning course on the basis of a modular curriculum can be seen: the possibility of preparing the course, taking into account the

knowledge of the student; the possibility of rapid change of the content of the course by the author, which in turn can be introduced without delay in the world and national innovations in teaching methods; the volume of training materials on modules and topics can be changed as desired, which is important for the smooth conduct of the distance learning process; the ability to interact with modules and themes.

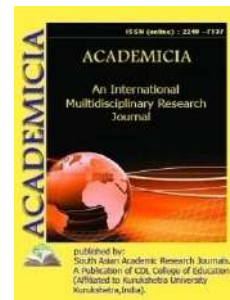
Experience in the development of teaching aids for distance learning courses shows that each module should be named in accordance with the purpose, including specific designation. The number of modules is determined by the authors, based on the State requirements for the quality of the educational process, the State educational standards of teaching and the specifics of teaching methods.

E.S. Polat, a leading expert in the field of distance learning, said that "the specifics of the subject not only determine the content and structure of teaching, but also reflected in the chosen model of teaching" [4; 2; 1]. Distance learning courses of educational-methodical support and special programs developed in the course of research are carried out on the basis of the didactic model developed for implementation of educational process.

Thus, the teaching and methodological support of distance learning can be developed and applied in practice at all levels of the system of continuing education. Motives and factors such as "having life and professional experience", "striving to solve important life problems and achieve certain goals through study", "ready to put into practice the knowledge, skills and abilities acquired during training" are positive for the effectiveness of distance learning. affects. Therefore, the introduction of distance learning in the development of skills of future economists in the electronic information environment is a expedient and effective measure.

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DOI: **10.5958/2249-7137.2020.00752.1**

## **“CLEANUPS” OF THE SOVIET GOVERNMENT IN GOVERNMENT OFFICES (ON THE EXAMPLE OF GOVERNMENT AGENCIES IN THE FERGANA VALLEY)**

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### **ABSTRACT**

*This article provides information on the Soviet government's policy of “cleansing” state bodies in 1929-1932 and its implementation. The reasons for the start of the “cleansing”, the legal basis, the mechanism of its implementation and its negative consequences are described. The object of study in the article is the Fergana Valley, which is the most densely populated area of the Uzbek SSR.*

**KEYWORDS:** *Fergana, Andijan, Namangan, OGPU, Narkompros, People's Commissariat Of Education Of The Uzbek SSR, Inspection Of The Soviet Apparatus, Judicial-Search Apparatus, Neighborhood Committees, “Cleansing” Of Government Organizations, “Pest”, “Right-Winger”, “Child Of The Captain”, “Child Of Faith”, “Kept The Remnants Of The Old Complication”, “Communicated With The Oppressors”, “Lazy”, “Uneducated”, “Not Retrained”.*

### **INTRODUCTION**

Another method of struggle in the Soviet era was the struggle against bureaucracy. The system of military communism has led to an unprecedented expansion of the state apparatus. By the time of the new economic policy, the fight against command has been on the agenda several times. But this did not give the desired results. By the end of the 1920s, the number of workers in government organizations (party organizations, Soviet organizations, and trade unions) had tripled. The increase in the number of employees of government organizations did not increase, but decreased, the efficiency of their activities. The reason for this was the lack of potential staff capable of implementing party instructions quickly and efficiently. In connection with the



transition to the construction of large-scale socialism in 1929-1932, the idea of “cleansing” the authorities was born, which led to a series of “cleansings” in government agencies. The precarious situation in the countries has created an “enemy image” that is hindering change. “On the eve of the clean-up, 20 “pests” were detained by the OGPU during the clean-up of the post and telegraph structures of the USSR. They were accused of deliberately lowering the “five years of gold” norms imposed on communications networks. Another reason for the “cleansing” was the changes in the village. During the construction of the collective farms, the People's Commissars of the USSR were accused of failing to implement the grain production plan for 1929-1930. In a secret document dated August 23, 1930, ‘Questions for cleaning the Norkomtorg of the USSR’, a 7-point indictment was filed. All the failures and mistakes in the life of society were blamed on ‘pests’. It has often been argued that eliminating them allows for effective solutions to problems. As a result, a major “cleansing” began in the fight against the “right-wingers”. During 1928, the front page of the publications of the central party organization reported on the “right threat.” The concept of “right risk” has been transformed from abstraction to reality in the example of specific individuals working in the international and national leadership. The Sixth Congress of the Comintern, held in Moscow in July-September 1928, was held under the slogan of the struggle against “right-wing extremism.” At the Plenum of the Central Committee of the All-Union Communist Party (Bolsheviks) on October 19, 1928, Stalin wrote about the “right threat” within the All-Union Communist Party (Bolsheviks) with a lecture entitled. Moscow has accused party workers of indecision in the fight against the “right wing.” In November of this year, by the decision of the Moscow Committee of the ACP (b), the leaders of the Moscow party organization, together with the secretary of the organization N.A. Uglov, were dismissed from their positions. The composition of the party was discussed at the plenum of the Central Committee of the ACP (b) in November this year, and the question of preparation for a major cleansing was raised. At the same time, the issue of “cleansing” the state apparatus in the near future has been raised with extreme caution. Pravda began to publish a series of articles such as “For an honest Soviet expert”, “People who are not in our apparatus” [1]. The “major cleansing” of the state apparatus in 1929-1932 was carried out on the basis of the resolution of the Central Executive Committee of the USSR of June 1, 1929 “On the cleansing of the state apparatus, cooperatives and public organizations” CPC. According to him, the LPI (Workers' and Peasants' Inspectorate) was given the right to issue a decision to ban the employment of people whose activities are considered to be “obviously detrimental to the interests of the working class.” Tasks, procedures and methods of cleaning In early May 1929, the Central Control Committee (CCC) and Approved at the joint meeting with the USSR IDI HK (Worker-Peasant Inspectorate) (Instructions of the USSR LPI HK on inspection and cleaning of the Soviet apparatus). The instruction consists of 8 sections, which provide information on the task of cleaning, the organization of cleaning, the timing and sequence of cleaning in organizations, methods of preparation and conduct of cleaning, the order of cleaning, the procedure for appealing the cleaning sentence. Section 5 of the Instruction on the Procedure for Cleaning clearly states from whom the Soviet apparatus should be cleaned. The commission members were told that the defendants were not limited to charges such as “iodine” and “the rich man's child.” [2. 8] Therefore, in addition to the above charges, many untrained employees were charged with “alcoholism,” “loosening discipline,” and “ill-treatment of applicants,” in an attempt to conceal the purpose of the clean-up. All those cleaned according to the instructions were divided into three categories.



The first category includes people who, as a result of the study of their activities, were assessed as “completely irreparable.” They were deprived of employment in the Soviet apparatus, vacation pay, pensions, and were specially registered by labor exchanges.

The second category includes those who are found to be “correctable but dangerous to leave in these organizations”. In practice, this category of central office workers was required to change their place of residence and workplace.

The third category consisted of those who, in the opinion of the commission, were “inappropriate to remain in positions of responsibility.” “Cleaned” leaders with experience and knowledge are left in the technical work in the apparatus [3. 9]. The validity of the decision in respect of persons belonging to the second and third categories could be determined by the commission. The decision of the Commission on Category 2 and 3 cleaners was notified to the local labor exchanges, stating the reasons for dismissal.

## MAIN PART

Commissions were formed on a hierarchical basis to conduct and manage the cleanup: commissions of republican, oblast, district organizations. At the top of this hierarchical ladder stood the Central Commission for the Purification of the Soviet Apparatus, approved on June 3, 1929, under the NK RKI of the USSR. “Cleaning” is carried out in the following order. Employees of the enterprise or organization being cleaned came to the interview with the “troika” in a timely manner. The members of the “troika” had pre-collected information about each employee. If any suspicious information is found in this information or in the biography of the employee, the commission members began the inquiry by clarifying this information. Dozens of questions were asked to each employee. They were asked about their attitudes toward religion, the Soviet government, and current politics. According to the “Instruction on the Inspection and Cleaning of the Soviet Apparatus,” the USSR People's Commissariat of Labor and its bodies were to be the first to be inspected as an organization “inextricably linked in its daily activities with the broad masses of workers.” Paragraph 3 of the 8-part instruction on the inspection and cleaning of the Soviet apparatus sent by the Council of People's Commissars of the USSR states that the inspection of land bodies, courts, accounting bodies and militia bodies must be completed by 1929 by January 1, 1930 [4.6]. On February 17, 1929, at a meeting of the commission of the Fergana district executive committee of the Communist Party of Uzbekistan (b) “cleansing” of the judicial-investigative apparatus, the issue of studying the composition of the judicial-investigative organization was considered. At this meeting, 40 members of the judiciary will be examined and their fate will be decided. Paragraph 5 of the decision states that the People's Judge of the 14th Precinct Nishonboev Smoilqori, as a member of the party, organized banquets with the chairman of the Yangi-Chek village council. It was revealed that Boybacha was in contact with Korboshi and Kosh-Korboshi guys. He was removed from office and transferred to the District CC (Control Commission-Control Commission). Various charges have been filed against the dismissed employees. For example: Lutpilla Magzumov, a famous religious scholar, the son of a Sharia judge. Member of the party since 1918. He was fired for his extreme religiosity. People's Judge Abdurahmanov Rakhmon Berdi was dismissed because he was the son of a trader and was in constant contact with traders. Khakimov Toshmat, a People's Judge of the 10th Precinct, was dismissed for having contacts with “iodine elements” and for giving orders in the case. Bailiff Rhine

was fired on similar charges. Of the 40 employees who passed the cleanup, 10 were fired, 2 of whom were sent to the District Court for investigation. Two men, Aziskhanov and Uryashev, were sent to the district executive committee for consideration. Twenty-six people who passed the inspection were left in their positions. Those who did not pass the purge were charged with “contact with social iodine elements,” “ill-treatment of the poor,” “alcoholism,” and “contact with oppressors.” The list of 30 police officers who could not come to the clean-up for various reasons during the clean-up of Fergana city police officers, which lasted until the 1940s, was submitted to the leadership by the secretary of the commission Firsell. These employees were warned that they would be fired if they did not pass the commission interview within a week.

In 1929, the District Finance Department (okrfinotdel-Sh.Q), the District Labor Department, the District Court, the Prosecutor's Office, and the Kokand City Search Department underwent a thorough inspection of the Fergana District. As a result of the cleaning of the district finance department, 1 person was found guilty in the 1st category (category-Sh.Q.), 9 people in the 2nd category, 7 people in the 3rd category and dismissed from their positions. Another 12 employees of the same organization received warnings. As a result of inspections in the district court, 1 person was dismissed from the 1st category, 2 people from the 2nd category, and 5 people from the 3rd category. 7 people received warnings. As a result of cleaning in 5 districts, 15 people of the 1st category, 43 people of the 2nd category, 27 people of the 3rd category did not pass the cleaning. In addition, 5 people who did not belong to any category were fired .

In an excerpt from paragraph 1 of the decision of the meeting of the Fergana City Cleaning Staff No. 12 of March 21, 1930, the inspector of the tax station No. 32 Jura Ibragimov concealed his social origin and contacted "iodine elements" (owner of the teahouse, caravanserai). has not been cleaned up for doing so. The commission found him to belong to the second category and dismissed him from Facebook. Qolaversa J. Ibragimov was banned from financial work and working in the state apparatus for up to 5 years. According to paragraph 2 of the decision, the inspector of the station Orifjon Mahmudov was found to belong to the third category for connection with “iodine elements” and dismissed from his post. Special attention is paid to the spouses of the employees under investigation by the commission. For example, the wives of nine members of the Andijan city party organization were criticized for wearing shawls and not allowing their wives to attend schools, clubs, and meetings if they were communists . Officials were not even allowed to attend religious ceremonies and weddings. A December 1923 report by the Fergana District Control Commission stated that participation in weddings among party members was spreading like a contagious disease. It was noted that among the 200-300 people invited to weddings, there are “iodine elements”, and talking to them at weddings has a negative impact on ideologically weak employees and expands the scope of “iodine elements” within party organizations. As a solution to the problem, the district party organization and the control commission proposed the issue of limiting the participation of leading officials and party members in weddings and rumors.

A report was prepared on April 9, 1928 on the results of the cleaning carried out among the staff of the neighborhood committees of Namangan. Two staff members worked for the Mulla Barak

Mahalla Committee, which belongs to the Chukur Chokin area in the old Namangan part of the city. The chairman of the mahalla committee, 59-year-old Mashirbaev Abdumumin (whose name is written in the protocol as Abdumin), is said to be a trader and has a loom in his house. Mashirbaev's deputy, Badalbaev Mulla Bashnali, was a Sufi in the Mulla Borot mosque in 1923 and was secretly involved in the sale of cloth. Aliakbarov Nigmat, 66, chairman of the Sharipshur Mahalla Committee in the same part of the city, was reportedly involved in the sheep trade and now his son. Compiled and signed by the chairman of the district executive committee Ibrokhim Khodjaev, the head of the secret department Dashinskaya and the secretary Lisnevsky, the document contains information about the chairmen of 10 mahalla committees. They were asked to take action against higher organizations. Such inquiries were conducted in all organizations. In production-related organizations, this process was carried out in the form of combating the looting of state property, while in management organizations it was carried out in the form of combating "infiltrated iodine elements". Such a fierce and ruthless struggle led the fictitious enemies of the regime, such as the "right-winger" and the "iodine element", to find their "proof" in the example of specific individuals and names during the purges of the lower management.

Like all public institutions, educational institutions were not left out of such cleanups. Subsequent research has shown that as a result of the repression in the former Soviet Union, 5 million intellectuals were shot between 1919 and 1930, and 1,300,949 between 1930 and 1940.

The repression of employees of the People's Commissariat of Education of the Uzbek SSR was called the "Narkompros case." In 1930, the Soviet Secret Service arrested them as a separate group for their alleged involvement in or suspected of involvement in the secret organization of the National Independence. According to the decision of the USPA (United State Political Administration) on March 31, 1933, 9 people (Botu, Nosir Saidov, Mannon Ramiz, Sabir Kadyrov, Bois Qoriev, Hosil Vosilov, Hayrullahon Alavi, Qayumkhoja Aliyev, Qamchinbek-Abdulla Gaynullin) were sentenced to be shot. was later commuted to 10 years in prison. The rest were sentenced to 10 years, one to three years in a correctional cocktail camp. Botu and Ramzi were later shot. The presence of N. Saidov, a member of the Narkompros board and head of the Andijan DPEC (District Public Education Council), among the accused in the Norkompros case, also led to the "screening" of members of the valley's public education. The meeting of commissions of inquiry appointed by the Namangan city party committee, the education union and the education department, chaired by Abdullayev, was held in August 1934, which analyzed the activities of 21 teachers working in various schools in Namangan. They were charged with "child of a commander", "child of faith", "retaining the remains of an old complication", "contact with the oppressors", "lazy", "low education", "not retrained". The verdict was the same as the charges - they were all fired from the teaching profession. Some, such as Aliyev, the former principal of School No. 14, have been asked by the education union to prosecute him for the poor quality of schooling.

## CONCLUSION

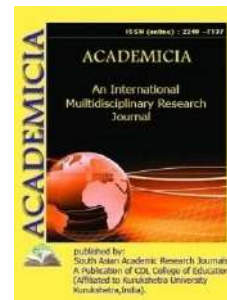
A special resolution adopted by the Central Asian Bureau of the All-Union Communist Party (Bolsheviks) on March 27, 1933, launched a large-scale "cleansing" of teachers in Uzbekistan. For example, in the 1933-1934 academic year alone, 9% of school teachers lost their jobs from a class-ideological point of view.

December 1937 - January 9, 1938 Sovnarkom and the Central Committee of the Communist Party of Uzbekistan (b) issued an instruction “On measures to eliminate the effects of pests in the system of Narkompros of the USSR.” This instruction led to the expulsion of teachers from public jobs. In the 1938-1939 school year, 10% of school teachers were fired.

Nevertheless, the cleansing of party and state apparatus did not go unnoticed in the life of the country. These cleansings have caused many people physical and mental suffering. As a result of the purges carried out in the state apparatus, many citizens who did not pass the purges committed suicide. It was not uncommon at the time to criticize oneself for “remorse for one's actions,” and those accused of “right-wing extremism,” especially if they were “ex,” would lose not only their jobs but also their families. In the process of cleansing, the image of an ideal Soviet official was created, who should be an example to all and follow the decisions of the party and the government. In addition, the cleaners taught Soviet citizens how to quickly collect the necessary “compromises” about each other.

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DOI: **10.5958/2249-7137.2020.00753.3**

## CHARACTERISTICS OF USING THE MORTGAGE METHOD IN PROVIDING OBLIGATIONS

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### ABSTRACT

*In civil law relations, serious attention is paid to the creation of a legal framework for loans, mortgages and mortgages. According to Article 1 of the Law of the Republic of Uzbekistan "On Pledge": The transfer of property or rights to another person by another person to secure obligations is a pledge. The concept of collateral and the basis for its formation have been improved in practice. In particular, an amendment was made to the pledge agreement, its form and the article of the agreement on registration. As a result, the collateral can henceforth be identified by a general description of the property.*

**KEYWORD:** *Pledge, Lease, Debtor, Creditor, Performance Of Obligations, Proper Performance Of Obligations, Public Law, Private Law, Pledge Right, Real Estate, Movable Property, Mortgagee, Mortgagor, Trust To Return The Property. Specific Aspects Of The Use Of Collateral In Securing Liabilities*

### INTRODUCTION

The ongoing reforms in our country to build a stable and efficient economy are showing their results. In particular, in a short period of time significant progress has been made in implementing profound structural changes in the economy, ensuring income growth, strengthening effective foreign trade and investment processes, agricultural reform, sustainable development of small business and private entrepreneurship, strengthening the banking and financial system.

If we look at the current legislation of the Republic, we can see that civil legal relations are further improving. Particular attention is paid to the creation of a legal framework for loans,



mortgages and mortgages. As a result, the role of this type of relationship in our economy is significantly strengthening.

Two thousand five hundred years ago, on the basis of the system of slavery, the great Roman civil law emerged in the Roman slave society, which was divided into two parts: public (public) and private (private) rights.[1]

In those days, too, the emphasis was on the "right of pledge": For example, one of the types of rights to the property of others is the right of pledge. The law of bail was one of the most widely used methods in ancient Roman law to secure the performance of obligations arising under various treaties. Pledged relationships consisted mainly of property rights or claims over immovable property and movable property, and in some cases on the object.

Mortgages on real estate are called mortgages. First of all, no rights are considered as collateral. In order to be the subject of a pledge, it must be specified in the contract or law.

Ancient Roman jurists strictly forbade a person who was not a subject of property rights, but had some material right to that property, to pledge the property without the consent of the owner of the property right. Even if, without the consent of the property owner, the mortgaged property belongs to the property of other persons, the agreement entered into is not valid.[2]

It is known that under the current legislation, the permanent residence of individuals cannot be mortgaged. But banks There are cases when the loan is issued on the basis of the mortgage of the houses of the persons who are considered to be in excess of the need. Problems in practice show that this type of collateral is a very risky supply for the bank. This is because it is prohibited to sell a house that is considered redundant only at a notary office. But it is not forbidden to register for permanent residence in this house. It is precisely in the absence of such a ban that problems arise in practice, as a result of which the bank is unable to direct the recovery to the permanent residence of individuals, which leads to the failure to enforce the obligation.

In practice, it is necessary to positively address the problems that arise in the process of securing the performance of the obligation on the basis of collateral on the basis of existing laws and regulations.

According to Article 1 of the Law of the Republic of Uzbekistan "On Pledge": The transfer of property or rights to another person by another person to secure obligations is a pledge. If the debtor (mortgagor) does not fulfill or improperly fulfills the obligation secured by the pledge, the creditor (mortgagor) has the right to be satisfied by the mortgagor on this obligation on a preferential basis over the value of the mortgaged property.[3]

Fulfillment of any obligation that is valid under the law: loan, bank loan, lease, sale, transportation and other obligations between any subject of the right (individuals and legal entities, the state) can be secured by collateral. The liability must be expressed in monetary units (national or foreign currency).

In the Roman state of slavery, the first method of bail was agreements. The debtor entered into agreements to repay the debt by imposing certain requirements on the transfer of ownership of the property to another person, ie on the grounds that the pledged property must be returned to the debtor after the performance of the obligation. This requirement was of a purely spiritual nature in the ancient Roman state, i.e., it was related to the test of confidence in the return of



property. Then, after the fulfillment of the obligation, the debtor has the right to impose a claim on the return of the collateral to the creditor

In addition to transactions, the concept of *rigpis - pignus* ("to place a pledge by hand" or "hold in hand") has emerged as a method of pledge, in which the object of pledge is transferred to the mortgagor only to own, use and enjoy its useful properties, but the right of ownership. The property will be returned to its owner as soon as the obligation is fulfilled." [4]

Mortgaging of real estate, their provision and mortgage of the land plot on which the leased parts are located were carried out simultaneously under the main contract per bit. In particular, "When mortgaging a land plot, the right of pledge shall not apply to the mortgagor's buildings and structures located on the plot or under construction, unless otherwise provided by the contract. If the contract does not stipulate such a condition, the mortgagor retains the right to limited use (servitude) of the land plot, its part necessary for the proper use of the building or structure, if the collection is directed to the mortgaged land plot." [5]

It is known that in practice, there are cases when banks accept items that are the object of credit as collateral for the performance of obligations. Although it is not illegal to secure the performance of an obligation in the form of collateral, which is the object of the loan, this view of the method of collateral for the bank poses a number of problems.

Solving these problems, in practice, ensuring the fulfillment of obligations is an important task for the creditor. Another problem is that when a borrower uses a common property as collateral without contributing to the welfare of the family, there are cases of objections from participants in the common property and heirs who receive a mandatory share of the inheritance. In such cases, the contract must first be notarized, with the consent of the participants in the common property and the heirs receiving a mandatory share of the inheritance, and their share and mandatory shares must be clearly specified in the contract.

The new law added Article 290, Part 8, of the Criminal Procedure Code. That is, within one day after the decision to confiscate the property, the inquiry officer or investigator shall make an appropriate entry in the pledge register, and after the issuance of a court decision on the seizure of property, the authorized body in accordance with the law. Banks were scheduled to make such a note within three days. These norms were harmonized with the amendments and additions to the relevant articles of the Law "On the Pledge Register", adopted on December 9, 1992. [6]

The Civil Code was also amended to satisfy creditors' claims at the expense of the property transferred as a means of securing the debtor's obligations. That is, this code was supplemented by Article 259-1.

Now, if the debtor fails to fulfill its obligations, the creditor's claims on the obligations secured by the property shall be satisfied on a preferential basis from the value of the property over other creditors of the person to whom the property belongs.

The law also stipulates that the creditor's preferential right shall apply to the income, products and other income from the use or sale of the property provided by the debtor as security for the performance of obligations, unless otherwise provided by the contract.

In accordance with the best practices of international law and the recommendations of the United Nations Commission on International Trade Law, the annex provides for a uniform and clear

procedure for determining the order of creditors 'claims secured by debtors' property and other property rights. . In addition, the new law improves the concept of collateral and the basis for its formation based on practice. In particular, the pledge agreement, its form and the article on the registration of the agreement were amended.

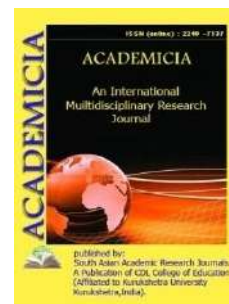
As a result, the collateral can henceforth be identified by a general description of the property. The secured obligation is characterized by specifying its maximum amount. These changes allow borrowers to finance the necessary funds, in particular, through the next collateral mechanism without the need to request property from the previous lender to secure the next collateral. In this case, the rights of previous mortgagees are protected by the Law "On the Pledge Register". This law establishes the right to satisfy claims depending on the time of entry in the register.

In turn, the amendment to the Code of Economic Procedure provides for the recovery of property to be a guarantee of the debtor's obligations. These changes are aimed at enforcing the debtor's obligation to collect collateral, to sell court orders for the recovery of property as soon as possible so as not to lose value, and to prevent the debtor from stealing property. According to the new law, Article 60 of the Tax Code, at the same time as the application for repayment of the tax debt to the taxpayer, in the event of non-repayment of the tax debt by the state tax service, the amount of tax debt to the debtor's property. supplemented with a sentence related to the entry in the pledge register. In this case, the record is deleted from the pledge register after the tax debt is fully repaid or written off. Also, the new law added the paragraph 17 of Article 171 of the Code of Civil Procedure. Now, if a claim is made to direct the recovery to movable property that is a security for the debtor's obligations, a court order will be issued.

In short, all this will undoubtedly serve to expand access to finance for the population and private businesses, increase the international rating of Uzbekistan, the stability of the financial system and reduce overdue loans.

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DOI: **10.5958/2249-7137.2020.00724.7**

## **A VIEW OF MYTHS AND POLITICS RELATED TO KOHOMBĀ KANKĀRIYA: SOME INVENTIVE DIMENSION OF HISTORY**

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### **ABSTRACT**

*This paper attempts to trace the substantial reality underlying the mythical establishments: the origin myth, and the concept of gods in the Kohombā kankāriya traditional ritual of Sri Lanka. Narrators tend to alter the historical myth known as “Vijaya and Kuveni” after about 1000 years of its available initial mention in the great chronicle of Sri Lanka in weaving the origin myth of the ritual. The Kuveni Asna of 15<sup>th</sup> century, a creative prose poetical writing, appears as the pioneer modifier of the myth while depicting the traits of a ritual as well, performed for the king Parākramabāhu VI (AD 1412-1467). The long-term social political process localised the royal ritual as “Kohombā kankāriya” under the intervention of feudal aristocracy promoting a local godhead. Current paper argues that the composition of the origin myth of the ritual was an action taken upon aristocratic need in order to tune the ritual milieu into “their culture” and this very “stratification of human intelligence” disrupts the universal reality of invocation based on the common human sensation of consolation. Paper applies thematic text analysis and historical analysis in tracing the social political dimensions underlying the myths in Kohombā kankāriya. In this sense, the current paper is an attempt to explicate that the myths in Kohombā kankāriya are creative establishments produced by humans in order to achieve their social political goals.*

**KEYWORDS:** *Kohombā Kankāriya, Kuvēni Asna, Ritual, Political Influence, Stratification, Universality.*

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## INTRODUCTION

*Kohombā kankāriya* is a religious ritual indigenous to the upcountry region of Sri Lanka. It invokes a number of gods offering oblations. The purpose of the ritual is achieving well-being and prosperity. According to a view, it is undoubtedly the most majestic ritual in Sri Lanka (Gunawardana, 1976, p. 5). *Kohombā kankāriya* uses an altered version of the myth of “Vijaya and Kuveni”, which originally appears in some historical writings including the great chronicle of Sri Lanka that advertises the glory of royalty and relatively the defeat of commonalty. *Kuveni Asna* (the message of Kuveni), a historical prose poetry written in the 15<sup>th</sup> century AD, *Rājāvaliya* (the chronicle of the kings) might be written after the 15<sup>th</sup> century AD and the *Sihabā Asna* (the message of Sinhabāhu) written in the 18<sup>th</sup> century AD are included the altered myth. Some other writings, probably written after the *Sihabā Asna*, added some extra modifications.

Scholars conclude that the *Kuveni Asna* depicts traits of a ritual done for the sake of king Parākramabāhu VI (AD 1412-1467) (Dissanayake, 2012 p. 40). In this context, the current paper scrutinises these modifications focusing the scope on two factors. One of them is the immediate modification of the historical myth and the other is the use of the modified myth as the origin narrative of the “royal ritual”. By implementing these two factors simultaneously, *Kuveni Asna* indirectly supports to introduce a higher stratum to the “royal invocation”. Though the stratification of this manner was not unfamiliar in the world history, it is an important landmark in terms of the current study. However, this transformation has rewarded a number of cultural aspects, which are deemed today as unique traditional art forms. Hence, in the current context, extraction of the substantial reality in the history, which was covered by the mysterious aspects, confirms the distinction of the human artistic activities.

## A HOLISTIC NOTE ABOUT GENUINE INVOCATION

The early examples of man’s sense of helplessness might have built upon the experience of the natural environment. Attempting to prevent the uncontrollable confrontations of the nature and, on the other hand praising for the natural supporters might have marked the inceptive stages of religious ritual. In this sense, the universality of the religious invocation can be identified as an issue of ‘human – nature dialogue’. S.N. Ratanjankar elucidates that noticing the natural phenomena, man seems to have been inspired with the idea of some power behind these wonders over which he had no control, and to which he had therefore to submit and adapt himself. This power he called Parabrahma, Paramatma, Deus, Zeus, Juhova, God, Allah, Khuda, etc. (1952, p. 105).

The genuine trait of invocation treats as a universal and independent appeal; the reinterpretations indisputably damage and disrupt the authentic sense. Hence, in the traditional context, the superficial stories accumulated on the long-held ritual practice in the history have suppressed the original sense.

## MYTHS AND MODIFICATIONS

The myth of Vijaya and Kuveni, which contextually promotes the majestic power, is seen in some historical writings including the *Mahāvamsa* or the great chronicle of Sri Lanka (circa the mid 4th century AD) as the leading source. *Kohombā kankāriya* uses a modified version of the myth of Vijaya and Kuveni, as its origin myth.

According to the myth in the Mahāvamsa, Vijaya, the son of Sinhabāhu in *Sinhapura* (supposed to be an area of West Bengal in India) was banished by his father with his followers due to his malpractices. He landed in Lanka (Sri Lanka) with followers on the day that the Buddha was laying down to pass into *nibbāna*. In this time, Buddha said to the god Sakka (king of the gods) to protect Vijaya with his followers and Lanka which is the place his religion would be established. In Lanka, Vijaya met Kuveni; who was a superhuman woman. After some series of events, Vijaya promised Kuveni to take her in marriage as his queen and finally destroyed the Kuveni's relative Yakkhas in her intervention. Afterwards, deserting Kuveni with son and daughter, Vijaya acquired princes from Madhura in Southern India for the coronation. Kuveni had in vain besought; finally took her two children and departed for relatives, though fearing that evil should come of it. Relative Yakkhas took her for a spy; one who was violent killed Kuveni with a single blow of his fist (Geiger, 1912, pp. 56-60).

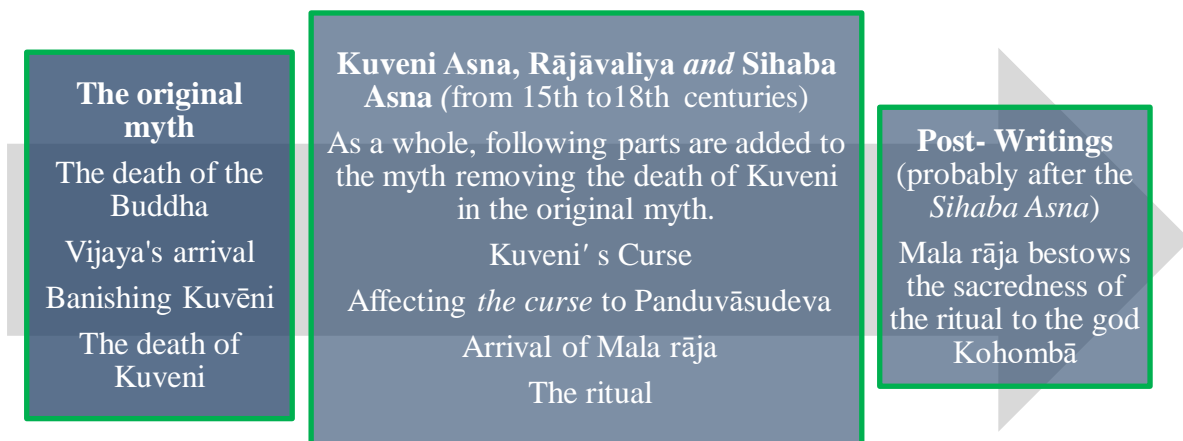
After about ten centuries of the available first mention of the myth of Vijaya and Kuveni in Mahāvamsa, the Sinhalese prominent writings: Kuveni Asna, Rājāvaliya, Sihabā Asna and some other literary replacements of the story written in the time of Kotte kingdom and latter periods, represent the legend with some modifications. Because of the unanimity of the general view of above major three writings regarding the modifications, some text of Rājāvaliya is quoted below.

[Thus disappointed,] Kuveni made to herself a tongue of diamond and came to kill the king Vijaya. But as Buddha had placed Lanka under their protection, the gods Sakra, Brahma, Mahesvara Kihirelli Upulvan, Saman Boksai and Kanda Kumara of Kataragama watched over the king caused the said diamond tongue to be shivered turned Kuvēni into a stone, and secured the happiness of king Vijaya. He died after a reign of thirty- eight years, and obtained a place in the city of the gods (Rājāvaliya, 1995, pp.19-20).

These narrators remove the incident of the Kuveni's death and introduce some additional parts to the story. For example, they add the story of the curse, which was put by malicious Kuveni on perjured Vijaya. Further, the Rājāvaliya mentions that after the king Vijaya, his nephew Panduvāsudeva in India was invited for the throne and the evil of the Kuveni's curse affected to him; he got a mysterious disease. God Purandara, directed to the god Iswara to contrive a plan to bring the king of *Malaya rata*, (*Mala Rāja*) in order to ward off the evil of Panduvāsudeva. According to Rājāvaliya, Rāhu, a deity instructed by Isvara, transformed himself to a boar; went to the garden of Mala rāja and began to devastate all before him. Mala rāja tried to shoot but in vein; He chased the boar and eventually came to Lanka (Rājāvaliya, 1995, pp. 20-22).

After the Kuveni Asna, an organization of the post-centuries stages, the role of god Kohombā was combined to the existed modified narrative. According to the current scope, the modifications done time to time are encapsulated in the figure 1.



**FIGURE 1: EVOLUTION OF THE VIJAYA- KUVENI MYTH****ROYALIZATION: DISRUPTION OF THE AUTHENTICITY**

Why modified the origin myth? Ostensibly, it was to introduce a majestic colour to the ritual held for the sake of averting the evil influences of the monarch. Kuveni Asna, the pioneer modifier of the myth and the Sihabā Asna reinforce the above-mentioned view based on the “cause of modifying the myth” including a ‘blessing part’ to the text. These blessings for the kings is for warding off the fear of enemies, fear of diseases, planetary influences and the fear of evil spirits of them and to protect Lanka (Sri Lanka) more than hundred years with their ministers raising the glory, majesty, command and valour (Kuveni Asna and Sinhāba Asna, 2008, pp.63,80). These kings respectively were Parākramabāhu VI (AD 1412-1467) of Kotte and Sri Vira Parākrama Narēndrasingha (AD 1707–1739); the last Sinhalese king of Sri Lanka; ruled in Kandy. The scope of Kuveni Asna is more important in the context of present paper since it appears as the previous work.

A.V. Suraweera remarks,

About the time of Parākramabāhu VI of Kotte, there seems to have gained popularity a legend about a curse of Kuveni, on account of Vijaya's violating his vow not to discard her. This curse befell Panduvāsudeva, the second king of Ceylon. Details of this anecdote are found in works like *Kuveni Asna*, *Sihabā Asna*, *Kohombā Yakkama* and *Malerāja Kathāva* (1968, p.158).

In deeming the views of Charls Godakumbure and Punchibandara Sannasgala, Mudiyanse Dissanayake points out that a kind of ritual based on Kuveni Asna, written by venerable Uturnumula, a Buddhist monk, seems to have been held to bless king Parākramabāhu. Further, he argues that Kuveni Asna was written for the welfare of king Parākramabāhu who was under mental pressure due to a condition of (socio political) crisis. Dissānāyake infers that the prevalent rural Buddhists might have believed that the cause for Parākramabāhu's mental pressure was his second marriage done after abandoning his first queen and two children, which was similar to the incident of king Vijaya (pp. 40- 41).



Kuveni Asna evokes powerful emotions on Kuveni's lamentation seemingly promoting her helplessness. On the other hand, in explaining the monarch it follows an exaggerative method reserving a big quantity of text. When the text is focused on a materialistic perspective, the attempt of 'elevating the king's position' emerges conspicuously. Here, a quantitative text analysis is applied to have a moderate idea about the purpose of writing the Kuveni Asna. In explaining the ritual done by king Malaya, Kuveni Asna uses nearly 266 purposive words out of the whole text (Kuveni Asna and Sinhaba Asna, 2008, pp. 62-63). The text includes themes successively as below,

1. Adorning the king Malaya with jewelleries (by god Sakra)
2. Advising to the king Malaya to save the Kings as his eyes (by god Sakra)
3. The panegyric of king Panduvāsudeva
4. The introduction to the ritual
5. The Panegyric of king Parākramabāhu VI
6. Blessings for king Parākramabāhu VI

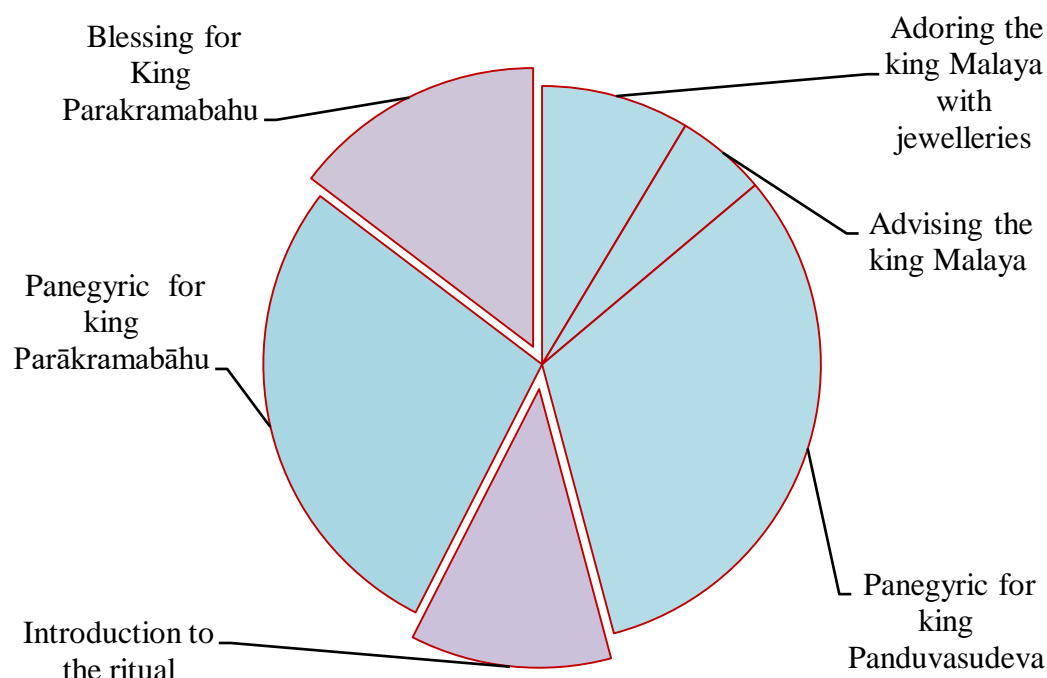
The table 1 illustrates the approximate percentages of the use of words in each of themes in the Kuveni Asna ritual description.

**TABLE 1: THEMATIC TEXT ANALYSIS OF KUVENI ASNA RITUAL DESCRIPTION**

	Theme	Word count %
1	Adoring king Malaya	8%
2	Advising king Malaya	5%
3	Panegyric of Panduvāsudeva	32%
4	Introduction to the ritual	12%
5	Panegyric of Parākramabāhu VI	28%
6	Blessings for king Parākramabāhu VI	15%

As a whole, except fourth and sixth themes, the rest has been written exceeding the basic requirement of "invocation for consolation" keeping exaggerative colour of royal status. Although this can be interpreted as the general trait of that very social order, actually it provides a historical written example for the state of "stratifying the universal human sensation". Chart 1 illustrates how Kuveni Asna attempts to keep the glory of monarchy while playing the role of a ritual.

**CHART 1: THEMATIC TEXT ANALYSIS OF  
KUVENI ASNA RITUAL DESCRIPTION**



The content can be summarised as the table 2.

**TABLE 2: THEMATIC TEXT ANALYSIS OF KUVENI ASNA RITUAL DESCRIPTION**

Content	Word count	Whole
Introduction to the ritual	12%	Ritual (function)
Blessing	15%	
Panegyric of Panduvāsudeva	32%	Glory of the royalty
Panegyric of Parākramabāhu	28%	
Adoring Malaya	8%	
Advising Malaya	5%	

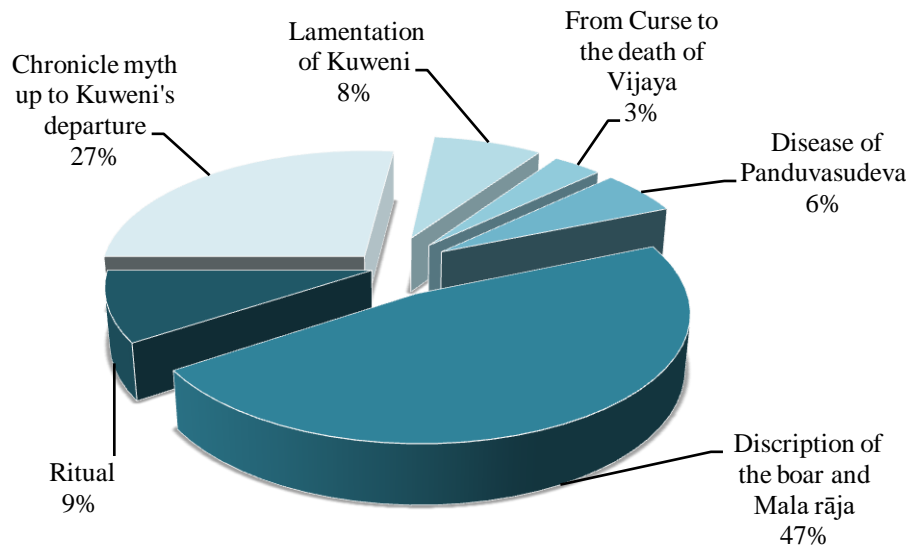
Indeed, these quantitative values simultaneously represent the qualitative value of the text equally because the author is conscious to keep the emotional power of the text using semantics and syntax shrewdly focussing on the required distinct theme in the text ubiquitously.

## THE MYSTERIOUS EXORCIST

Kuveni Asna attaches the story of the mysterious exorcist, the king of “Malaya rata” (modern Kerala) to the previous narrative. Other mentioned writings are also accompanied the story. This very concept of Mala rāja actually indicates a long-term socio cultural relationship regarding ritual practice between Sri Lanka and India. The use of the rituals sometimes known as the Malayalam rituals or ‘*Malayāli gurukam*’ in Sinhalese held for warding off the evils are ‘not unfamiliar’ even today in Sri Lanka. The mention of Kuveni Asna “Mala raja conducts the ritual evincing a form of possession on two Brahmins who are well versed in Vedas i.e. Rig, Yajur, Sāma and Atarvan” is the strategic statement used by the author to connect created story of the ritual to the contemporary time. On the other hand, the author’s neglect of using the direct almighty power of mentioned gods: Sakra, Brahma, Mahesvara, Kihirelli Upulvan, Saman Boksar and Kanda Kumara etc. in terms of the restoration of king Panduvāsudeva also convinces the purpose of performing a live ritual in front of the king. This implies of course Kuveni Asna is written aiming a ritual, which was to be done by Brahmins for the sake of averting the evils of King Parākramabāhu VI. Moreover, this evidences that the planned method of the ritual was to be blessed king Parākramabāhu by two Brahmins being possessed as Mala raja. History mentions that in the durations of Gampola, Kotte and Kandy kingdoms, Hinduism was propagated in Sri Lanka strongly. K. M. de Silva points out that The Hindu influence of Sri Lanka was nurtured by the groups of Brahmins whose numbers increased during these centuries while enjoying the patronage of the rulers (and the special favour of Parākramabāhu VI) and the support of the people (p. 93).

The Kuveni Asna suggests extramundane features of the exorcist (Mala rāja) who is qualified to cure a king exceeding the nature of general ritual practice. For example, Mala rāja was born from a lily and known as a son of Sitā and Rāma (in the Rāmāyana epic). At the ritual, two Brahmins were possessed by Mala rāja in order to cure the king. These applications emerge some religious influences of Kotte era based on Vaishnavism. While introducing Mala rāja as a son of Sita and Rāma (Vishnu), Kuveni Asna connects the scope with some other mythical aspects of Hinduism as well. For example, in the contrivance made to bring Mala rāja to Lanka, the author exaggerates the role of the bore vigorously. This may remind the story of the *Varāha* incarnation of Vishnu in Hindu mythology. According to Bhagavata Purāna, Varāha incarnation protected the submerged globe destroying the demon Hiranyaksha (Varadpande, 2009). Kuveni Asna comparatively describes the bore and its activities including the chase of Mala rāja more than other themes. This implies that the Kuveni Asna introduced the ritual related to the Vaishnavism. Chart 2 illustrates the thematic text analysis of the Kuveni Asna full text, which nearly contains 2879 firmly contextualised words (Kuveni Asna and Sinhala Asna, 2008, pp. 51-63).

## CHART 2: THEMATIC TEXT ANALYSIS OF KUVENI ASNA FULL TEXT



### THE INTERPRETATION OF 'DIVI DOS'

Divi dos is the Sinhala term used in Kuveni Asna and other related post-writings except Rājāvaliya to introduce the disease of king Panduvāsudeva caused by the Kuveni's curse. Kuveni Asna says that malicious Kuveni came in a guise of a leopard with a diamond tongue to kill Vijaya and afterwards Panduvāsudeva dreamed a guise of a leopard and incurred the divi dos (pp.55-56 ). However, Rājāvaliya does not mention about the leopard while emphasizing the aftermath of Vijaya's perjury ; it says "and now, it came to pass that the perjury of which king Vijaya had been guilty was visited on the person of the king Panduvāsudeva, who dreamt a dream and lay unconscious unable to rise" (p. 21).

The Sinhala term 'divi' gives several meanings: life, tiger, leopard, a god, deity, oath, vow, kind of bird, the blue jay, *Swarga* or the heaven of the gods. The term 'dos' (the plural form of 'dosa') is defined as fault, hatred, indifference to pleasure or pain, stoicism, the humours of the body (such as bile, wind, and phlegm), sickness, disease, misfortune displeasure and crime. (Clough, 1892). Kuveni Asna connotes 'divi' as leopard although seemingly intrusive to the context while keeping 'dos' relatively as the sense of sickness, disease, misfortune or the humours of the body (such as bile, wind, and phlegm). Hence, the Kuveni Asna introduces divi dos as an evil caused by a dreamt guise of a leopard. However, the definition provided to the term 'divi dos' in the Clough Sinhalese - English dictionary (1892) that "evil effects supposed to follow false swearing" provides more comprehensive meaning to the scope. General scholarly view is also agrees with the idea that the divi dos seems most appropriate to interpret as a result of breaking a promise (Seneviratne, 1978, 206). Walkott also supports the similar meaning of 'divi dos' interpreting it as "the curse of perjury" (p. 10). In this context, the introducing of divi dos as an effect caused by a guise of leopard may be a strategy made to cease the transmission and

repeating the first king Vijaya's malefaction, which seems to have inevitably emerged in the personal life of the king Parākramabāhu VI.

### **KANKĀRIYA IN THE KUVENI ASNA**

The Sinhalese term Kankāriya connotes "a function"; however, its social sense indicates a circumstance of a specific active religious action. Moreover, the Sanskrit term 'karma-kṛitya', derived from the Vedic sources semantically defined as "activity or the state of active exertion" (Williams, 1872, 209); This term directly furnishes the meaning of the term kankāriya. In this sense, the description of the particular ritual in the Kuveni Asna connected to the Vedic ritual performed by Brahmins, reinforces the view that the fundamental stage of modern kankāriya was the ritual, which is explained in Kuveni Asna. In this context, the view of Sannasgala, which Dissanayake cites that Kuveni Asna depicts itself the features of a ritual, is factually evidential (p. 40).

### **FROM KANKĀRIYA TO KOHOMBĀ KANKĀRIYA**

The three kingdoms: Gampola (AD 1345-1406), Kotte (AD 1412-1597) and Kandy or Udarata (AD 1469-1815) interacted due to the complex social political background (Rājāvaliya, 1995). Current paper points out some superficial aspects, which can be inferred as effects that affected to transmit the royal kankāriya towards the Kandy region.

According to the historical analysis of K. M. de Silva (1981), Kandy hilly region was the central part of the Gampola kingdom and was firmly under the control of Parākramabāhu VI. In the last years of his reign, he crushed comprehensively the insurrection led by Jothiya Sitana of Kandy and appointed a prince of the Gampola Royal house in place of Jotiya Sitana to administer the area on behalf of the Kotte king. However, after the Kandy rebellion of Jotiya, there was no innovation in or expansion of the machinery of government to consolidate the re-establishments of an island polity. Parākramabāhu VI placed subjugated regions under their former rulers who then acted as vassals of Kotte or installed new rulers with wide powers falling just short of semi-independent status. This decentralisation of authority underlined once more the feudal character of the Sri Lanka polity. Thus, the Kotte kingdom under Parākramabāhu VI, was a brittle structure in which centrifugal forces were kept in check by the personal influence and authority of a gifted ruler (p. 88).

After the death of king Parākramabāhu VI, the way of handling the autonomous power of the feudal lords seems to have changed totally the established mode of cultural aspects.

The foundation of the Kandyan kingdom may be traced back to the last quarter of the fifteenth century. The absorption of the Kandyan region into the Kotte Kingdom under the energetic Parākramabāhu VI did not extinguish separatist tendencies among the Kandyans; on the contrary, it may have helped to transform these into a proto-nationalism (De Silva, 1981, p. 89).

### **KOHOMBĀ, THE SYMBOL OF THE FEUDALISM**

Kohombā is the main deity of the ritual that depicted in the ritual plaques seemingly likening to the features of traditional Kandyan aristocrat. The term Kohombā is a post annexation that indicates the provincial political approach to the mentioned kankāriya. The derivation of the name Kohombā is hitherto fictional because of the absence of proper social historical evidences. Dissanayake (2012) mentions the myth that after the ritual of Panduvāsudeva, king Malaya

entrusted the patroness of the ritual to a prince of the Velihela village who was bathing under a 'kohomba' tree (*Azadirachta indica*) making him divine while alive and naming Kohombā because of the difficulty of coming again for the ritual (pp. 20,36).

Of course, someone can argue that the concept of god Kohombā directly connects with the neem tree because of its distinguished qualities. Neem is closed with the human life in the Indian sub continent and the neighbours. The medicinal power of the tree has caused heartfelt relationship with humans even in the mythical context. "For centuries, Neem has been so closely associated with the life and culture of people in the Indian sub-continent, that it can be called *Kalpa Vriksha*, the wish-fulfilling tree. The tree is believed to be a symbol of truth" (Amirthalingam, 2013). These qualities of the neem that people embraced for ages might have caused to name the deity of the kankāriya held in the purpose of curing a disease. On the other hand, indicating the neem tree as the "kalpa vriksha" accompanies the developed purpose of Kohombā kankāriya that is for aquairng well- being and prosperity. However, the arrival of the god Kohombā exists as a landmark of a certain stage of implementing the said autonomous power of feudal lords. Moreover, it implicates the initial steps of the ruralisation of royal kankāriya.

The *Maha yatikawa* (great invocation) and the *Kohombā hella* (Kohombā rigmarole) used in the Kohombā kankāriya, mention trio of Kohombā gods as *Aluth Kohombā* (the new Kohombā), *Maha Kohombā* (the great Kohombā) and *Parana Kohombā* (the old Kohombā). These three deities have been introduced in the related sources as the past regional councillors of Sinduruvana region of Kandyan kingdom. *Maha yatikawa* connects the Kohombā gods to the title "Bandara". According to S. Paranavitana (1966), the term *bandara* was appeared in Sri Lanka since 14<sup>th</sup> century AD because of Malaysian relationships, to indicate high officials especially related to the treasury (p. 209). A troupe of Malaysians is said to be landed in Sri Lanka in the time of Parākramabāhu VI (Dissanayake, 2012,55-63). The Malaysian term *bendahara* derived from Sanskrit, is used to indicate the title of a very exalted Malay state official, usually ranking next to the heir apparent; *bendahari* is the term for the treasury officer (Wilkinson, 1908, p.21). These Malay words can be compared with the Sanskrit *bhāṇḍagāra* and *bhāṇḍagārika*, which are defined in turn as treasury or storehouse and treasurer or overseer of a storehouse (Williams, 1872). The propagation of the name bandara towards Sinduruvana of Kandy region, directly relates to the Parākramabāhu VI's above mentioned policy that the installation of provincial rulers who acted as vassals of Kotte in the subjugated areas of Kandy under the decentralisation of autonomy.

The general rural ideology of deifying elites after their death is infringed here by attributing the godhood to the elites while they alive. This phenomenon exhibits the desire of the feudal lords to be divine acquiring the power of mythical Mala raja of the royal kankāriya. The god Kohombā's turning up was an effect of the royal Kankāriya's localisation in the social revolution occurred as a consequence of the royal autonomy's decentralisation. Further, deifying the provincial councillors while they were alive may exemplifies a dimension of Kandyan aristocrat's proto-nationalistic attitudes; On the other hand, it mirrors local aristocratic desire of self-exaggeration invested from the higher social strata.

### MODERN KOHOMBĀ KANKĀRIYA

Foreign invasions were familiar in Sri Lanka's history from the Vijaya's arrival according to the chronicle history. From the Vijaya's arrival, Sri Lanka had remained Sinhala territory until about



AD 500 when the Dravidan rulers from South India gained control over the northern part of it for a short period. They continued invasions and experienced counter invasions of the Sinhalese until the arrival of the Portuguese in Ceylon in AD 1505. The Portuguese conquered certain maritime parts until the Dutch ousted them in AD 1640. In AD 1796, the Dutch, too, yielded their possessions to the English (Population, 1974, p. 1).

Hence, the socio political milieu from the Kotte kingdom to the Kandyan kingdom-approximately 200 years - formed a highly multicultural society in Sri Lanka. Climaxing the South Indian influence, Nayaks of south India possessed the monarchy crowning in the Kandyan kingdom from 1739 to 1815. Although the Portuguese and Dutch rulers were impossible to overcome the Kandyan kingdom, the British government after them, enhanced their power in the whole island comprising the Kandy region. Merging these socio cultural flows with the political conflicts between Sinhalese rulers occurred from time to time seems to be densified the folklore. Thomas Skinner (1891) explains how British launched modern materialistic thinking in to the social economic process of Ceylon in the 19<sup>th</sup> century with the great effects of industrial revolution. A mention of Edward Carpenter about some Kandyan youngster who practiced Kandyan dance in somewhere of the latter part of 1800 with a brief introduction to a Kandyan ritual dance introduced as devil dance, provide a notable evidence for the above-mentioned social change.

This devil dancing appears to be a relic of aboriginal Kandian demon-worship: the evil spirits had to be appeased, or in cases of illness or misfortune driven away by shrieks and frantic gestures. It is a truly diabolical performance. ...Some two or three years ago however Hagenbeck, of circus celebrity, being in Ceylon engaged a troupe of Kandians...to give a native performance for the benefit of the Europeans; and since that time the old peasant life has palled upon our friend, and it is evident that he lives in dreams of civilisation and the West (1892, pp. 30-31).

Statements, which exaggeratedly upgrade the status of western civilization, influenced the traditional practitioners of the ritual. Socialization of above western perspectives marked the turning point of Kandyan dance, which was accepted as a reward gained from Kohombā kankāriya and seems to have been a harbinger of the post- classicization of Kandyan dance.

In this context, with the gradual decline of feudal society, the members of *berava badde* caste, who were formerly appointed as drummers of the palace (ex. Davy, 1821) and normally conducted the rituals, became as the bearers of the Kohombā kankāriya; the sacred role of the feudal lord transformed towards the patronising elite. This state caused to confirm the long-term existence of “aristocracy based gods” who invaded the conventional kankāriya in their autonomous realm.

Kohombā kankāriya includes a large number of gods in a very complicated background. A number of authors have discussed this complexity in social cultural, political and aesthetic contexts. As a whole, discussions and conclusions elucidate that the local gods who are worshiped in Kohombā kankāriya are totally aristocratic based; on the other hand, the polytheist of Kohombā kankāriya is a direct impact of the social power struggle and the multicultural amalgamation.

M. D. Raghavan (1965) outlines about a political colour, which has been attributed to the Kohombā kankāriya by J. E. Sedaraman, a late dance maestro in the mid 20<sup>th</sup> century. This definition may indicate the traits of the rapid revolution of social thinking arisen seemingly by the end of 19<sup>th</sup> century in Sri Lanka. Raghavan re-marks that the three Rajas of Malayala instituted the *Hetapas Mangalaya* (a ceremony) to bring about political peace between the Sinhala king and the Yakka chieftains. To this great conference, Yakka chieftains from eighty yakka strongholds were invited. Among these are named Atalagala, Kotalagala, Kokkagala, Sandagirigala, Mudagirigala, Mulgirigala, Dodamvatukabala and Hunnasgiriya. Alternatively, these chieftains are addressed as Veddās. However, the Hetapas Mangalaya failed of its purpose. Then, a deputation of twelve chieftains was formed. Those are severally Kohomba, Aluth Kohomba, Parana Kohomba, Valiyak Devio, Viramunda, Irugal Bandara, Kande Bandara, Kalu Bandara, Amarapati, kotuvattu Rajaya, Maha guru, Melliye Yakku and Kadavara Yakku. In this deputation three main groups are represented as the Bandarās (Kuveni's people), Veli Yakka, Ambarapati and Kadavara (Indian deities) and Maha guru, Kuda guru and the rest (minor aborigines of the island). The Malaya king declared that all these chieftains should live in concord and unity and eat and live together. The Malayala suzerain also confirmed that this Kohomba deputation will be responsible in future to maintain peaceful relations among the different groups (pp. 123-124)

The interpretation reinforces the concept of communal collaboration and may hint for an emerged circumstance of ceasing some social barriers especially like casteism. Further, this interpretation indeed, brings an antithesis to the existed social stratification of the Kohombā kankāriya.

Some notes of Susan Reed (2012) about the mutuality between elites and Tittapajjala Suramba, who was an eminent traditional maestro of Kohombā kankāriya subtly exemplify the mentioned struggle (2010,93-94). The statements of Tittapajjala Suramba about the friendly companionship between them imply the nature of mentioned autocratic governing influence. Moreover, some of Reed's accounts about the recent past relating to the art depict subtle remains of above tendency. According to the Reed's words, "The classicization of the Kohombā kankāriya dances had the initial effect of ostensibly elevating the berava dancers to the status of symbols and bearers of the classical Sinhala culture" (2010, p.155).

After about 600 years of Kotte era and under a broad social evolution after 24 years of the political freedom of British government in Sri Lanka, Tittapajjala Suramba, explains the ritual on 12.12.1974 as follows.

We perform a Kohombā kankāriya with the assistance of a group of villagers for the common benefit of all. Through the performance of the ritual, the corporation and friendly relationships established. With the establishment of good relations, productivity improves. The ceremony is an expression of Vedic feature whereby one engages in a blessing activity (*Vaidika shantikarma*). the sufferings of people reduced by improving their social, economic and cultural activities. We say that we are performing the Kohombā kankāriya for the god Kohombā; basically we are performing this ceremony in Vishnu's name. The Kohombā god's line is connected with Vishnu's line. (Walcott, 1978,10).

This statement indicates the ruralisation of ritual; moreover, it depicts the long-term existence of "royal kankāriya" concept due to the scholarly establishment of the Kuveni Asna. The

recollection of Vedic ritual performed by Brahmins and elevating the Vishnu's authority dominated by the Kuveni Asna subtly implicates the intellectual struggle against the long-held social stratification. This was the crisis generated when the rustic wishes were inclined to be united with the aristocratic flavour in the Kohombā kankāriya, transmitted towards the rural exorcists or yakkessas. In this case, the elite, attempted to control the practitioner's independent thinking by positioning their social privilege, however, while involving as practitioner's well-wisher. Hence, the aristocratic power encouraged "their autonomous culture" opposing the arisen thinking against their regular autocracy. Susan Reed (1998) elucidates this state in terms of folk dance, "regulating purity and authenticity in folkloric dance in a patriarchal and protective mode is a common feature of state and elite interventions, often indexing notions of a defensive culture under seige" (p. 512). Moreover, Reed remarks, "the elite of a nation may feel that "their culture" is on decline or eroding due to influences such as tourism, industrialization, "westernization", and other "outside" influences"(personal communication, April 7, 2013). However, with the acceptance of these outside influences as "requirements" under the state open economic policy began in the latter part of 20<sup>th</sup> century, the central government contributed to the Kohombā kankāriya under the policy of protecting the traditional heritage of Sri Lanka. Further, the gradual revival based on the professional atmosphere and the educational involvement occurred within some decades caused Kohombā kankāriya as a cultural heritage. However, the ideology that the kankāriya is a blue-blooded practice has not lost so far from the practitioners as well as educationists (Vaidyavathi Rajapakse, personal communication, July 24, 2012).

## CONCLUSION

When comparing with the universal purpose of invocation, Kohombā kankāriya seems to have been stratified for the sake of some achievements of noble society. Initially, this agenda is implemented for fulfilment of two major factors, which is born the latter as a requirement formed by the former. These two factors are "warding off the evils of monarch" and "confirming the distinction of monarchical ritual". In this very stratification, narrator presents an origin myth utilizing the historical myth that depicts the royal autonomy elevating the glory of the monarch. In the transmission of the royal ritual from the monarch to the local elites, the purpose became wider and more political. The title "Kohombā kankāriya" was a subsequence of this complex political milieu. Hence, the two stages of the ritual performed in the palace and the out of the palace can be distinguished in turn as the kankāriya and the Kohombā kankāriya. However, the very term "kankāriya" is unique even for today because it is adequate to make a sense of Kohombā kankāriya. This circumstance may implicate the practitioner's tendency of introducing the ritual as its inceptive sense.

The buried rural history in terms of Kohombā kankāriya is indisputably broader than the inferences that are available to be dug out from the written political history. Hence, having scrutinized the available socio political history, a number of factors can be point out relating to the Kohombā kankāriya's evolution. Thus, the transmission of kankāriya from the royalty to the commonalty and establishment as Kohombā kankāriya was a consequence of a complex socio political process, which was occurred within approximately five centuries i.e. from 15<sup>th</sup> century to 20<sup>th</sup> century AD.

Kuveni Asna, the historical prose poetry, based on some historical myths, which depicts itself the traits of a ritual, supports to determine the socio cultural and historical values of Kankāriya. It

appears as a sturdy source of the scrutiny including three major dimensions in relation to the socio political background of Kankāriya. Firstly, it is a great literary work, which depicts unique virtuosity of the author. This quality is very important in the content analysis of the text done in order to have a sound understanding about the purpose of the work. It means that the ubiquitous use of un wasteful words in the text in different themes focusing directly to each scope is helpful for a perfect thematic text analysis to understand how the author has drawn attention to each theme. Secondly, it is a stalwart of conveying the gloriousness and the distinction of the noble stratum. Hence, it implies how lower strata should accept the nobility of autocracy. Thirdly, it mirrors the prevalent contiguous cultural relationships and education based on long-term social cultural interaction between India and Sri Lanka.

Kohombā kankāriya, the very ritual that implies the autonomy of regional aristocrats and which was borne by rural exorcists or yakdessas is the latter stage of the kankāriya. The social evolution occurred due to the internal conflicts, foreign invasions, and governmental strategies changed the thinking encompassed the Kohombā kankāriya. Eventually it has become a cultural heritage of Sri Lanka, which encourages the uniqueness of Kandyan dance. Hence, a cultural heritage has been generated by the amalgamation of spiritual and materialistic aspects. The artistic excellence of the conventional “majestic art” of Kohombā kankāriya has socialized in the 21<sup>st</sup> century exceeding its mythical and political realities.

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DOI: **10.5958/2249-7137.2020.00734.X**

## ANALYSIS OF THE BIOTECHNOLOGICAL COTTON PLANT POPULATION FOR GENOMES FREE OF NPT II GENE

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### ABSTRACT

*The article deals with the modern technologies and methods for breeding transgenic plants free of selective marker genes (SMG). The classification of the widely applicable methods in the world is given in the paper. The bio-prospecting methodology is presented to identify kanamycin-resistant genotypes from the Porlock-1 cotton population. The plasmid vectors designed for transformation including genes for identifying transformants. As a rule, they are antibiotic resistance genes (for example, non-metallophosphotransferase genes (npt) and hygromycin-phosphotransferase genes (hpt)), which products provide transformed plant tissue growth in selective environment. They have been named as selectable marker genes (SMG) due to their basic function performed in the process of the genetic engineering works. However, after transformed cell screening, the genes lose their value, but remain in human genome transformants. Since such sequences started to be called the "genetic burden" and even "genetic debris", it has become urgent to remove these genes from a plant genome. This kind of research of a*



*cotton plant is carried out for the first time in our country, just as the RNA interference technology for cotton plant, which has changed the qualitative characteristics of the fiber, is used for the first time.*

**KEYWORDS:** *Biotechnological Cotton Plant, DNA, Primers, PCR, Selective Marker Genes (SMG), Npt II, Verification.*

## INTRODUCTION

Biotechnology has firmly entered human life and activity. By means of the biotechnology methods, in particular by the genetic engineering methods, various types of products, as well as strains, varieties and breeds, demanded for our existence, began to be bred. One of the main results of biotechnology method application is breeding of new varieties of agricultural plants. In view of this, RNA interference method has begun to be used in the world recently. The plants - new valuable metabolite and industrial raw materials producers have been bred by means of this method. The need to create new lines and varieties is dictated by many reasons associated with the gradual aging of varieties, land depletion, ecological turnover, coming global warming, as well as the emergence of new, more aggressive species of fungi and microorganisms that adversely affect current crops. Along with that, new varieties of crops are created to meet the needs of an ever-growing world population, as well as light and food industries.

As a rule, in the genome of biotechnological plants, in addition to its set of genes, there is some certain amount of introduced genetic materials that is unnecessary after performing its functions. They are selective marker genes (SMH), which have been definitely used for selection of transform ants. Recently, such SMGs have been called even “genetic burden”. And as a result of this, the public, a direct consumer of biotechnological products, has begun to show concern regarding transgenesis. The presence in the genome and the constitutive expression of plant genes that are alien to plants, such as antibiotic and herbicide resistance, is deprecated, especially by commercial companies. On the basis of this, a new direction in genetic engineering has appeared - the development of methods for marker-free transgenic plant breeding and its innovative varieties is the first step towards bringing genetic engineering technology closer to the innovative breeding and genetic process.

At present, it is fundamentally possible to obtain biologically safe marker-free (without selective genes) transgenic plants. Currently, the available strategies for transgenic plant breeding that do not contain potentially dangerous selective markers depending on the implementation tool, are systematized into several groups. These are co-transformation, transposition (Ac / Ds), site-specific recombination, and methods of direct screening of transform ants [1, 2]. For instance, during co-transformation, the specific and marker genes are located in two independent T-DNAs in one or two agro bacterial strains [3, 4]. Double transform ants cross and select offspring without a selective gene. Another strategy involves moving any of the genes, specific or marker, using transposition, in particular, the Ac / Ds mobile element system of maize, and then removing the marker gene from the plant genome [5, 6, 7]. The third strategy for marker-free plant breeding is based on the site-specific recombination system from bacteria. This is the Cg / lox technique [8, 9]. The fourth group includes methods for direct screening of transform ants, grouping the FLP / FRT system, direct screening of transform ants, and the R / RS system using PCR [10, 11, 12, 13].

We are interested in direct screening of transformative the presence of the specific gene expression product appears. This method is based on the identification of genotypes without alien nucleotide fragments in the genome. It has been discovered by the researchers that the genotypes without selective genes are found in large populations of the transformed plants. In our studies, we applied this technique to the biotechnological *G. hirsutum* cotton plant (variety of Porlock series) obtained as a result of RNA interference.

In the basis creation process for Porlock series variety, the vector design pHellsgate-8 :: PHYA1 has been used, into which the kanamycin resistance gene (npt II) was introduced. We set the task - to identify genotypes that do not carry a selective marker gene (SMG) in their genome, that is, to select the non-kanamycin cotton plants formed by a natural process.

## MATERIALS AND METHODS

Object of study: Porlock1- a biotechnological variety of cotton plant.

Isolation of genomic DNA. Genomic DNA was isolated from leaves by the CTAB method with modifications for cotton [14].

### PCR record

A reaction mixture for PCR in a volume of 10 µl was prepared according to the scheme: 15 ng of genomic DNA, 1 µl of 10 x Taq buffer, 0.2 µl of dNTP (10 mM each), 5 pM / µl primer, 0.07 µl of Taq polymerase (5 units /µl AmpliTaq Gold, Applied Biosystems), water up to 10 µl. PCR was carried out under the following conditions: 1 cycle - 940C, 3 min; 35 cycles of 940C, 1 min; 550C, 1 min; 720C, 2 min; 1 cycle - 720C, 7 min. For PCR, the following primers were used: 35S-F / 35S-R, PDK-F / OST-R and Kan F / Kan R Kan F / Kan R

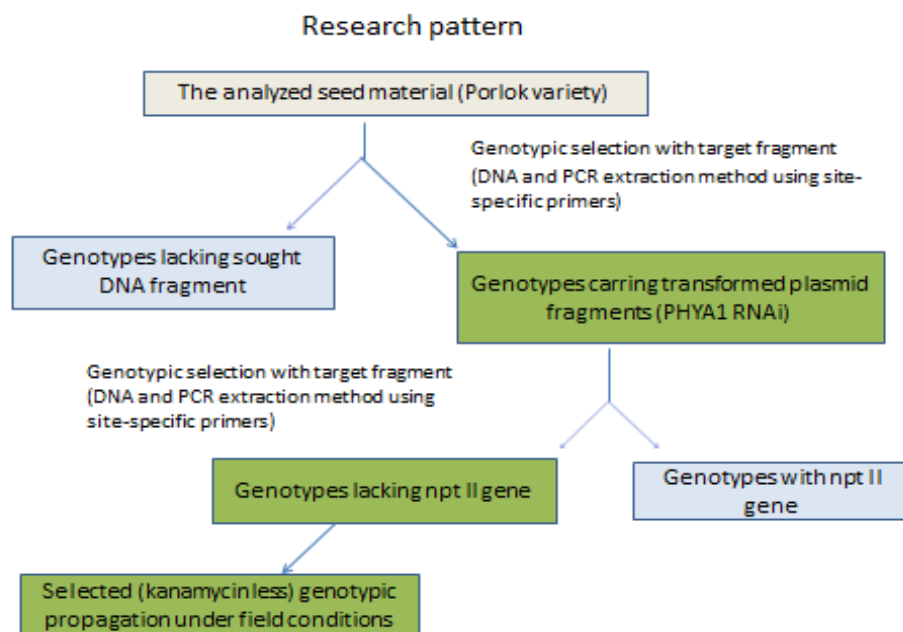
## RESULTS OF THE EXPERIMENT AND S AND DISCUSSION

The researchers are working on the accelerated production of new genotypes, which along with high yields and early maturity, are also resistant to pests and diseases, to the ecological turnover. In industrial crops, attention is paid to updating valuable economic features, among which the quality of the cotton fiber is of primary importance. Medium fiber cotton (*G. hirsutum* L.) is a precocious and high yielding variety; however, fine fiber cotton (*G. barbadense* L.) has the highest quality fiber, but is relatively low yielding and late ripening cultivar. Using the RNAi - RNA interference method, a new variety of cotton plant has been bred, which fiber is close in characteristics to the fine-fibrous *G. barbadense* L variety.

The RNA interference for cotton plant is the result of introducing a specially designed plasmid construct (Figure 1.) into the Coker-312 cell culture (Coker-312), and further, by means of the traditional hybridization method with its domestic variety, AN-Bayavut-2, and subsequent selection a gene knockout variety Porlock-1 has been obtained.

We hasconducted the pilot study to exclude consumers' questions about the presence of a "foreign genetic burden" in the genome of the biotechnological varieties.

As a result of the study, we obtained 90-93% amplification results with primers 35S-F / 35S-R, PDK-F / OST-Ramong randomly selected plant materials. This is the evidence of the plasmid construct presence causing an interference effect in the genome of the Porlock variety. Whereas the results of PCR with a primer for a selective marker gene (npt II) were 3-4%. The variants of the PCR results with the different combinations of primers are presented schematically.



Thus, we have selected the plants that had negative amplification results with a primer to detect the kanamycin-resistant gene. The seeds of these plants were sown in 2019 in the field for propagation and recurrent molecular genetic verification for the presence of the selective npt II gene in their genome.

**TABLE THE RESULTS OF PCR ANALYSIS OF SOME GENOMES OF PORLOCK-1 BIOTECHNOLOGICAL COTTON CULTIVAR FOR THE PLASMID SEQUENCE PRESENCE AND NPT II SELECTIVE GENE IN THEIR GENOME.**

Primer combination	Biotechnology Cotton DNA Sample Number											
	1	2	3	4	5	6	7	8	9	10	11	12
<b>35S-F&amp;35S-R</b>	+	+	+	-	+	+	+	-	+	-	+	+
<b>35S-F&amp;PDK-R</b>	+	+	+	+	+	+	+	+	-	+	+	+
<b>PDK-F&amp;OST-R</b>	+	+	+	+	+	+	+	+	-	+	+	-
<b>Kan F &amp; Kan R</b>	+	+	+	-	+	+	-	-	-	+	+	-

Amplification results during PCR with different primers.

(+) - a PCR product was detected in a 1.5% agarose gel; (-) - no PCR product was detected;

In the field, after the necessary agronomic measures had been taken, 259 plants were cultivated by the flowering period in 4 working plots. Leaves were taken from these plants and DNA was extracted for PCR analysis. According to the electrophoresis of the results of amplification products, it is concluded that more than 55% of the plants with a positive response to 35S-F /

35S-R, PDK-F / OST-R do not synthesize amp icons with Kan F & Kan R primer. That is, they give negative PCR -result with a pair of Kan F / Kan R primers, which is the most obvious evidence of the npt II fragment absence. The seeds of these plants will be prepared for sowing next year and the plants grown from them will be again subjected to molecular genetics verification in order to detect the mechanism of appearance of marker-free genotypes.

Understanding the mechanism of inheritance and excision of SMH npt II in natural populations is of certain importance for us since it is recommended for use as the least labor-intensive molecular genetic verification tool in comparison with the co-transformation, transposition, site-specific recombination techniques, or the removal of selective genes from the plant genome using recombinases (Cre, FLP, R) [16, 17, 18].

## CONCLUSION

The presented work has been carried out due to the fact that the presence of resistance to antibiotics and other marker genes in genetically modified plants causes concern in society because of the alleged, potential risks to the environment and human health. The application of the antibiotic resistant genes is the subject of controversy and intense discussion by both scientists and the average man. In this regard, biotechnological plant breeding that do not contain foreign genetic material, especially of bacterial and viral origin, significantly reduces the tension among consumers. Therefore, today, such direction of genetic engineering as marker-free transgenic plant breeding is actively developing. In addition to selective marker genes, the creation of transgenic plants often uses the so-called reporter genes, whose products make it possible to immediately judge the expression of the built-in genetic construct and evaluate the success of plant transformation [15]. The expansion of the list of reporter genes available for practical use will increase as far as new chromomeric and fluorogenic substrates will be developed for various enzymes.

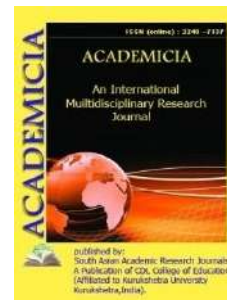
At the same time, despite the growing number of selective and reporter marker genes, only a few of them have found application in transgenic plant breeding. This is due to the complexity and duration of even primary experiments to test their expression. At the same time, the disadvantages of many of the marker genes remain insufficiently obvious. The answer to the question about the biological safety of the marker genes is ambiguous, as the impact of their distribution in the environment can occur only many years after their application.

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DOI: **10.5958/2249-7137.2020.00735.1**

## TEACHING STUDENTS TO THINK CREATIVELY THROUGH INDEPENDENT EDUCATION IN HIGHER EDUCATION IS A PRESSING ISSUE

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### ABSTRACT

*This article describes the problem of increasing the self – activity of the assimilation of knowledge, independent thinking by organizing self – education in higher educational institutions. In the process of working in groups, students complete some difficult tasks are difficult to solve independently. So work in groups individual at the same time as organizing the overall work in the organization. In the process of offering students independent learning in the form of problems, in the process of searching for or expressing conditions in specific problem situations, the activities organized by the subjects seem to be performed by the teacher instead of the students. There are a number of shortcomings in the organization of group work. One of the challenges is to be able to form groups with the right goals and organize work in them. . Therefore, it is advisable that the questions and answers, laboratory work, exercises in the practical classes should be as personal as possible.*

**KEYWORDS:** *Self – Education, Thinking, Education, Development Activates. Practical Lessons, Free Thinking, Activities, Self – Study, To Exchange Opinions, Training, Tree Thinking, Discussing, Education Activates, Self – Thinking.*

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## INTRODUCTION

One of the most pressing issues is the organization of independent work of students on the basis of the Regulation approved by the Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan dated August 14, 2009 No 286 "On the organization of independent student work." As the President said: "If students do not learn to think freely, the effectiveness of education will be low. Definitely need knowledge. But knowledge goes its own way, and independent thinking is a great asset. An important condition for the development of society is the perfection of the training system, the socio-economic development of the country, improving the quality of personnel, the formation of independent, creative thinking skills of students, as noted by the President. if they learn to think freely, the quality of the education given will inevitably be of quality! "

For this purpose, the main task of teachers is to provide students with independent education and independent work, in turn, to be able to apply the knowledge and skills acquired in the course, to strengthen their skills, to consciously master each student. divided into groups according to their specific characteristics, it is necessary to take into account the results of individual independent training.

Identifying problem signs in independent learning allows you to separate important information from secondary information and look for factors and additions.

The subjective purpose of the educational process is to strengthen the knowledge of students studying in higher education institutions, self-education, independent work, development of knowledge, the formation of understanding, skills, abilities. appropriate is the organization of regular independent study.

Independent learning - when successfully completed, students' independence is nurtured. Usually, independent study is brought to the attention of students in the form of an issue that can be solved immediately. In the process of offering students independent learning in the form of problems, in the process of searching for or expressing conditions in specific problem situations, the activities organized by the subjects seem to be performed by the teacher instead of the students.

In independent study, the conditions are not known in advance. If the student cannot find a solution in the process of carrying out educational independent work given by the teacher, then he will not be able to face this situation and turn this independent work into a situation that allows him to seek a solution.

Independent learning requires strict adherence to certain didactic tasks. When the conditions of independent study are set in advance by the compiler, the student is not required to demonstrate the ability to change. In independent learning, you have to complete tasks that do not have more conditions. On the basis of independent learning, the subject becomes acquainted with the laws of changing conditions, uses existing skills and abilities to analyze a specific problem and perform independent work.

Forming concepts using independent learning allows subjects to independently identify problem signs, separate important information from secondary information, and search for additions.

Independent learning, which allows for independent work, involves the creation of a conducive environment for students with low levels and unsatisfactory mastery of concepts, motives, and values.

Independent education is the organization of regular independent activity in accordance with the subjective purpose of the educational process for the formation of self-education, independent learning, the development of imagination and skills.

One of the first principles of the independent learning factor is the intellectual mastery of scientific methods and advanced pedagogical practices. Scientific knowledge is a true reflection of reality.

Only knowledge that reflects the laws of the world around us, the intrinsic properties of objects and events, and their interrelationships is scientific.

The scientific principle of independent education is necessary in order to create the right conditions for the teacher to reflect, understand, master the laws of the teaching material.

Understanding of theoretical rules is an important feature of interpreting material on a scientific basis, which determines the characteristics of the student's thinking activity. Scientific knowledge can reflect the realities inherent in science to varying degrees. Scientific interpretation One of the tasks of the rules of science in each group at all stages of independent learning is to know the structure of theoretical data, in terms of how deeply it reflects the world around them.

In the process of acquiring scientific knowledge, students acquire a scientific outlook, beliefs, and develop thinking.

The principle of the independent nature of education is to equip students in the educational process with future scientific knowledge in accordance with the current level, to ensure that young people are acquainted with the methods of scientific research.

Therefore, the role of the educator in the education system is great in the free, creative, independent thinking of students in the educational process and independent work. It is expedient to use two principles in the structure of education - independent work and its organization - the principle of systematic and consistent work of independent work.

The historical experience of the institute in each period of social development shows that the task of education cannot be accomplished without a certain system.

The system of interpretation of the curriculum depends on the ideas that are clearly stated in the curriculum, which of these ideas the teacher wants to explain, how old the students are, how well they are able to acquire knowledge, whether the student knows well or not. the nature of the specific thinking activity depends on how the process of mastering the knowledge in the lesson is usually explained.

Independent work is about being systematic, consistent. A characteristic feature of consistency is that it is aimed at ensuring that students deepen, expand and consolidate new knowledge, skills and competencies on the basis of previously acquired knowledge and skills.

Independent work is also important in showing that the disciplines of each discipline are inextricably linked to each other through the principle of structure and coherence.

The principle of independence of independent education is to strengthen the teaching materials and to supplement the previously taught materials, to ensure that students work independently and continuously and systematically, to ensure that the knowledge and skills acquired by students. nikma also includes taking into account their skills.

The three principles of organizing independent work are to link it with the practical activities of independent work.

The most basic and guiding rule is to link independent work with life and production practices. Because students are independent, creative activities that serve this activity and are connected to life, it helps them not only to master their content in order to acquire this knowledge, but also to be able to apply their knowledge in practice.

In the organization of independent work, it is effective if the tasks between the members of the group are clearly approved, and cooperation is established. The following elements should be taken into account in the organization of independent work of students.

1. Preparing students to work in groups, clearly adding assignments, giving an idea of working in groups, setting rules.
2. Develop and discuss a plan for completing assignments. Identify solutions and share responsibilities.
3. Be able to organize work on the completion of educational tasks.
4. Monitor the work process and the workplaces of the members in the organization of work in the group and provide assistance if necessary.
5. Provide information on the results of the tasks in groups, group discussions, additions and corrections to the work process. The teacher draws conclusions and summarizes the results of the work.
6. Establish cross-checking and monitoring of group assignments.
7. Analytical assessment of the results of each group's work, group work.

The success of group work depends on the teacher's ability to organize learning activities.

That is, the ability of the teacher to organize the individual activities of each student in the group, the ability of each student to receive the support of the teacher, the success of the work depends on the ability to show the end result. There are a number of shortcomings in the organization of group work. One of the challenges is to be able to form groups with the right goals and organize work in them.

In the process of working in groups, students complete some difficult tasks are difficult to solve independently. So work in group's individual at the same time as organizing the overall work in the organization. You also have to organize the work. That's fine - this is fine results can be achieved. In general, depending on the level of difficulty of the assignments in the subjects a creative environment is created. When working in groups, the student, the student-student, if there is an atmosphere of mutual cooperation, mutual support

The work gives the expected results. Independent work is given to develop work skills in interactive methods. In independent work, students think creatively, develop skills and competencies to use in their learning activities.

In the organization of the educational process, the teacher must first pay attention to the content of education, scientific, modern, compliance with the STS.

Training is one of the main forms of additional education, the peculiarity of which is that students learn to use time efficiently, independently, to work, to make decisions.

There are so many types it's hard to say. For example, group discussions, game-based methods, situation modulation, human sensory development techniques, mediation techniques, and more.

Group discussion - this method requires theoretical and practical, creative participants in the joint discussion of problematic issues. Such methods are designed to look at the solution of the problem from different angles, each participant has a different opinion on the solution of the problem, and on this basis a solution is reached. The facilitator leads the discussion by asking a variety of questions and leading them to a solution. If team members ask a question, they can find a solution on their own without a leader.

The training can begin with a discussion of the rules of organization, and can end with a discussion of questions such as what is a group, how a group is formed, and what criteria are used to form it. Effective training leads to the acquisition of new skills, the development of creative, independent activities.

The trainings have the peculiarities of organizing independent work in groups.

- In this form, students are divided into groups, and each group is given specific tasks.
- Each group works on separate (ie identical or stratified) tasks.
- The task is based on interaction or is organized under the guidance of a leader.
- In groups, the task is performed in such a way that at the end of the session, the contribution of each participant or group member is taken into account.

The composition of the group may not be permanent; they create an environment in which a member of the group can make his or her maximum contribution.

Groups can be formed in different sizes. Usually groups consist of 4-6 members.

It may change depending on the content and nature of the assignment.

The group should be formed in such a way that the presence of students with independent work skills in each group gives the expected results.

Some students felt the need for individual support in organizing group independent work. In such cases, it is advisable for the teacher to help students with a low level of training.

Group learning - educational activities, laboratory work, practical classes, internships in the natural sciences, speech practice in the natural sciences, speech development classes (dialogue), mastering texts, studying historical materials and pedagogy very helpful in their lessons. In these cases, group communication and independent work give good results.

Practical classes are organized on the basis of scientificity, conformity to the nature of the student, consistency, structure, comprehensibility, robustness, understanding and activity, the relevance of demonstration to practice, the ability to apply in practice and develop independent thinking and achieve the following.

- When using active methods, he uses all his strength and skills to organize practical training, tries to explain well with the help of visual aids, didactic handouts. The teacher discusses the topic with the students. Solves exercises by giving creative work. Performs their development through independent work, repetition. They will be able to master the content of education. The organization of practical classes on the basis of new technologies creates a favorable environment for students to master the learning process, allows students to exchange ideas. Conditions will be created for mutual receipt and transmission of information. They discuss and resolve issues that need to be resolved. They find a joint solution to the situation. They demonstrate their knowledge to each other based on the information they receive. Inspired by each other, they are satisfied and do not know that time has passed. Each participant feels the content of education as an author. Achieve full mastery of the content of education.

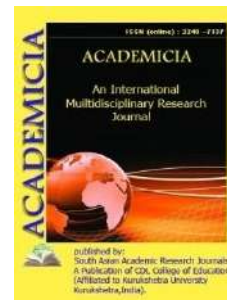
In conclusion, it should be noted that practical training should be organized on the basis of interaction, discussion, debate, thinking, solving problems or activities.

Practical training is focused on the same by the teacher, that is, there is a bit of abstraction. Curiosity motivates everyone, regardless of their abilities, to search, think and work towards the same goal. Due to the fact that students have the same level of development and training, the acquisition of knowledge and skills does not guarantee the same results. Therefore, it is advisable that the questions and answers, laboratory work, exercises in the practical classes should be as personal as possible.

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DOI: **10.5958/2249-7137.2020.00736.3**

## FUTURE APPLICATIONS OF FUTURE EDUCATIONAL TECHNOLOGIES IN TEACHING THE SCIENCE OF INFORMATICS AND INFORMATION TECHNOLOGIES

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### ABSTRACT

*This article outlines the future prospects of education and the use of resources, including cloud technology, in the development of modern information technology teaching methods. The use of a number of software tools and methods is discussed here.*

**KEYWORDS:** Education, Modern Education, Methods, Innovation, Efficiency, Information Technology, Information Technology Teaching, Cloud Computing, Information Storage, Teaching Methods, Internet, Online Learning, Distance Learning, Private Cloud, Public Cloud, Hybrid Cloud, Track Internet, Dropbox, Open Source.

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### INTRODUCTION

Today, modern teaching methods are widely used in education. The use of modern teaching methods leads to high efficiency in the teaching process. The choice of teaching methods is based on the didactic function of each lesson. While maintaining the traditional form of teaching, enriching it with methods that activate a variety of learners' activities will lead to an increase in learners' mastery.

To this end, high efficiency can be achieved through the rational organization of training, the interest of students by the teacher, the choice of methods and tools in accordance with the content of the studied material.

Learners' level of mastery, practical skills and competencies can be developed through interactive or interactive teaching methods. Interactive methods are methods that activate students and encourage independent thinking, which serve to achieve high efficiency in the educational process in the student-student-teacher collaboration. When these methods are used,

the educator encourages the learner to actively participate. The learner is actively involved throughout the process. The benefits of interactive teaching methods include:

- More effective learning;
- High motivation of the student;
- Taking into account previously acquired knowledge;
- support the initiative and responsibility of the student;
- Practical study;
- Creation of conditions for bilateral discussions.

How does the development of modern information technology affect the educational process today?

Today, progress is evolving and changing rapidly. Almost every minute there are changes, updates and surprises in different parts of the planet. Every day is spent under a strong flow of information. The flow of information follows us at home, at work and on vacation. Humans cannot function normally without the influence of information. Understanding and studying life takes place through the collection and assimilation of information. A person's level of knowledge is also determined by the amount of information that a person learns over a period of time.

A number of theoretical and methodological problems related to innovation and creative activity of the teacher in the study of innovative processes in education (criteria for evaluating innovation, traditions and innovations, features of the innovation cycle, the teacher's attitude to innovation, etc.) is being promoted.

In their research, scholars have often dealt with a specific aspect of preparing teachers for innovative activities:

For example:

- ✓ Problems of implementing innovations in education;
- ✓ The role of research components in the innovative activity of the teacher;
- ✓ Coverage of socio-cultural problems in the innovative activity of the teacher, the transition of public and private culture, the harmony of individual and community;
- ✓ the main motives of the teacher's attitude to the introduced innovations, the teacher's readiness to use new technologies in the learning process and motivational problems;
- ✓ The relationship between teacher innovation and reflection;
- ✓ Psychological problems of implementation of pedagogical innovations in the education system;
- ✓ Theoretical and methodological bases of the essence, structure and evaluation criteria of pedagogical innovations.

The work of M.V. Clarin has a special place in the research on training teachers for innovative activities.

In his work, he connects innovative activities with the need for continuing education, organized through the development and implementation of socio-cultural projects. This approach focuses on the individual's free choice, in which 54 learning activities occupy one of the leading

positions and can be an important, leading tool in personal development and a way to engage the individual in the learning process.

We are thinking about the technologies that will be used in the future in the educational process and in the storage of information.

Cloud computing typically provides the user with computer resources and power in the form of an Internet service. In this way, the user is provided with "pure" computing resources, and the user may not be able to answer questions such as how the computer is running, what type of operating system (OS) is running, and there is no need to look for answers.

Finding similarities and commonalities in the way business compares cloud technology to mainframes. However, there are fundamental differences between the cloud and the mainframe, in particular, the fact that the computing power of the cloud is not theoretically limited.

Among the early data processing technologies, grid computing (1990s) was somewhat widespread. Initially, this approach was seen as an opportunity to make efficient use of the available resources of the hardware processor and to develop a system of voluntary leasing of computing power. Grid computing and cloud computing have many similarities in terms of architecture and principles. At the same time, the cloud computing model has been recognized as the most promising technology because it has a flexible enough platform to use remote computing resources.

Today, large cloud computing consists of thousands of servers located in data processing centers (MIBMs). They provide thousands of users with thousands of application resources at the same time. Cloud technology is a handy tool for businesses that find it costly to maintain a variety of servers that require the purchase and configuration of a custom ERP, CRM system, or hardware. Many cloud services, such as Documents and Calendar, provided by Google for their convenience, have become popular among private users.

The reason for the continued success of the use of cloud technologies is simple: their use has a wide range of capabilities and saves on infrastructure, services and staff costs. The hardware that allows data processing and data storage in a remote data center can be significantly simplified. Almost all of these problems are the responsibility of the service provider. This approach allows you to standardize different operating systems (OS) (Windows, Linux, MacOS, etc.) on enterprise computers. Provides easy access to company data for both employees and customers who are out of the office but have access to the Internet.

Although it is easy to use, it has a number of drawbacks. For example, the user is fully connected to the service provider. Indeed, according to the principle of creating a cloud service, the activities of the enterprise will depend on how the service provider and the Internet provider work.

Modern cloud technologies are rapidly entering the market not only of ready-made network and server devices, but also of embedded cloud systems. The idea of connecting and managing various devices to a global network is called the Internet of Things (IoT). According to Kevin Dallas, general manager of Microsoft Windows embedded, the idea of the Internet of Things has existed for many years, but the reason for the lack of such a network was the lack of a single link - cloud technology.

According to distribution models, cloud computing technologies are divided into private, public, and hybrid technologies.

A private cloud is an enterprise's internal cloud infrastructure and services. Such a cloud is located within a corporate network. The organization can manage the private cloud independently or delegate the matter to an external contractor. The infrastructure can be located in the customer's building or in the external operator, or partly in the customer and partly in the operator's building.

Public cloud - cloud computing services in such infrastructure can be used by the general public, provided by suppliers and hosted outside the corporate network. Such cloud users will not be able to manage or service data in the cloud, all information will be uploaded to the cloud owner. The customer pays for the resources they use.

Users are offered a business system or website (distribution) method with a large-scale scalability that is not possible in other solutions, easily and affordably. Examples of such providers are Amazon YEC2 and Amazon Simple Storage Service (S3), Google Apps / Docs, Salesforce.com, Microsoft Office Web online services. It should be noted that in a mass cloud, it is not always appropriate to implement processes that require strict security measures and compliance with regulatory requirements, as the user has very little or no control over the infrastructure.

**Hybrid cloud** (hybrid cloud) - this includes all models of infrastructure distribution (private, public). Typically, a hybrid cloud is created in an enterprise, and the responsibility for managing them is shared between the enterprise and the public cloud supplier. A hybrid cloud provides services that are partly public cloud and partly private cloud.

Many servers are set up around the world today to host a cloud networking platform. Examples of popular cloud systems include Yandex, Disk, and Google Drive. These cloud servers allow you to upload, store and manage data from anywhere in the world.

Let's take a look at the sequence of organizing an education system based on the Dropbox cloud server service. Dropbox cloud service system is organized on the basis of the site <https://www.dropbox.com/>. The system is organized on this site and the information is placed in the following sequence.

1. Registration. The user is registered to log in via the web interface.

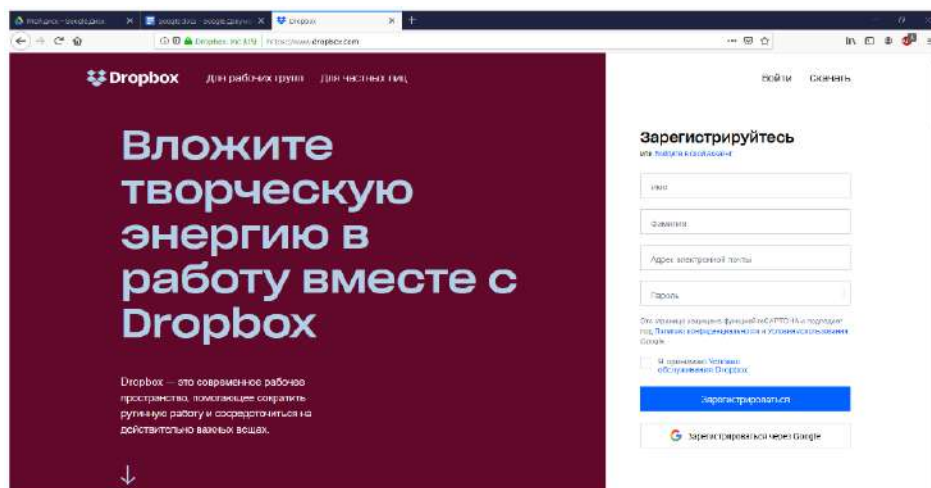


Figure 1. "Register for the Dropbox service.

2. Work in Dropbox system through web interface. After registration, the following window will appear on the website.

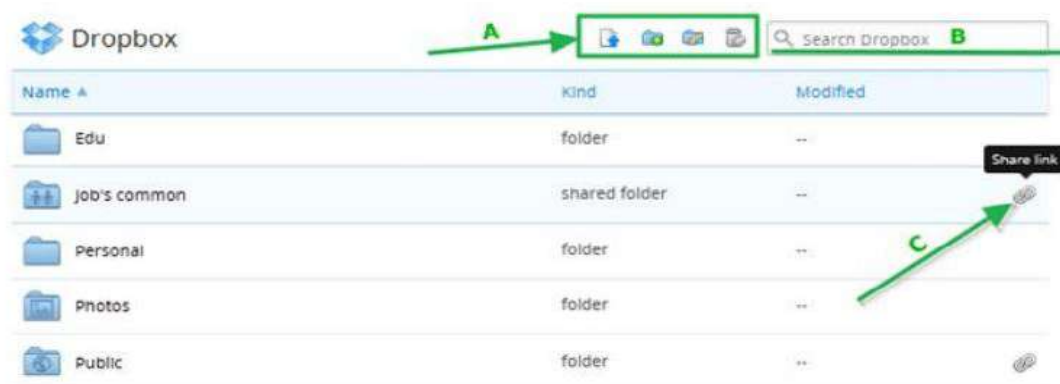


Figure 2. Dropbox service web interface.

The following can be done through this window:

- Create new folders.
- Upload new files.
- Create or add new directories.
- Organization of general connection.
- Edit and delete files.

Thus, the above-mentioned systems allow organizing not only education, but also various systems based on cloud technologies.

**Use the LMS Moodle** (LMS) in the learning process. The open source software package Moodle is a special system for managing the learning process using the Internet. Implemented by Moodle in the form of an open source system supported by <http://www.moodle.org/>, which includes

documents, the latest versions of installation packages, support for developers and users. -line tools are stored. This system requires a server with a PHP processor and MySQL MBBT that can run on any platform. The assembly of the system (along with the selection of server and software configurations) takes a few days, after which the structure of the training can be formed. It should be noted that the Moodle system has a wide range of capabilities for a variety of learning functions; in particular, the system has the following tools:

- Ability to send student responses in any form (text, file, etc.);
- Extensive forums for discussion;
- chatlhar;
- A test system that supports various test preparation systems, including the import of assignments in the popular GIFT and HotPot formats;
- Course management system (number of topics, structure, calendar-calendar, etc.);
- a system for recording the behavior of all categories of users by saving their blogs during the setup;
- Authorization and authentication system, which allows access to different categories of users, access limits and functions;
- Advanced messaging system, as well as subscriptions and notifications, and more.

An important advantage of the system is that it supports a number of international standards in the field of educational resources, which in turn provides the following opportunities for the exchange of resources separately from other universities:

1. IMS package, IMS metadata, SCORM - information (educational-methodical) support.
2. IMS QTI, WebCT, HotPot, Gift - a set of test tasks.
3. Moodle XML is a complete course with all the components.

The statistical system provides constant monitoring of the work of all users of the system, ie the student can access the resource on the site, what he does, how many times he pays attention to the forum, answers, asks questions and sees the teacher at any time. The administrator, on the other hand, may have complete statistics, including teacher activity.

We can see the development of e-learning in the ability of students to behave freely in the digital world, that is, to download and analyze the necessary information, to have free access to online content. Over time, we can add to this trend 18 desired types, methods, teaching methods of traditional education based on the use of technology.

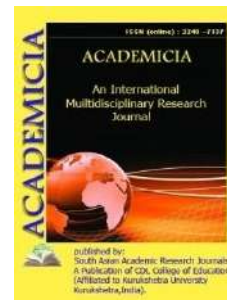
A 2019 Campus Technology survey of teachers on “Teaching Using Techniques” found that 71% of teachers said they would use online resources alongside traditional education. The advantages of e-learning (adaptive learning, the use of online learning modules) can be seen in the combined use of traditional educational social technologies and media resources. The goal is to develop an educational model that takes into account the needs of students based on their demographic group and socialization.



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DOI: **10.5958/2249-7137.2020.00737.5**

## MECHANIC AND MIKRO-AGGREGATE STRUCTURE OF TYPICAL FOOTWEAR GROUND OF NUROTA REGION

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UZBEKISTAN

### ABSTRACT

*The following article defines the formation of the footwear ground of Nurota region in complex geomorphological lithologic sinuous, loessy in rocky parts, rough, stony eluvial deposit, drift, proluvial sandy way. In the typical gray soils studied, microaggregation was significantly expressed relative to light gray soils. Depending on the cultural condition of typical gray soils (protected, dry, conditionally irrigated) microaggregation is expressed at different levels. In the typical gray soils studied, microaggregation was significantly expressed relative to light gray soils. Depending on the cultural condition of typical gray soils (protected, dry, conditionally irrigated) microaggregation is expressed at different levels.*

**KEYWORDS:** *Eluvial, Drift, Hollownees, Humus, Nitrogen, Micro-Aggregate, Erosion, Salinization.*

### INTRODUCTION

Typical gray soils in Nurata district are formed on the foothills of the complex geomorphological, lithological conditions on the wavy, loose, coarse-grained, alluvial, deluvial, proluvial sandy-sandy deposits on the ridge. Washing in these soils (water and wind erosion) is characterized to varying degrees. The degree of skeletalness of the soil profile is a characteristic feature of almost all regions where these soils are distributed. Sometimes there are layers of gravel on the surface of the soil and at different depths of the profile. Therefore, they are rough skeletal in some places with medium and ser skeleton (gravel). These gravel-skeletal deposits of the proluvial type serve as the main parent rock that forms the soil. Typically, these deposits are carbonate.

### Main part

The mechanical composition of typical gray soils is mainly light to medium sandy. The main part of the mechanical composition consists of sand and coarse dust (1-0.01mm). The sum of these

particles is 45-60%. Medium and fine dust particles (0.01-0.005, 0.005-0.001mm) oscillate between 15-30% in the vertical profile and the smallest particle size (<0.001mm) between 9-17%. At a depth of 20-60 cm of the typical gray soil profile, the accumulation of il particles is observed.

The results of many studies on the genesis of gray soils show that gray soils are among the oldest soils. Even in the period of evolution, the structure of gray soils is almost intact and has a complex history of formation and development of several thousand years. Gray soils have gone through many stages, including several periods of extreme humidity, so it is noted that at a certain depth of the soil developed symptoms such as accumulation of gel (gel) and enrichment of a large part of the profile with iron.

Observing the process of soil compaction, the following conclusions are drawn. In first-gray soils, the upper and middle parts of the soil profile are saturated with turbid particles one and a half times and more than in the original parent rock. Second, the absolute and relative amount of turbidity increases with the transition from light gray soils, ie from light gray soils to typical and dark gray soils. Thirdly, it is also important that most of the turbid particles are collected in the middle of the profile. In the soils of the desert zone, the bulk of the muddy particles are collected at a depth of 10-60 cm above the ground, in normal gray soils at a depth of 15-20 cm, and in dark gray soils at a depth of 15-85 cm. These are the most important characteristic features of gray soils. However, it should be noted that data on the main soil types distributed in the Nurata mountain and foothill plains are rarely covered in the literature.

In this regard, the data obtained as a result of multifaceted soil reclamation, soil erosion expeditions conducted by the staff of the Department of Soil Science of the National University of Uzbekistan, led by Professor LT Tursunov, are of great scientific and practical importance.

The obtained data show that the main distinguishing common features of gray soils are: first - the predominance of dry continental climate: second - the short duration of the spring mesothermic period: third - the relatively high soil and air temperature: fourth - the relative predominance of ephemeral plants. In the typical gray soils studied, microaggregation was significantly expressed relative to light gray soils. Depending on the cultural condition of typical gray soils (protected, dry, conditionally irrigated) microaggregation is expressed at different levels. In particular, 15-16% of micro-aggregates in grassy and subsoil layers of light sandy mechanical soils, 20-25% in medium sandy soils, 19-25% in plowed and subsoil layers of medium sandy soils, 17-21% in medium sandy conditionally irrigated lands. The content of microaggregates in the 0-50 cm layer of typical gray soils (15 years) varies between 15-17%. The data show that the change in the amount of water-resistant aggregates in the humus layers of typical gray soils is mainly due to its mechanical composition, the amount of humus and carbonates.

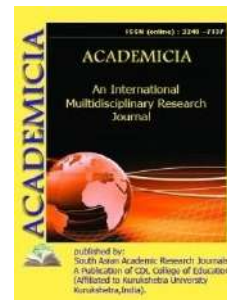
## CONCLUSION

In our opinion, the conditions for the formation of water-resistant aggregates in typical gray soils are not very favorable. This is due, firstly, to the low accumulation of organic residues (above-ground and underground residues) and their mineralization at high dry air temperatures, and secondly, to the chronic or periodic water and wind erosion of these soils. This process, of course, leads to the disappearance of fine aggregates from the soil surface, organic residues, which are a source of humus.

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DOI: **10.5958/2249-7137.2020.00738.7**

## APPLICATION OF XML TECHNOLOGY FOR DATA DESIGN

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### ABSTRACT

*The presented article is devoted to the development of a logical mechanism for placing research objects in the database of scientific and theoretical heritage, the development of datalogic models of representation of scientific and theoretical heritage and research results in the database, the creation of software based on XML technology. It shows the advantages of storing object information in XML containers, as well as the development of theoretical foundations for the creation of such a system, as there is no database management system for XML technology, algorithmic and software tools, processing mechanisms, analysis of creation methods, functional capabilities of similar systems. and the reasons for choosing XML technology.*

**KEYWORDS:** *Web services, Design automation, Automatic control, Control systems, Process control, Collaboration, XML, Internet, Decoding, Data security*

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### INTRODUCTION

It is known that the restoration of national values in the socio-humanitarian and spiritual-enlightenment spheres, the scientific study of ancestral heritage, the basic principles of pure Islam to the general public, the correct definition of the role of Islam in educating modern youth from destructive ideas, living in peace and harmony The effective use of modern information and communication technologies, the Internet and high technologies in the rapid assimilation of the state policy of the Republic of Uzbekistan to all segments of the population in the formation of feelings such as inter-religious tolerance, love for homeland and values [1].

### LITERATURE REVIEW

The strategy we used to create the search strings was as follows [3] [21]: • 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: Web services AND Design automation. It has been highlighted in [7] [20] that there are two main issues on conducting an SLR search which are the sensitivity and specificity of the search. In our preliminary search, when we used the complete search string defined above we retrieved a very high number of articles. For instance, Google scholar, Scopus, ProQuest education, IEEEExplore, Science Direct, Springer Link retrieved more than two hundred results. Therefore, we have deepened our search and used this search string: (Automatic control OR Control systems) AND (Process control, OR Collaboration) AND (XML OR Internet). The revised search string has given us a reasonable number of studies and we finally selected relevant empirical studies

## METHODOLOGY

In this regard, on the basis of the Department of Modern Information and Communication Technologies of the Academy, a lot of work is being done to use the opportunities of students majoring in "Informatics and Information Technology", the widespread application of modern information and high technologies in socio-humanitarian and religious education [2].

At present, many enterprises have been efforts to establish a variety of computer applications in order to help business operators. While that has had a significant improvement in the efficiency, but it does not extend to companies outside the business. These businesses cover a variety of companies applications or business operations of the exchange and communication. Many cases, enterprises and their business partners, suppliers and customers there are islands of information. Between enterprises and their business partners and their exchanges are still dependent on manual processing, so efficiency is very low. Electronic Data Interchange (EDI) is considered to be the solution to this problem, and the application layer data exchange technology is the top priority of the program, this paper studies the electronic data exchange technology in application-level XML data exchange technology [19].

In the restoration of the scientific and theoretical heritage of our ancestors, the development of models, algorithms and software tools for creating a database to summarize and summarize the results of research is of great scientific and practical importance. To do this, it is necessary to develop a logical mechanism for the placement of research objects in the database of scientific and theoretical heritage, their classification, the development of data models of data representation in the database. It will be necessary to study the algorithmic and software tools, processing mechanisms, analysis of creation methods, functional capabilities of similar systems [3].

The following tasks are required:

- The logical basis for placing the objects of scientific and theoretical heritage of our ancestors in computer memory will be developed;
- Development of data logical models for the database of scientific and theoretical heritage of our ancestors and the results of research in this area;
- A software package based on XML technology is created in data design.



In solving the above tasks, a software package based on XML technology of data design was created, looking at ancient manuscripts and the results of research on them as database objects [4].

By analyzing the logical methods of representing objects in the database, the possibilities of the relational model were opened, the problems of matching data types, defining key fields and normalizing tables were solved while ensuring the correlation between table columns in the infographic model attributes database [5].

Problems such as remote connection of customers to the database, the ability to view data from the database in modern browsers, create their own graphics browsers, short-term transfer of large amounts of data from one source to another around the world network have led to the use of XML technology [6].

XML technology is based on programming in XML. A program created in XML is called an XML document. The difference between an XML document and an HTML document is that you can define custom tags in XML and thereby enrich the ability to describe the content of the document. You can also use an XML document as a container to store information about an object [7].

What are the advantages of storing object information in XML containers? A simple mechanism of data exchange. In XML, data and characters are stored in the form of texts. Text and characters are user-controlled. An XML document is created using an XML text editor. If there is an error in the document, it will be corrected in the text itself. No coding of texts using any special programming language operators is required. It also uses a large amount of memory to store data using Microsoft Word, Microsoft Excel, or Microsoft Access [8].

For example, creating a document of one or more characters using Microsoft Word requires at least 20,000 bytes of memory. Creating a similar file in Microsoft Excel takes up five to six times the amount of memory that needs to be stored. Microsoft Access uses 96 Kb of memory when opening a file[18].

It is also possible to define custom tags in XML and thereby enrich the ability to display the contents of a document, using them as containers that store information about an object. In XML, data and characters are stored in the form of texts. Used by the user [9].

An error in the document is corrected in the text itself. No coding of texts using any special programming language operators is required. Creating such a document that stores data in XML requires only 30-40 bytes of memory. XML has also been adopted as a meta language for languages that work with characters. This XML technology was chosen because of the fact that HTML, BITS, IFX, BIPS, TIM, xCBL, ebXML, PDML, FIX, TEI and CML can be created using XML, and the data stored in it can be systematized and integrated. This feature is very important when storing serious data [10].

Consider the following document:

```

1  <? xml version="1.0" ?>
2  <KOURS>
3      <CLASS type="seminar">
4          <CLASS_TITLE> XML In Monoscript</CLASS_TITLE>
5          <CLASS_NUMBER> 310</CLASS_NUMBER>
6          <SUBJECT> XML </SUBJECT>
7          <START_DATE>6/12/2010</START_DATE>
8          <LISTENERS>
9              <LISTENER status="attending">
10                 <FIRST_NAME> Abdurashid</FIRST_NAME>
11                 <LAST_NAME> Bobojonov </LAST_NAE>
12             </LISTENER>
13             <LISTENER status="withdrawn">
14                 <FIRST_NAME> Zokir</FIRST_NAME>
15                 <LAST_NAME> Mustafagulov </LAST_NAE>
16             </LISTENER>
17         </ LISTENERS >
18     </CLASS>
19 </ KOURS >
20

```

This program code indicates that two trainees are participating in a course on the application of XML technology in the study of manuscripts. Depending on the structure of the program code, we can see that each <LISTENER> element contains <FIRST\_NAME> <LAST\_NAME> elements, while the <START\_DATE> element cannot be part of the <LISTENER> element. In fact, determining document accuracy is a key criterion in XML technology [11].

When the XML code is checked by a browser, the formal correctness and authenticity of the document is determined. Such a document is called a formal correction if the parent element takes other elements according to the established rule and the elements do not intersect with each other. Such a document is valid if the code contains a document type definition DTD [17].

The detection of DTD ensures that the syntax is corrected. The <! DOCNYPE> tag ensures that the DTD is present in or outside the document.

It follows that XML defines the structure and semantics of a document, not its form. To display the contents of an XML document in a browser, you will need to use the built-in capabilities of Internet Explorer or an independently defined style sheet [21].

The style sheet of an XML document can be defined in basically two different ways. Using CSS or XSL. While CSS is typically used in more HTML documents, it is also possible to use it in XML. Using CSS, you can define the shape of individual elements, create style classes, and set the fonts, colors, and placement of elements on a page [12].

Using XSL in XML is more preferred. Because, in fact, an XSL style sheet is a syntactically correct XML document. XSL documents are created based on the requirements and rules that apply to an XML document. If the pattern defined in the XSL document is recognized in the

XML document, then the XML code is converted to a completely new view according to the given procedures and rules. This way you can convert XML to HTML [13].

If the CSS table only defines the layout of forms and elements on the page, XSL can rearrange the elements in the document, change them completely, show some elements and not show others, and choose styles according to the elements themselves or the attributes of the elements. There are two ways to work with XSL. One is the shaper XSL objects, the other is the XSL switch [14].

The shaping XSL objects have their own set of custom names. Each element in the set of names has a fo prefix. For example, consider creating a 36-pixel, sans-serif block of text that says, "Welcome to the Manuscript Recovery Lab." The object forming <fo: block> is used:

```
<fo:blok font-family = "sans - serif" line - height = "48pt" font - size = "36pt">
```

Qo'lyozmalarni dasturlash vositasida tiklash laboratoriyasiga marhamat

```
</ fo:blok >
```

The font-family, line-height, and font-size parameters of the shaping object can be assigned values, and the XSL processor can be given the task of shaping this document [14].

The XSL switch is done as follows. Suppose we need to describe two works in the manuscript fund (works.xml).

```

1      <? xml version = "1.0" ?>
2      <? xml - stylesheet type = "text/xml" href = "asarlar.xls" ?>
3      <QULYOZMALAR>
4          <QULYOZMA>
5              <NOMI> Tafsiri al husaini </NOMI>
6              <YOZILISH_TILI XAT = "nastaliq"> Arabcha </ YOZILISH_TILI >
7              <YOZILGAN_YIL HISOB = "xijriy"> 897 (1491 melodiy) </ YOZILGAN_YIL >
8              <INVENTAR_RAQAM> 3 A </ INVENTAR_RAQAM >
9              <QOGOZ> Sharq qogozi </QOGOZ>
10         </QULYOZMA>
11
12         <QULYOZMA>
13             <NOMI> Salosat ul mutaqaddamin va hulosat ul-muttaxxirin </NOMI>
14             <YOZILISH_TILI XAT = "nasx"> Arabcha </ YOZILISH_TILI >
15             <YOZILGAN_YIL HISOB = "xijriy"> XIII-XIV asr (XIX asr melodiy) </ YOZILGAN_YIL >
16             <INVENTAR_RAQAM> 563 </ INVENTAR_RAQAM >
17             <QOGOZ> Quqon qogozi </QOGOZ>
18         </QULYOZMA>
19     </QULYOZMALAR> |
20

```

The corresponding XLS style sheet is as follows (works.xls):

```

1      <? xml version = "1.0" >
2  <xls:stylesheet version = "1.0"
3      xmlns:xsl = "http://www.w3.org/1999/XSL/Transform" >
4      <xsl:template math = "QULYOZMALAR">
5          <HTML>
6              <xsl : apply - templates />
7          </HTML>
8      </xsl:template>
9
10     <xsl:template math = "QULYOZMA">
11         <P>
12             <xsl : value - of   select = "NOMI" />
13         </P>
14     </xsl:template>
15 </xls:stylesheet>
16

```

In this example, the data in the works.xml file was converted to HTML code using the works.xls style sheet [15].

There are three ways to convert a document:

1. ☐ Using a server;
2. ☐ With the help of the client;
3. ☐ Using a separate program.

The models of datalogical design of manuscripts and their research results were analyzed and appropriate methods were selected; A software package using XML technology has been created [16].

Problems of implementing the address function in practice have been studied and possible cases have been identified. In physical design, the issues of optimizing the sorting of the data sought were considered. The methods of sequential and related placement of the data structure in memory were studied, and the process of selecting the optimal methods based on the requirements of the subject area was shown.

## CONCLUSION

It has been proved that the number of iterations can be reduced by studying forward and reverse directional schemes. Methods of placing data in physical memory on multi-link structures were analyzed. At the same time, the issues of placement of multi-link nodes in memory using the principle of indicators and increasing the speed of its reading were considered. To increase the

speed of data reading, a mechanism was developed to group the nodes and determine the optimal number of groups. Since there is no database management system for XML technology, the theoretical foundations for creating such a system have been developed. One of the most promising things about XML, and the new breed of tools built on it, is that we can build applications that are driven by a single information model rather than multiple data models accommodating each application function. We can change the behavior and functionality of application programs by changing the underlying XML rather than by changing code. Additionally, we can optimize performance by changing the way information is expressed. Even in environments not fully leveraging XML as a central information model, it is important to design good XML for the sake of readability and maintainability. Building good applications efficiently requires that we learn not only to use XML correctly, but that we learn also to use it well. Object types were analyzed and optimal options for their representation in the database were developed.

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DOI: **10.5958/2249-7137.2020.00739.9**

## WATER SYSTEM IN UZBEKISTAN: PROBLEMS AND SOLUTIONS

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### ABSTRACT

*During the years of independence, the history of irrigation in Uzbekistan requires an objective and modern conceptual and methodological approach from today's point of view. This article analyzes the water management system of Uzbekistan, its existing problems and their solutions from a historical perspective. On August 4 this year, the Presidential Decree No. PD-5134 "On measures to radically improve the activities of the Ministry of Agriculture and Water Resources of the Republic of Uzbekistan" was signed.*

**KEYWORDS:** *Water Management System, Irrigation, Agriculture, Factors, Irrigated Lands, Water Resources, Land And Water Use, Nature, Historical Approach.*

### INTRODUCTION

It is now very important to study and analyze historical processes to prevent and address the problem of water scarcity. During the years of independence, the history of irrigation in Uzbekistan requires an objective and modern conceptual and methodological approach from today's point of view. The water management system is the bases of agrarian and industrial production, and for the development of social life. The development of agriculture and the economy is directly linked to the irrigation and land reclamation sectors. One of the important factors in obtaining an abundant and high-quality crop in agriculture is the efficient use of land and water resources. In this regard, it is especially important to maintain the reclamation status of irrigated lands in a stable state. After all, it is impossible to get high yields from crops without improving the reclamation of lands and taking measures against salinization.

### Methods and level of study

The article is based on the principles of generally accepted historical methods - historical, comparative and logical analysis, consistency, objectivity, which shows the emergence of a

modern water management system in Uzbekistan, the current problems and the historical aspect of their solutions.

### **Main part**

In accordance with the Decree of the President of the Republic of Uzbekistan dated October 29, 2007 "On measures to radically improve the system of land reclamation", more sustainable development of agricultural production, improving land reclamation, increasing their productivity as well as extensive work is being done to improve the organization and financing of land reclamation.

In order to implement complex measures for the reconstruction, repair and rehabilitation of reclamation systems aimed at radically improving the reclamation of irrigated lands, the State Program for 2008-2012 was developed and gradually implemented. This work was funded by the Irrigated Land Reclamation Fund under the Ministry of Finance of Uzbekistan.

About 50 state unitary enterprises specializing in land reclamation and other water management works in the Republic of Karakalpakstan and regions in order to effectively use the funds of the Fund for Improvement of Irrigated Lands, to develop contractors specializing in land reclamation and other water management works, to strengthen their material and technical base and increase competitiveness was established.

Since 2008, a new approach has been taken to the repair and rehabilitation of drainage networks, which is being carried out systematically. Over the past year, 15 billion soums were allocated for the repair and rehabilitation of drainage networks in the country. According to the approved schedule, design work on 427 facilities was completed by October 1, 2008, and expert opinions were obtained. Enterprises and design organizations in the ministry system were involved. 508 excavators, 116 bulldozers, 75 indoor drainage network washing units, 91 auxiliary equipment for transportation of machinery to strengthen the material and technical base of specialized construction and operation organizations for the next five years will be purchased at the expense of the Fund on preferential leasing terms. So far, 126 hydraulic excavators have been delivered to the site. These modern techniques, of course, allow to carry out quality reclamation activities, improve the reclamation of lands.

In particular, if we consider the analytical data on the work done in the water sector of the country in 2011, the amount of water irrigated during the irrigation period in the country amounted to 30358 million m<sup>3</sup> or 88% of the limit (34418.4 million m<sup>3</sup>) compared to 2010 (39989 mln. m<sup>3</sup>) was 79 percent. Irrigation works were carried out on 15,544,000 hectares with the obtained water. Including 3826 thousand hectares of autumn grain (in 2010 it was 5009 thousand hectares) and 5460 thousand hectares of cotton fields were irrigated (in 2010 it was 6468 thousand hectares). Deficiencies in the rational and targeted use of water resources in the regions, such as violations of the rules of water intake from irrigation systems, misuse of water, non-compliance with the rules of accounting for water from water bodies, were identified and taken measures in accordance with the law. In particular, 7179 (6614) acts were drawn up against those responsible for the shortcomings identified during the season, they were warned and explanatory work was carried out on the current rules of water use. On the basis of protocols drawn up on 2739 (1135) cases on the basis of the Code of Administrative Liability of the Republic of Uzbekistan against persons guilty of repeated violations of the legislation on water and water use, 172.1 mln. UZS (45.9), of which 157.9 mln. soums or 91 percent.

In 2012, 106.0% of the annual plan or 3397.0 km (3150.0 km in the same period of 2010) were cleared. During this period, 3325 units, 106.0% (3282 units) of hydraulic structures and 3533 units, 106.0% (3430 units) of hydroposts were repaired. Instead of the planned 11661.0 km, in practice 12179.0 km or 104.0% (8894.0 km) of internal irrigation canals were cleared by mechanisms, including 87781.0 km by hand, 104.0% (53110.0 km) in length. In turn, 10915 units, 107.0% (7767 units) of hydraulic structures and 14222 units, 107.0% (12021 units) of hydroposts were repaired. At the same time, we can see that the farms are equipped with 28,851 (111.0%) water intake ears in the on-farm irrigation networks.

In 2012, the General Directorate of Water Resources and its affiliated organizations will implement the state management of surface water resources based on the principles of targeted and efficient use of water resources, management of irrigation systems in basins and the introduction of market principles of water use at all levels. Some work has been done to ensure modernization, improve the reclamation of previously irrigated lands, and ensure strict compliance with the legislation on the use of land and water resources.

The use of water resources in the Republic during the irrigation period amounted to 40,258 million m<sup>3</sup> or 102% of the limit (39,279 million m<sup>3</sup>), compared to the previous year in 2011 (30,358 million m<sup>3</sup>) - 132%. Irrigation works were carried out on 21,322,000 hectares with the obtained water. Including 6,018,000 hectares of winter wheat (3,826,000 hectares in 2011) and 7,101,000 hectares of cotton fields were irrigated (5,460,000 hectares in 2011). Shortcomings in the rational and targeted use of water resources in the regions, such as violations of the rules of obtaining water from irrigation systems, misuse of water, non-compliance with the rules of accounting for water from water bodies, were identified and taken measures in accordance with the law. In particular, 9452 (8580) acts were drawn up against those responsible for the shortcomings identified during the season, warnings were issued to them, and explanatory work was carried out on the current rules of water use. On the basis of protocols on 3171 (3548) cases on the basis of the Code of Administrative Responsibility of the Republic of Uzbekistan against persons guilty of repeated violations of the legislation on water and water use, 241.2 mln. UZS (233.7) was fined and fully recovered.

In 2014, a total of 5,402.0 km of inter-farm irrigation networks were cleaned. 262 excavators were involved in this work. During the reporting period, 5278 hydraulic structures and 4854 hydroposts were repaired.

At the expense of water consumers' associations and farms, 124024.0 km of internal irrigation networks were cleaned. 16,415 hydraulic structures and 21,205 hydro posts were repaired in these networks. In addition, 35,349 water intake ears of farmers were equipped.

In the operation and power supply of pumping stations, the annual plan included the repair of 2726 pumping units, in practice 2807 units were repaired or exceeded the plan by 103.0%. The annual plan for the repair of irrigation wells included 1292 wells, and in practice 1439 wells were repaired or the plan was fulfilled by 111.4%. The annual plan for the repair of domestic pumping units was 1851 units, and in practice 2061 units were repaired or the plan was fulfilled by 111.3%.

During 2014, 7364.1 million kWh of electricity was used by water management organizations in the ministry, which saved 633.67 million kWh of electricity compared to the plan.

In the field of construction of irrigation facilities, in accordance with the Decree of the President of the Republic of Uzbekistan dated November 18, 2013 "On the Investment Program of the Republic of Uzbekistan for 2014", the construction program for 2014 includes a total of 97 facilities, including 59 annual and 38 new facilities.

In 2014, a total of 279.6 km of canals, 68.2 km of tray networks, 10 hydraulic structures, 4.2 km of shore protection works, pumping stations with a total capacity of 9.5 m<sup>3</sup> / sec, 31.8 km of pressure pipes, A reservoir with a capacity of 1.5 million / m<sup>3</sup> was commissioned to operating organizations. As a result, due to this work, the water supply of 227,174 thousand hectares of land has improved.

In 2016, the Law on Targeted and Effective Use of Water Resources by State Water Management Systems, Implementation of State Management of Water Resources and Market Principles of Water Use, Modernization of the State Water Management System, Improvement of Irrigated Land Reclamation, Land and Water Use Some work has been done to ensure strict compliance with the documents. In particular, 422.0 billion soums were allocated from the state budget for reclamation of irrigated lands. As a result of targeted and effective use of funds allocated for the reconstruction and construction of reclamation facilities, 851.7 km of open and 317 km. 1 km of closed-bed collector-drainage networks, 242 vertical drainage wells, 71 hydraulic structures, 1080 reclamation monitoring wells were reconstructed and built.

In 2016, a total of 290 priority projects, including 43 projects from year to year, a total of 16 thousand 44.4 km of open and 1021.3 km of closed-bed collector-drainage networks, 8 reclamation pumping stations, 555 vertical drainage wells, 33 water metering facilities, 2175 pipe crossings, 1178 control wells were repaired and restored. Also, 239 out of 290 reclamation facilities have been repaired and handed over to the State Admission Commission. Within the framework of the state program, 63 reclamation equipment and mechanisms, including 10 excavators, 19 dump trucks, 5 cranes, 7 dump trucks and 22 other equipment were leased to water management organizations.

In 2017, a total of 272 priority projects, including 43 projects from year to year, a total of 15,618 km of open and 1128.3 km of closed-collector drainage networks, 13 reclamation pumping stations, 758 vertical drainage wells, 17 water metering facilities, 2,039 pipelines, 852 control wells were repaired and restored. In addition, 219 out of 272 reclamation facilities have been repaired and handed over to the State Admission Commission. As part of the state program, 78 land reclamation equipment and mechanisms were leased to water management organizations.

As a result of the measures taken, the water supply of 277,000 hectares of land has been improved.

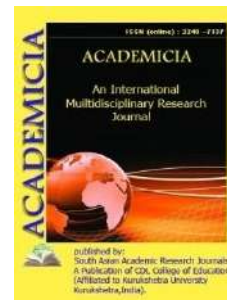
The Ministry of Agriculture and Water Resources of Uzbekistan is directly responsible for the efficient use of water resources in the country and regular monitoring of the activities of water management agencies. On August 4 this year, the Presidential Decree No. PD-5134 "On measures to radically improve the activities of the Ministry of Agriculture and Water Resources of the Republic of Uzbekistan" was signed. According to him, the main goal is to implement a unified agricultural and water policy aimed at comprehensive modernization of the industry, the introduction of scientific and technical achievements in agriculture and water management, modern resource and water-saving agro-technologies, advanced local and foreign experience.

The work carried out in our country to improve the reclamation of irrigated lands allows to further increase the production of agricultural products, increase the income of farmers, improve the living standards of our people, the sustainable development of our economy.

### TRANSLITERATION

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DOI: **10.5958/2249-7137.2020.00740.5**

## THE ROLE OF "NEED" AND "INTEREST" IN THE THEORY OF JOHN LOCKE LIBERAL

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### ABSTRACT

*In the article, John Locke's views examined the issues of coverage of concepts of need and interest. In particular, in his work "research on natural law," the need is an important feature of biological and social systems, its role in social life, interaction with the concept of interest issues were analyzed on a theoretical basis. In particular, if the object is a subject that has its own needs, that is, people, one side of social relations, the second side is emphasized by the issues of the organization of benefits, which are the conditions for the satisfaction of these needs. The projection of social relations is not only aimed at maintaining, changing the social conditions that are one side of these relations, but also at the formation of the subject and its needs, which are the second side of it, is also subject to a comprehensive stop to such aspects.*

**KEYWORDS:** *Need, Interest, Social System, Object, Human Personality, Social Group, Nation, Social Need, Vital Need, Hierarchy, Inactive Interest, Stratum, Seed-Elat.*

### INTRODUCTION

Reforms are being carried out in all systems of society to realize the century-old dreams of our nation and fully meet their vital needs, Express and protect their interests arising based on these needs. In particular, the president of our country Sh. The "strategy of action", put forward by Mirziyoyev for 2017-2021 years, provides for the strategic direction of our national development, as well as the Real essence of Liberal ideas such as equality, freedom, progress in social life, paving a wide way for its solemnity, is of great importance. In particular: "to further increase the effectiveness of the reforms carried out, to create conditions for the comprehensive and rapid development of the state and society, to modernize our country and to implement priority directions for the liberalization of all spheres of life...", - the expression of strategic

goals, such as: to direct the members of our society towards practical activities towards ensuring the foundations of free and prosperous life, on the one hand, if this aspect creates conditions for the development of our national development, on the other hand, shows the importance of Liberal ideas of classical thinkers today.

From the history of philosophy, it is known to all of us that we will never be able to enter into one kind of life all the philosophers who lived in the past. Because the philosopher, who lived in each period, put forward his philosophical views, proceeding from this period. For example, if philosophers in the epochs of the enslaved system of BC put the problems of knowing the universe based on their philosophical theories, then by the Middle Ages, that is, the period of awakening, these views began to replace philosophical currents, which gradually reflected the properties of anthropocentrism. In particular, it is precisely in these periods of medieval awakening that the philosophical views that have come into being have become of particular importance with the fact that man covers such issues and problems as both material and spiritual land, its provision, the interaction of man with society, the perfection of man in the quality of his personality.

Therefore, the period of awakening made a radical turn to the process of developing mankind as a whole. We will not be mistaken if we say that this period was a period of literally awakening to the development of science and technology, industry, human spirituality, social development of society. At the same time, many scientists, poets, and philosophers have created their goals for the sake of a single goal, that is, for a person to live in peace, comfort, and prosperity.

One of the outstanding philosophers, John Locke, who lived in such a difficult and unstable period and created his philosophical direction. Thanks to John Locke's chemist friend Robert Boyle, philosophers begin to warm up to the instruction of Dekart and Gassendi. John Locke served in the high offices of the government, quickly rising from his career and reaching the post of Lord Chancellor of the British government.

## METHODS

John Locke, in principle, from the age of 39, begins to study the science of philosophy with strong interest and enthusiasm. The socio-philosophical views of John Locke, who lived in the Middle Ages, are characterized by the fact that he was able to maintain his relevance and significance not only in his time but also at the same time. One of the main lessons of this is that the basis of his social philosophical views is formed by the idea of liberalism. Liberal ideas, first of all, began to form in the inner meaning, dignity, spirituality, rights of each person. But the emergence and development of theoretical views on it are connected with the ancient Greek city-states and the Roman Republic. The most important and unique aspect of the ideas of the ancient era Liberal, that is, freedom in these states-closely related to the policy of the great imperialism, which consists in conquering the world. Because, in those times, the land of his state did not exclude the denial of the freedom of other states. At the same time, the concept of "freedom", "freedom" also included liberation from despotic power. This situation was associated with the slavery system and was also interpreted as a tyrannical power, that is, the domination of the master over his slaves. In this sense, comparison with the tyrannical authorities helps to correctly understand the reflections on freedom in antiquity. John Locke in his views also studied several problems of his period philosophy, in addition to liberalistic ideas, which still maintain their

relevance today, without losing their relevance. Shular among the categories "need" and "interest", in this article we will focus on the theoretical analysis of the problem.

The famous English philosopher, representative of the concept of liberalism John Locke is one of the personalities whose philosophical thinking plays an important role in the development of evolutionary perfection. He, together with his series of studies, directly connects the needs and interests with the object of laws by translating requirements into subjects, that is, the specific habits, characteristics, and motivation of people, into the object of life. In this sense, Locke concludes that need and interest are the initial expressions of the requirements of social laws. Therefore, even so far in the philosophical literature, the concepts of "need" and "interest" are often distorted, equalized. Indeed, they are close to each other in terms of content and are closely interrelated. But it is necessary to distinguish them as different joints in the chain of human activity.

In the work of John Locke "research on natural law," the need is an important feature of biological and social systems. In general, when we say "need", we understand a certain natural or social subject, the existence of an event, the conditions necessary for its existence, existence, -he says. The existence of each system is expressed in its state and indicators, which determine the satisfaction of its vital needs. The difference between the object-state of the existing system and the Real-state-of-existence arises when a conflict arises, the need and necessity arise."

Therefore, the need is such an internal, legal contradiction of a particular system that it arises from the conflict between the owner, the owner of the need and the environment, and consequently receives material and Spiritual Power, Energy, Information components necessary for its Real state of existence, activity. Biological and social systems eliminate these contradictions due to their inherent activity in the interaction and relationship between themselves and the surrounding natural and social environment. Therefore, the social need is closely connected with the ability of the existing system to activities, actions aimed at solving internal conflicts. So, when we say need, we understand the internal motive that arises from the appearance, manifestation of the need that arises based on the laws of a particular social system, the activity that is objectively necessary for the existence and development of the organism, human personality, social group, Nation, people and society in general.

According to John Locke, " in social life, the need exists in the form of the object property of the subject, and its necessary parameters are manifested in the form of a conflict between the Real, real state and the need of the object, that is, the sub-conditions of the existence of this social phenomenon." All that is necessary for people to live and grow as a person, constitute their vital needs.

## RESULTS AND DISCUSSION

So, when we say human needs, we understand the form of the transformation of the conditions necessary for its existence and functioning into a certain necessity. To monitor, study, and analyze this process, it will first be necessary to consider the needs of social subjects.

As we know, " the life of society includes both biological and social needs. Thanks to this, the social life of a person improves on the contrary, without denying the biological aspects in it, that is, his needs. In social life, both of these needs will be individual, not without a parallel, but, on the contrary, in a mutually inseparable connection, but social needs will be the main thing in this

It should be noted that in the course of the existence of the individual society, it leads, first of all, to the gradual exchange of natural needs, which provide for human life, with the help of a means of production, the relationship of the human body with the external environment, with a new method, which differs from the previous biological adaptation, and on Ultimately, not only did the need for material consumption arise, but also the need for ideas, knowledge, spiritual and spiritual activities aimed at practical activities that could create its ways, methods, and means in meeting this material need. This means that it will be possible to correctly understand the need only when it is received together with the activity that is inherent in a person, that is, the activity of Labor. It is known that the need for Labor arises from two factors. If the first factor is the lack of satisfaction of vital needs without labor, the second factor is that a person finds his way to achieve his goals in life, through the growth of his intellect and abilities.

The natural-biological needs of humans are manifested as a certain method of production in a certain historical period, that is, consumption creates production, brings into the body.

The philosopher noted that "as long as a person does not satisfy his basic vital needs, there can also be no talk of his existence, but the satisfaction of needs is associated with the production, that is, the object of their vital existence. The need is the sub-expression of the laws that determine the existence and development of this particular method of production."

Social needs always characterize the need of people for important activities, spiritual values, in which it is possible to achieve a certain social position in one of these aspects of social life, including in the society in which he lives and to maintain this position. Hence, the social needs of people are a form of manifestation, expression of object demands in the laws of society.

Needs as an object, internal, contradictory feature of the subject are manifested as a factor arising from the demand for law, determining and motivating human activity to solve the matured problems, contradictions of social life. It should be noted that natural and social needs constitute a system of mutual needs as a whole, in this system the laws of existence and development of society are interrelated with each other in the relationship of subordination (hierarchy). In this relationship, social needs predominate, because they express the requirements of social laws. The presence of the subject in a particular social system will primarily depend on social conditions. Buda, we see that biological needs are manifested directly through social needs. On this basis, needs become a benefit.

The "Social Interest" of the subject arises, manifests itself as his attitude to a particular social system in which he lives, operates, satisfies his needs.

To formulate these relationships, it is first necessary to determine the social system and the side of commonality between the needs of the subject operating in this system. And this process is facilitated by the formation of property at the same time, the formation of the process of Commodity Exchange, and the division of Labor. Under these circumstances, the extent to which the needs of the subject are met depends not only on the results of labor activity but also on the social status of the individual in society, that is, his attitude to property and participation in the distribution of material wealth of the society. As for the occurrence of "interest", it is caused primarily by conditions that arise in the process of satisfying human needs, which are opposed to it, which cause suffering.

When we say "interest", we understand the set of attitudes and activities of the subject concerning the conditions, that is, the satisfaction of his various needs. One of the main conditions for the existence of social processes and phenomena is a social activity. The formation of interest is also inextricably linked with this activity. Without activity, without interest, activity does not occur. Therefore, when we say activity, we understand that the subject affects the object consciously and purposefully.

The need and interest are inextricably linked with each other. One of the interests of particular importance in the history of mankind is the group interest. From the science of sociology, people are united, united in public organizations, such as various social units – group, stratum, party, proceeding from their specific goals. These associations are formed and formed primarily based on the similarity of the conditions of the lifestyle of members of this union, the common signs and attributes inherent in them, including belonging to a certain historical region, belonging to the belonging of social institutions: seed-elat, nation, religion.

As you know, every society will certainly have its internal structure. the emergence, action, and development of any society and the Real social relations in it are a direct link to the social system, the system of relations, it's content and nature, the relations between its main elements. Because of the totality of the needs and interests of each social group, members of the stratum determines their general condition, the position of the object in a particular system of social relations. These are the conditions that satisfy the need of one of the members of the social unit, which, of course, also allows the needs of the rest to be met. Therefore, in the members of this unit, the same attitude to the social environment, to the conditions is formed.

## CONCLUSIONS

Look explained that the common interest of members of the social group is to bring into being their organized activities in unity. The more harmonious the subject, that is, the person, the more his interests will also be developed. On this basis, it will be capable of such a high level of social activity. With the introduction of market laws, the competitive environment is structured, opportunities for free entrepreneurship are opened, and at the same time, with the observance of these laws, the composition of production is also changed. And such a process occurs only when there is a desire to withstand the competition. To withstand the competition, entrepreneurs themselves will be forced to constantly update production, create the necessary conditions. The group interest embodies the common relations inherent in all spheres of the social life of members of this group.

If the object is a subject that has its own needs on one side of social relations, that is, people, then its second side is the interests that have the conditions for satisfying these needs. The projection of social relations not only serves to preserve, change the social conditions that are one side of these relations, but also to form the subject and its needs, which are the second side of it.

Naturally, the famous scientist John Locke achieved remarkable results in the processes of the philosophical analysis of the theory of liberalism. But, in his research, he also contributed to the development of World Philosophy in the study of the concepts of "need" and "interest", along with the problems that philosophy is relevant for the period.



In general, benefits are a means of satisfying all the needs of people, and the goal, which is always aimed at satisfying the needs, serves the formation of social relations. In this sense, social interests are manifested in the form of expression of the object requirements of general sociological laws and serve as the main factor in the system of the mechanism of action of laws

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DOI: **10.5958/2249-7137.2020.00786.7**

## DEVELOPMENT TRENDS IN THE BUILDING COMPLEX IN UZBEKISTAN

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### ABSTRACT

*The situation in the construction sector is unstable. The adoption of new laws in Uzbekistan has had a significant impact on changes in the processes taking place in this area, which requires further development, rethinking and introduction of methodological approaches to the organization of construction and improving the quality of construction. This study examines the processes of construction quality management in the formation of self-regulation in the market based on complex and systemic approaches.*

**KEYWORDS:** *Construction Complex, Construction Quality, Organization Of Construction, In A Row, Investment Construction, Quality Management In The Construction Of Facilities.*

### INTRODUCTION

One of the main tasks facing Uzbek enterprises in the construction industry today is their successful adaptation to the conditions of a market economy. The solution to this problem is a prerequisite for their survival and further development. The modern market economy poses fundamentally different requirements for the quality of construction. Currently, the sustainable position of a construction organization in the contract market is determined by the level of competitiveness. In turn, competitiveness in construction is associated with three indicators - the duration, cost and quality of the construction facility. At the same time, quality gradually comes to the fore. The concept of Uzbekistan's national policy in the field of quality of goods and services rightly emphasizes that the main task of the country's economy in the 21st century is to increase competitiveness by improving quality.

The degree to which the problem is investigated. The main rules in the field of quality management theory in the investment and construction complex are described by CIS scientists:

V.V. Buzryyov, N.G. Verstina, H.M. Gumba, N.N.Ivanova, N. Kirillova, R.G. Kvachadze, N.F. Kostetsky, I.G. Lukmanova, Yu.P. Panibratov, V.V. Novozhilova, V.V. Okrepilova, L.I. Pokrassa, L.S. Puzyrevsky, A.N. Pytkina, V.M. Serova, F.E. Udalov, B.V. Schurov, F.F. Yurlova and others.[1;2;3;4;5;6]

## MATERIALS AND METHODS

Construction is one of the most important branches of the national economy, which includes the reproduction of fixed assets, their reconstruction, technical re-equipment, as well as the development and improvement of the social sphere. Construction is characterized by a long production period, industrial houses, power plants, pipes and similar geographically connected facilities, as well as high dependence on geographical conditions. In recent years, the construction sector has become one of the most important drivers of economic growth in Uzbekistan, which has significantly stimulated the development of other sectors of the economy with its growth rate and pace. Large capital is accumulated in this area of production, and the effectiveness of the entire economy depends on the speed of their circulation.

The quality characteristics of the facilities under construction and their compliance with world standards will become a prerequisite for further progress and the level of well-being of the population. The current period of development of the investment complex in Uzbekistan and its regions can be described as a period of economic growth. This is evidenced by the pace of change in economic indicators, such as the volume of investments in fixed assets and the volume of construction and installation work performed. The main problems of Uzbekistan in the construction industry are

1. Low productivity. For many years we have tried to solve this problem, but so far it is useless. The fact that Uzbekistan lags behind the West, in particular, can be made from such figures. According to experts, value-added in 2014 amounted to 8% of the total number of Uzbek enterprises for the development and implementation of innovations, while in Germany - 70%, Ireland - 57%, Belgium - 60%. Construction productivity in Uzbekistan is 21% higher than in the USA and 33% higher than in Sweden. One Uzbek builder will build 18 square meters, Swedish - 51 square meters, and American - 81 square meters.

2. Excessive depreciation of fixed assets in the construction industry. The share of expired cars in the total volume of cars was as follows: for single-bucket excavators - 37.7 - 42.3%, for scrapers (richer machines) - 71.9 - 73.2%, for tower cranes - 55.6 - 60.9%, for caterpillar cranes - 68.6 - 70.1%, for bulldozers - 52.4 - 54.9%. This factor may not affect the cost of construction. In 2014, only 25.4% of the total funds were spent by enterprises on real production, and the bulk of the funds were directed to financial assets.

As a result of such a policy, it was impossible to convert free funds into infrastructure and social facilities to update production facilities.[6] The growing trend of non-productive and administrative costs is worth noting, resulting in a significant increase in the cost of any projects and housing construction.

3. Technological backwardness in the use of modern technologies in construction. Wood and steel frames, as well as small prefabricated structures, are rarely used in construction, occupying only 10-17 per cent of houses, while in the United States this figure reaches 70-80 per cent.

4. The unfavourable investment climate in Uzbekistan compared to many other countries of the world is the main reason for the lack of domestic and foreign investment and the outflow of Uzbek capital abroad, that is, to attractive countries. The following conclusions can be drawn: it is necessary to double labour productivity in the industry, which will increase housing supplies twice a year. This requires measures from the state and business, non-profit partnerships for the development of investment and construction complexes. The construction industry cannot develop independently of other industries, and this depends primarily on the level of technological modernization. Therefore, the initial conditions for updating production capacities are certainly necessary, and they cannot be realized without investment and innovation, without upgrading the skills of employees and their training, without reproducing human resources that meet modern requirements.

5. Another big problem is the sales of contractors. If in the past this problem was solved a little bit, but with the introduction of auctions, the problem became a dead end. Also, the only criterion of the auction winner in the tender documentation is the minimum offer price, so the industry can never be competitive.

6. Administrative barriers. Since the adoption of the Urban Planning Code, there are still no uniform rules for the development of documents in the field of spatial planning, the provision of land for construction takes up to 3-5 years and is very formalized. Due to excessive employment of state examination bodies, state examination of design documentation is often carried out in violation of deadlines.[7] Obtaining permits for the construction of facilities by customers will have to wait a long time. Abroad, for example, the period of design of facilities is on average one year, and in our country with all agreements and approvals - from three to five years. The collection of signatures for a construction permit in Uzbekistan takes more than 300 days, in Europe (Sweden) - 116 days, in Canada - 80 days, in the USA - 50 days. In terms of the cost of approving primary permits, Uzbekistan is at the national average level. From obtaining a building permit, Uzbekistan is one of the last countries in the world.

Obtaining permission to connect to water, sanitation, gas and heat supply systems, as well as to electricity networks, is associated with excessively complex measures and leads to high connection costs. As a result, the construction and commissioning of facilities will be expanded, and at the exit, the technology is already outdated, so we lag behind the developed countries and are not competitive. The increase in real estate prices was due to the financial cost of overcoming administrative barriers. The absence of clearly defined norms in the activities of state authorities, local self-government bodies, officials allows illegal payments for services rendered, unreasonable requirements, an extension of the decision-making period and other violations. To conduct a more detailed analysis of the economic situation and determine the prospects for the development of the construction industry in Tashkent and the regions, it is necessary to analyze the dynamics of the development of the industry over the past decade.[8] At the same time, there is a balance of processes in the market - the number of new buyers outside the real estate market is growing significantly due to a lack of financial resources in the past. These two collaborating factors have generated ever-increasing demand, which in turn has led to higher real estate prices and created unprecedented incentives for the development of the construction industry. The conditions for granting loans for construction are tightening. Significant growth in interest rates has become a steady trend, including for allocated loans, where their interest rates often increase by 25%.[9] The change in demand has also affected the design of homes to be built and put into

operation. Lack of funding and high levels of uncertainty freeze most construction projects, including social programs. Summing up the study of the economic prospects of the construction sector of Uzbekistan, it should be noted that the construction market began to grow at the first signs and signs of stabilization of the general economic situation in the country.

Cash flow accelerates the reduction of uncertainty, as by this time the cost of raw materials and construction work will fall, and, as a result, an increase in the volume of work should be expected.

## CONCLUSION

The main problem facing Uzbek enterprises is their successful adaptation to the conditions of a market economy. Competitiveness in construction is associated with three indicators - the cost, quality and duration of construction of facilities. At the same time, cost plays a key role in developing and making strategic and tactical decisions. At the same time, increasing competition requires managers of all levels of production management in construction to solve the problem of quality improvement with a clear goal both at the design stage and at the construction stage of the facility. To achieve these goals, it is necessary to use the rules and ideology of the international standards of the ISO 9001 series.

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DOI: **10.5958/2249-7137.2020.00787.9**

## FURAN-PHENOLIC OLIGOMERS

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### ABSTRACT

*The reaction of furfural with phenol was studied both in acidic and alkaline media and when using catalysts of various nature. By the method of mixing, one can obtain solid oligomers as liquid polymers. To increase the heat resistance to the effects of aggressive media, DIFA (difurfurilidenene acetone) was used in the composition of furan-phenolic oligomers. The nature of the polymerization of all varieties of furan-phenolic oligomers is identical. The furan-phenolic oligomers are technologically advanced in the production process and have a high coke residue after polymerization and carbonization. Furano-phenolic oligomers are used in the production of foams and construction materials.*

**KEYWORDS:** *Furan-Phenol, Phenol-Formaldehyde, Oligomer, Furfuraldenacetone, FAFF-31, FA-15, Urotropin, Diatomic, Dual-Core, Modified, Not Modified.*

### INTRODUCTION

Recently, other areas of production of furan-phenolic polymers have been developing, primarily the mechanical mixing method.

By mixing, you can obtain as solid oligomers if you mix solid components and liquid consistency polymers; if the starting components were liquid. Mixing of liquid and solid components allows furan-phenolic binders with a wide viscosity range. [2]

By dry mixing in industrial ball mills, a powder binder is obtained for press products from the oligomer di-furfurilidene acetone and the phenol-formaldehyde resin CP-OIOA.



By fusing the oligomer  $\Phi$ A-15 and the phenol-formaldehyde oligomer of the novolac type, binders used in the production of foams and articles filled with foamed furan-phenol polymers are obtained.

## MATERIALS AND METHODS

It is even more convenient to obtain furan-phenolic oligomers of liquid consistency components. [1] The known resin FAFP-31, produced by the domestic industry and is a mixture of furfural-acetone monomer FA with phenolic formaldehyde oligomer of the enveloped type. As a special case of this resin with properties that pass FAFP-31, it is necessary to present the resin DF-1, including the monomer difurfuriliden-acetone and phenol-formaldehyde oligomer in the same proportions. In the same way, an oligomer based on FA, FAM, 4FA monomers are obtained, which are mixed with phenol-formaldehyde and phenol-formaldehyde pentanediol oligomers. This series of FAFP, 4FAFA, FAFP-5, 4FAFA-5 found application in anticorrosive protection. (3) Partial condensation of phenols with furfural alcohol gives oligomers FF-IF and FF-IC. Real novolac phenol-formaldehyde oligomers are also similarly exposed to furfural alcohol. Furfural and furfuryl alcohol can handle not only the products of phenol-formaldehyde condensation but also carry out the joint condensation of phenol, formaldehyde and furan monomer. Polish researchers have proposed to obtain such oligomers using furfural: phenol: formaldehyde in a molar ratio of 1: 1: 0.75 in an acidic medium and using furfuryl alcohol: phenol: formaldehyde in a ratio of 0.9: 1.0: 0.7. Oligomers contain free furfural and furfuryl alcohol (7). Offered for use in linear production. To obtain highly filled polymer compositions, a binder based on partial condensation of furfuryl alcohol, phenol and formaldehyde in other ratios was also obtained. (1) According to the American patent, condensation under alkaline conditions is carried out using previously obtained ones.

- on the one hand, the products of aldol condensation of furfural with other aldehydes, such as propionic aldehyde, butyric aldehyde, pentanal, hexanal, cratonal, acetic aldehyde;
- on the other hand, phenol, resorcinol, cresol, xlenol, di-oxyphenylmethane, di-oxyphenyl dimethyl methane, as well as phenolysis products of saturated or unsaturated hydrocarbons capable of interacting with an aldehyde (nonylphenol, allylphenol, phenol, dibuthenyl, dibuthenes, in the chain).

Aldehyde amine components here can be saturated or unsaturated aliphatic, aromatic, heterocyclic aldehydes containing up to 10 carbon atoms (acetaldehyde, crotonaldehyde, furfural, formaldehyde). (4.6) To increase the heat resistance and resistance to aggressive environments, furan-phenol polymers obtained by partial condensation are produced in the composition of furan-phenolic polymers with furfural acetone condensation with furfural acetone monomer FA followed by distillation of water. The resulting 2FS oligomer is very convenient when used in repair polymer compositions. Furfuryl alcohol oligomer increases the heat resistance of foundry binders. Furitol-8 polymer, obtained by condensation of phenol alcohols from furfuryl alcohol oligomers, significantly exceeds the heat resistance of its analogues obtained using furfuryl alcohol. (5, 8) The latest brands of furan-phenolic polymers often use the DIFA monomer. Difurfurilideneacetone has been tested in the oligomers for casting a series of furitol and is introduced into the composition of the polymer of the anticorrosive purpose of a series of polyfuron. The furan-phenolic polymers of the furitol series may contain, as phenolic components, wood resin, lignin thermal degradation products, and resorcinol. Polymers and

polyfuran among thermosetting materials is the main material with high corrosion resistance. It is enough to say that materials based on polyfuran polymers are stable in sulfuric acid of 93% concentration at a temperature of 100 ° C. Polyfuran oligomers are obtained by partial condensation of difurfurilideneacetone, phenol-formaldehyde condensation products and furfural. As the furan component, difurfurylidene cyclohexanone and dinitrofurfurilideneacetone can be used. Several phenolic components to them are novol and rezol phenol-formaldehyde oligomers, phenol alcohols, bis-phenols, diatomic and di-nuclear phenols. As an active diluent, furfural, furfuryl alcohol, tetra furfuryl oxy silane, tetraethoxysilane are used. (5.9)

The multicomponent composition, the presence of a large number of functional groups and activity centres, a wide range of hardeners make it possible to transfer furan-phenolic oligomers to a non-meltable insoluble state using a variety of curing modes. Furan-phenolic oligomers are capable of curing both in the presence of hardeners and under the influence of irradiation or heating. Thermal curing is more characteristic for fosane-phenolic oligomers of the resole type, capable of curing at elevated temperatures both in the block and in a thin layer, although other compositions of furan-phenolic oligomers can cure in coatings, in laminated plastics, which are heated by convective heating or irradiation.

The nature of the curing of all varieties of furan-phenolic polymers is largely identical. The curing of resole furfural-phenolic oligomers is accompanied by several changes that are not easy to measure and evaluate. The viscosity of the system grows, low molecular weight products are formed, the colour of the mass changes. Physicochemical research methods reveal the exhaustion of functional groups, a decrease in the content of double bonds, the emergence of new structures. Similar changes, but occurring with lower speed, are observed when heating pillow furan-phenolic and furan-phenolic oligomers obtained by other methods. Research shows that when furan-phenolic oligomer is heated, a series of successive and parallel reactions take place. Individual products are exhausted, furfural joins the phenol (or phenolic component) by the carbonyl group, the content of conjugated diene bonds in the mass decreases, and single double bonds of furfural fragments are found at elevated temperatures. Furan-phenolic polymers, by their nature, have their origin with both phenolic and furan polymers, but they are nevertheless appreciated for the valuable differences that are formed in the process of their preparation and construction. Compositions based on furan-phenolic oligomers are distinguished by their ductility, the ability to fill in the forms of the most complex configuration and curing regimes that are widely regulated. Furan-phenolic oligomers are technologically advanced in the production process, have a high coke residue after curing and carbonization. As can be seen from the table, furan-phenolic polymers in terms of the most important indicators compare favourably with both furan and phenolic polymers. First of all, it should be noted high deformation heat resistance, a relatively small shrinkage during curing, and stable dielectric characteristics. Differences in properties from furan and phenolic polymers during synthesis and curing. The high-frequency crosslinking structure of furan-phenolic polymers is the reason for the high chemical resistance to aggressive environments of various nature. The properties of furan-phenolic oligomers, of course, cannot satisfy the requirements of all modern technologies for their use. Therefore, work is underway to modify furan-phenolic binders. When using oligomers in the manufacture of press products, unsaturated organic acids or salts of organic acids are introduced into them to improve the lubrication of injection moulding or compression moulding.

Elastomers in various qualities are used to give the composition elasticity, to reduce their fragility. To increase the adhesion of the modifying additive, epoxy oligomers, polyvinyl butyral and other acetals, hydroxyl-containing compounds can serve. Formaldehyde, urotropine, urea, furfuralamide are used to increase the chemical activity of furan-phenolic oligomers. Purpose modifying additives are introduced to increase heat resistance, chemical resistance, and radiation resistance. Modifiers can be mixed with furan-phenolic oligomers both at the stage of their synthesis and at the stage of preparation of the compositions. Both modified and unmodified furan-phenolic polymers find their applications, then the first to enter the industry are furfural-phenolic oligomers as a binder in the manufacture of press powders used to produce parts for radio engineering and anti-corrosion purposes filled with kaolin and wood flour. Press powders were characterized by good ductility, increased viability, which is important in the manufacture of large-sized parts of complex shape. (8)

Comparative characteristics of furan, phenolic and furan-phenolic resins and polymers

TABLE 1

№	The name of indicators	Furan Oligomers	Phenolic Oligomers	Furano-Phenolic Oligomers
1	2	3	4	5
1.	Appearance	Viscosity liquid or solid mass		
		Dark cherry colour	Pink to red	Brown colour
2.	Density, g / cm <sup>3</sup>	1,17-1,26	1,20-1,40	1,22-1,38
3.	VZ-4 viscosity, s (liquid resins)	20-45	200-300	40-100
4.	Solubility:	complete	complete	complete
5.	in acetone	complete	complete	complete
6.	in alcohol	7-9	6-8	5-6
7.	Shrinkage during curing, %	170-180	130-150	190-205
8.	Processing temperature, ° C	30-60	60-90	60-120
9.	Gelling time at 170 C with 4%	90-140	100-140	100-150
10.	Resolution voltage, MPa: under compression	25-45	30-60	30-70
11.	when bending	2,5-3,5	4-6	3-4
12.	Specific Impact Strength, kJ / m <sup>2</sup>	330-380	280-340	330-380
13.	Brinell hardness, MPa	220-260	130-220	270-320
14.	Martens heat resistance, ° C	55-60	45-50	58-65
		70-97	80-94	97-99
		-	-	+
		+	-	+
		+	-	+

Note: + stable; unstable

The most famous press materials were asboplast on the oligomer FM-2, introduced in the electrical industry, graphitoplast, PG-1 on polyurethane resin - 73 as antifriction self-lubricating materials for friction units in textile machinery for the light and food industries, powder press based FN oligomer and wood filler for general purpose parts with reduced shrinkage. Abroad, pressed powders, in particular the anti-friction series, based on furan-phenolic oligomers are less widely used, giving way to more advanced materials and cost-effective technologies for their processing. Asboplasts, graphitoplasts, wood layers and other of the materials listed above really have many shortcomings, among which the first should be noted and called fragility and, as a consequence, low resistance to shock loads, to bending loads. Requirements to increase the strength of furan-phenolic plastics led to the development of laminated plastics, the physical and mechanical characteristics of which are enhanced by fibrous and fabric fillers. A whole series of paper-laminated plastics have been developed, including ornamental and foil getinaks, and decorative paper-laminated plastic. These materials are used in electrical and other industries. However, modern layered plastics are most prevalent: organofibers, the filler of which is natural or chemical fibres, fibreglass-based on fibreglass or fibreglass of various characteristics, carbon fibre, developed using carbon fibres, carbon and graphite fabrics. Furan-phenolic resins do not contain nitrogen. And it is very important for casting without pores and sinks. They are accepted for iron and steel casting of active metals and alloys. The use of furan-phenolic oligomers specifically allows castings with a good smooth surface and stable geometric dimensions to be obtained. Such binders are widely used abroad, mainly in developed countries. Despite the general low adhesion to metals of the entire class of furan-phenolic oligomers, the British industry has mastered the production of furan-phenolic adhesives with special applications. The basis of such adhesives is the resole fragments of the furan-phenolic oligomer with a high specific content of hydroxyl groups. Both liquid and solid furan-phenolic oligomers are used in the manufacture of foams or foam-filled structures. As foaming agents for solid polymers, substances with a high gas removal capacity and an appropriate decomposition temperature that is higher than the melting point of the oligomer are used. Liquid furan-phenolic oligomers are foamed by incorporation of acid and metal shavings into the resin. Known polymer concrete developed using furan-phenolic oligomer as a polymer binder. Polymer concrete is used in water construction for lining dams, waterworks, catchments, etc. Or in the chemical industry for the arrangement of floors in workshops, for the manufacture of columns, coatings, other structures, for the repair of the foundations of technological equipment. Polymer putty arзамит-y and ex-y based on furan-phenolic binders are not widely used, but their release was mastered under industrial conditions at the Tyumen plastic plant (aramid-u) and at the Akrikhin production association (furankor-u). For repair work, a putty polymer based on furan-phenolic oligomer turned out to be interesting. 2FS. He repaired the cooking boilers of the pulp and paper mills with such a putty, characterized by low water absorption. Abroad, polymer putties based on the product of furfural-phenol-formaldehyde condensation are used for cutting masonry joints. Furan-phenolic polymers are used on a large scale in the abrasive industry. Resins SFZh-2039, manufactured by the Slate Chemical Plant in Kohtla-Järve, is completely spent on the manufacture of grinding skins and grinding wheels of various articles, as well as various grinding tools. The use of furan-phenolic oligomers in the abrasive industry made it possible to increase the operating temperature range, as well as the quality of the treated surface. In recent years, furan-phenolic polymers have also been used in the manufacture of the latest materials, such as carbon fibre and carbon-carbon composite materials. It has been established that furan-

phenolic polymers make it possible to obtain carbon-carbon composite materials with higher strength characteristics in comparison with similar materials on oil pitch and phenol-formaldehyde resins.

## CONCLUSION

The paper presents the results of studies of binders for the manufacture of carbo plastics based on carbo fibres containing epoxy and resorcinol-furfural resins, active and passive solvents. The considered binders provide high wettability of carbon fibres and the filling of all surface irregularities, good adhesive strength. The prepregs based on these binders have a long (up to 3 months) viability while maintaining their technological properties flexibility and stickiness.

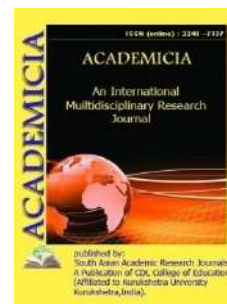
The prepregs are pressed at low pressure (0.7-1.0 MPa) and temperatures of 150-190 ° C for 0.5-1.0 hours. Heat treatment of products is carried out depending on the required properties, at temperatures of 220-300 ° C in air. Carp fins with epoxyresorcinofurfural binder are characterized by high physical and mechanical properties, including interlayer shear strength of up to 7.5 MPa, high heat resistance (up to 330 ° C) and the ability to acquire high heat resistance due to additional curing at temperatures of 270-300 ° C. These materials retain at a temperature of the destruction of more than 50% of the initial bending strength and are used to create structures for heat protection purposes.

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DOI: **10.5958/2249-7137.2020.00741.7**

## CLASSIFICATION OF TOURISM BY PURPOSE OF CARTOGRAPHY

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### ABSTRACT

*Different analysis of the essence of the concept of tourism, its functions and content show that tourist activity is a very different area, so the classification of tourism by types and forms is important. The classification of tourism makes it possible to determine the characteristics of the cartographic provision of its various forms. The article provides a classification of tourism on the basis of a systematic approach on the criteria that reflect the main directions of tourism activities and reveal its needs in the cartographic provision.*

**KEYWORDS:** *Tourism, outbound tourism, inbound tourism, domestic tourism, international tourism, recreation, classification, tourist map, tourist plan, tourist atlas, topographic map, scale, tourist flow, ethnographic tourism, excursion, speleotourism, grot, aviatourism, dating tourism, planned tourism, initiative tourism, green tourism, festival tourism, professional tourism, active tourism, passive tourism.*

### INTRODUCTION

Today, the world is paying more attention to the non-manufacturing sector of the economy, especially in the service sector. People are trying to spend their free time productively, to relax, to restore their health, to know the world, the customs and values of nations. Such services are provided by the tourism industry. The development of tourism plays an important role in the development of the economy of many countries, so due to its potential, geography, history and present, various areas of tourism are widely used in the development of such areas as health tourism, medical tourism, ecotourism, excursion tourism, sports tourism, extreme tourism, pilgrimage tourism. are conducting research.

In Uzbekistan, too, tourism is considered one of the priorities of economic development, creating favorable conditions for tourism. For the rapid development of national and regional tourism, it is important to develop, implement and innovative long-term projects of regional tourism activities and to provide them with resources and databases.

Primary data and their description. The study identifies the decrees of the President of the Republic of Uzbekistan on tourism development, the third direction of the Action Strategy for the five priority areas of development of the Republic of Uzbekistan for 2017-2021, "Priorities for economic development and liberalization". APPENDIX 1 to the Decree of the President of the Republic of Uzbekistan No. PD-5611 of January 5, 2019, the CONCEPT for the development of tourism in the Republic of Uzbekistan in 2019-2025 and other relevant legal acts, research work of foreign and domestic scientists in this field.

### **Research methods**

Geographical comparison, cartographic, systematic approach, historical and other methods were used in the research.

### **The main part**

According to some scientists, tourism is divided into three types according to its general features and functions: treatment, rehabilitation-sports, dating tourism [7]. Uzbek and foreign researchers (G.Yu. Alexandrova, M.B. Birjakova, V. Gerasimenko, Yu.D. Dmitrevsky, M.P. Krachilo, A.A. Lyubitseva, Yu.S. Putrik, V.V. Sveshnikov, T. Sokol, S.R. Erdavletov, I.S. Tukhliev, A.S. Soliev, M.R. Usmanov, N. Ibodullaev, M.A. Mirzaev) gave different classifications of tourism. Classifications are distinguished by explanations of structural principles, applied features and their units, practical functions, the concept of tourism.

### **Tourism is classified according to:**

- functionality (travel destinations) [2, 5, 6, 7, 8, 9];
- the main type of tourist activity [9];
- travel style [1, 4, 5, 6, 8, 9];
- seasonality [1, 2, 4, 5, 7, 8, 9, 10];
- the composition of tourist groups [7, 9];
- travel duration [1, 3, 2, 5, 7, 9, 10];
- tourist load feature [5, 7, 9];
- forms of organization [1, 3, 2, 5, 7, 8, 10, 11];
- coverage of the territory [1, 2, 5, 6, 7];
- regional features [1, 8];
- degree of organization [1, 3, 2, 5, 8, 10, 11];
- principles of sale and payment of tourist services [1, 2];
- use of accommodation during travel [1, 5, 7, 11];
- number of tourists [1, 6, 7, 11];
- level of service [7];
- types of places used in tourism [1, 7, 11].

Organizational forms of tourism can be domestic and international. Domestic tourism is the domestic travel of citizens of Uzbekistan and the population permanently residing in its territory. In Uzbekistan, cartographic works for domestic tourism are widely used as one of the most popular types of cartographic products. Domestic tourism is provided with detailed maps of different regions of the country compared to other types of tourism.

Outbound and inbound tourism are considered international tourism. Outbound tourism is the travel of citizens of Uzbekistan and the population permanently living in its territory to other countries. Recently, the number of Uzbek citizens traveling abroad is growing.

Inbound tourism is the travel of non-residents to Uzbekistan. More and more attention is being paid to the cartographic provision of inbound tourism. Cartographic enterprises print maps in one or more languages, allowing foreign tourists to use them during travel or excursions.

We propose to consider the classification of tourism according to the need for cartographic support of tourism on the following criteria:

- according to the level of organization: planned (organized), enterprising (organized, unorganized). Planned tourism involves a strictly defined tourist trip of groups and individual tourists on the basis of a specific route and schedule, determined by the organizers. During the former Soviet era, tourist maps were distributed throughout the union, along regional routes. Cartographic works for planned tourism purposes provide information on routes, historical monuments planned to be visited, tourist infrastructure facilities; indicate the route by travel dates; must have information about the tourist establishment that organized this trip.

Initiative tourism is considered as an amateur activity on a voluntary basis without the participation of tourism organizers. During the former Soviet Union, this type of tourism was very popular and still occupies its place in independent Uzbekistan. The organization of entrepreneurial tourism requires large-scale tourist maps for different forms of tourism, distinguished by the accuracy and detail of the general geographical and thematic nature, the possibility of application at all stages of travel (organization and conduct of trips, as well as reporting documents for independent travel); .

- Form of organization: individual (1-5 people), group (6 and more). The number of tourists traveling together on one route is a key factor. Group trips are organized according to the interests of the participants. The requirements for tourist cards that provide individual and group tourism do not differ.

- By age: children, youth, middle-aged, elderly, etc. For children's tourism, tourist cards must be distinguished by expressiveness, visuality, image brightness, attention, and accuracy and detail of the cartographic image, as young tourists do not have the ability to work with the cards. The content of youth tourism cards should reflect the objects of recreational and study tourism and meet the needs of young people. In the maps for the elderly, the main focus should be, firstly, on the objects of cultural and historical heritage, and secondly, on the objects of tourist infrastructure and transport.

Social status of tourists: single, family and children. For tourists of different social levels, tourist maps must take into account the specifics of groups of tourists and reflect the objects of interest and suitable for each of them.

-Regularity of tourist flows: regular (year-round), seasonal (winter, summer, seasonal). Regular tourism means regular visits to tourist areas and centers throughout the year. This tourism is characterized by excursion activities provided with plans of the city and individual tourist facilities. Depending on the season, general tourist cards for seasonal tourism and cards for different types of active tourism (winter-skiing, summer-hiking, cycling, cruise, etc.) are available.

-travel duration: holidays, short-term, medium-term, long-term tourism. Holiday tourism (1-3 days) is the most popular form of tourism, the main task of which is to get acquainted with the place of active recreation, travel. Regular short-term (1-2 days) recreational activities have a more effective impact on a person's health, mood, and mood than a one-time long-term trip (29-91 days). Medium-term tourism lasts 11-28 days in order to get the rest needed to regain strength. Long-term tourism is characterized by a duration of more than 92 days. Tourist maps are determined by the size and scale of the area.

-type of tourist activity: excursion, trip, tourist local history expedition, training camp, sports orientation, hunting, fishing, mushroom picking, berry picking, etc. Excursion - a trip for educational, scientific, sports, recreational purposes (duration does not exceed 21 hours); collective visits to historical and cultural tourist sources. Cartographic works must reflect in detail the individual objects of tourism.

A trip is a short-term tourist trip on a certain route in order to heal the body, do sports, "get along" with nature. The content of cartographic works intended for trips should reflect the specific natural features of the area, nature, historical and cultural monuments, tourist infrastructure. Depending on the means of transportation during the trip, the tourist card and atlas must contain special information necessary for the safe organization and conduct of the trip.

The tourist and local lore expedition is conducted in order to study the tourist and local lore sources of the travel area. The map, atlases should contain information about the monuments located in the area, the places of spread of folk crafts and traditions, etc.

Training sessions increase the physical skills of tourists. Tourist cards must reflect the meeting place or natural and artificial obstacle races.

Orientation to sports involves training and competitions within the region, and the needs in this area are met by sports cards. These cards are large-scale maps that are provided with special symbols to easily recognize them when crossing passages, natural and artificial objects.

A sports card differs from a topographic map in that it reflects the location of movement (to select the optimal route) and is easy to recognize (to quickly and accurately determine its location). It requires special attention to the relief image and the soil and vegetation. Hunting and

fishing maps and atlases must reflect the boundaries of hunting grounds, fishing grounds, hunting and fishing grounds, and the distribution area of game animals. On these cards, it is advisable to mark the places of distribution of medicinal plants, fungi and berries.

Cartographic works that provide different types of tourist activities often complement each other.

- Means of accommodation of tourists: hotels (hotels, boarding houses, motels), without hotels (tourist bases, camps, private houses, tents). The second method of accommodating tourists requires detailed information about the accommodation options and convenience of the tourists.

- Vehicles and means of transport used by tourists: hiking, skiing, alpine skiing, ship, horse, bicycle, motorcycle, car, bus, railway, aircraft and mixed vehicles. Hiking is the most developed and popular form of active recreation and can last almost all year round.

Tourism requires pre-arranging overnight stays. Cartographic works must contain information about the snow cover (thickness, duration of storage), the condition of water bodies (duration and duration of freezing, the thickness of the ice sheet), convenient and dangerous turns for skiing, avalanche-prone areas, tourist infrastructure.

Ship tourism involves traveling by sea, ocean, river or lake to relax in nature by boat, left, kayak and other means, to get acquainted with historical, cultural and natural monuments or to do sports. Cartographic works of water travel should provide a detailed view of the coast and the objects of the excursion to be visited during the trip. Maps and atlases required for walks along the river and lake reflect the river bed, stream, spreading area and its elements, pedestrian bridges, ruined dam remains, and other natural and anthropogenic ravines; crossing options for various water transport, the most convenient piers; Excursion facilities located on the coast should include existing residential areas.

Horse tourism in Uzbekistan is a bit exotic. The spread of this tourism was due to the rapid travel to other places, the transportation of heavy loads and the holding of goat weddings among the people. Cartographic works should reflect the possibility and conditions of horse care in tourist stops, in addition to the accepted (unified) objects of the tourist infrastructure.

Bicycle tourism cards should contain information about the location feature, dangerous parts of the road, convenient routes for cycling. Autotourism has now become the most popular form of public travel. A quick access to another place, which is its peculiarity, affects the ability to visit a large number of settlements. Cartographic works required for automobiles and motor tourism may include the condition of roads, service facilities, including gas stations (methane, propane, gasoline, diesel), car maintenance, car washes, car markets, campsites, and more.

Bus tourism is designed for multi-day and one-day trips, and these types of maps should provide information about the natural landscapes, settlements, historical and cultural monuments encountered during the trip.

In addition to the scheme of railway routes for the railway type of tourism, it is necessary to create plans of tourist facilities and residential areas with tourist infrastructure, where tourists can stay for one or more days.

Air tourism is one of the youngest and fastest growing types of tourism, consisting of flight and charter types. This type of tourism requires the creation of maps with the description of tourist services, ie airport plans, trade and banking institutions, hotels, etc., which reflect all services, in addition to tourism facilities.

A mixed type of tourism is common, with tourists making the most of a variety of means of transportation.

For the above types of tourism, tourist cartographic works differ significantly in content based on tourist surveys. In most cases, these cards and atlases are not interchangeable and require separate development and publication. But usually this issue is resolved differently. In the former Soviet Union and now, a single card has been prepared for several types of tourism, which is not always expedient.

- The main purpose of the trip: study tourism (excursions, education, ethnographic, cultural and entertainment), sports, recreational, health resort, green, festival, professional (business, scientific), religious, remembrance of the past, industry, etc.

Learning tourism has an impact on raising a person's spiritual and cultural level. It includes trips to attractions (historical, cultural, natural, etc.). For such trips, tourist plans, maps, and atlases that fully reflect the facilities suitable for other types of study tourism are required.

- The purpose of excursion tourism is to get acquainted with the interesting objects of cultural and natural heritage, which are rich in many historical and cultural objects, including areas associated with the system of excursion routes. One of the types of necessary tourist cartographic works are excursion plans of natural and cultural heritage sites.

- Educational tourism includes acquaintance with historical and cultural, archeological, architectural and other monuments on a specific topic of the curriculum. It corresponds to natural complexes that allow to scientifically demonstrate various natural (botanical, zoological, geological, hydrogeological, historical, etc.) objects. Cartographic works must reflect at most two or three thematic objects.

-ethnographic tourism (country) includes acquaintance with the culture of individual peoples, their way of life, folklore, folk art and crafts, architecture and requires a corresponding thematic cartographic work.

-cultural and entertainment tourism includes a tourist trip to visit a theater, photo gallery, museum, etc. This, in turn, is reflected in the detailed plans, maps and atlases of tourist service facilities.

Sports tourism is the most popular among the population, which includes sports activities in different natural areas with separate natural barriers for each type. The most basic types include hiking, skiing, cycling, horseback riding and other tourism, and the cartographic works mentioned above are required. Cartographic works should be created for extreme types of tourism that are dangerous for the lives of tourists. In addition, these services and exhibition plans should be prepared in several foreign languages.

Occupational tourism involves a group of people united behind a common goal and interests. This type of tourism is characterized by a very convenient geographical location, a variety of



additional services of a communication and entertainment nature. It is divided into business tourism and scientific tourism. The content of cartographic works for the needs of professional tourism should include the field of production, science, culture and recreation.

Religious tourism refers to cultural sites that must be reflected in cartographic works that contain the information necessary for that tourism. Its content should include cultural centers and areas of different faiths, places of worship, and so on.

Nostalgic (ethnic) (remembrance of the past) tourism includes travel to places related to the past and origin of their ancestors, homeland, places where they spent their childhood, visiting the graves of relatives and deceased loved ones. This type of tourism can be provided with complex tourist plans of cities, maps and atlases of the region.

Recreational tourism includes hunting and fishing sports, travel to collect medicinal plants, fruits, nuts, and other fruits. This type of tourism cartographic works depict tourist facilities that serve the needs of hunters and fishermen.

- types of recreational natural resources and places: plain, mountain, aquatic, speological; city, village. If plain tourism is organized in flat areas, foothills or small mountainous areas at an altitude of 3000 m (walking, cycling, skiing, etc.), mountain tourism is based on mountain barriers, mountain passes, rocky places, slopes, glacier crossings (mountaineering, hiking in the mountains, alpine skiing, etc.). Water tourism includes trips to water bodies, lakes, seas.

Depending on the level of tourism developed in a given region, the cartographic works required for travel vary in scale and subject matter. In this way, mountain tourism requires a detailed and accurate image of the relief, while water tourism requires specific features of hydrographic network objects and so on.

Speleotourism is developed in areas rich in karst cavities. Its purpose is to study caves, grotts, wells and other speological objects. For this type of tourism, it is necessary to create a cave and their vertical cross-section plan. The plan of the cave should have an entrance projection in the horizontal plane of wells, sidewalks, sleeping areas, represented by conditional signs. Long, relatively high, and wide areas above the entrance level to the cave, the height of the dome, the classification of the corridors must be given in cross section.

Urban tourism mainly uses anthropogenic sources (mostly historical and cultural monuments). Seasonality is weakly represented, the main volume of services is carried out at the expense of excursions using tourist plans, maps and atlases.

Rural tourism is a short-term stay in a rural area for health-aesthetic, study or other purposes. The direction of tourism is related to the use of natural resources. It is classified as relatively stationary and continuous recreation. The main source of information in the creation of tourist maps are the rural area, the necessary buildings for tourists, a set of services and other conditions of recreation, transport services, hospitals, cultural institutions.

- The nature of the load and the level of activity of tourists: active, passive. The first appearance of tourism involves travel by high-speed vehicles, including pedestrian, ski, boat, bicycle, horse

and other means. The content of cartographic works must be based on the characteristics of each type of tourism.

Passive tourism offers the use of transportation throughout the entire journey. These include buses, railways, aircraft, sea and other vehicles. Tourist cartographic works must reflect historical monuments.

- Route type: linear, circular, radial. Tourist cartographic works for linear and circular routes should reflect the detailed travel area, which requires the specificity of the route for a particular type of tourism, depending on the means of transport. Cartographic works for radial routes should include a plan of the tourist base and surrounding facilities where tourists will be accommodated, as well as separate route maps for each radial exit.

## CONCLUSION

Each classification of the various authors mentioned above has different methodological approaches. Based on a systematic approach, we have developed a tourism classification based on criteria that reflect the main areas of tourism activity and reveal its needs in cartographic support. Using the developed tourism classification, it is possible to develop tourism classifications that meet modern tourism requirements.

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DOI: **10.5958/2249-7137.2020.00742.9**

## A NEW LAW OF LOGICAL THINKING

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### ABSTRACT

*The general laws of logical reasoning — identity, contradiction, and the third — the laws of exception and sufficiency — advance the requirements necessary for logical reasoning. Compliance with these requirements will ensure that the discussion is accurate, understandable, clear, non-contradictory and reasonable. Let us now turn our attention to another aspect of the law of proportionality. The point is that the idea being expressed, that the comments are in line with the intended purpose and complement each other, does not yet mean that the requirements of this law have been fully complied with. The reason is that the law requires "every logical element." In general, the issue of language accuracy is a matter of debate in linguistics. But here it is not the language itself, but the interdependence of thought and language that is considered in the most general terms, in terms of logic, correct thinking. After all, "an important feature of thinking is that it is inextricably linked with language." Today, the importance of general secondary schools plays an important role as a preliminary stage of continuing education. Therefore, the importance of teaching each subject separately is growing. "*

**KEYWORDS:** *Logic, Law Of Identity, The Law Of Contradiction, The Law Of Excluded Middle (Or Third), And The Principle Of Identity, Logically Correct, Thinking, Knowledge, General Law, Law Of Exceptions And Efficiency.*

### INTRODUCTION

The general laws of logical reasoning — identity, contradiction, and the third — the laws of excluded middle (exception and sufficiency) — advance the requirements necessary for logical reasoning. Compliance with these requirements will ensure that the discussion is accurate, understandable, clear, non-contradictory and reasonable.

However, in our view, these laws do not fully cover the process of logically correct thinking. **First**, the law of identity requires precision, but some aspects of precision are not within its scope. **Second**, none of the general laws of logically correct thinking fully reflect logical consistency. **Third**, the general laws of logically correct reasoning - identity, contradiction, and third, the law of excluded middle - regulate the respective aspects within the text, but none of them analyzes the text as a whole. **Fourth**, “thinking, as some authors claim, if the law of identity is unconditionally observed, loses its creativity” [1, 19]. **Fifth**, a self-thesis is also rejected if it is shown that a particular legal requirement has been violated in relation to any thesis. If it is acknowledged that a law has been violated, but the thesis is not rejected, then another law has been applied. For example, mutually exclusive considerations are analyzed either by nonsense or by a third law. A similar situation can be seen in the example of the law of identity. Some theses are acknowledged as infringing on the law of identity and the thesis is denied, while some are shown as infringing on the law of identity, but the thesis is not rejected. The question arises: what law is followed in this place?

**Analysis.** Turning to the analysis of these problems, first of all, let us consider the question of clarity, which is one of the most important requirements of logical thinking. The concept of clarity is used in different senses in different areas. In the science of logic, clarity is the reflection of the specificity of reality in thinking, the precise expression of this reflected reality in language, and the inability to deviate from its original state in its interpretation. Hence, A must be the same as A in the reflection of reality in thought, in its expression in language, and in its interpretation. In this case, the reflection of reality in thinking and its expression in language belongs to the 1st person, and the interpretation belongs to both the 1st person and the 2nd person. It should be noted here that many authors point to the aspect of authenticity in the interpretation of the law of identity, which requires clarity, and give an approximate definition: in a particular discussion, the concept, the idea, must be used in a sense.

We do not deny this aspect of the law of identity, but at the same time it is a law that requires the correct reflection of reality in thought. “What is the definition of the law of identity that states that thought is self-evident? Obviously about the clarity of thought. In the process of proper discussion, each concept is linked to the object of its intellectual reflection” [2, 59]. “As long as man thinks in order to know, he always thinks of something, so thought and its laws are inextricably linked with the source, the object, the content of scientific knowledge.... . “The law of identity is a law that reflects reality. It has its own objective source and reflects the relative stability and permanence of objective things” [2, 63]. “If we take a closer look at the principle of identity, we can see that the formula  $A \text{ is } A$  shows that there is no difference between A as an object, an objective reality, and A as a part, an element, an image of thought. From this it can be concluded that the science of logic gives meaning to the principle of identity in relation to both reality and thought” [3, 65].

Thus, the law of identity embodies two aspects of accuracy: the first is the accuracy in the reflection of reality in thinking, and the second is the accuracy in interpretation. It is clear from this that clarity in language is not within the law of identity [4, 56]. However, clarity “ensures that objects and events are clearly reflected in human thinking, that every thought and opinion is clearly expressed. The ambiguity of thought leads to the shallowness of logic in thought, to illogicality (emphasis added)” [5, 14].

In general, the issue of language accuracy is a matter of debate in linguistics. But here it is not the language itself, but the interdependence of thought and language that is considered in the most general terms, in terms of logic, correct thinking. After all, "an important feature of thinking is that it is inextricably linked with language." Furthermore, "language, which is a means of thinking, also affects thinking itself. Mistakes in thinking can manifest as errors in language, which in turn can lead to errors in language. Accordingly, research aimed at studying this interrelationship is very important in the study of logical thinking" [6, 28]

Hence, the integral connection between thought and language, the logic between them, the precision in the expression of language do not reflect any of the general laws of logically correct thinking.

Now let's talk about consistency. Consistency is one of the key features of logical thinking. "The general legitimacy of thinking in the logical process is the consistency of ideas, their clarity and validity. It is important to keep in mind that clarity and validity of opinion are essential aspects of consistency". [7, 24] It is clear that special emphasis is also placed on logical consistency. So which of the laws of logic reflects a logical sequence?

In the literature on the laws of logic, we find the following ideas: "Nazism and the third exceptional laws reflect the consistency of thought and do not allow intellectual conflict", "One of the most important features of logical thinking in the law of sufficient basis is consistency feature".

We are interested in 2 questions on this subject: is it really nazidism, the third is exception, and can sufficient fundamental laws fully reflect logical coherence? If we follow these laws, will one of the main features of logical thinking be consistency?

To answer these questions, we must first determine what logical consistency is. "Consistency is a feature of logically correct thinking, according to which the discussion of an issue, at the same time, in a relationship, is free from internal contradictions ... Logical consistency also means that the ideas in the discussion (conclusion, theory) are so interconnected connected that the content of each new idea derives from the previous idea. This situation is well expressed in the following phrase: "A should say B. "To deviate from this rule would be logical" [8, 462].

Hence, there are two aspects of logical coherence: the first is to avoid conflict in the discussion of an issue at the same time and in the same relationship; the second is that in any process of thinking, thoughts are inextricably linked, that is, they form a peculiar "chain of thoughts".

Now, for comparison, let us recall the definitions of the logical laws mentioned above: according to the law of Nazism, two opposing ideas about the same subject cannot be true at the same time, in the same relation and proportion. The third is that according to the law of exception, if one of the contradictory judgments is true, the second is, of course, erroneous, and the third cannot be. According to the law of sufficient basis, the truth of an opinion must first be based on an opinion whose truth has been proven.

Hence, the laws of nazism and the third exception exclude one aspect of logical coherence, while the law of sufficient basis partially reflects the other aspect. The reason is that the organic connection of ideas is not only in the form of "basis-result", for example, the connection of ideas in the form of numbers, ideas in the form of information, comments. Furthermore, an opinion is based only when it needs to be substantiated [5, 15].



From these it is clear that none of the general laws of logical reasoning alone can fully reflect logical consistency, one of the main features of the process of logically correct thinking.

As for the fact that the third exception is sufficient to reflect some aspect of the logical sequence of fundamental laws, it is known that any law in science has its own core, that is, only its own aspect. However, around this nucleus there are certain edges that intersect with other laws of science. These intersections indicate that this law is consistent with other laws of science, that is, "it does not contradict the law, theory, etc., formed in science." This is one of the factors that show the reality of this law, we return, one of the factors that shows the reality, not the law itself. Here, too, based on these intersections, we cannot say that these laws fully reflect the logical sequence.

Perhaps someone has wondered whether consistency is necessarily reflected in the general laws of logical reasoning, and whether logic alone is not enough to be one of the basic concepts. Yes, it is necessary, because consistency is a requirement of logical thinking at the level of law, and it must be in place.

We express our thoughts, both orally and in writing, in a certain order, in a sequence, in a word, in a logical sequence. Otherwise, no one would have fully understood them and we would not have been able to explain our thoughts. Yes, while logical consistency is not reflected in the general laws of logical reasoning, it exists in our thinking as one of the important laws of logical reasoning.

We can see in another way that the general laws of logical reasoning do not reflect logical consistency. Let us now compose a text based on the requirements of the general laws of logical reasoning - authenticity, nepotism, the third exception, and the laws of sufficient basis. If these laws fully express the logical sequence, then this is automatically reflected in the text.

### **Law and offense**

Laws are adopted to maintain order in society, to protect the policies of the state, to govern the behavior of citizens, to define their rights, freedoms, duties and responsibilities. The fact that there is no trace of the perpetrator at the crime scene also means that there is a trace. The suspect is either a criminal or not a criminal. This law is in force because it is in accordance with the current Constitution and has recently been adopted in a new edition to replace the previous one.

If we follow the requirements of the law of identity, the concepts and ideas in the text are used in their own sense and in the same sense. For example, the concept of law is not used in a legal sense in one place and in a scientific sense in another.

The sentence "the fact that there is no trace of the offender at the scene of the crime also means that there is a trace" meets the requirements of the Nazi law. The concept of "trace left by the offender" can be applied to three objects: 1. In relation to the crime itself. 2. The factual evidence left by the offender - in relation to fingerprints, criminal weapons, etc. 3. The logical arguments that arise in reasoning based on the actions of the offender, such as the fact that they leave no trace, are experienced, and so on. In this case, the concept of traces left by the offender is applied to two objects - factual and logical evidence. The third statement, "The suspect is either a criminal or not a criminal," follows from the requirement of the law of exception, in which the formula "either one or the other" applies. In this case, alternative judgments are given, one is true, the other is false, and the third cannot be. In the comment at the end of the text, the law of



sufficient ground has been followed, and there has been sufficient ground to show that a particular law is in force.

Hence, the requirements of the general laws of logical reasoning in the text - authenticity, nepotism, the third exception, and the laws of sufficient basis - are fully fulfilled, and every comment made in the text is true. However, the ideas in the text are not organically linked to each other, and the content of each new idea does not stem from the previous idea. For this reason, there is no general, coherent content in the text. This shows that logical consistency is not reflected in the text, whereas if these laws had reflected logical consistency in themselves, it would have been reflected in the text itself.

It can be seen that one of the basic requirements for the logical technology of text composition is logical consistency, none of the general laws of logical reasoning fully reflect logical consistency.

Now, as a problem, when it comes to the idea that "if the law of identity is unconditionally obeyed, thinking loses its creativity," this idea is somewhat correct, but not absolutely correct. That is, if the concepts, considerations and ideas used in a particular process of thinking are not clear, they do not correspond to reality, and if each concept, idea is used in different senses, nothing can be solved, no conclusion can be reached. Therefore, as a result of disobedience to the law of identity, "thinking loses its creativity"

The law of identity, on the one hand, ensures the creativity of thinking in a creation that relies on objective reality, that requires precision, for example, in science. On the other hand, "as a principle of theoretical construction, the law of identity eliminates the figurative representation of psycholinguistic meaning." But with a clear reflection of reality, the use of concepts and ideas in a figurative sense in the types of creativity directly related to thinking, for example, in artistic creation, creates the necessary conditions for them in figurative thinking [9, 117].

Manifestations of contemplation based on figurative meaning, figurative expression, are not within the law of identity. If the law of identity is absolute, "humor is impossible" based on them. Therefore, "in the art of askiya, it is possible to observe a deliberate violation of the law of identity, the use of concepts not in their own sense, but in a figurative sense" [10, 19]

Sophistry also relies mainly on the violation of the law of identity, but "although the method of sophistic thinking plays a negative role in scientific knowledge, in determining the truth, it also plays a positive role in art, in creating various comic situations, in artistic imagery" [11, 58].

From these it is clear that the law of identity in our thinking is a law aimed at the direct reflection of reality, and in our thinking there is a law that serves to indirectly reflect the reality.

### Diagnosis

According to the results of the analysis, first of all, ensuring the integral connection of thinking and language serves one of the main features of logical thinking - clarity. None of the general laws of logical reasoning reflect this aspect. Second, in the process of thinking, whether verbal or written, people express their thoughts in a certain sequence, in an order, by linking the ideas together, in a word, by relying on a logical sequence. In other words, they follow a law that reflects a logical sequence. However, this law is not reflected in the general laws of logical reasoning. Third, this law, which reflects consistency, allows for a logical analysis of the text as

a whole. Fourth, the law of identity serves to directly reflect reality, and in our thinking there is a law that serves to indirectly reflect reality.

Hence, it is necessary to consider the essence of the integral connection of thought and language, consistency, text, indirect reflection of reality, to determine their commonality.

“Language and thinking are historically important human traits, such as knowing reality, interacting with other people, influencing objective reality, thinking ahead and doing everything consciously, and ensuring the conscious, purposefulness of human activity in general”.

“Thus, the logical sequence that reflects the necessary connection, the development of ideas, and the logical structure of thought in the process of knowing and exchanging ideas is the general and fundamental law of the process of logical thinking. We are talking about an integrated logical process that includes individual processes in its structure. Again, the general legitimacy of the holistic logical process in the structure, change (development) of ideas in the processes of cognition and exchange of ideas is the origin of the necessary, purposeful - from one to another, from one to the next. The logical structure of ideas is thus different from the group (associative) flow of ideas”.

“A text is a complex structure in which all the elements are closely interconnected and represent nominative-aesthetic information from the author's point of view, directed to a specific goal”.

The most common feature of metaphors, expressions, and figurative meanings that indirectly reflect reality is the meaningful text of emotional expression. They are “texts designed to express a person's inner feelings, his attitude to reality with a certain pathos”.

Analyzing the above points, we see that the integral connection of thought and language, consistency, text, a common feature of the indirect reflection of reality - the goal and conformity to it. From this it can be concluded that if the expression in the language corresponds to the intended purpose, the organic logical connection of thinking and language is ensured, if the ideas and comments in the text follow the intended purpose, the sequence is followed. Hence, the expression in the language must correspond to its intended purpose.

It is clear that the reality reflected in thinking does not manifest itself directly in language, but stems from a set goal. Hence, A must be the same A as it is in the reflection of reality in thought, in the purpose from which it arises, and in its expression and interpretation in language. The law of identity, which ensures clarity, controls A in interpretation and A in interpretation. Target A and language A are not under his control. The relationship between them is reflected in the demand that the expression in language should be consistent with its intended purpose. This requirement represents purposefulness, proportionality. Let us call it the law of proportionality.

Now we take the antithesis to test the validity or falsity of the thesis we are proposing, and try to prove it: the expression in language does not have to fit the purpose for which it is intended. The falsity of this thesis and the futility of trying to prove it are thus apparent. That probably means we're on the right track.

At this point, the question arises as to whether the proposed law of proportionality can explain the indirect reflection of reality and what it will look like. Indirect reflection of reality arises from the set goal. In this case, reality A is explained by reality B.

That is, if reality is A in the reflection of reality in thought, and it is intended to express it through reality B, then it must be in the same way as B (A) in both language expression and interpretation. A change in any of them leads to a violation of either the law of identity or the law of proportionality. To be more precise, the law of proportion is violated if it is changed in the expression of the language, and the law of identity is violated if it is changed in the interpretation.

Let us now turn to the question of the inextricable link between thought and language, the text, the indirect reflection of reality, and the question of coherence, which is a necessary condition for any other thought process. Consistency "In the process of knowing and exchanging ideas, the general legitimacy of the whole logical process in the structure, change (development) of ideas is the origin of ideas necessary, purposeful - from one to another, from one to the next." It is clear from this that the appropriateness of the expression in language to its intended purpose is one aspect of the logical process (sequence) and the other aspect is the "origin of ideas and considerations from one to another, from another to the next." This means that each logical element in the process of expression must complement what came before it, and conditionally demand what came after it. In my opinion, it is not necessary to consider the antithesis for verification. After all, "the logical structure of ideas differs from the group (associative) flow of ideas".

### **The law of proportionality**

According to this law, an expression in a language must correspond to its intended purpose, and each logical element in the process of expression must complement what came before it, and conditionally demand that it come after it.

The requirements of this law, as well as the law of identity, seem to be "very simple", "just a little attention", and only young children can go astray and address their father as "mother" and their mother as "father". However, we do not always comply with these requirements of the law of proportionality. Let's look at examples. First of all, let's look at some examples where the requirement that an expression in a language should be appropriate to its intended purpose is violated: a) "If I die, I'll cure you" (from the song), in fact, means "I'll cure you even if I die." b) "I will not weep, even if my tears fill the rivers" (from the song). It cannot be called a metaphor, an exaggeration, or an analogy. In fact, he wants to say, "I won't cry, even if my tears are like rivers." The reason is that tears do not fill the river. If his tears meant that the rivers were full, then there is no need to say "I will not cry." c) In another song, when the purpose is to sing the uniqueness of the night, the characteristics of the "night butterflies" are sung: "Half-moon nights come, how many talk, leave the song to me, brothers."

Let us now consider even more serious examples. The laws of authenticity, nepotism, the third exception, and sufficiency, which we call the "general laws of logical reasoning," are called the "basic laws of right reasoning" in many literatures. Here, too, we can see that the expression in the language does not correspond to its intended purpose. The reason is, first, that the concept of "right thinking" is a broad concept, not just the science of logic. Second, the concept of "fundamental law" is used only when other laws are derived from them. For example, the Constitution is the basic law. Other laws in the science of logic, on the other hand, do not derive from the laws enumerated, but are required to be followed unconditionally in any process of

thinking. Accordingly, it would be logically correct if they were called “general laws of logical reasoning” rather than “basic laws of right thinking”.

Another example: "Literature - the art of words." This definition does not reveal the essence of the literature. Literature "creates an image through words and is therefore called the art of words." Can the tool serve as a definition? So why don't we call music the art of music and painting the art of painting? Such a description of literature does not conform to the rule of description either, for the use of the word at the level of art is not the sole essence, not the sole purpose, of literature.

Although the content of the examples given is different, the form is the same - the expression in the language does not correspond to its intended purpose, that is, A takes the form B in the expression in the language, retaining its A league, both in the reflection of reality and in the purpose derived from it.

It should be noted that the inadequacy of the expression in the language itself is often misunderstood. However, sometimes the full observance of this requirement, that is, the conformity of the expression in the language to its intended purpose, leads to a violation of the law of identity and other laws of logic. The reason is that this situation depends on how the goal is set, and the goal is subjective. For example, in sophistry, various wrong methods are used to deceive and distract the interlocutor. In this case, either the concept or thesis, or the context can be replaced, and so on. In this case, reality A is interpreted as reality for both the intended purpose and the expression in language. However, it should not be concluded that the observance of the law of proportionality violates the law of identity, which means that the objectivity and reality of this law are in doubt. The reason is that both laws - the laws of identity and proportion - are one thing - they serve to reflect reality. However, their approach is different: the law of identity represents a direct reflection of reality; the law of proportion does not deny the direct reflection of reality, but allows it to be reflected indirectly, the law of identity does not allow such a possibility. Therefore, it is necessary to understand this situation in the same sense, that is, just as the observance of the law of proportionality in some cases leads to a violation of the law of equality, so the observance of the law of equality in some cases leads to a violation of the law of proportionality. For example, if the indirectly reflected reality is analyzed on the basis of the law of identity, "thinking loses its creativity."

Now, the second requirement of the law of proportionality is that each logical element in the process of expression must complement what came before it, and then conditionally demand what came after it. At this point, the question may arise as to why, first of all, the starting point now relies on the next logical element, not the first logical element. This is because the requirement of the law of proportionality that the expression in a language must correspond to its intended purpose determines the starting point of any expression in the language and the whole state of the whole process of expression. The internal structure of this process is reflected in the requirement of this law that each logical element in the process of expression must complement what came before it, and conditionally demand what came after it.

When it comes to the question of why it is "conditionally necessary" rather than "necessary", the point is that the next element that a logical element requires is not just one. That is, it can say B1 or B2 and so on, not “A should say B”. Formula: A should say B1 or B2 or B3 ... Bn. Therefore, it is called "conditional" because of the possibility of choice.

This requirement of the law of proportionality requires meticulousness, serious attention, and a statement of considerations as the course of events. However, this requirement is not always met:

In one of the articles in the collection of materials of one of the scientific-theoretical conferences we read the following sentences:

“Primary education plays an important role in the system of continuing education. Today, the importance of general secondary schools plays an important role as a preliminary stage of continuing education. Therefore, the importance of teaching each subject separately is growing. ”

Note that the first consideration is about primary education, the second about general secondary education, and the third about science.

Let us now turn our attention to another aspect of the law of proportionality. The point is that the idea being expressed, that the comments are in line with the intended purpose and complement each other, does not yet mean that the requirements of this law have been fully complied with. The reason is that the law requires "every logical element." This implies the need to pay attention to every concept and link in ideas and feedback, as well as to the construction of ideas and feedback. Otherwise, the feedback given will be difficult to understand. Example: "The function of the posterior, longitudinal, and midbrain centers of motor neurons that provide muscle movement is controlled by nerve cells located in the anterior central hemisphere of the cerebral cortex - the higher nerve centers of motion." If this text were written in accordance with the requirements of the law of proportionality, it would be much easier to understand: “Muscle movement is provided by motoneurons. The centers of motoneurons are located in the posterior, medulla, and midbrain. The function of these centers is controlled by nerve cells located in the anterior central hemisphere of the cerebral cortex - the higher nerve centers of motion.

Thus, the following conclusion can be drawn about the importance of the proposed law of proportionality:

First, it demonstrates the logical aspects of the organic connection of thought and language. Second, it serves clarity of thought. Third, it fully reflects the logical sequence. Fourth, it shows the logical basis for the indirect reflection of reality. Fifth, it describes the logical technology of text creation. Sixth, it allows a holistic logical analysis of the text. Seventh, it serves as a methodological basis in the learning process.

## TRANSLITERATION

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DOI: **10.5958/2249-7137.2020.00743.0**

## LINGUISTIC FEATURES OF TERMS RELATED TO THE CULTURE OF INTERETHNIC COMMUNICATION IN THE FIELD OF TOURISM ON THE EXAMPLE OF UZBEK AND ENGLISH LANGUAGES

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### ABSTRACT

*International tourism, as one of the biggest and the most dynamic industries in the world, inevitably influences all the aspects of social life, including language. The development of international tourism has given rise to increase in professional communication in the field. The common parties of communication process in tourism are tourism professionals, tourists and local population "tourees" (Dann, 2012). The communication process itself can take place between all the parties in different combinations. The present investigation seeks to address only the written form of tourist communication. The latter includes communication between incoming and outgoing travel intermediaries. However, communication between industry professionals/ tourists and tourees lies beyond the scope of the present research. It is by all means interesting topic for further research, but contains little terminology. Furthermore, this topic is more relevant for the investigation of intercultural aspects of translation process of tourist texts. The large number of tourism terms is continually coined, increasing scientific interest in the questions of translating tourist terminology into different languages.*

**KEYWORDS:** *Tourist Texts, Tourism Terminology Description, Including Destination Description, Countries, Areas, Regions, Vacation Descriptions, Beach Vacation, Sightseeing Holiday, Tour Description, Cruise, Excursion.*

## 1. INTRODUCTION

The present research aims at investigating tourist terms found in different types of tourist texts. By tourist texts we mean all types of written address to tourist or tourist professionals be it a brochure, a leaflet, a price-list, or a catalog. The present paper makes an attempt to analyze the language of tourism used to create a tourist text and particularly tourism terminology used in the process.

Here we address the question of defining the degree of specialization of language of tourism, mentioned in the works of different researchers (Agorni, 2012; Muñoz, 2012; Calvi, 2005 to mention but few). We make an attempt to classify the degree of specialization by means of discriminating between different types of tourist texts starting with those describing the destination (country, region, resort etc) through the texts, aimed at providing detailed information, to the professional-oriented tourist texts (price lists, newsletters, special offers etc). The term density of different types of tourist texts will be calculated and compared. Part of the research deals with the division of abbreviations into categories according to their function and gives general review of the approaches to acronym translation. Almost everybody at least once in their lives has encountered tourism-related acronyms (e.g. in tickets, bookings, reservations, advertisements). Nevertheless, there is no, to the best of our knowledge, comprehensive investigation into the subject of translating tourist abbreviations. This is an important issue for future research which is already underway.

## 2. LITERATURE REVIEW.

A recent review of the literature on the topic of translating tourist texts as the type of specialized discourse has found that there is a considerable amount of literature on translating specialized texts. Eugene Nida (1964), Peter Newmark (1993) have made thorough research into translation of different types of specialized discourse.

The study of terminology by Juan Sager (2001), M. Teresa Cabré (2010), Márta Fischer (2010) and others provide an in-depth studies and background information pertaining to terms and their translation.

Peter New mark (1993), Alan Duff (1981), Mary Snell-Hornby (1999) make rather negative comments regarding the quality of translation in the tourism sector of economy. Patrizia Pierini (2007) investigates the quality of translation of online tourist texts and makes some suggestions concerning approaches to translating tourist texts. Dorothy Kelly (1997) deals with some constraints the translator of the tourist literature is challenged with. She emphasizes the need to professionalize the translation process in the sector of international tourism. Gloria Cappelli (2006) devotes a number of her works to different aspects of tourism texts and their translation. She investigates inter alia the degree of specialization of tourism discourse and translation of tourism-related websites.

Mirella Agorni (2012), Elena Manca (2004), Isabel Durán Muñoz (2012), He Sanning (2010), have carried out a number of investigations into different dimensions of translating tourist texts and the language of tourism. He Sanning (2010) suggested the new strategy for translation of tourist texts, the neutralizing strategy, as opposed to domesticating and foreignising strategies.

Graham M.S.Dann has carefully investigated the language of tourism and the way it helps to “convert...[tourists] from potential into actual clients” (Dann, 1996,2). The scholars from

different countries (M.Gotti, 2006; M.G.Nigro, 2006; R.Mocini, 2005 to name but some) have carefully investigated and proved that the language of tourism can indeed be considered as the specialized discourse.

Few researchers have addressed the issue of tourism terminology (N.Ivanova, O.Maslennikova, 2013). A number of studies have been published on the question of translating tourism terms with a few lines devoted to tourism abbreviations (G. Denisova, A. Drozd, R. Romanovich, 2011).

However, there is still a need for the careful investigation into the types of tourist terms, degree of their specialization and means of their translation. Moreover, the specific area of tourist acronyms and means of their translation has been overlooked in the previous studies.

### 3. METHODS.

In order to investigate the degree of specialization of language of tourism in different kinds of tourism-related texts, the total number 150 tourist texts were analyzed. For our research we used English tourist texts and their Ukrainian or Russian translations. As mentioned before, by tourist texts we understand any type of written tourism-oriented material aimed at describing, informing, or otherwise promoting travel product through print or web-based media. It can be an information booklet, hotel brochure, excursion itinerary, travel guide, terms of booking, reservation system including all but not limited to above.

In the first part of our empirical investigation we compare term density of three kinds of tourist texts: destination/ tour descriptions, hotel/ tour/ cruise information and professional tourist material. The latter comprises price-lists, itinerary details, agreements, reservations requests and reservation systems etc. We calculate the term density (Taylor, 1998:38) of the above texts in two stages. Firstly, we use the open online tool Textalyser to calculate the lexical density of an English text and open online tool Advego to analyze Russian and Ukrainian texts. Unfortunately, the latter resource does not calculate the lexical density automatically. The analysis results are used to calculate the lexical density with the help of the formula  $Ld = (Ndw/Nw) * 100$ , where  $Ld$  is the lexical density,  $Ndw$  – the number of different words and  $Nw$  is the number of words. Furthermore, we used the lexical density rates to calculate term density by means of the adopted formula  $Td = (Nterm/Nw) * 100$ , where  $Td$  is the term density of the analyzed text,  $Nterm$  is the number of terms in the text and  $Nw$  is the total number of words in the analyzed text. By this we attempt to prove that the more professional-oriented text is the higher term density would be. Thus we hope to confirm our hypothesis that the degree of specialization of tourist texts depends on the target reader. In the next stage we compare the results of the calculation of English and Ukrainian/ Russian tourist text to find out the difference in term density in different languages, if any.

In the second phase of our investigation we examine methods, used for translation of English tourist terms into Ukrainian or Russian. To create parallel terminology corpus in English, Ukrainian and Russian, the open resource corpus analyzer CATMA 4 is used.

Tourist terms are first divided into groups, based on the area of their usage. In this phase we try to confirm our second hypothesis that the strategy of terms translation depends on the target reader i.e. tourist or professional.

In the third phase of our research we make an attempt to assess the quality of tourist terminology translation. We analyze mistakes, encountered in target tourist texts, roughly dividing them into grave and easy. For the purpose of this paper we consider grave mistakes as those which lead to the breakdown in communication (D.Kelly, 1997) and easy as those which lessen the communicative effect. The criteria for their assessment are based on K.Reiss' text typology (Reiss, 1971) and P.Newmark's categorization of translation mistakes (Newmark, 1993).

Finally, we examine the possibilities for standardization of tourist terminology: motivation, benefits, and limitations.

#### **4. RESULTS AND DISCUSSION.**

To evaluate the degree of specialization of different types of tourist texts the total of 150 tourist texts were analyzed, English text as the source text and Ukrainian/ Russian text as the target one. The texts were divided into 3 main types, 50 texts in each type:

- description (tourist texts, giving general descriptions of a destination, a sight, type of holiday, including destination description, e.g. countries, areas, regions; vacation descriptions, e.g. beach vacation, sightseeing holiday; tour description, e.g. cruise, excursion)
- information (tourist texts, giving practical information on facilities, appliances and services used and offered, including hotel descriptions, cruise ship descriptions, excursion itinerary, terms and conditions of service, visa and documents information etc)
- professional communication (tourist texts, used to communicate information between tourism professionals, including price lists, application forms, reservation systems, ticketing terms and conditions, booking manuals etc)

The analysis reveals that lexical density rate drops in more professional-oriented texts whereas term density rate increases with the degree of professionalization. Some source texts of the 3rd type had the term density rate of about 96%. Some difference was also observed in term density rate between source and target texts of all types. Further analysis showed that the discrepancy has mainly occurred due to the fact that target texts had significantly larger number of words. The difference in language structure rather than the lack of appropriate translation of tourist terminology made for the divergence. The question of translation of tourist terminology remains nevertheless uninvestigated at this stage of the research.

As expected, our analysis proved that the tourist texts, created to convey the information between industry professionals, contain more terminology and less general lexis than those created for the purpose of convincing or informing tourists.

International traveling progress shows no signs of slowing down and consequently supply and demand development and creation of new terminology proceeds rapidly. Hence the need for the standardization of tourism terminology raises new questions and creates new challenges. Christopher Taylor states that "standardization procedures are still being refined and are still far from complete" (Taylor, 1998,37). Juan C.Sager considers the standardization to be a two-step process consisting of "a) unifying and fixing each referent, and b) unifying and standardizing its designation" (Sager, 2001,255). Being far from transcendental idea of immediate consolidation of translators, tourism professionals and tourists we still want to raise the question of standardization of tourism terminology. As was mentioned above (cf. 4.2) there exists

considerable discrepancy in the concepts of some tourist terms. Tourists, booking a 5-star hotel abroad cannot be completely positive about its '5-starness'. One country's 5-star hotel is the other country's 3-star hotel. The common question of a tourist's traveling experience and background knowledge of facilities, that travel agent asks before dealing with holiday arrangements raises "security and safety considerations" (Sager, 2001,255). Additional comments are often added to relate the linguistic form and the corresponding concept of some tourism terms. Hence the motivation is substantiated for raising the level of appropriateness between the term and the concept when dealing with tourism terminology.

The benefits of the standardization process can immediately be revealed through the raising quality of translation in the industry of tourism. Standard terms can help translators recreate the communicative effect of a source text in a target text. There will be no need for clumsy glosses supposed to explain to a reader the exact concept of tourist dentate. Thus the higher level of precision can be achieved and all the misunderstandings avoided.

However, we do understand all the limitations for the process. The global nature of tourism itself points at the biggest limitation to standardization probability. Furthermore, the rapid development of international traveling creates new concepts and influences term formation. Still, further investigations into tourism terminology can add to the future opportunities to unify all the referents and designations in the industry of tourism.

Our work made an attempt to prove that the level of term density of tourist texts is receiver-dependent, future research could lead to higher generalization of our results. Besides, our work left behind the relevant question of the practice of acronyms formation and usage in tourism. Moreover, the methods of translation of tourism abbreviations leave much space for further investigations.

The results of our study seem to show that the translation of tourism terminology is likewise reader-dependent. The preliminary analysis of translation mistakes shows that much is left to be desired by means of translation quality. Further investigations can determine the correlation between proper and improper translation of tourist terms.

## 5. CONCLUSIONS.

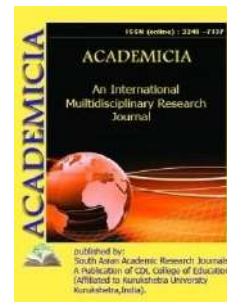
Our work has led us to conclude that the term density of tourist texts increases with the degree of specialization of a text. The text, used for professional communication between tourism specialists can be unintelligible for the common tourist. Thus, the tourist texts with high level of term density are neutralized when translating for the tourist, whereas professional-oriented target texts retain the high level of term density if compared to the source text. In general, therefore, it seems that the quality of tourism translation is largely influenced by the means of translating tourism terminology. Abbreviations in tourism texts and strategies for their translation need further investigations outside this paper. The paper gives the comprehensive review of means and ways of tourism terminology translation and can add to the future process of achieving generally accepted standards for using, creating and translating tourism terminology. The possibility of creating the universal standards for forming multilingual corpus in the filed of specialized tourism discourse lies in the hands of future researchers into the subject.



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DOI: **10.5958/2249-7137.2020.00744.2**

## RELIGIOSITY AND SECULARISM: INTERPRETATIONS AND CATEGORY ANALYSIS

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### ABSTRACT

*In the modern world, the principles of secular society dominate, on the one hand, and on the other, the process of the initial revival of religious consciousness, one of the ancient sources of popular culture. That is why religion has become a social institution on the agenda of many issues related to the role and status of modern society. In this sense, a thorough scientific analysis of the categories of “religiosity” and “secular”, which for a long time were mutually opposed, shows the relevance of the subject. The article explores the terms “religiosity” and “secularism” from the point of view of history and logic: commented on the lexical meaning of the word, its comparative and critical analysis of the definitions of different authors. Particular attention is paid to the analysis of the views of modern philosophers on this issue, the analysis of theoretical views proposed by various academic schools. General and specific aspects of the description and approach are highlighted, the author’s own views on them are described and definitions of the concept of “secularization” and “religious” are developed. Based on recent studies, general theoretical conclusions are given.*

**KEYWORDS:** Religiosity, Secularism, Rationalism, Irrationalism, Harmony, Religious Consciousness, Secular Identity, Social Welfare, Social Decline.

## I. INTRODUCTION

Historically, issues of religiosity and secular society, their relationship, have been interpreted on the basis of different interpretations, sometimes they have been viewed as mutually exclusive principles. These issues are especially important in today's society, which is on the path of democratic development. In particular, President Sh. Mirziyoyev emphasized the harmony of our religious and national values: "We cherish our sacred religion as an embodiment of our eternal values" (Mirziyoyev M., 2017: 3). Indeed, the balanced relationship between the two spheres is a matter directly related to the present and future of the political-economic, spiritual-spiritual sphere.

Many issues concerning the place, position and importance of religion in a secular society have not been resolved, although there is legislation on religious freedom. From this point of view, the definition of the content of the concepts of "religiosity" and "secularism", the systematic study of events and phenomena associated with them is of both theoretical and practical importance.

## II. LITERATURE REVIEW

In researching this topic, dictionaries and encyclopedias on philosophy, dissertations and monographs that are directly related to the subject have been widely used, published in English, Russian and Uzbek in recent years. Especially written in English Stanford Encyclopedia of Philosophy / Ed. Edward N. Zalta. – Stanford: Stanford Press, 2007; Encyclopedia of philosophy / Ed. Donald M. Borchert. — 2nd ed. — New York: Thomson Gale, 2006; Edward C. Routledge Encyclopedia of Philosophy. — London: Routledge, as well as the following publications in Russian and Uzbek were widely used: M.A. Maslina. Encyclopedia of russian philosophy. — Moscow, 2007; Philosophical encyclopedia / Nazarov Q. and others. - T.: Publishing House of the National Society of Philosophers of Uzbekistan, 2004. In addition, the 2005 encyclopedia of Religion, edited by L. Jones, was widely used.

## III. MATERIALS AND METHODS

In the study of the topic, the method of comparative analysis of the etymology, definition, brief history of both categories and their interpretations and interpretations by experts was used.

Moreover, along with a critical analysis of the modern views of Eastern and Western scholars on the harmony of secularism and religion, the author's personal conclusions are based on evidence. In this regard, Farah's monograph "Secularization and Religion" and T. Assad's research "Formation of the secular: Christianity, Islam, modernity" served as a methodological source. The article provides a paradigmatic analysis of the categories of secularism and religiosity based on the above sources. In addition, a critical analysis of the moral-creator socioeconomic hypothesis and the secular-democratic socioeconomic hypothesis put forward by G. Paul's article in the journal Evolutionary Psychology.

## IV. RESULT AND DISCUSSION

The main reason for studying the concept of "religion" in the twentieth century was due to the spread of the theory of secularism. Although this term is currently used in many fields of knowledge, in the literature there is no consensus on its content. The term is also not defined in encyclopedias and annotated dictionaries of philosophy published in English and Russian (Edward C., 1998: 8680, Gritsianov A., 2001: 1312, Zalta N., 2007: 6151, Maslina., 2007: 736,

M Stepin V., 2010: 696). The definition of this term can be observed only in research in the field of sociology and religion. In particular, S.A. Kravchenko gives the following definitions: "Religion - 1) is a characteristic feature of the mind and behavior of individuals, which reflects their belief in mythical and divine things. 2) According to G. Simmel, religiosity is a form of social relations that arises due to the relationship between the interpersonal god "(Kravchenko S., 2004: 351).

E.D. Rutkevich defines the term as follows: "Religion is a quality of an individual and a group, which is the belief in, worshiping, or believing in supernatural forces on objects and objects that are considered sacred, and which is involved in behavior and actions in religious and non-religious spheres. reflects "(Osipov G., Moskvichev L., 2014: 389). Also, N. Darren also defines the term "religion" in this context (Darren E., 2015: 390).

This concept expresses the interdependence of religion and certain social subjects, reflecting the complex qualitative characteristics of religion. If the concept of "religion" is considered a specific type of social relations and institutions within a holistic social system or a special form of social consciousness, then the term "religion" refers to the religious influence on the consciousness and behavior of the individual, as well as social and demographic groups. In this sense, religiosity refers to a particular state of an individual, group, or community that believes in supernatural forces. V., who conducted research on this issue. I. Garadja, D. M. Ugrinovich and I. N. The Yablokovs considered religiosity to be a reflection of the social quality of an individual or group, religious consciousness, religious morality, and religious relations.

We believe that if we evaluate religiosity as a product of social change and new religious movements, the long history of this concept will be overlooked. It should be noted that religiosity has always had its influence to one degree or another, regardless of the beliefs of each person. In this sense, religiosity is, in essence, a key feature of the human personality that determines many aspects of a person's activities.

B.Holdcroft explains the term as follows: "Religion is a complex concept that is difficult to define for at least two reasons. The first reason is due to its vague and imperfect feature in English. The word religion has synonyms such as religiosity, orthodoxy, faith, belief, piousness, devotion, holiness. The second reason is that the principle of religiosity is the subject of research in several disciplines, each of which has its own interpretation of the subject "(Holdcroft B., 2006: 196). Another synonym for this term is defined in the Encyclopedia of Religion as follows: The term "religion" is often used to mean "sacred." Some sources state that the word is etymologically derived from the Latin word "sacrum," meaning belief in gods and their power, and was later used in the sense of baptizing people in remembrance of the gods (Jones L. 2005: 7964). Although words denoting religiosity in different languages have several meanings, it is appropriate here to refer to the definition of a word that is antonymous in content to the term secularism.

In our opinion, "religion" is the manifestation of the cultural and social life, behavior, values, relationships and other behaviors of social subjects, as well as the teaching, guidance and is a concept that implies a relatively stable reflection of instructions.

We must also dwell on the term 'secularism', which is the second part of the subject. The term "secularism" is defined in the Uzbek dictionary as a word that refers to the real, material world, life, the meaning of life (Madvaliev A., 2006: 644).

D.Bayaliev explains this concept as follows: "Secular ideology refers to the world and human life not by the divine power beyond and above it, but by the single reality of the material world in which it lives, in which ideals, values, based on rational logical thinking and experience, a set of ideas and views " The scholar's view that secularism is based on logical reasoning is debatable. Indeed, among secular ideologies there are also irrational, irrational, illogical ideas and views that are not related to religion. As a proof of our opinion, it is expedient to cite ideologies that lead to political-economic, socio-cultural and spiritual-psychological decline, such as anarchism, antagonism, amoraism, apathy, totalitarianism, chauvinism, which are devoid of religious beliefs.

G. Demidov defines this term as follows: "Secularism is a comprehensive rule that is critical of any religion and does not criticize itself. In this process, the center of gravity always favors the so-called "secular" worldview. Therefore, any reality that enters the gravitational field of secularism is constantly undergoing transformation "(Demidov G., 2016: 395). The scholar views secularism as contradictory to religiosity and emphasizes that secularism is a priority in all areas. In our view, secularism has largely limited the influence of religious institutions in the political, economic, and scientific spheres, but has not completely replaced religion in other spheres. Also, secularism does not constitute a conflict with religion, and it manifests itself as a reality related to religious beliefs due to its nature. In this sense, secularism, like other principles, is not a perfect principle without criticism.

Ch. Taylor, in contrast to others, connects this concept with Western Christian culture: "Secularism is inherent in traditional Christian culture, and there is no analogue in Islam. Therefore, the Muslim society cannot adapt to the secular order "(Taylor Ch., 2015: 221). Undoubtedly, the process of secularization first occurred in the Western Christian world. However, this process, like other regions, affected the Muslim world in the East.

S. Farax connects the concept of secularism with the history of enlightenment rationalism. He recalls that in the New Age there was a growing tendency in Western Europe to recognize all reasonable events as reality, and that proponents of such a view argued that there was nothing outside of nature. The scientist writes about this situation: "In the first stage of rational thinking, the connection with metaphysics was completely severed. Most philosophers did not deal with matters of morality and theology. In the following period, the followers of enlightenment, positivism, scientism, atheism created a new god to replace the religious consciousness. The deity of the representatives of this line is thought and science, and the term "secularism", based on secular consciousness, "excluded all religious beliefs from the field of science" (Farah S., 2008: 72). Although Farax's views on the historical development of secularism are consistent, his views on the replacement of the traditional divine phenomenon with science are debatable.

T.Asad emphasizes that these two concepts are not rigid, they are due to a historical process and depend on the formation of the modern situation. In his view, secularism is a category that combines morality, knowledge, and emotion in modern social life (Asad T., 2003: 25). Unlike many experts, he does not contrast secularism with religiosity and views religion as a social necessity related to the characteristics of time and space.

When we look at the definitions of this term, we see that there are three main interpretations of it from a socio-philosophical point of view:

According to the first interpretation, secularism is opposed to religiosity through overt or covert ideas. The firm rejection of religiosity and its full support for secularism as an alternative is a distinctive feature of this type of interpretation. This interpretation has been observed since the time when secular culture, which emerged under the influence of the process of secularization, began to take precedence. In the recent past, the former Soviet Union's widespread application of atheism to society and "whoever is not with us is against us" (as quoted by V.I. Lenin in his April 11, 1919 speech at the UN General Assembly) as an example. In fact, secularism does not deny religiosity and views it as a social phenomenon.

The second interpretation reflects secularism as irreligion. In this case, the concept of "secularism" is interpreted more lightly and broadly, and even if there is no question of a firm rejection of religion, it maintains a certain distance from it. This type of interpretation is a peculiar liberal form of secularism in a secular position. According to this interpretation, secularism should not have a religious meaning.

According to the third interpretation, the concept of "secularism" is not expressed as an anti-religious approach. This type of interpretation of the principle of secularism is relatively broad and ideologically neutral, but differs in its sharpness from a philosophical point of view. According to this interpretation, the secular origin is a non-religious reality. At the same time, the issue is not with the subject's denial or objective denial of religiosity, but with how positive it is in terms of secularism. This definition gave rise to a separate objective philosophical-scientific approach to the question of secularism and religiosity.

In our view, it is expedient to promote an interpretation of secularism in broad and narrow senses. In a broad sense, secularism is everything that is inherent in the existence of a real society, events, processes and features of their existence, while in the narrow sense, this concept exists without the influence of religion and religious views, formed and developed on the basis of its own internal laws. reflects all aspects.

It should be noted that, according to the broad interpretation, religiosity is also understood as an integral part of secularism, and this is also consistent with the essence of religion as a social institution. After all, people who rely on a religious worldview have their own content and form only in the context of a secular worldview with such an interpretation. Simply put, the importance of religion cannot be imagined without the world.

At the same time, "secularism" as a concept has a political and legal meaning, implying the protection of a pluralistic worldview by the state without special privileges to certain religious teachings. According to the principle of rationalism, the fact that ideas and views are inherently rational or irrational does not serve as a criterion for secularism.

Since the concepts of religiosity and secularism have long been interpreted as opposing principles, two views are often observed on this issue. On the one hand, the clergy argue that religious beliefs promote high morals, ideas about the existence of punishment for sin will be a mechanism to ensure the well-being of society, such as reducing crime and corruption, economic development. On the other hand, most researchers argue that the prudent policy of the secular authorities is more important in the development of society than the mass increase in the level of religiosity of the population.



Research shows that there is no consensus among sociologists on the positive or negative significance of religion in modern highly developed society. It should be noted that a large-scale study of this issue has been hampered by some political and ethical factors. It should be noted that some political and ethical views have hindered the comprehensive study of this issue. Paul's 2009 article in the journal *Evolutionary Psychology* partially filled this gap. In his study, he presented the results of a comprehensive international analysis conducted to examine two alternative hypotheses about the impact of mass religiosity on the well-being of society. The first hypothesis is called the "moral-creative, socio-economic hypothesis" (the moral-creator socioeconomic hypothesis), which states that mass belief in a god or gods, indifference to the issue of morality has a positive effect on the welfare of society. The second hypothesis, called the "secular-democratic socioeconomic hypothesis", on the contrary, considers modern religions to be a negative factor hindering the growth of social welfare in modern developed societies.

G. Paul conducted his research based on the analysis of a number of indicators of 17 developed democracies, whose international databases and reports are relatively complete. The study compiled a list based on a sequence of low-performing countries from countries with high levels of religion: USA, Ireland, Italy, Austria, Switzerland, Spain, Canada, New Zealand, Australia, the Netherlands, Norway, England, Germany, France, Denmark, Japan, Sweden.

He assessed the well-being of the society on the basis of the following 25 socio-economic indicators: murder, suicide (suicide among young people studied separately), child mortality, life expectancy, cases of speech and trauma (adolescents with this disease studied separately), the number of abortions among minors, the birth rate of women between the ages of 15-17, the number of marriages and divorces, alcohol consumption, life expectancy, per capita income, imbalances in property, poverty, corruption, unemployment, society degree of heterogeneity, number of migrants and environmental status and other indicators (Paul G., 2009: 441). The article provides a detailed analysis of the relationship between these indicators in the countries surveyed. The study concluded that the higher the level of religiosity among the population, the lower the level of social welfare. In his view, religiosity is a relatively shallow, flexible, and changing psychological mechanism that helps to overcome stress and anxiety in societies with low levels of socio-economic stability and protection. He also sees the mass renunciation of the "Creator-God" as a natural human response to the improvement of living conditions.

In our opinion, it is not expedient to compare these two categories. First, while religion is an important part of the spiritual life of man and society, it cannot be a direct determinant of material well-being, and religiosity is not the only cause and source of a nation's cultural development. Second, secularization is not a hypothesis that needs to be defined, but a process that is clearly manifested and confirmed in the socio-cultural sphere.

Although the main criterion of secularism is freedom, the main focus in this issue is on universally recognized international standards of human rights and freedoms, democratic principles and secular education. It is a guarantee of the independent activity of secular society institutions and religious organizations with a neutral approach to different worldviews and a legal basis. In this sense, secular society does not allow the absolutization of ideologies of a particular religion or atheistic nature and so on. At the same time, religiosity, as an integral part of secularism, requires adaptation to its criteria.



Therefore, in the democratic processes taking place in the world, the socio-political activity of various religious organizations is increasing, and the quality of the value system, which represents the common interests of mankind, is trying to manifest itself. In particular, since the middle of the twentieth century, the leaders of Christianity, Islam and Buddhism, the world's religions, have signed a number of documents stating that democracy, the constitutional state, secular education, human rights and freedom of conscience do not contradict their beliefs. This indicates that religious teachings strive for mutual harmony as a result of conformity to the principles of secularism.

## V. CONCLUSION

**First**, secularism and religiosity are not contradictory concepts. In this sense, it is inappropriate to compare the two concepts and generalize one of them. After all, they are a different way of looking at the essence of human life, and the object of both is one - human life.

**Second**, pluralism has played an important role in the human worldview as a basic criterion of the principle of secularism, human rights, aimed at ensuring human dignity, and its perception of itself as a free independent entity. There are two mechanisms that drive these principles, the first is to separate the state from the religious organization, and the second is to ensure the neutrality of the state towards religions.

**Third**, if true secularism continues to be open to debate, if it develops on the basis of respect for different moral values, it becomes a universal social ideology. It is also possible to evaluate the secular approach towards enlightenment, which follows the universal moral norms in accordance with science, as the most advanced and creative.

**Fourth**, the complex dialectic of religiosity and secularism is of particular importance to both sides. These two views have their own objective and subjective factors, as well as the characteristics of space and time. There is a huge socio-cultural potential in religious teachings. It is necessary to strive for their harmony through the effective and creative use of this potential in the reform of the spiritual and moral sphere, in strict adherence to the rules and norms of secular society.

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DOI: **10.5958/2249-7137.2020.00745.4**

## KNOWLEDGE, PRACTICE AND SCIENTIST

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### ABSTRACT

*The article analyzes the views of mystic theorist Muhammad Porso on science, practice and scientists. He is impatient, but he is unconscious and stunned. For example, a blind mouse does not see during the day, his eyes are weak. It can't stand the sun. If he is exposed to a small amount of sunlight at night, he can see through it. This is not to say that things are visible at night, but they are visible during the day. His eyes are weak. In doing so, first of all, the pursuit of science, the purpose of the study of science, is not only to satisfy material interests or personal ambitions, but also to satisfy spiritual needs. The apparent sciences are useful sciences that the companions derived from the words and deeds of the prophet. Tobains and predecessor scholars followed them.*

**KEYWORDS:** *Science, Means, Quality, Enlightenment, Action, Experience, Martyrdom, Commentary, Hadith, Sunnah, Fard, External Science, Internal Science, Scholar, Ignorant*

### INTRODUCTION

According to Muhammad Porso, the beginning of science is wisdom. The condition of science must be with danger and fear. The more knowledge a person has, the greater the danger and fear. Because man works with that knowledge, turning it into a tool. Instead of turning science into a means of amassing wealth, gaining prestige, or acquiring beautiful blessing, he will have to use it with awareness of the meaning of his life and the means of the hereafter. Knowledge is the legacy of the prophets and is divided into external and internal sciences. The apparent sciences are useful sciences that the companions derived from the words and deeds of the prophet. Tobains and predecessor scholars followed them. They read, studied, and followed it. They learned from the science of the Qur'an, the Sunnah, the Tafsir, axbor va osor, fiqh and other following sciences. The science of Botin is the science of knowing those meanings. Muhammad Porso in "Fasl al-Khitab" said, "Know that knowledge is the greatest means. It is to be close to

God and his attribute. You can reach great heights through the means and means of knowledge” [1.47.], - he emphasizes.

According to Muhammad Porso, the usefulness of science is that when it is used. The science of Shari’ah is useless if it is not dealt with. Even if it is useful in its place. There is The science of the stars, fortune-telling and various sciences, with which it is impossible to know the science of enlightenment, the truth. Indeed, the knowledge of God(Allah) is not formed by reading or narrating. Avoiding the calamities of useless science depends on the sincerity of intention. The lessons taught, the fatwas issued, and the debates should serve goodness, happiness in the Hereafter, and closeness to the Truth. It is necessary to spread knowledge, to explain the Shari’ah, to protect the religion, to protect science from pollution of greed and covetousness, and this is the reason for the destruction of scholars.

In his “Fasl al-Khitab”, Muhammad Porso wrote about the scholars of his time, and wrote about their virtues as well as their flaws.

*Content translation ( N.B.)*

The dirham caught the greed of the scholars.

This humiliation does not come to them from the liars.

My life was over with grief.

This deadly greed does not end without sand

Muhammad Porso honors scholars who value science, who consider it the happiness of the two worlds, who bear the burden of the people. He also said to those who despise science: “Whoever seeks knowledge to boast to the scholars, to show it to the lowly, and to gain the approval of the people with it, for him is only the generation of hell” [1.255].

Muhammad Porso and other mystical theorists put forward good ideas about the demand for knowledge, its order, and the pursuit of it. Abu Bakr al-Kalabadi wrote in al-Ta’arruf: “After studying the science of monotheism, a person should strive to study rules of the Shari’ah in accordance with the path indicated by his book, the Sunnah, the consensus, and the Salaf. It is necessary to know the science of praying, fasting and other duties. The science of trade also should be studied according to taste. Science is between two movements. It is necessary to act on it before it is formed, and to follow it after it is formed. It is harder to demand what is more precious in one’s soul(nafs)” [1.54].

According to Muhammad Porso, whoever fully masters the external (Zokhiriy) sciences and practices them, passes on the inner(Botiniy) sciences. “Whoever practices what he knows, Allah will give him what he does not know” [1.50.]. After all, a person achieves the goals he has set for himself with knowledge. In doing so, first of all, the pursuit of science, the purpose of the study of science, is not only to satisfy material interests or personal ambitions, but also to satisfy spiritual needs. The fact that the first verse of the Qur’an is also called “Read” is an appeal to mankind for enlightenment and knowledge. Sufis have learned that the first stage of knowing the truth is outward knowledge.

The mystic scholar Abdul-Qadir Isa [2.288] in his mystical studies studied the views of the Sufis( on science and called them “Fardul-ayn” (“The sciences that every tax should study”) and “Fardul-kifaya” (“Necessary for the study and practice of society sciences”).

According to him, “Fardul-kifaya” requires the study of fiqh, tafsir, hadith, aqeedah, arithmetic, and medical sciences. It is also forbidden to deceive members of society, the sciences that do not prevent deception, astrological sciences, sorcery, fortune-telling. There is no harm in astrological sciences in finding the Qibla during prayers and in finding the Ka’bah for those who go from the desert to perform Haj.

Muhammad Porso describes his views on scholars and divides them into three categories:

Scientists who have mastered the external sciences.

1. Masters of inner knowledge.
2. Scientists who are aware of both external and internal knowledge.

In his view, scientists who possess both external and internal sciences are not many. If there are five of them in the world, there are many. However, the blessing of one such scientist will be enough for the east and west of the universe. He will be the pole of that era.

Muhammaad Porso quoted al-Bukhari’s commentary on al-Ta’arruf and states that knowledge and acquisition of knowledge: if Allah bestows all the blessings on him without difficulty, then his peace is the security of his property, or all these are divine blessings. Knowledge is a precious blessing. There is no greater blessings than knowledge in the two worlds. This precious blessing (knowledge) cannot be attained without effort. The harder it is to acquire the knowledge of the Shari’ah the harder it is to acquire the knowledge of the truth.

The science of the truth is the science of inheritance. This knowledge is the result of the actions that arise from the correction of morality, the enlightenment of the (NAFS), the enlightenment from the calamities of the enemy, and the conspiracies of the world. Abstinence from the world, abstinence from the evils of the member of the (NAFS), protection from its surroundings, and even the ability to purify the mysteries and secrets of the slave.

The teachings of Muhammad Porso had multifaceted influence not only on the Naqshbandi sect, but also on the sects and mystical teachings of his time and beyond, and the mystical thinking formed Movarounnahr, because during this period, the socio-cultural and enlightenment ties of Muslim countries were strengthened. Sprituality, knowledge, repsect for science appreciation of its value prevailed in spirituality. Religious and secular sciences developed in unison. The scientific potential of the ancient Indian, Greek and other peoples way widely used. The scientists of Movarounnahr diligently studied the discoveries made by the peoples of these countries in the field of science and made a great contribution to the development of science themselves.

Eastern thinkers “laid the foundation of algebra and trigonometry, as well as optics, by eroding the foundations of Greek mathematics astronomy, and medicine” [3.167.]

Reading the works of Muhammad Porso, one can recognize him not only as a theologian, a mystic sheikh, but also as a naturalist, anthropologist, (jurist).

The first half of the 14th century and the beginning of the 15th century saw a new stage in the upbringing and education of the Naqshbandi sect. This is because the reformers of the Khojagon sect, Abdulkholiq Gijduvani and Bahauddin Naqshband, developed the legacy of Yusuf Hamadoni on the basis of inheritance, relying on the traditions of teachers and students.

Based on Muhammad Porso's idea of "Heart to God, Hand in Work", this school has the idea of relying not only on dry worship, but also on perfect socio-moral upbringing. It is the idea that motivates man not to perfection associated with material prosperity or achievement, but to perfection in the harmony of goals linked to higher moral ideals.

He emphasizes that science is the beginning of everything. God created the people in different colors. Then He gave him everything he deserved. With knowledge man recognizes his God. He prays to his God with knowledge. It was Moses's answer to Pharaoh. O Moses, who is your Lord? Moses said. My Lord is the One who created and guided everything, that is, He created the people and guided them to the right path. He gave it to whomever He created. Guidance is the right path, it is the knowledge that He has given all of them the knowledge of all things from His Truth and guided them towards Himself. Science is "inclusive."

Man's need to know the knowledge of Allah is due to why he was created. By copying different words and writing narrations, memorizing several volumes of the word, knowing wisdom, philosophy, the terminology of scholars, and the wisdom of judges, one cannot yet become a scholar.

Not everyone will see the glory of Allah by making the image of asceticism and obedience. The soul must have a "kudsiy" so that "asmo"(names of God) knows what the names and attributes mean. His secrets do not shine in every heart. Not every ear can hear the voice of His glorious "savti."

According to Muhammad Porso, knowledge is given according to the purity of everyone's understanding. Purity of mind and purity of heart are important in understanding the truth. He writes: "Scholars do not have the dignity of the pious, nor the gentleness of the lovers. Scholars have no diet, no humility of consent, no image of the needy, no strength of the faithful, no shame of the sad, no grief of the burnt, no account of the lovers, no spirituality of the learned, no sense of unity." [1.54]

According to Muhammad Porso, the devotee of the scholars, the one who is on the right path will get his share. The consequence of sincerity is that Allah gives joy to the sincere person in this world. It inspires respect in the hearts of the people and enhances its prestige. He despises the world and throws it at his feet. In his tomb he is given a prophecy of great consent and is warmed. He makes his grave a garden of paradise. On the Day of Resurrection, He will protect him from suffering. Suids, saints and mukarrabs make room next to themselves. If he is a hypocrite, it will be the opposite. The wise man knows this, realizes that science is for action, not for sale, and finds happiness in both worlds.

Muhammad Porsa writes: "Surely, when Allah made all the people of the heavens and the earth and gave them knowledge, and made them know with that knowledge and made them think and think about it, and gave them wisdom and in His presence, then He made each of the people so many more. When He created them knowledgeable, wise, and prudent, then when He discovered the consequences for them and informed them of the mysteries and revealed to them the depths



of the blessings, when He informed them of the strangeness of the end and revenge, when he told them to do the measure of property with knowledge, and then when he helped them in this matter and supported them, their measure would not be more than the measure of Allah, which you see now, good or bad, good or bad. Not a particle fell like a fly's wing. This is the observation of the risk takers. Only scientists know this intelligently. It is said that the smallest creatures of Allah are the fly, the grain, and each of them has three hundred and sixty wisdoms. Then the wisdom will increase as the creature grows "[1.259.]

Although Muhammad Porso's works are more religious-philosophical or mystical in nature, the scope of the issues covered by his narrative style is broader than this. As the scholar thinks about each problem, he pays special attention to its comprehensive scientific observation, to the solution of these problems in the works of contemporaries or early medieval scholars. He quotes from each and states his conclusions.

Muhammad Porso in his "Fasl al-Khitab" said, "The science of faith, the science of Islam, the science of charity, the science of ayqan, the science of religion, the science of ayan, the science of ayn, the science of tawba. The science of Zuhd, the science of piety, the science of piety, the science of sincerity, the science of enlightenment, the science of purification of the soul, the science of purification of the tongue, the science of the difference between inspiration and gesture, the science of the difference between speech and call, the science of the word, the science of adjectives, the science of authority, the science of authority, the science of condition, the science of sacrifice, the science of Buddhism, the science of vusul, the science of fano, the science of eternity, the science of gratitude, the science of error, the science of enlightenment.

In the teachings of Muhammad Porso, science and enlightenment are interpreted in relation to each other. According to him, without knowledge there is no enlightenment, without enlightenment there is no science. The work of an uneducated person is dangerous. Execution of one body is more dangerous than killing thousands of people and destroying a thousand hearts. If a scientist himself does not know one out of a thousand things with enlightenment, what kind of enlightenment can he impart to others. "In enlightenment, nakrat (abstraction) is high, amazement increases. Enlightenment is not a matter of conscience, enlightenment is difficult without knowledge, and knowledge is worthless without enlightenment [1.264]."

This means that not all thoughts that come to the human brain are the product of real inspiration. He must be alert, anxious to be separated from the faith. He has to distinguish and remember that what comes to the brain is only true. This cannot be done without knowledge. 'Abdullah ibn' Abbas said: The scholars of this ummah are two. A man gave him knowledge from Allah and he spent it on people. He did not covet it and did not sell it for money. Birds in the sky, fish in the sea, land animals, and two angels on their shoulders, Kiromin and secretaries, pray for him. On the Day of Resurrection, he will be brought before Allah as a great Sayyid. Even the rank is higher than that of the apostle prophets.

Another man was given knowledge by Allah in the world, with which he bought prestige from the servants of Allah and coveted with it. On the Day of Judgment, he will be brought with a grassy blanket in his mouth. The screamer cries out that this is the son of so-and-so, Allah has given him knowledge, he has used his knowledge for greed, money and temporary prestige. Allah will punish him until the reckoning of the people is over. In short, the clergy know this and avoid the greed of the world and its demands.

Muhammad Porso expresses his views on the sciences of the Sufis in a separate chapter, *Fasl al-Khitab*, entitled "On the Terms of the Sufis and Their Knowledge." In his view, this supported category has in the midst of each other the terms, phrases, and long words they have recognized, through which they speak to each other. But the meanings contained in these expressions and their meanings do not fall under the sign except the discovery of the expression. Because the opening of hearts and seeing the secrets is known only to those who are in that state and have reached these positions.

Their knowledge is the science of discovery and observation. It is a divine science, not a memorization. Their words, too, are commensurate with their condition and perfection. There is no category, whether they are from writers, faqihs, or other groups, they have terms that only they understand, only their own people understand. Or, in order to understand, Allah knows only one who has opened his mind, who is a Tawfiq, and who is one of the people of this category. Whoever learns from them and serves the mashayiks, turns the pages of truthful stories from them, this faithful seeker will understand all their words.

Muhammad Porso writes: Abu Abdullah said: "Knowledge is of three kinds. The knowledge of Allah, the knowledge of Allah and His measure and rububiyat, the knowledge of Allah's commands. The science of the event relates to the chapter on servitude (worship). The knowledge of Allah is the sanaat (virdas and dhikrs) that appear in the tongues of those souls"[1.264].

According to Muhammad Porso, truthfulness with documents and evidence is a science. It is a pleasure to feel the same situation. It is faith to know with beautiful suspicion through experience and hearing.

Muhammad Porso expresses his views on humility, emphasizing that the humility of scholars is important for man and society. According to him, *ujb* (surprise) with arrogance is more common in kings, rich people, scholars, and *qori* (people who learned by heart the Koran). The head of their struggle is contemplation. It is to think of the evil of pride and arrogance. Because an arrogant and arrogant person is the enemy of all hearts. Let them humble themselves. Let him continue in this humility and keep pride and arrogance away from him. The humility of kings will be different, the humility of scholars will be different, and the humility of Persians will be different. Pride and arrogance acquire separate colors. The worst arrogance is the arrogance of the old and the poor. The sign of hypocrisy will be that the devotee will be humbler than all the people in obedience. He will be kinder to the people of the whole world. It will be softer than everyone else. It will be more load-bearing. After all, it would be the devotion of the science of meanings. The hypocrite will be a burden to everyone. It will not be a burden in itself. He expects respect and humility from everyone. A person who has this arrogance cannot be humble. These are all qualities of hypocrisy. The arrogance of the religious scholars after the *qori* and *porso* becomes bad. His sign is that they put cash benefits above all else in learning science and teaching it to others.

The shortcomings of human beings are as clear as a mirror to the followers of the Way of Truth. The arrow of the people's suffering lifts their souls. It doesn't hurt the whole world, not even an ant. His mark Muhammad Porso emphasizes that the scholars are of three categories. They are *muftis*, thinkers and judges. *Muftis* are the people of learning and the people of opinion and the people of *fatwas*. These are two types. One of them is the heart and the linguist. They act with

fear in science. They are pious with the fatwa. The study and dissemination of knowledge is the degree of salvation and the Hereafter. They look away from the wealth of the world will be that his knowledge will be honorable and that his teaching will be a pillar of trust.

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Second, the linguist is ignorant. There is no fear or hope in Allah in his heart. The intention is to gain wealth in the teaching and dissemination of knowledge. They strive for acceptance and career. Their desires win. Their knowledge obeys their desires. He does everything with his soul. He does not practice science. Taqwa envies the scholars. He enters into their clothes and slanders them. He is in the forefront of the debate. He shows himself to be superior.

The Sufi explains that the path of martyrdom that some sages say is to use the quality of exaggeration against him. It does the opposite. In observation, that is, there is a norm of movement. It is measured by the norm. If a scientist does not know this rule, he will not be safe from Satan. Were it not for this criterion, no one would know which of his worships, prayer, fasting, and recitation of the Qur'an, is preferable. However, some are harmful and some are beneficial. Were it not for the norm, a sane person would not be able to distinguish the benefits of his fasting and prayers.

Muhammad Porso emphasizes that there is a standard in everything. According to him, it is important that both the monk and the hermit have their own standards in the mathematics of the scholar. The difference between the teachings of Naqshbandi and other teachings is that they are based on strict norms. Muhammad Porso emphasizes the importance of adhering to strict norms, whether it is a tax or a murshid who has entered the path of the sect. As mentioned above, the principle of "Heart to God, Hand in Work" means that the body consists of both body and soul. It is important to keep this standard in Naqshbandi. It is the perfection of man that depends on the maintenance of this standard. Outwardly with the people, inwardly with the Truth, Privacy in the assembly, Consciousness in the moment and other tendencies and tendencies also served as a criterion for this "golden mean".

Muhammad Porso writes about contemplation: "The greatest contemplation is the contemplation of the nature and attributes of Allah. But the people can't stand it. His mind is not enough for him, the Shari'ah forbids it. It is said not to think about it. This difficulty is not because of its secrecy, but because of the light of Allah's glory. It is clear, but human vision is weak. He is impatient, but he is unconscious and stunned. For example, a blind mouse does not see during the day, his eyes are weak. It can't stand the sun. If he is exposed to a small amount of sunlight at night, he can see through it. This is not to say that things are visible at night, but they are visible during the day. His eyes are weak. The common people are like that. But this view is tolerable among the righteous and the great. But they also do not tolerate permanent division, as if people can go to the sun at the spring, and if they are constantly watching, they become blind. In the same way, this view is from the fear of insanity. Even if the elders know the truth of the attributes of the Truth, they are not allowed to speak to the people in their own language. No

matter how perfect a person thinks, he will be amazed and terrified at the end of the day."<sup>[1.258]</sup>

In matters of science, Muhammad Porso seeks to unravel the essence of the Sufi sciences, emphasizing that not everyone can grasp the fact that these sciences are bestowed on specific people. He quotes al-Hujwiri's opinion on "Kashfii maorif" ("Discovery Understanding") from the book "Discovery of the Secret of Discovery to the Hearts of the Heart" by Kashf (Allah). His condition worsens and he falls into a trap. Fazl and art come to the rescue and his words become mysterious, the interpreter is surprised by his words, the mind stops perceiving him, and if everyone objects to his words, he will not be able to understand them. They do not know its purpose or meaning. The people of insight do not look at the appearance of the phrase. They know that there is only one possibility for the owners. They do not follow the outward expressions, because it is impossible to follow their outward expressions. Discoveries cannot be explained in letters and sounds. If they are mentioned in beautiful phrases and vivid gestures, they can reveal the truth. Those who have been enlightened say that no matter how many things the heart sees and observes, or the secret is revealed, the word of truth is not correct from it. The inner vision is a sign of revelation and the mystery is beyond words. Perfection is difficult to find and surround. Some scholars have said that the sign of the manifestation of truth is that one does not see the interpretation that takes precedence. Or understanding is not enough for him. And whoever interprets or understands, then it is a reminder that proves it. The seer is not an idiot. Also, in the book Ta'arruf: The essence and purpose of the purpose can show nothing but nouns and adjectives. As it turns out, the language becomes dumb. Although the learned and the mature show that they know the qualities, in the end they are unable to express them. It is narrated on the authority of Hadrat Ali: "Whoever knows his Lord is dumb" <sup>[1.258]</sup>.

Muhammad Porso states in his views on the sciences of the discoverers that Sufis are unique scholars. The natural expression of these sciences cannot be realized through language. Their science is a high level of inner science and requires special training to master it. However, Muhammad Porso interprets these sciences as the science of knowing Allah. According to him, the science of discovery is the science of gestures - that is, gestures, which are understood only by Sufis. Because it is impossible to explain the essence of these sciences, to be able to discover their secrets. No one knows what happened, only those who have been in high positions. It is known that in suphism, as a source of knowledge, along with common sense, a great place is given to discovery, inspiration and emotion.

In Fasl al-Khitab, Muhammad Porso refers to the thinkers and says that they are of three categories. Criticizes their knowledge and actions. The first group remembers the meanings that have been made up and written, and there is nothing in it from the science of religion. They explain their language in those words. They travel around the world for the purpose of receiving people and accumulating wealth. They praise kings, emirs, ministers and officials. They allow heresy and lying. They make up stories on their own while praising them.. Sometimes the dervishes were judged and stopped in their hearts by reluctance. They hope for wealth from the oppressors. They narrate made up hadiths, which are called authentic(sahih) hadiths. He tells people in places where they are despised and verbally welcomes him. They lead the people to heresy and misguidance. Sometimes they are bigotry and sedition. The common people are provoked by bigotry. These are the "scholars of the ignorant heart," that is, the ignorant linguists

The second category: Imams are righteous people. They narrate hadiths for the sake of Allah and the reward of the Hereafter. They stay away from heresy and misguidance and keep themselves. Tafsir al-Akhbar and the Salafis narrating about the view of the pious.

They stop the people from the places despised. He does not defile himself with dirt by demanding. The truth is effective if it is said without greed. If the world is mixed with love and greed, then the word is also polluted. It comes from the desires of the soul ( nafs). If it is not true, it will not come from the heart. The elders said: words from the heart reach the heart.

The third category is the Christians. With the help of the punishment of the Truth, they make the path of the religion and the journey closer to the world. By the grace of Allah, they have acquired the knowledge of Allah. Those who see the meanings of truths and mysteries in the light of the manifestation of the attributes of the truth. The path of truth has been completed by the authorities and the state. Allah and His Messengers have commanded us to educate the people with evidence and to call them to the path of Allah. Then they were advisers to themselves all their lives. Advise yourself, then advise people, otherwise you will be ashamed of me. Allah is the Advocate of the heart of every believer. Those who accepted his advice, became aware of their secret desires and schemes, and engaged in the call of the people by ruling and decree.

Muhammad Porso distinguishes between different classes of scholars. He expresses his opinion about them: “When a person's lust is to collect books and memorize various things, his state is in three levels and in three states. The first is that his devotion is not to memorize and grammar and vocabulary, but to the correctness of his dear life. It is obligatory for this person to bring himself from the correction of the tongue to the correction of the Shari'ah. When a mistake goes beyond words, it leads to hypocrisy, hypocrisy, words and deeds with the words of sincerity. Let the collection of deeds and the collection of vocabulary come from the collection of deeds and the will of the heart. Let him remove laziness and excess from his body and heart. All the sages agreed that if a person utters the duties of the religion and the Sunnah of the Shari'ah in his own language and works with it, he will be one of the best of the monks, Sufis and the nation.

The second level is writing books and poetry. That is his goal. He is proud of his poetry. His intention is to weave poetry and recite poetry, which is far from the laws of Sharia and the pillars of religion. It does not follow Islamic rituals and customs. It becomes a place of laziness due to the imitation and imitation of deeds and actions. In the bodies of Siddiq, the treatment of the people in the immediate vicinity and in the possession of a number of sciences and enlightenments is found in them. When you meet them, you can talk to them easily. It is obligatory for a person to consider this situation, is it closer to lust or closer to wisdom? He knows that it is all lust. It is not the slightest bit of wisdom, but greed for wealth is far from wisdom. It is far from wise to be humble for the sake of one's wealth. It is far from wisdom to be diligent in finding one's own shortcomings and to find the intrigues of one's own self, and to trade in the market of eloquence. Their way of struggle is to think about the accusations we have mentioned and to recite the Qur'an from the mosque.

The third level is that science tends to be more inclined to natural science and astronomy. It is the study of science and the collection of books related to it, and the pursuit of its truths and its secrets. According to him, the essence of science is the way of thinking, the way of thinking. The ways of the prophets are monotheism and are on monotheism. It is not to see these things for reasons and defects. The mind means that the unseen does not disappear by itself. There is no



way, no wayfarer. He does not realize that walking is neither the work of the intellect nor the work of the intellect unless he comes out of the presence of Allah and a flame is struck from his soul. He puts his hand on the Sunnah of the Prophet. For example, it is a religious order. It works. That's where it stands and continues. Finding things and seeing the truth would be different. We have mentioned these three levels, which were the places of transition from the sciences of the Shari'ah to the sciences of the relatives. This means that the Shari'ah is the beginning of the sciences, and the immediate sciences are the sciences that come after it.

It is narrated from the Prophet that the scholars of my ummah are like the prophets of the Children of Israel. But with all this, it is necessary to know that knowing the truth, knowing the truth of the Truth, is given to everyone according to the purity of his understanding. Whoever has a clear understanding, his knowledge will be more than the help of the Truth. As Muhammad Porso explains, prophecy is awareness. Guardianship is awareness. Wisdom is knowledge. Science is awareness. Their levels of awareness and awareness are as follows:

1. The knowledge of prophecy is as bright as the sun. For both the eye and the ear are on the head. Both the eye and the ear in the secret.
2. The guardianship notice is like a fourteen-day month. He has only eyes and ears.
3. The awareness of wisdom is less than the crescent of the moon. Scientific awareness is flowing in the example of the stars. The prophets see mysteries in the sunlight. The saints do not see them. The saints see things in the light of the fourteen days of the moon, but the rulers do not see them. Judges see qualities in the crescent light, but scientists do not see it. Scientists have found their footsteps in the light of the stars, but not all believers.

Muhammad Porso was a scholar who was determined to study the sciences of his time in depth. He also had a special place in the science of hadith. In the previous chapter of our dissertation, we mentioned that the scientist became famous during the reign of MirzoUlugbek as a famous muhaddith. MirzoUlugbek praised his ingenuity in the science of hadith. Muhammad Porso's views on hadith and muhaddithin are found in all his works. He pays special attention to this issue in his "Fasl al-Khitab". According to him, the ranks of muhaddithin are in three cases:

1. The muhaddithin are proud to say that they have heard the hadiths in high disgrace. The conditions for this group to demand disciples are such that it is not the job of the slaves to exaggerate. There is the text of the hadith behind the disgrace and in the hearing of science. Behind the text of the hadith is the knowledge of command and prohibition. There is knowledge of reward and punishment. There are lessons to be learned from those examples. Behind him is the execution of orders and the return of the district. Look at the mirror with the example. It is because of this sincerity that obedience is important. There is vigilance and avoidance of mistakes. If this position is correct, it will be the first status of the slave of the Truth. This is a degree of guilt. If there is generosity in that place and insight is revealed, and this thought is his mashrab (drinking place), then he should be aware of his generosity (moderate). Don't stop looking for great news. Let him turn his face towards the good. Let him know that science is for action. He is still a prisoner of science. What evidence and pride to be proud of without reaching for science.
2. The muhaddithin are skeptical that the muhaddithin's face should be turned to human science. Let Mursal be different from musnad. Let him carry it in his head for the rest of his



life. In any case, hearing is for recognition. Knowledge is for action. Doing so is for the sake of the Truth. If not, life is wasted. The account of life is fidelity.

3. Let the muhaddithin be wise and perfect, let them know the meanings of the mysteries. His devotion is focused on writing and classifying. He considers spelling and classification to be the beginning of all happiness. It is obligatory for him to think of his ornaments and dignity. The lucky person is the one who has fulfilled the fards and wajibs. The first obligation is to purify the heart from envy and jealousy of one's brother. Doing their message, being aware of the tricks of the devil and avoiding the tricks of his friends, recognizing the lust and being aware of its tricks are the air of knowing and avoiding it. That's when you can deal with it and keep an eye on it. It is the world and its deception to know both enemies. The face of disaster is the gathering of the world through love and classification. Spelling and classification are worldly and prestige. Let him check that he is wasting all the rituals of the heart. One of the rituals of the body is to beware of haraam and doubt.

In conclusion, Muhammad Porso in his works has extensively analyzed the issues of science and scholars. He considered it a condition for scientists to practice the sciences and those sciences; Muhammad Porso divided the scholars into classes and taught them that they were responsible for human beings, for the life of society and for the sciences they possessed;

Among the scholars of his time, Muhammad Porso lacked the dignity of the pious, the meekness of lovers, piety, the lowliness of the people of consent, the image of the longing, the strength of the faithful, the embarrassment of the sad, the care of the burnt, the reckoning of the lovers, the lack of spirituality and knowledge of the learned, criticized and urged them not to betray faith, justice and science;

According to Muhammad Porso, if Allah gives knowledge to a person, if he spends it on people, if he does not covet science, if he does not sell it for money, then the birds in the sky, the fish in the sea, the animals on the ground and the two angels on his shoulders pray for him. He will be a master, even higher than the messenger prophets;

If Allah gives man knowledge in this world, if he acquires prestige from the servants of Allah with this knowledge, if he covets with it, if he receives money, on the Day of Resurrection he will be brought with a fire in his mouth. The one who shouts cries out that Allah has given him knowledge and he has used his knowledge for greed, money and a temporary reputation. Allah will torment him until the book of reckoning of the people is exhausted;

The perception or understanding of the body depends on four factors:

1. Feeling one's own body;
2. The feeling of the existence of the truth with perfection and the glory of the being is the image, that is, the hearing;
3. To feel the pure beauty of one's body is to see. Basar is the inner secret or the eye of the heart;
4. It is a word to praise His being through praise and glorification;

Science and wisdom are important in knowing and grasping the truth. With the senses and the intellect, with the mind, it is possible to know the events and processes of the material world;

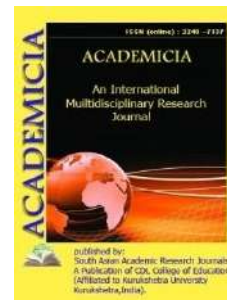
It is impossible to comprehend the ever-awake Truth on the basis of source theories and teachings;

Man remains a seer and a seeker, and research reaches its climax through the encounter with the Truth within man. Searching for the Truth Man's experience of his personal, original basis. The truth is nowhere to be found. The truth is here in the inner turbulent, breathing, realizing heart of man;

Sufi scholars believe more in their inner and spiritual eyes than in their mental thinking. They realized that there were external (external physical) and internal (internal spiritual) eyes, and that there was a fundamental difference between them. Muhammad Porso acknowledged that insight and insight are unique in this area.

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DOI: **10.5958/2249-7137.2020.00746.6**

## THE ROLE OF THE "COLLECTION OF ORIENTAL MANUSCRIPTS" IN THE STUDY OF THE HISTORY OF UZBEKISTAN IN THE IX-XII CENTURIES

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### ABSTRACT

*This article gives a brief history of the creation of the "Collection of Oriental Manuscripts," as a result of many years of work by orientalists. In particular, sources in the IX-XII centuries were included in the collection devoted to the development of science and culture in the cities of Movaraunnakhr. During the war, many scientific institutions were evacuated to Uzbekistan. The opening of the Academy of Sciences of Uzbekistan on November 4, 1943 was an important event in the life of the republic, laid a solid foundation for the further development of science.*

**KEYWORDS:** *Scientific Institution, Oriental Manuscripts, Written Monuments, Rare Books, Problem Approach, History, Natural Sciences.*

### INTRODUCTION

In the history of Central Asia, the IX-XII centuries are interpreted as the "Renaissance", in Islamic sources as the "Golden Age". During this period, such ancient cities as Bukhara, Samarkand, Nasaf (Karshi), Termez, Khiva, Shosh (Tashkent) made a worthy contribution to world civilization as scientific and cultural centers. Scientists who grew up on this soil, their works have a special place in the development of world science. Today, these works are not only unique written monuments, but also of great importance in the study of the history and historical geography of the peoples of Central Asia, as well as the history of culture and other spheres of socio-political life.

The Manuscripts Fund of the Institute of Oriental Studies named after Abu Rayhon Beruni of the Academy of Sciences of the Republic of Uzbekistan, included in the list of unique objects of UNESCO, is one of the richest treasures in the world. The fund currently holds 26,000

manuscripts, 39,000 lithographs and printed works [1.6]. The works in the Manuscripts Fund cover many disciplines, including copies of great scholars that are not available in world libraries.

The creation of this fund has a long history. Twenty years after the opening of the first public library in Tashkent in 1870, 87 volumes of the manuscript collection were registered by E. Kal [2]. In an article written in 1895, N.V. Dmitrovskiy noted that the Turkestan library contained 90 volumes of manuscripts in Oriental languages [3. № 33-34]. This fund of the library has been enriched in various ways, such as purchases, gifts. From 1918 to 1943, the "Oriental Manuscripts" section of the library was replenished with unique books stored in Samarkand and Bukhara. The well-known orientalist A.A. Semenov described the collection of these collections as "an opportunity to reflect the intellectual activity and needs of Central Asian society" [4.6.].

After the establishment of the Academy of Sciences in Uzbekistan in 1943, the Institute of Oriental Manuscripts under the Academy of Sciences was established on the basis of the "Oriental Manuscripts" section of the library. Until 1950 it was called the Institute of Oriental Manuscripts. In 1950, it was renamed the Institute of Oriental Studies due to the scope of scientific activities carried out at the institute. In 1957 he was named Abu Rayhan Beruni.

In 1999, by the decision of the Board of the Academy of Sciences of Uzbekistan, the Institute of Manuscripts named after Hamid Suleyman was merged with the Institute of Oriental Studies.

The work of collecting and systematizing information about rare and rare oriental manuscripts began in the 30s of the XX century. Identifying the available manuscripts, scientific interpretation was a very complex and responsible task. Initially, the publication of the "Collection of Oriental Manuscripts", which contained brief information about about 2,000 sources, was recognized in the resolution adopted on October 23, 1937 at the II session of the Association of Arabists [4.8.]. But World War II, which began in 1941 for the Soviet state, halted this work for some time.

During the war, many scientific institutions were evacuated to Uzbekistan. The opening of the Academy of Sciences of Uzbekistan on November 4, 1943 was an important event in the life of the republic, laid a solid foundation for the further development of science. Soon new scientific institutions emerged. In 1944-1945, as a result of the work of leading orientalists at the Institute of Oriental Manuscripts under the Academy of Sciences, the preparation of the "Collection of Oriental Manuscripts" intensified. During the war at the institute V. I. Belyaev, E. E. Bertels, N. V. Dyakonova, A. N. Kononov, N. D. Miklukho Maklay, I. P. Petrushevskiy, O. I. Smirnova, and later I. Abdullaev, S. Azimjonova, A. K. Arends, B.C. Akhmedov P. G. Bulgakov, A. Irisov, U. I. Karimov, S. Mirzaev, A. Murodov, A. Nosirov, I. Odilov, M. G. Pikulin, A. Rasulov, M. A. Sale, A. A. Semyonov, M. M. Khayrullaev, Great orientalists like A. Urinbaev worked.

The "Collection of Oriental Manuscripts" contains information about manuscripts written in Uzbek, Arabic, Persian, Tajik, Urdu, Pashto, Azerbaijani, Turkish, Tatar, Turkmen, Uyghur and other Oriental languages of the IX-XX centuries. They belong to various branches of science of the Middle Ages and beyond, namely history, literature, philosophy, law, Islamic sciences and mysticism, astronomy, chemistry, medicine, geography, pharmacy, language, music, mathematics, mining and others.

In 1952-1987, an 11-volume catalog of manuscripts in the fund of the institute was published under the title "Collection of Oriental Manuscripts of the Academy of Sciences of Uzbekistan" ("Collection of Oriental Manuscripts of the Academy of Sciences of Uzbekistan"). In 1998-2000, a catalog of manuscripts in the areas of "History", "Natural Sciences", "Medicine" was presented to students. The collection of manuscripts written in Persian, Arabic and Turkish languages based on the study of Oriental manuscripts has become one of the richest collections in the world. This publication is widely used not only by scientists in Uzbekistan, but also by scientists around the world.

With a focus on direct volumes, the manuscripts were presented in a periodic sequence and a problem-solving approach. The first volume of the collection includes history (general history, Central Asian history, Indian history, Iranian history, Turkish history, history of other countries), biography, acts, letters and correspondence, travelogues and memoirs, stylistics (epistolary prose), natural sciences (mathematics, physics, astronomy and astrology, chemistry and alchemy), medicine (treatment methods, pharmacology, veterinary medicine), geography, agriculture, art [4.439-440]. The list of works included in this volume includes a small number of works from the IX-XII centuries. It first gives information about the "History of Bukhara" written by Abu Bakr Mukhammad ibn Ja'far an-Narshakhiy in Arabic in 943-944 [4.46-53]. This work contains important information about the spread of Islam in Central Asia as a result of the Arab conquest (VIII century) and its predecessors, as well as the economic, cultural, social and political history of the peoples of Bukhara and nearby towns and villages in IX-XII centuries. This fact laid the foundation for the great history of Bukhara as a valuable source. In the collection, the history of the work to the present day is different from other manuscript sources, and it is possible to get a brief information about it before studying it. It is not known how Narshakhiy actually named his work. For this reason, the work is published in manuscripts and in modern scientific and historical literature "History of Narshakhiy" ("History of Narshakhiy"), "History of Bukhara" ("History of Bukhara"). It has been called by various names, such as "Tahqiq ul-viloyat" ("Determining the truth of the region"), "Akhbori Bukhara" ("News about Bukhara"). The study of the "History of Bukhara" as the main source and the involvement of valuable information in it in scientific research has been going on for a long time [6]. The first volume also includes works covering the period of the Ghaznavids and Qarakhanids [4.53-54]. The second volume of the Oriental Manuscripts Collection was published on the occasion of the 10th anniversary of the Academy of Sciences. It consisted mainly of poetry, prose, and examples of folklore. Volumes 3 and 4 of the collection contain a list of manuscripts on Islamic teachings and philosophy. Naturally, although they are ideologically labeled "scholastic" and "religious mystical", they provide an opportunity to observe the history of Islam, religious and legal sects, Islamic law and the development of jurisprudence in Movaraunnahr. It is worth noting that local schools of jurisprudence have formed the traditions, customs, certain legal norms, opinions and views specific to the Movaraunnahr region [7.110-112].

The sixth volume of the "Oriental Manuscripts Collection" contains descriptions of 842 manuscripts, and works directly related to the IX-XII centuries were given mainly in the field of natural and medical sciences [8].

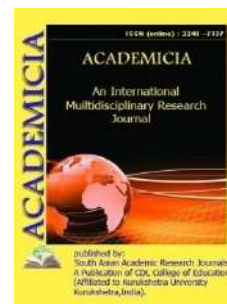
In general, a list of 7574 manuscripts was included and described in 11 volumes of the "Oriental Manuscripts Collection" created over 25 years [9.3]. However, it should be noted that the works on this list, which provide information about the IX-XII centuries, are less than in later periods.

The existence of works of science, mainly created during this period, once again proves the development of science and culture in the cities of Movaraunnakhr.

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DOI: **10.5958/2249-7137.2020.00747.8**

## **SPEECH DEFECTS IN YOUNG CHILDREN AND WAYS TO OVERCOME THEM**

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### **ABSTRACT**

*This paper makes analyses of the speech defects in young children and ways to overcome them. On this case, analyses were conducted on different research points as the whole. Analyses of theoretical and practical aspects were pointed in various areas as the whole. It concludes with both outcomes and shortcomings at all. The structure of the speech defect and the compensatory processes are often determined by when the brain damage occurred. It has now been proven that the nature of a whole brain developmental anomaly depends to some extent on the duration of the injury.*

**KEYWORDS:** *Speech Defects, Young Children, Ways, Overcome, Youth, Young Generation.*

### **INTRODUCTION**

Children's speech is a precious voice of a child's unique culture. Speech development is not only an aspect of introducing a child to the world around him, but also a pillar of general mental development. The development of a child's speech is associated with the formation of the individual as a whole, as well as all mental processes. "Language acquisition is not just a process of imparting knowledge, skills and abilities. This is education first and foremost. It is the education of the heart, the education of the mind, the formation of the formation of ideas, the enduring work on the most delicate aspects of the human psychological image" (K.D. Ushinsky).

Understanding that a child's speech development is determined, on the one hand, by external influences and, on the other hand, by its sudden occurrence, "spontaneous action," is typical of modern notions of speech ontogeny. Understanding these laws and mechanisms of speech development requires careful consideration.<sup>1</sup>

A variety of harmful factors that affect a baby's development in the womb, childbirth, and the early years of life can lead to incomplete speech development. The structure of the speech defect and the compensatory processes are often determined by when the brain damage occurred. It has now been proven that the nature of a whole brain developmental anomaly depends to some extent on the duration of the injury. Severe brain damage under the influence of various harmful factors (infection, intoxication, etc.) usually occurs during early embryogenesis. It is estimated that damage to the brain during the 3rd to 4th months of pregnancy (the period of maximum separation of nerve tissue) causes more extensive changes in the structure of the brain. Depending on which parts of the nervous system develop more rapidly during the period of exposure to this or that harmful factor, the underdevelopment is more related to motor, sensory, speech, or intellectual functions. Due to the constant unfavorable conditions during pregnancy, it is observed that the whole brain is not developed, along with some clearly expressed individual brain structures. This is the basis for the development of complex defects (for example, the combination of oligophrenia with motor alalia).<sup>2</sup>

Hereditary factors play a special role in the development of speech disorders, including incomplete speech. In such cases, speech impediments can occur, even under the influence of seemingly insignificant harmful factors.

When speech is partially or completely lost as a result of brain damage, it is necessary to distinguish between aphasia and alalia. Aphasia is the loss or impairment of speech that occurs as a result of external influences on the brain. Speech development, late development, or speech in a child growing up before birth, during birth, or as a result of trauma, is an incomplete formation.

Alalia is the continuous development of the cerebral cortex due to organic injury of the speech area of the brain until the formation of speech in the mother's womb or in the early stages of development.

The translation of the term "alaliya" (Greek - no, Latin lalio - speech) has been observed since ancient times in the literature on the absence of speech, the state of speechlessness - speech disorders. In addition to the term "alalia" in the specialized literature, the following terms have been used to describe this speech defect: "Congenital aphasia", "Ontogenetic aphasia", "Developmental phase", "Dysphasia", "Speech retardation", "Constitutional retardation of speech", "Deficiencies in language acquisition" and so on

There is no scientifically based data on the prevalence of alalia. It is estimated that alalia affects one percent of preschool children and 0.6 to 0.2 percent of school-age children. On average, alalia is observed in 0.1 percent of the population. According to the authors, alalia is twice as common in boys as in girls.<sup>3</sup>

As a complete lack of articulatory capacity, alalia was compared to dyslalia and was later rightfully referred to as anarthria. A. Kussmaul introduces the term "lalopathy" in order to call articular defects (dysarthria and dyslalia, as well as diction disorders - dysphasia) by a common name. Nevertheless, A. Kussmaul, like the above authors, classifies alalia as one of the speech defects associated with articulatory disorders, and introduces the term anarthraliterlis (lack of articulation of sounds) as an equivalent name for this term. Inability to do so included in the allele the cases of the disorder which were considered characteristic: he later began to use the term "anarthria" to describe such a condition. In addition to the articulatory disorders mentioned, A. Kussmaul distinguishes what he calls diction disorders.

**Causes of Alalia** For a long time, the causes of Alalia were varied. R. Cohen (1888), A. Gutsman (1924), E. According to Freshels (1931), M. Zeeman (1962) and others, alalia is caused by a pathological process of inflammation or alimentary trophic metabolism in the mother's womb or at the stage of development. According to A. Treytel (1901), alalia is the result of insufficient attention and memory. A. Libmann (1901) connects the incompleteness of speech in the alalia with intellectual deficiency. A. Iving (1963) attributes the lack of a motor image of speech to brain disorders in children due to incomplete speech development. M. Zeeman (1962) states that speech does not develop as a result of disruption of the brain centers. R. Luxzinger (1970), M. Berry (1957), M. B. Eidinova (1961), VA Kovishkov (1985) and others have identified the role of congenital head trauma and infant asphyxia in the origin of alalia.

Birth defects and asphyxia are in some cases the result of fetal pathology. This leads to chronic oxygen deprivation, leading to a decrease in the function of the respiratory centers. Brain tissue, primarily young in relation to the phylogenetic relationship, is more sensitive to oxygen deprivation in the third layer of the cortex. The third layer of the cerebral cortex initiates a complex system of associative connections. This system promotes the formation of higher cortical functions in the human body, primarily speech and psyche. The leading etiological factors are fetal encephalitis, meningitis; unfavorable conditions for development; fetal poisoning; brain injuries during fetal or early development; brain damage as a result of illness in early childhood, etc. Pregnancy pathology leads to diffuse brain injury, congenital head traumas, and infantile asphyxia cause relatively local disorders. Injuries to various areas of the cerebral cortex cause disorders in the development of speech and non-speech functional systems.

Ye.M.Mastyukova (1981) characterizes alalia from the point of view of neuroontogenesis and points out that in the influence of any harmful factor in prenatal and postpartum early age, when the brain is still in the formative stage, it will be difficult to pinpoint the presence of a local defect because the injury is often diffuse in nature. SSKorsakova and N.I. Krasnogorsky's observations revealed that alalia is a central nervous system fatigue caused by somatic diseases that cause malnutrition. Yu.A. According to Florenskaya, rickets, eating and sleep disorders in early childhood, and frequent respiratory diseases have a special place in the pathogenesis of alalia. Not all authors agree with this view. Somatic diseases exacerbate the pathological effects of leading neurological diseases. Some authors (R. Cohen, 1988; M. Zeeman 1961; R. Luxzinger, A. Saley 1977, etc.) distinguish hereditary factors, familial predisposition in the etiology of alalia. However, the influence of hereditary factors on the origin of alalia has not been reported in the literature. In most cases, the anamnesis of the child shows not only one, but a whole set of pathological factors.

**Anatomical-physiological aspect of the study of alalia** Alalia is an organic speech disorder of a central nature. In some parts of the cerebral cortex, the formation of nerve fibers is delayed. When the nerve fibers are deficient, the neuroblast stops developing. This condition can occur at birth or before the baby is able to speak. In Alalia, brain injury can occur in the perinatal or early postnatal period. The first three years of a child's life are conditionally considered the pre-speech period. This leads to the rapid formation of cerebral cortex tissue, and the child still has very little experience with speech. The development of the brain system, which is important for speech function, does not end during pregnancy and continues after birth.

Speech therapy was performed with three-and-a-half-year-old Khadijakhan, whose speech developed later and more slowly than that of normal children. According to the parents, the child's father spoke completely late. His brother also began to speak fully after the age of 3. In this regard, the late development of speech can be attributed to heredity. It is reported that the child is healthy in the womb. 'I'm advanced. In addition, the child's left arm was injured during childbirth. As a result of nerve damage to the left arm, the arm is very weak compared to the right arm. Cannot lift high, cannot perform various elastic movements, needs the help of the right hand to move the left arm. Since the child was ten days old, he received treatments to restore nerve fibers, and a special hand massage.

As a result, to date, 60% of hand activity has been restored. It is known that hand movements are also important for the development and fluency of speech. In children, it is possible to cite both hereditary and acquired causes of late speech development. he has short speech. He can say the words he needs for himself. He relies more on facial expressions to express his thoughts. When composing simple sentences, he omits grammatical additions. His sentences are both syntactically and semantically flawed. "I eat bread" - "I eat bread", "Do you go to school?" - "Do you have school?" (The child says this in a questioning tone). does not differentiate possessive suffixes. Uses the same person I for all person. Like "My pen is my pen", "Your pen is my pen"...

According to the data, children who have just started to speak, first use the main consonant instead of the whole consonant. In this case, the tone of the thought he wants to express will change. For example, "I saw the house", "I'm going home", "I'm at home now" is represented by a single "Home."

It is necessary to pay attention to all aspects in the development of a child's speech, because in this case everything is important in achieving an effective result. If the child has good hand movements and the ability to write and draw, then the expected result can be achieved. Because if the sensitivity of the nerve fibers in the hand is strong, it is reflected in the child's speech. When performing various developmental exercises, the child should not be limited to compulsory exercises, but also to his wishes. If the child is interested in drawing, draw as he wants. need

Taking into account the above recommendations, speech therapy work was carried out with the child. At first, we spoke as he wished. Gradually, speech-enhancing exercises began. Special literature and various developmental exercises presented in scientific works in this area were used.

Phonemic perception develops gradually, in parallel with the formation of pronunciation. Normally, by the age of 4, a child is able to distinguish all the phonemes in his native language by hearing them.

The child's speech was phonetically checked and each phoneme was pronounced separately. Can pronounce 80% of phonemes correctly. Г, pronounces the phoneme y instead of x phonemes. However, he can clearly say words beginning with g` and x. It also pronounces the phoneme q independently t, the same at the beginning of the word and at the end of the word in the form of q. In addition, r pronounces the sound y instead of the sound. It pronounces the sound s instead of the sound SH.

For example:

Q	Qo`l	To`l
SH	SHar	Say
R	Randa	Yanda

In such children, the speech therapy effect is aimed at fostering conscious analysis of speech content, developing phonemic awareness, and understanding speech content.

In the teaching of such children, special methods are used, aimed at the development of activities, sound and morphological analysis, and the formation of the content side of speech. It takes into account the degree of underdevelopment of understanding, speech, cognitive activity, the general characteristics of the child's personality.

The scope and nature of child-centered referrals used in the family will be determined. Teachers and parents create a list of clearly defined (standardized) instructions for the child's daily routine, both in the classroom and in the classroom. His level of attention to non-speech sounds is determined by complete silence and noise. Initially, speech communication is limited, and the child's erratic speech is inhibited.

The work begins with the organization of the child's speech order. Hours and days of rest for the child will be introduced. In daily life, sound devices (television, radio, etc.) are removed. A warning sound mode is created, and the input of verbal and non-verbal signals is limited. Freshels recommended not only creating silence around the child, but also creating a state of visual hunger: not showing pictures, toys, and so on. Only on the basis of such calming can work be started, which will help to increase the child's sensitivity to sounds. Gradually, the state of attention and perception is determined, and then work is done to develop and expand them.

The main tasks of the work are: to arouse interest in the surrounding sounds, speech sounds, to develop the need, desire and ability to imitate them, to distinguish between spoken and non-spoken sounds.

General pedagogical work is aimed at forming the psycho physiological basis of speech, which leads to the main activities, the development of voluntary attention, visual and acoustic instructions and differentiation. The work does not begin with the sounds of speech, the sounds of a non-speech character, the distinction of noises. However, this is only possible if the child is well-organized and has the ability to concentrate on the basics.

A variety of tools are used to develop children's attention and ability to work: cross-sections, sticks (making geometric shapes from counting sticks), classifying objects by color, shape and size. When a child is sufficiently organized, able to concentrate, and elementary forms of activity are formed, it is possible to work on the perception of sounds.

When a child develops enough attention, imitation, and ability to work, he or she is taught to distinguish between a number of different, unorganized sounds. It starts with a few bright, powerful sounds, cultivating some rough differentiations: the sound of coins in your wallet, the knocking of pencils in a glass, and so on. Gradually, you will be able to distinguish between low,



low, and close sounds: the noise of slippery paper, the rustling of matchsticks in the box, and so on. That is, there is a gradual transition to more subtle acoustic differentiation.

Uses sound signals from toys and instruments. It is useful for the child to hold the toy in his hand and feel the vibration when it sounds. First, he observes how the teacher makes a sound, trying to make it himself. The speech therapist then gestures to the child to close his eyes or turn around (the sound-producing objects can be placed behind the screen), and the child should be able to distinguish only the objects that match the sound-sound source.

There should be no applause, no tapping on the floor, no knocking on the table, because in such cases there is no perception of sound, vibration, vibration of bone conduction.

Gradually, the range of sounds becomes more complex and varied. It incorporates new sounds, first long and dissimilar, and then closer sounds that require subtle acoustic work. The child's hearing area is thus expanded and improved. Depending on the success of the work, strong speech sounds (a, r, u, etc.) are added to the noisy line, which is associated with an object or event. If a child gets tired quickly, he becomes distracted, very impressionable, restless, yawns, and loses his effectiveness. The child needs to rest or change the way he or she works. Such exercises are performed throughout the work, but in each session it is necessary to set a strict standard of acoustic load. It is advisable to return to such exercises several times in one session, but only once in a very limited amount, without allowing the child to get tired. The volume of active auditory attention increases slowly.

When working with children with speech impediments, their age and the level of existing speech must be taken into account. It is known that if a child has motor alalia, as a result of the necessary speech therapy exercises can be educated in a normal preschool, along with their peers. Only if the specialists who deal with such children are trained regularly and help them to reach their peers, then the child can become one of them. Sensory alalia is relatively rare and requires more research and practice. Because in motor alalia, the child understands the speech of those around him and partially responds. The sensory alalia, on the other hand, does not understand the speech directed at it. He does not understand. When you do not understand anything, it is difficult to form a speech. Such children will have to be brought up in special institutions.

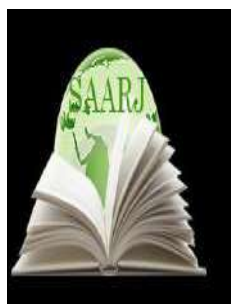
With this in mind, it is easier to achieve the goal by studying the speech of a child with a speech impediment, checking at what level the most errors are observed, the reasons why the speech is in this state, and taking into account the psychology of the child. The more active the hand movements and the better the sensitivity, the more it affects the speech. From this point of view, hand exercises are also important in speech development. The main purpose of developing speech in young children is to establish communication with others through the development of oral speech in the child. Speech development is a complex multifactorial process related to the acquisition of socio-historical experience, which plays a central role in the individual psychological process of the child.



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DOI: **10.5958/2249-7137.2020.00788.0**

## FACTORS INFLUENCING LANGUAGE LEARNING IN PRESCHOOL CHILDREN IN COGNITIVE DEVELOPMENT

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### ABSTRACT

*Preschool children's learning language is just an evolving period and they have already learned a lot of words in their native language until 5 and 6 years old. Children are actively involved in observing others and interaction with their peers and encouraging of adults to speak can help to improve language development. There are some factors which impact on language acquisition of children such as family interaction, peers' influence and watching television. We discussed these factors in our article.*

**KEYWORDS:** *Preschoolers, Language, Television, Social Interaction;*

### INTRODUCTION

Learning language is a processing beginning early in human life. It is a complex means of social communication to learn but learning by children seems simple process and comprehend this process is very interesting topic for developmental psychology. Infants start without knowing a language, yet by 10 months, babies can distinguish speech sounds and engage in babbling. The language is the use of a set of rules and rules for meaningful communication. People play the role of a mediator in bringing information to each other. It is evolved as a result of human activity. Human beings are also differentiated from animals by using meaningful language. Animals can also exchange information by means of certain characters, sound and gestures. But human language is incredibly complex and productive. Although language is one of the most complicated and abstract knowledge we have, all children of the nation understand the language from an early age and use it as a means of communication. In fact, children start speaking before they start walking. After many years and literally thousands of studies, researchers have concluded that five kinds of knowledge underlie the growth of linguistic proficiency: *phonology*, *morphology*, *semantics*, *syntax*, and *pragmatics*. Phonology refers to the basic units of sound, or

phonemes that are used in a language and the rules for combining these sounds. Each language uses only a subset of the sounds that humans are capable of generating, and no two languages have precisely the same phonologies – a fact that explains why foreign languages may sound rather strange to us (D. Shiffer and K. Kipp, 2010). When babies begin to speak, they first distinguish between the phonetic sounds and have to pronounce the sounds correctly in order to properly understand their speech. Many factors influence children to be fluent in their mother tongue. Below we will introduce with these factors.

### **Family interaction influence on language development**

The family is the first factor that effects the development of the child. As the child grows, he continually observes the environment and by this he will construct new schemas. Likewise, language of children can also be traced by monitoring family communication. The child listens to a regular conversation because his family is constantly living around the child. Today, people who are learning a new language are encouraged to listen in the same language. Since the child is in the family circle every day, he keeps track of some of the family members' actions. And they use seep when they are doing something. The observer child compares their actions or circumstances to what he says and tries to understand speech. Furthermore, parents and other members of family teach language to young children. How? For example, they tell the child something of a name or repeat words in daily conversations during their work. The child will keep in mind what he has heard about them. The child begins to say the expression (ddddd, bbbb, mmmm). Until 5 years old the child will have learned many words in language. This is achieved with the help of family members who are in constant contact with him. However, when the child is talking with adults he uses such words even adults do not know real meaning of these words. How did children learn these kinds of words?

### **Effects of television in language development of children**

Today it is not a lie when every child is born becomes a television audience. Different TV shows are so bright and colorful that not only children's but also adults' attention can be easily attracted when people focus on something more active, their learning processes work more effectively. So the focus of the child's attention on the television will continue as a set of schemes for all the data in his memory. It is much more interesting for him to pay attention conversation on the television than people's around him. I have come to this conclusion, observing the baby watching the TV one month old. May nephew Bahora's mother put her in a room with full of guests. Bahora was watching TV without paying attention to the guests. TV completely attracted her attention. What is more, her sisters and brothers were sitting in front of TV not paying attention to the noise in the room. When it comes to television, many people talk about its negative sides. Of course, the negative aspects are many, but there are also advantages. For instance, it helps to increase the child's vocabulary. While the child is watching TV, he listens to the conversation. Recognition processes that have remained at one point in time are also very active, when they are attracted by which sense organ. When you talk to the child he uses the beautiful words in the literary language and you are surprised. Sometimes you think "When he learned these words?" Where did the child these literary words? The child is at home all day without going out. The children learned from a variety of television shows on TV that can show the entire world. The beautiful conversations on the TV reach the child through words he has never heard and the child adds these words to his linguistic wealth. As the child understood

words, he began to add his speech. Sometimes he asks for its meaning if he cannot understand what he has just met. It is difficult to answer to their question for adults, as well. Because some of the literary words they say are not well known by older people earthier. Asking for the meaning of the words will continue until the child's vocabulary is reached. Indeed, a person cannot master a single language perfectly until the end of his life. The child's linguistic wealth and speech can also be used to support television animations, children's programs and other movies. It is also interesting to hear the speech of the people and it deeply affects the child's emotions and takes a deeper place in his memory. However, adaptive animation for adults on TV does not help to improve the child's speech. For, the child cannot grasp the basic meaning behind them. Such shows and animation can increase the scope of the child's attention but do not raise his speech. The best way of increasing the child's speech is live communication.

### **How peers and garden educator influence on developing language acquisition**

As they get older, children's use of language also becomes more mature and complicated. For instance, children start to understand the use of basic metaphors based on very concrete ideas, such as the saying "hard as a rock". According to scientists' findings, the most effective way to learn the language is to communicate lively. Likewise, the child's language needs to be communicated to others. Children interact freely with their peers and in addition, children use the new words they learned in the same way as other children. Connecting communication with peers will increase the confidence of the child. In the kindergarten there are regular exercises with children and most of the workshops are designed for language development. For example, groups of children are taught in different ways in terms of their age stages. That is, children between the ages of 3-4 are taught the simple form around them and are called animal names. Children aged 4-5 will be taught more sophisticated words. At the age of 5-6, children's vocabulary begins to explore some of the words that need to be scrutinized. These are mainly pre-school preparation classes. In addition, in the kindergarten kids are taught tales, puzzles and proverbs. The fairy tale grows the child's vocabulary and makes language smooth. Because, after listening to fairy tales children will tell it to other children as a teacher and thus the children's vocabulary does not have to face the challenge of communicating.

### **Method**

In order to identify television shows or other programs effects on language acquisition we organized a small experiment. According to our experiment, we selected 15 children who are 5 years old. The children were sat in front of TV and they are showed interesting cartoons which they never seen before. The cartoon is full of new words for them and it is also for adults not only for children. After watching the cartoon we observed their speech when they were talking each other.

### **RESULT AND CONCLUSION**

Result showed that all children two and three new words which they have heard from the cartoons. The cartoons can help to grow the children's vocabulary because of their curiosity. In summary, the development of the child's language is influenced by the impact of his family and social environment. When talking to a child, it is necessary to say without reducing words to make the pronunciation good. For example, many parents say the bread (non) "nanna" or food (ovqat) "ashsha". As a result, these words in the riches of a child's language, takes the same form and delays the development of the tongue. Critically saying television is the best assistant for

parents, when the children sit in front of the television all day long, parents can easily do their works. But television programs can be a good influence on the baby's progress. In most cases, it just attracts the child's attention. Therefore, it is necessary to reduce the time spent on children watching television. The most effective way to make the child's language beautiful is to have a live chat with him, because the child learns to express his thoughts during the interview.

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DOI: **10.5958/2249-7137.2020.00748.X**

## USE OF PROGRAMMING LANGUAGES IN APPROXIMATE CALCULATION OF EXACT INTEGRALS IN PROBLEMS OF TECHNICAL SPECIALISTS

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### ABSTRACT

*This article presents suggestions and conclusions on how to create applications that approximate exact integrals using the capabilities of the Java programming language and how to use them effectively in the educational process in the field of specialization.*

**KEYWORDS:** *Explicit Integral, Simpson, Trapezoid, Error, Java Public, Set On Action String, Funks, Intelekt NULL ().*

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### INTRODUCTION

As you know, a program is a specific sequence of machine codes that controls the operation of a specific computing tool. Hundreds of programming languages have been created to make the software development process easier. All programming languages can be divided into two categories:

- Low-level programming languages;
- High-level programming languages;

**The goal.** Today, it is necessary to calculate exact integrals in solving engineering problems, in many cases it is not possible to accurately calculate the integrals encountered in practical problems, and it is necessary to calculate approximately using special methods. The results are obtained using approximate calculation methods and put into practice.

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**Scientific novelty of the article.** The syntax of Java is based on the C ++ programming language. That's why it's easy to learn Java by learning C ++. But most of the features are simplified. For example: Working with pointers means that Java does not have a separate pointer. Operator reloading is also not available. Most importantly, unreferenced objects are cleared automatically. This is done by the Garbage Collector (GC) in Java. In C ++, this is done manually (mechanically) using destructors. In addition, each new version of Java adds more features.

**Results and practical applications.** We approximate and calculate exact integrals using trapezoidal and Simpson methods using an application created in Java software.

Given  $S = \int_2^5 (x + 1)^2 dx$  we calculate the exact integrals:

$$\int_2^5 (x + 1)^2 dx = \frac{(x+1)^3}{3} \Big|_2^5 = \frac{(5+1)^3}{3} - \frac{(2+1)^3}{3} = 63.$$

Taking this value as the exact value of the integrals, we analyze the results obtained using approximate calculation methods.

$$S = \int_a^b f(x) dx \quad (1)$$

we will approximate the exact integral value by trapezoids and Simpson methods.

$$K(f) = \int_a^b f(x) dx = \frac{h}{2} (y_0 + y_n + 2 \cdot (y_1 + y_2 + \dots + y_{n-1})) \quad (2)$$

(2) The formula is called the trapezoidal method formula [3].

$$S(f) = \int_a^b f(x) dx = \frac{h}{3} (y_0 + y_n + 4 \cdot (y_1 + y_3 + \dots + y_{n-1}) + 2 \cdot (y_2 + y_4 + \dots + y_{n-2})) \quad (3)$$

The formula is called the Simpson method formula [3].

Given the function  $y = (x + 1)^2, [2; 5]$  by dividing it into  $n = 300$  cross-sections bounded by the interval, and we get acquainted with the part of the code and the results of the approximate computational process in the trapezoidal method (Figure 1).

Program code:

```
trapetsiya.setOnAction(v1 -> {
String funksiya = funk.getText();

double A, B, N, H, S = 0, S1 = 0, s0, s1, s3;
A = Double.parseDouble(ainput.getText());
B = Double.parseDouble(binput.getText());
N = Double.parseDouble(hinput.getText());
H = Math.abs(B - A) / N;
s0 = finput(funksiya, A);
```

```

        toutput.appendText(String.format("%7.5f", A) + " " +
String.format("%7.5f", s0) + "\n");
        for (int i = 1; i <= N; i++) {
            S = S + finput (funksiya, (A + i * H));
            s1 = finput (funksiya, (A + i * H));
            s3 = A + i * H;
            toutput.appendText(String.format("%7.5f", s3) + " " + String.format("%7.5f", s1) +
"\n");
        }
        S1 = S + ((finput (funksiya, A) + finput (funksiya, B)) / 2);
        S1 = S1 * H;
        noutput.setText(String.format("%7.5f", S1));
    });

```

Here is a brief description of the program code: trapezoid.setOnAction property describes the process that occurs when this button is pressed, String function = funk.getText (); assimilates the algorithmic expression of a function to a string-type variable, double A, B, N, H, S = 0, S1 = 0, s0, s1, s3; the variables used in the program are declared in real type.

A = Double.parseDouble (ainput.getText ()); The getText () function is used to read the data entered in ainput (TextField) to a real variable of type A, the Double.parseDouble function is used to convert the text to a number [4],  $H = \text{Math.abs}(B - A) / N$ ; divide the given space into sections,  $s0 = \text{finput}(\text{function}, A)$ ; finput class represents the line (function assignment) in the function variable according to the syntax rules of the programming language, toutput.appendText (String.format (% 7.5f ", A) + " " + String.format ( "% 7.5f", s0) + "\ n"); The appendText function was used to format the resulting step values of the function to toutput (TextArea). In the next step, the expression of the mathematical model is described in the programming language, based on the problem statement.

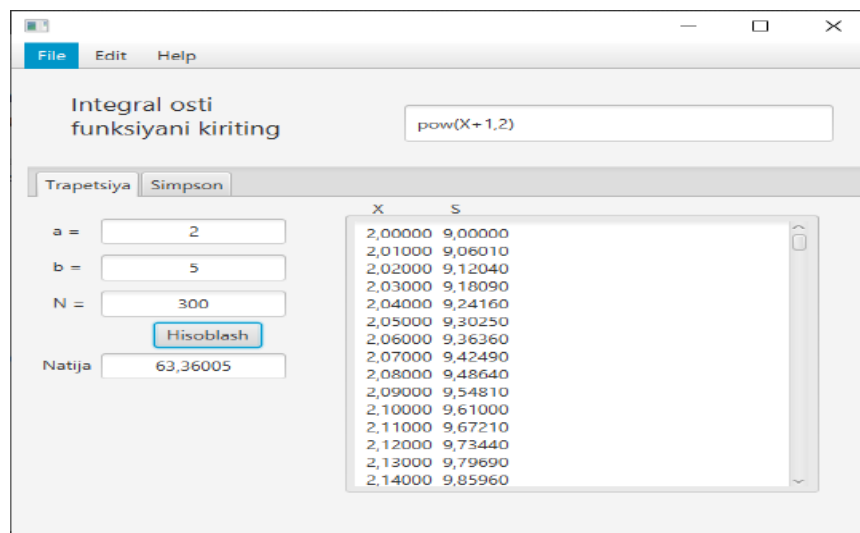


Figure 1. The results obtained at N = 300

Therefore, the absolute and relative errors are given by the result obtained using the application, the value of S is 63.36005, and the integral exact value is  $63, \Delta a \approx 0,36005$ ;  $\Delta \delta \approx 0,56$  percent. If we increase the number of divisions, that is, when  $n = 350$ ,

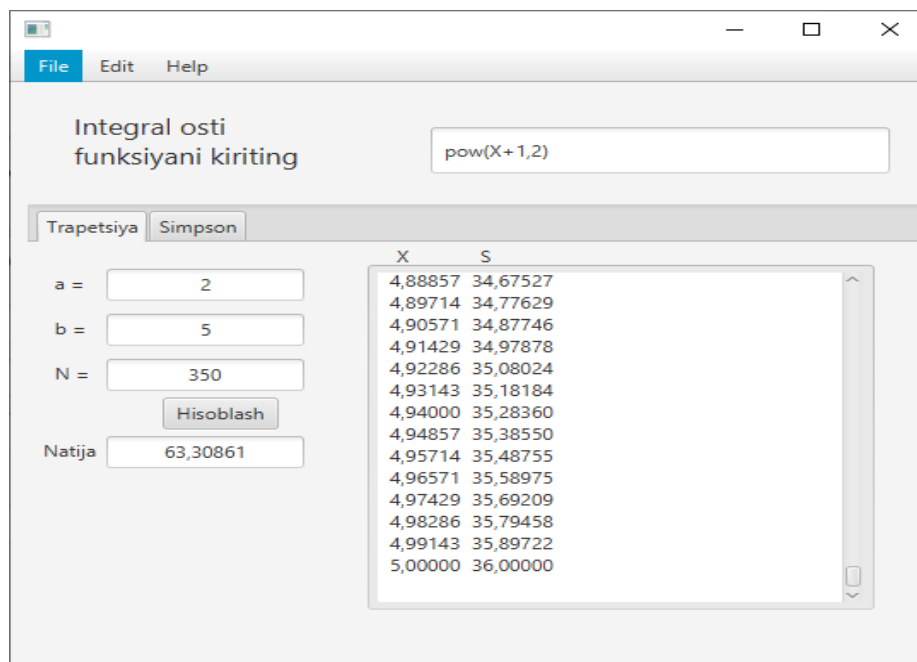


Figure 2. The results obtained at  $N = 350$

We can see that the results obtained at  $N = 350$  are close to the exact value,  $\Delta a \approx 0,30861$ ;  $\Delta \delta \approx 0,48$  percent (Figure 2).

Let's study the results of the approximate calculation of the exact integral by the Simpson method. Select the Simpson section from the application, enter the number of divisions  $n = 300$ , and the program code and results.

**Programm code:**

```
simpson.setOnAction(av -> {
    String funkssiya = funk.getText();
    double A1, B1, N1, H1, S2 = 0, S3 = 0, k = 1, s3, s1, s0;
    A1 = Double.parseDouble(a1input.getText());
    B1 = Double.parseDouble(b1input.getText());
    N1 = Double.parseDouble(h1input.getText());
    H1 = Math.abs(B1 - A1) / N1;
    s0 = finput (funksiya, A1);
    t1input.appendText(String.format("%7.5f", A1) + " " + String.format("%7.5f",
s0) + "\n");
    for (int j = 1; j <= N1; j++) {
```

```

S2 = S2 + (3 + k) * finput (funksiya, (A1 + (j - 1) * H1));
k = -k;
s3 = A1 + j * H1;
s1 = finput (funksiya, (A1 + j * H1));
t1output.appendText(String.format("%7.5f", s3) + " " + " " +
String.format("%7.5f", s1) + "\n"); }
S3 = S2 + (finput (funksiya, A1) + finput (funksiya, B1));
S3 = S3 * H1 / 3;
n1output.setText(String.format("%7.5f", S3)); });

```

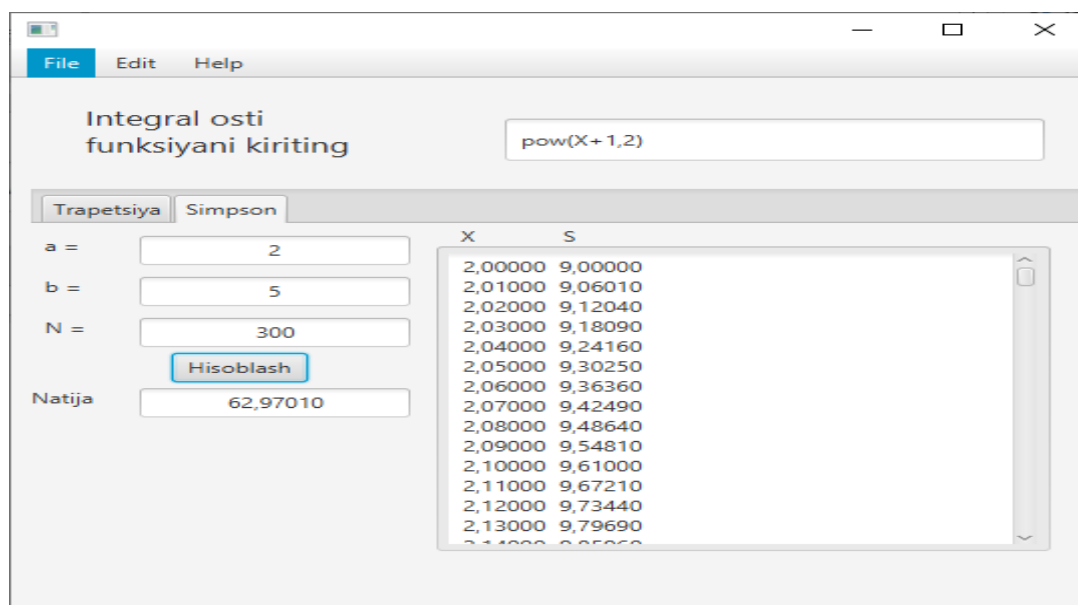


Figure 3. The results obtained at  $N = 300$

Our results obtained using the application are  $\approx 62,97010$ ,  $\Delta a \approx 0,0299$ ;  $\Delta \delta \approx 0,047$  percent. Hence, the result was improved compared to the trapezoidal method (Fig. 3). If we increase the number of divisions, that is, when  $n = 350$ , we evaluate the errors of the results obtained using the Simpson method.

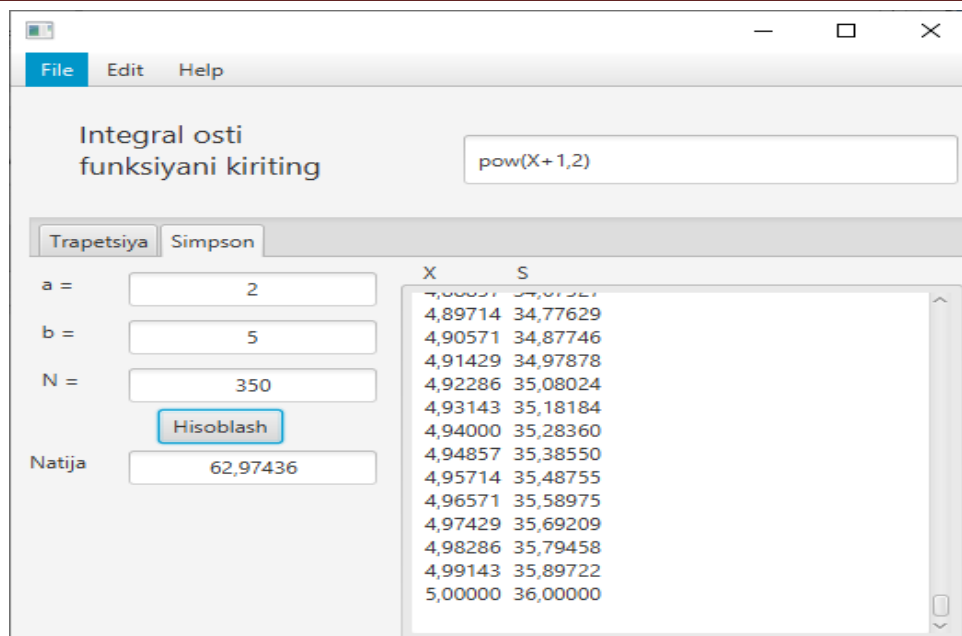


Figure 4. The results obtained at  $N = 350$

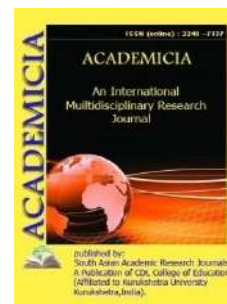
Our total value is  $S \approx 62.97436$ ,  $\Delta a \approx 0,02564$ ;  $\Delta \delta \approx 0,04$  (Figure 4). It turns out that if we increase the number of divisions of a given interval, the results will be more accurate.

## CONCLUSIONS AND SUGGESTIONS

Based on the above, the trapezoid of exact integrals for functions, approximate computational processes in Simpson methods was created in the Java programming language. This application can be used by students of technical education in higher education in the field of specialization, as well as in many areas of production, when users do not have the ability to accurately calculate the limits of strength, durability and volume of objects. In addition, students can calculate the values of the given functions in arbitrary intervals and analyze the obtained results with high accuracy. This serves to give the user an idea of the process. This application can be used as a virtual laboratory work in the disciplines "Numerical methods of linear programming", "Computational methods".

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DOI: **10.5958/2249-7137.2020.00749.1**

## PROGRAMS USED TO CREATE THE LANGUAGE CORPUS AND THEIR PRINCIPLES

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### ABSTRACT

*In the field of corpus linguistics, the creation of corpus programs that can directly analyze linguistic data and present different results to the researcher is classified and categorized according to the capabilities and characteristics of the programs. The advantages and disadvantages of each classified section are discussed. The language corpus analyzes the periodic sequence of the creation of programs that perform tasks such as searching and retrieving data for analysis.*

**KEYWORDS:** *Corpus, Software, Linguistic Software, Abstract, Concord, Antwebconc.*

### INTRODUCTION

Nowadays, language has become one of the areas that needs not only a theoretical but also a practical approach. Corpus programs are used in many languages to track unique and dissimilar linguistic features, speech patterns, and provide analytical conclusions through natural language texts (written or audio). computer technology creates programs and their design, special software. Due to the development of fast and convenient computer technologies, the creation of large-scale corpora of national languages, about a hundred programs for various purposes have been created.

Why do we need corpus programs? First, the creation of corpses is not possible without special software. Second, we need software in the analysis of broad-layer linguistic units in corpora. Third, the corps can be used not only by professional philologists, linguists, lexicographers, but also by language teachers and students. This requires corpus applications that can be used for a variety of purposes.



## MATERIAL METHOD

T.McEnery and A.Laurence have provided information about the separation of corpus programs from corpora through textbooks and articles. The classification of corpus programs was initially described by T.McEnery and A.Hardie. Programs are grouped by period of creation and activity. The scientist divides the programs into four generations<sup>1</sup>. 1) First generation programs: Includes Concordance Generator, Discon programs. Although these programs serve as the foundation for subsequent programs, their functionality is limited, recognizing only a limited number of characters. More text is limited to tracking the amount and list of words. 2) Second-generation programs: Oxford Concordance Program, Longman Mini-Concordancer, MicroConcord, which could be installed on personal computers and used in language teaching from small analyzes. 3) Third Generation Programs: WordSmith Tools are AntConc programs that can be recognized as high quality and wide range of applications with their use and various functions. 4) Fourth generation programs: corpus.byu.edu, SketchEngine, which are characterized by high speed and large amount of text. Although they are the latest and most advanced, fast search engine apps, they do have some limitations for the user. For example, SketchEngine, while fully copyrighted, makes it difficult to get complete information about the program, because it is a web-based program, the user can not download it to a personal computer, and pay a monthly fee for use. need Although downloading and using Corpus.byu.edu is free, the search engine charges a fee when it exceeds a certain amount. Many of the above four generations of programs have taken English or American-English to their research center or are tied to a specific language corpus that a researcher cannot use in any language search. However, among the programs of this generation, corpus programs created by A.Laurence can be highly appreciated in terms of openness and ease of use in the corpus. The AntConc program is also important in terms of language selection, meaning that different language researchers can download the program, monitor language and language features, and draw statistical and analytical conclusions. We also used this program in the Uzbek language. In an article published in 2013, A. Laurence provided information on the creation, structure and operation of a new generation program. So, the name of the fifth generation program is AntWebConc, which covers three integers. This is the Model-View-Controller<sup>2</sup>, ie the model - the corpus database, View - the browser interface, Controller - the controller (for example, concord analysis, etc.). According to the information provided about the program, any researcher who does not have a deep knowledge of programming and language can understand and use the program. The program is expected to be announced.

## DISCUSSION

In the Oxford Handbook of Lexicography, Iztok Kosem emphasizes the need for well-designed corpus programs for corpus inquiries, especially for lexicographers. I. Kosem groups programs into 3 types according to their use: standalone programs, computer-based programs, online programs. Evaluates standalone programs as programs that are not connected to the case and are stored on the user's computer. WordSmit and MonoConc Pro are included in this group. Stand-alone applications process a limited amount of limited corpus data, so such programs may reduce their usefulness in modern large-scale corporations. Online applications are also classified as stand-alone and corpus-connected online corpus applications<sup>3</sup>. Among the online programs is the most popular and improved Sketch Engine program in recent years. The program is also

significant in that additional features complement it. However, any researcher cannot access this program quickly and easily; there are requirements and limitations of the program.

## ANALYSIS

We think that it is appropriate to analyze the classification of programs used in the creation of language corpora and the implementation of linguistic operations in them directly using the methods of observation, experiment and comparison, because the similarities and differences of programs performing simultaneous and the same activity requires interpretation, direct observation, and experience. We try to group programs according to their function and application.

First of all, corpus programs that can be installed on the user interface or used online, depending on the application: 1) Corpus applications that can be installed on Windows, Mac, Linux operating systems: aConCorde, ANNIS, AntConc, ANVIL, CorpKit, Segment Ant, Corpus programs such as TagAnt, TextSTAT. For example, the AntConc concordant program has developed separate versions for Windows, Mac, and Linux operating systems, and the program can be downloaded either from the website or from other computers where the program is available. 2) There are many programs available only online today, and due to the wide range of capabilities of these programs, a specialist can fully explore the capabilities of the corpus: AMALGAM, BNCWeb, CLiC, HeidelGram Web-Based tools, Sketch Engine, Programs like Cortext Manager work online. Some online corpus applications are housed in private language corporations and are designed specifically for that corpus. For example, the ANC2go program was created for ANC (American National Corpus), and BNCWeb was created for BNC (British National Corpus). For example, the ANC2go program was created for ANC (American National Corpus), and BNC Web was created for BNC (British National Corpus). It is not always easy and convenient to use programs that are linked to a specific language, it is impossible to observe the linguistic phenomenon of texts of different genres in any language. On the other hand, online corpus applications can cover large amounts of complex and multi-layered complex text and perform linguistic analysis in seconds, such as part-of-speech tagging or tokenization.

We have divided the corpus programs into several groups according to their function: text collector programs, annotation programs, concordance programs, statistical analyzer, tag, grammar analyzer (parsing), tokenizer, semantic analyzer, audio text analyzer. and programs that perform mixed analysis.

1. Text compilers: A collection of corpus texts can be collected from a database on a user's computer or from the Internet at a specific address, or in a variety of genres and fields. WebBootCat, a program that collects text from the Internet, and SketchEngine, which are available in computer memory or can scan a source to create a body of data.

2. Interpretive programs: @annotate, AMALGAM, Atomic, Dexter, PALinka, Synpathy are only annotating programs. These programs also comment on the issue at hand. For example, in oral corpuscles, semantic annotation is included if semantic analysis is intended in the corpus, just as syntactic analysis is more important in interpreting familiar, prosodic features of speech<sup>4</sup>. Annotation programs provide complete information about the corpus: the author of the text used, the publication, the source (book, newspaper, web page), the size of the text, etc. Additional text may also include parts of speech, lemmas, and tokens. But scholars such as Sinclair and Laurency believe that annotation of each corpus causes a loss of textual integrity,

while on the other hand a researcher who is profoundly familiar with that language through corpus annotations explores the features of the text: can easily analyze.

3. Concordant programs: AntConc, BNCWeb, CasualConc, Concordancer, ParaConc, Wordstatix programs. It is one of the simplest but most important programs in corpus programs. Because these programs allow you to see and analyze the number of times each word and word form occurs in context. Concordances define two important forms of analysis in corpus linguistics: quality and quantity<sup>5</sup>. Concordant programs allow you to search for words, word forms, or phrases of a certain length in the body.

## RESULT

The corpus of Uzbek-language news items, "Saylovlar" was analyzed using the AntCons concord program.

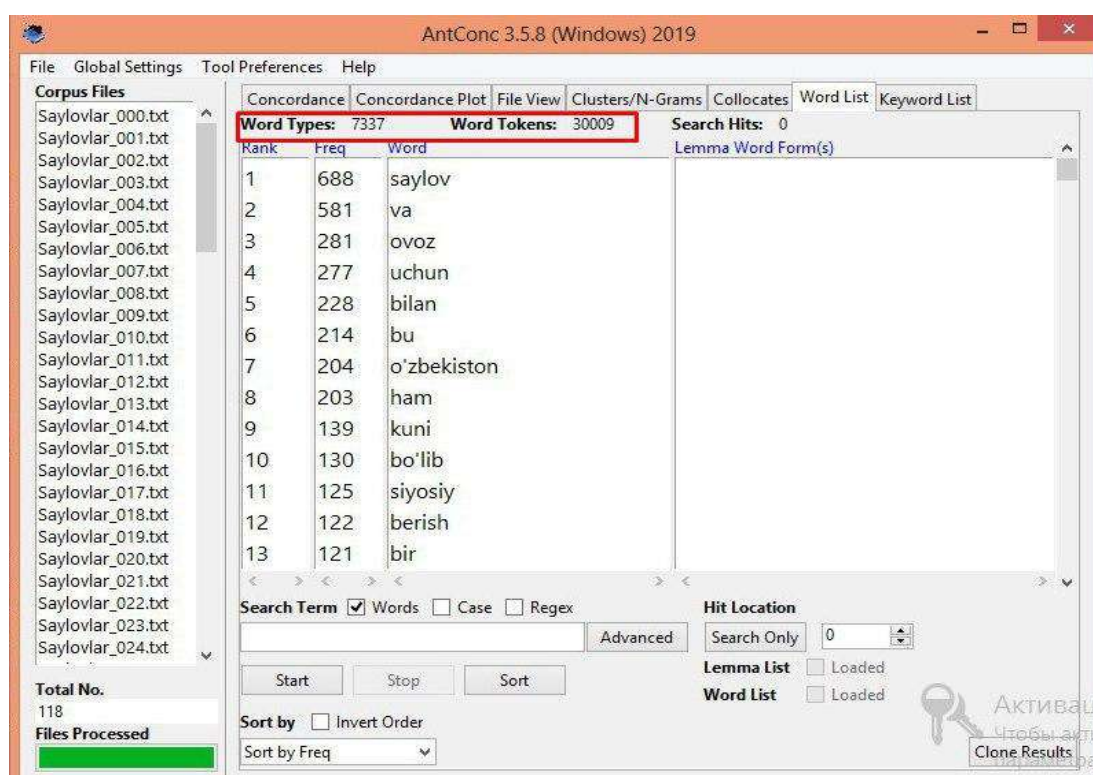


Figure 1. List of words

Of course, we prepared this very small case for experimental testing. There are 118 texts, as shown in Figure 1, showing a list of words.

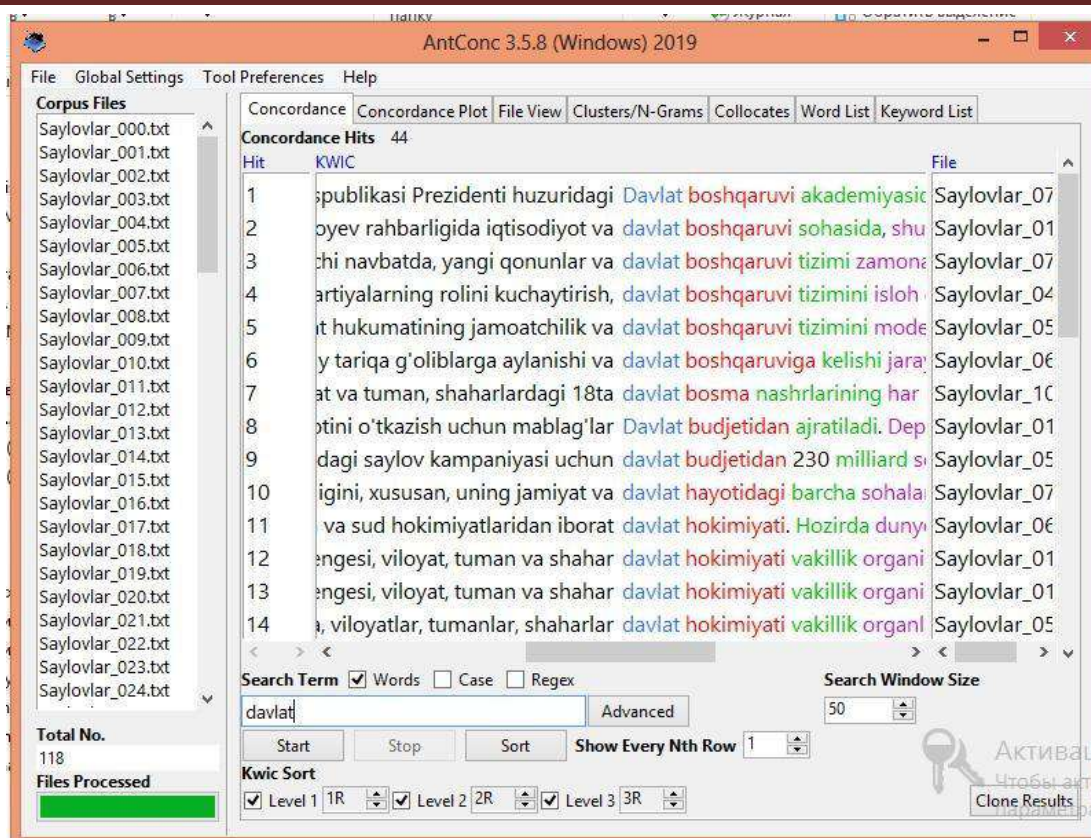


Figure 2. The concord is described.

Figure 2 above shows the words and phrases in the context. The word is described in the context in which it is used. This process is called KWIC, or "key word in context" in corpus linguistics<sup>6</sup>.

1. Statistical analysis programs are similar to concordance programs. For example, the Wordsmith program, but the UCS Toolkit program, which detects data statistics in large libraries, or the Log-Likelihood and Effect-Size Calculator program, which checks the size and frequency of two corpses, belong to this group. We thought it was a complex corpus for the average researcher.
2. Programs that separate parts of speech or speech differ from other programs in their complexity and uniqueness in each language. Even when each part of a sentence is tapped, that is, encoded, this tag may change depending on the content and structure of the sentence in another text.

In addition, corpus applications can be classified as grammatical analysis, semantic analysis, audio text analysis, and mixed multi-part applications according to the query.

Differences in the classification of software can be observed in corpus linguistics research and sources. For example, Humboldt University's website on Corpus Linguistics and Morphology categorizes software as online applications, API programming interfaces and frameworks, corpus creators, annotators, tags, corpus analysis tools, and more<sup>7</sup>.

Applications can also be categorized into open or closed, paid (for a certain period of time or without restriction) or free for any user.

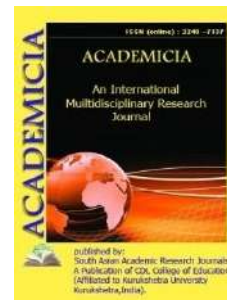


**CONCLUSION**

As a conclusion, software that displays the capabilities of language corpora can be further classified according to its internal features, but this does not mean that any type of software can be used in corpora. Typically, separate sites are created for each national language corpus, with software that provides analysis and conclusions, or the simplest user prefers to use free and easy-to-install software on the Internet. In our opinion, corpus programs are considered to have the most users if they do not focus on a specific language, if the access and use instructions for the researcher are complete, and if the user does not require in-depth knowledge of the programming language. Because such programs can be used not only in research, but also in various stages of language teaching and education in general.

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DOI: **10.5958/2249-7137.2020.00750.8**

## ASSESSMENT OF FACTORS INFLUENCING THE QUALITY OF EDUCATION IN HIGHER EDUCATIONAL INSTITUTIONS

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### ABSTRACT

*The article discusses the results of a study of the quality management problems of higher education in the preparation of highly qualified specialists for the economy of Uzbekistan. The factors affecting the quality of education and ensuring the competitiveness of native HEI in the educational services market are identified and analyzed. To achieve this goal, we used a combination of methods: analysis, synthesis, generalization and questioning. Our results can contribute to the basis for effective quality management in HEI of the Republic of Uzbekistan.*

**KEYWORDS:** *Quality Management, Educational Services, Factors, The Concept Of The Development Of Higher Education, Higher Education, Total Quality Management.*

### 1. INTRODUCTION

High demands on the moral, intellectual and professional potential of future specialists led to the training of high-quality personnel that satisfy international requirements, which is the main task of higher educational institutes. In the context of global trends in higher education, such as the internationalization of education, international student mobility and accelerated curricula, the issue of quality is the particular importance.

The emphasis is on the quality of higher education as its actual “result”, that is, the qualifications of graduates. At the same time, the quality of education is recognized as one of the urgent



problems facing the modern system of higher education. The quality of education as an object of research is widely studied and implemented in developed countries. Although the quality of education in the country's educational institutions has not decreased over the years of independence, at present it is developing as a system.

Nowadays in our country technologies are being created for clear, stable and promising higher education assessment procedures. It is worth noting that in recent years in Uzbekistan, especially with the participation of the head of state, a number of decisions and projects have been developed to reform the higher education system. In particular, the Concept for the Development of Higher Education of the Republic of Uzbekistan until 2030 will improve the quality of education, which take into account the needs of socio-economic sectors, improve the quality of education, train competitive personnel, and effectively organize scientific and innovative activities. [1]

Today 114 higher educational institutions operate in the republic, of which 93 are state, 21 are foreign higher educational institutions and their branches. In particular, over the past 3 years, 6 higher educational institutions and 17 branches, as well as 14 branches of foreign higher educational institutions have been created. According to the concept of the development of higher education in the Republic of Uzbekistan today, in front of the higher education system a number of urgent problems and lacks that requiring their decision in the direction of training highly qualified personnel, including:

- a) In the field of higher education enrollment and quality assurance
- b) In the field of research and innovation
- c) In the field of strengthening the material and technical base of higher educational institutions
- d) In the field of increasing the attractiveness and competitiveness of higher education at the international level [1]

The concept provides for raising the content of higher education to a qualitatively new level, establishing a system of training highly qualified personnel who are able to find their place in the labor market, and make a worthy contribution to the stable development of the social sphere and economic sectors. The solution of the above problems and the implantation of the tasks set require the development and implementation of a mechanism to improve the quality of education, taking into account the needs of employers, the effective organization of educational, scientific and innovative activities in integration with production. In this regard, the study of problems of improving the quality of education, the assessment of factors influencing it and the organization of effective management in HEI of Uzbekistan are relevant.

### **Review of scientific papers and methodologies**

The problem of the quality of education was devoted to the scientific research of many scientists, both native and foreign. In particular, in the works of Kambarova Zh.Kh., Turdialieva M.M., Khamidova A., Rakhmanova N.R., Inoyatova U., Juraeva R.Kh., Sharipova Sh.S., Yuldasheva M., Rakhimova N. R., Nizamova A.B., as well as in the works of scientists from CIS countries Ivanova R.V., Senkevich T.A., Alekseenko V.A., Yusufova F.Kh., Granichina O.A., Pavlyuchenko E.I. ., Shevchenko VA, Romanova IB a sufficient methodological base has been created in the field of improving the quality management of education.

Foreign scientists R. Landquist, W. Deming, V. Schuhart, A. Zabadi, A. Todorut, B. Burkhalter, B. Crumrine, J. Hackman, G. Kanji and others dealt with problems of improving the quality management of education in higher educational institutions. A review of scientific works on education quality management indicates that there are a variety of concepts and techniques. Higher educational institutions create their own systems of management and guarantees of the quality of education, based on the conformity of their educational programs, material resources, scientific, methodological and personnel support that meet the requirements of society, the individual, the state, the labor market.

In foreign practice, there are three main models which are most often used: an evaluation method for managing the quality of university activities; management based on the principles of total quality management (TQM); management approach based on the requirements of international ISO quality standards. In addition, such approaches as Kaizen, PDCA (Plan-Do-Check-Act) are used to improve the work in organizations. [5]

Kaizen (kaizen) - this is one of the approaches to improving the organization. This term appeared in Japan and began to designate a system of interrelated actions leading to an improvement in the quality of products, processes and management systems. In the modern sense, kaizen is a system of continuous improvement of quality, technology, processes, corporate culture, labor productivity, reliability, leadership and other aspects of the company.

PDCA (Plan-Do-Check-Act) - the cycle of organizational management, or the Deming-Shuhart Cycle. According to this cycle, management should cyclically go through the following stages: Planning - Doing - Checking - Acting. The PDCA explicitly implements a continuous process improvement model - the described sequence of actions is closed and forms a cycle so that statistical stability of processes can be achieved

From our point of view, in our country, the TQM-Total Quality Management model, which is widely used abroad, is a modern and effective approach to managing the quality of educational services in universities for the training of engineering specialists.

TQM-Total Quality Management (TQM) is an enterprise-wide method for continuously improving the quality of all organizational processes. This is the philosophy of universal quality management, which successfully started many years ago in Japan and the USA with the practice of awarding companies that have achieved the highest quality products.

It must be pointed out that despite a lot of research in the field of education quality, the Total quality management (TQM) system was not a separate object of research by our scientists. In this regard, the purpose of our study is to identify and evaluate the most significant factors affecting the quality of higher education from the perspective of various participants in the educational process and to assess the possibilities of introducing a system of Total quality management in the educational process of the Bukhara Engineering and Technology Institute.

## **2. MATERIAL AND METHOD**

Total quality management in the educational system is a management system based on the training of specialists demanded by consumers of education. TQM is aimed at systematically achieving the strategic goal of the organization through continuous improvement of work. The word "total" in the concept of "Total quality management" means that every employee of the organization should be involved in this process, the word "quality" means taking care of

customer satisfaction, and the word “management” refers to employees and processes necessary to achieve a certain level quality. [2]

The introduction of TQM principles in higher education institutions of the republic requires the use of managerial technologies in education, process and integrated, systematic, marketing, situational, cultural and educational approaches and specific organizational, economic, socio-psychological and innovative pedagogical methods and tools. When implementing the TQM philosophy, a number of problems are very often encountered that significantly reduce its effectiveness. These include a lack of leadership involvement, a lack of appropriate organization culture, poor preparation for change, and a lack of objective information. In this regard, there is a need to conduct a research to study the preparedness of teachers and students to implement the principles of TQM in our HEIs.

To this end, we conducted a questionnaire among the faculty and students of the Bukhara Engineering and Technology Institute (BETI) to identify their readiness for transformation, to determine factors to improve the quality of education and the development of the institute as a whole.

### 3. RESULTS AND DISCUSSIONS

In April 2020, a survey was conducted among 4-year students, where 185 students were interviewed. Survey participants were asked to fill out a questionnaire containing 36 questions presented in closed form. Since the participants in the study were 4-year students who had almost completed a full course of study, the analyzed data is objective for forming an opinion about each element of education. Namely, the content and provision of the educational process at the faculty, the professionalism of teachers, the professionalism of graduates, extracurricular work with students, the content of educational services, and production practice. Questions on these elements were asked in a closed form, with two factors taken into account: level of satisfaction and degree of importance (see table 1).

According to the student's opinion, the most influential factors on the quality of education at the institute are:

- Methods for conducting training sessions (95.5%);
- The ratio of theoretical and practical classes (86.7%);
- Organization and content of laboratory studies (86.4%);
- List of subjects taught (85.5%);
- The quality of practical and laboratory studies and the provision of consulting assistance (83.4%);
- Educational and methodological support in subjects (82.7%).

Generalizing this choice of students, we can say that students are tuned to receive high-quality knowledge and have a clear idea of what factors contribute to improving their knowledge and skills.

Questions related to the conditions of the organization of the educational process, the organization and conduct of practice, the professionalism of teachers and the form of students'

knowledge control, according to students, has medium importance, which also indicates their loyalty to the problem being studied.

Among the least influential factors, students included the following:

- Organization of research work of students (39.5%);
- List of available training areas and specialties (41.6%);
- Extracurricular work with students (work of circles, 42.2%).

This choice of students is probably due to their insufficient involvement in scientific activities and in the circle work of the institute, as well as the weak connection of this activity with the educational process.

Among the strengths of education at BETI, undergraduates noted the following:

- Available specialties and specializations of BETI (68.2%);
- knowledge of teachers of academic disciplines 67.9%);
- Content of academic subjects (67.4%);
- Educational and methodological provision (67.2%).
- Various forms of education available (full-time, evening, correspondence, (65.5%)).


Such an assessment of the respondents, although there is no obvious advantage of strong factors, indicates the great potential for improving the quality of education at the institute, which needs to be further purposefully increased.


**TABLE 1.SUMMARY RESULTS OF STUDENT'S SURVEY (%)**

	Questions	satisfie d	unsatis fied	import ant	unimpor tant
1	Course structure	67,4	32,6	76,3	23,7
2	Teaching methods	42,1	57,9	95,5	4,5
3	Conducting practical and practical training	43,2	56,8	83,4	16,6
4	Organization of student research work	65,8	34,2	39,5	60,5
5	Library provision	54,3	45,7	62,9	37,1
6	Convenience of audiences	57,2	42,8	71,1	28,9
7	Convenience of the lesson schedule	62,5	37,5	77,2	22,8
8	Providing with science literature	67,2	32,8	82,7	17,3
9	Provision of consulting services	58,1	41,9	83,4	16,6
10	Knowledge of the subject taught by teachers	67,9	32,1	72,8	27,2
11	Methodological training (pedagogical skills)	62,3	37,7	76,5	23,5
12	Existing specialties	68,2	31,8	41,6	58,4
13	Available forms of study at the faculty (full-time, part-time)	65,5	34,5	69,8	30,2
14	List of subjects taught	62,3	37,7	85,5	14,5
15	Theoretical and practical training (methods)	40,8	59,2	86,7	13,3

16	Conduct and structure of laboratory classes			38,2	61,8	86,4	13,6
17	Extracurricular activities			38,7	61,3	72,5	27,5
18	The form of current, intermediate and final control of students' knowledge			43,2	56,8	78,4	21,6
19	Duration of production practice			45,2	54,8	73,9	26,1
20	Practice base			43,8	56,2	75,5	24,5
21	Management of the practice by the host organization			41,7	58,3	74,5	25,5
22	Management of the practice by the Faculty			42,9	57,1	73,9	26,1
23	The structure of the practice			41,2	58,8	74,1	25,9
24	Sport			63,5	36,5	66,8	33,2
25	Cultural and popular works			64,9	35,1	57,2	32,8
26	Student accommodation			71,4	28,6	80,3	19,7
27	Club activities			52,1	47,9	42,2	57,8
	Questions	Very high	High	Don't know		Low	Very low
28	Would you go to this institute if you had a choice to go back to HEI?	20,3	44,8	8,3		23,4	3,2
29	How do you generally assess the quality of the organization of the educational process at BETI?	19,1	38,7	9,5		28,6	4,1
30	To what extent does your knowledge of the learning process match your expected results?	5,3	59,2	14,1		18,4	3
31	How highly do you rate the level of your theoretical and practical training in the specialty in which you study?	13,1	39,7	8,2		32,3	6,7
32	How do you estimate that about 25% of the subjects taught are not needed at all?	28,8	42,1	15,4		11,4	2,3
33	With the knowledge and skills you have acquired today, how do you assess your chances of getting a job in your field?	3,2	28,4	2,7		45,2	20,5
34	Do you want to improve your entrepreneurial skills and support the organization of your own business within the framework of the program you are studying?	38,7	39,1	10,1		9,1	3
35	How do you assess the current	4,2	19,7	1,9		42,8	31,4

	employment measures taken by the faculty?					
36	How do you assess the overall quality of training in your faculty?	12,6	24,2	44,3	14,7	4,2

 Strengths

 areas for priority improvement

The factors that received the lowest scores of the respondents and which are interpreted as weaknesses of the institute are:

- Organization of additional classes in academic disciplines (38.7%);
- The content of laboratory studies and the quality of their conduct (38.2%);
- The ratio of theoretical and practical classes (40.8%);
- Content of industrial practice (41.2%);
- Management of the practice by the host organization (41.7%);
- Methods of conducting classes (42.1%);
- A system for assessing student knowledge (42.2%);
- Organization of practice by the faculty (42.9%).

Survey results show that there are a lot of factors that negatively affect quality education. It is likely that these weaknesses will turn into potential threats to ensure the quality of education at the institute if management does not urgently take a systematic approach to the development of improving measures. In particular, it is necessary to develop an educational and scientific laboratory base; adjust curricula in accordance with the needs of production; pay more attention to the development of practical skills of students based on competencies, encourage teachers to constantly improve their professional and pedagogical skills, to use new pedagogical technologies, expand the base of practice and strengthen ties with employers, create an effective and efficient system for assessing students' knowledge and skills.

Most students agree that 25% of subjects do not have a connection with the specialty in which they are studying (70.9%) and support the improvement of the content of curricula conducive to their professional training.

As the survey shows, only 31.6% of students rate their chances of finding a job in their specialty highly. At the same time, attention should be paid to 65.7%, who believe that difficulties with employment will arise. It follows that it is necessary to strive to create a new system of support for graduate employment, providing not only the formation of skills for a successful job search, but also the creation of new jobs, entrepreneurship skills based on the development of career centers, entrepreneurial clubs, etc., which is claimed by 77.8 % of graduates. Most students are not satisfied with the existing mechanism for providing employment to graduates (74.2%). It is necessary to take measures that will fundamentally change the status of graduates from the employer to the status of the employer, which will testify to the high quality of education.



Good results were obtained by answering questions 28 and 30 (more than 65% of the respondents chose the first two answers to these questions), which indicate the prospect of getting an education at BETI, and 36.8% positively assessed its quality (question 36). But it is strange that 44.3% of the respondents answered, "I don't know" this question. Perhaps this is due to the fact that they do not have a proper idea of the quality of education or were not able to compare the acquired knowledge and skills in practice. In any case, this contingent should be in the center of attention of the institute's leadership. In general, studies confirm the readiness of BETI students for changes in improving the quality of education.

The survey of the faculty of BETI involved 125 people, which is 27 percent of the contingent, including 7 doctors of sciences, 37 candidates of sciences or PhD, 42 senior teachers, 22 – assistant, 7 teaching interns and 10 doctoral students. Among the respondents, 38% are teachers over the age of 50, 53% between the ages of 30 and 50, and 9% under the age of 30. The study participants were asked to fill out a questionnaire containing two sections. In the first section, respondents had to evaluate on a 5-point scale the importance (unimportance) of various areas of the institute's activities, ensuring its further development and improving the quality of education. And the second section contains statements characterizing the same lines of activity, the current state of which should also be assessed for the relevant changes, choosing one of five options for agreement (disagreement). Each of the 26 positions of the first section of the questionnaire is consistent with one of the 26 positions of its second section. The results of the questionnaire are presented in summary Table 2, where the assessments for the coordinating positions (questions) of the two sections are connected by one line. For each position, the average score in points, the relative percentage score, as well as the rating score for the average score are given.

**TABLE 2 SUMMARY RESULTS OF TEACHER'S SURVEY**

<b>Section 1. "Desired Level"</b> (importance of evaluation max-5, min-1)				<b>Section 2. "Reached level"</b> (importance of evaluation max-5, min-1)			
<b>Name of position</b>	<b>Average point</b>	<b>%</b>	<b>Rank</b>	<b>Name of position</b>	<b>Average point</b>	<b>%</b>	<b>Rank</b>
1. BETI's orientation on potential employers and consumers of educational services	4,75	95	4	27. BETI's leadership is orientated on potential employers and consumers of educational services	3,88	78	18
2. Informing each employee about the general goals of the HEI's development by the leadership	4,77	95	3	28. The leadership informs each employee about the general goals of the institute's development	4,44	89	5
3. Leadership's support for initiatives taken by teachers and staff	4,5	90	12	29. Initiatives taken by teachers and staff are supported by leadership	4,5	90	4
4. Resource provision of the educational process by the leadership	4,71	94	9	30. Educational process is provided with resources by the leadership	4,34	87	9
5. Existence of perfect	3,78	76	18	31. The perfect concept of HEI	3,78	76	19

concept of HEI's development				development has been created			
6. Effectiveness of institute leaders as leaders	4,4	88	14	32.HEI leadership is a model as a leader	4,4	88	7
7. Orientation of HEI to the requirements of the labor market	4,74	95	5	33.HEI is focused on the requirements of the labor market	4,13	83	12
8. Existence of special structural subdivisions in HEI responsible for separate processes	4,65	93	8	34. HEI has special structural units responsible for specific processes	4,55	90	3
9. Collection, analysis and application of information from external sources (competitors, political, economic, social sources)	4,12	82	16	35. Information from external sources (competitors, political, economic, social sources) are being collected, analyzed and used.	4,43	89	6
10. Analysis of information about activities of other HEI	4,32	86	14	36. Information about activities of other institutes are analyzed	4,34	87	9
11. Availability of employee incentive system	4,87	97	1	37. There is a system of employee incentives	4,44	89	5
12. Improving the working conditions of employees	4,86	97	2	38. The working conditions of employees are always improving	4,39	88	8
13. Opportunity to submit complaints and suggestions to the management of HEI	3,77	76	19	39. There is an opportunity to make complaints and suggestions to the management of HEI	4,21	84	10
14. Existence of a system for evaluating the effectiveness of staff work on the spot	4,44	89	13	40. There is a system for evaluating the effectiveness of staff work on the spot	4,22	84	11
15. Availability of staff training system	4,33	87	15	41. HEI has a system of staff training	3,77	76	20
16. Adequacy of financial support of HEI activities	4,66	93	7	42.HEI activities have sufficient financial support	3,95	79	16
17. Existence of the process of financial risk control	3,45	69	20	43. HEI has a system of financial risk control	3,44	69	21
18. Systematic analysis of all processes of HEI activity and its improvement	4,57	91	10	44. There is a systematic analysis of all activities carried out in the HEI and its improvement	4,56	91	1
19. Monitoring the level of satisfaction of employers and students	4,57	91	10	45. The level of satisfaction of employers and students is monitored	4,11	82	13

20. Analysis of HEI image development	4	80	17	46. HEI image development is analyzed	4,11	82	13
21. Analysis of the demand for higher education services by clients	4,66	93	9	47. The demand of clients for higher education services is analyzed	4,1	82	13
22. Analysis of employee achievements (grants, courses, academic degrees)	4,66	93	9	48. Employee achievements (grants, courses, academic degrees) are analyzed	4,55	91	2
23. Analysis of applications and complaints filed by the society	4,43	89	12	49. Applications and complaints submitted by the society are analyzed	4,21	84	10
24. Analysis of the cost and price of educational services	4,56	91	11	50. Costs and prices of educational services are analyzed	4,05	81	14
25. Analysis of the effectiveness of financial spending	4,71	94	6	51. The cost-effectiveness of finance is analyzed	3,89	78	17
26. Analysis of the efficiency of the use of space and equipment	3,34	67	21	52. The efficiency of the use of available space and equipment is analyzed	4	80	15

least important areas

strengths

most important areas

weaknesses

areas for priority improvement

The analysis of the results of the first section of the questionnaire indicates the point of view of staff on the especially important aspects of the institute's activities in ensuring the quality of education in three areas:

- The focus of education on the requirements for the quality of the labor market;
- Efficient use of resources to improve quality;
- Personnel Management.

Among the priorities, the employees noted two areas in the focus of education on the requirements for the quality of the labor market (1.7 questions), four areas in the field of personnel management (2,8,11,12) and two areas of the effective use of resources to improve quality ( 16 and 25 questions). It should be noted that the first 3 areas, rated as the most important, relate to the field of personnel management. Although some of these areas are also rated as the institute's strengths, this circumstance suggests that management should pay special attention to these areas and constantly improve methods and forms of personnel management, which also contributes to the necessary changes.

The following places in importance received directions in the field of orientation to the requirements of the labor market. These survey results indicate positive trends in the process of

awareness by the teaching staff of the importance of taking into account the requirements of users of educational services in ensuring quality. The leadership of the institute should take a set of measures to strengthen integration relations with employers and the public, even more respondents rated the relationship with potential employers and consumers of educational services as a weakness of the institute.

Further priority in importance, respondents consider areas in the effective use of resources, especially finance. The financial provision of the institute and the efficient distribution of finances are important factors in ensuring quality. The same areas are noted as weaknesses of the institute. Also, employees consider the process of controlling financial risks and analyzing the efficiency of using space and equipment to be equally important. Indeed, today these areas are becoming the most important areas for the development of the institute, since gradually, starting from 2020, all universities in Uzbekistan should go over to self-financing (Resolution of the President of the Republic of Uzbekistan dated July 11, 2019). And then all the fees and the allocation of financial resources should be made by the institution itself, but for now this activity is also its weakness.

Therefore, the leadership of the institute needs to mobilize the entire educational and scientific-production potential to determine additional sources of income and optimize costs. At the same time, the cost optimization of an educational institution should not fall below a certain level, which will be followed by an irreversible process of reducing the quality of specialist training. It is necessary to develop a mechanism for the targeted use of finance, mainly in those areas that contribute to improving the quality of education. It must be taken into account that in order to achieve a more efficient use of financial resources, it is necessary to ensure not only enough training of specialists demanded by the labor market, but also the economical and efficient spending of allocated funds to finance the educational and material base of the institute, which is an actual problem today.

The current direction for carrying out priority improvements is characterized, on the one side, by a high degree of its importance for the success of the institute and, on the other side, by a low assessment of the current state of this direction. Respondents expressed the least degree of agreement with the statement that the leaders of the institute have developed a perfect development concept and are analyzing their image.

Thus, according to the analysis results, four key areas for improvement can be identified:

1. Development of a perfect concept for the development of the institute and increase its image.
2. Development and support of staff by leadership.
3. Development of a mechanism for effective self-financing and distribution of financial resources of the institute.
4. The orientation of the Institute on the requirements of potential employers and consumers of educational services.

It is worth noting that, all these improvements are prerequisites for the implementation of the education quality management system in the institute. A system is understood as a model that includes a set of principles, methods, indicators and requirements for various aspects and processes of the institute's activity, criteria that determine the level of perfection of these

processes and methods for their assessment, which together determine all the processes of the institute's activities aimed at achieving the required quality results.

#### 4. CONCLUSIONS

The introduction of TQM in the management process of higher educational institutions of the country, in our opinion, is inevitable and requires the use of managerial technologies in education. To carry out improvements in the areas identified as a result of the survey in order to implement the TQM principles in BETI, the following work is necessary:

1. Decision-making by the senior management of the institute on the implementation of TQM. It should be noted that this stage is the most responsible and significant in terms of all subsequent decisions. A clear understanding of all the problems that may arise in the institute related to changes in the organizational structure, costs of managing, ensuring and improving the quality, training of personnel potential, etc. is also necessary, as well as awareness of the advantages that the institute will receive as a result of changes.
2. Development of a strategy for total quality management at the institute (defining policies, goals and objectives, indicators and quality criteria).
3. The creation of the Quality Council, headed by the head of the organization, and the appointment of officials responsible for quality at the institute and in each unit.
4. Dissemination of information among all employees of the team about the implementation of the TQM-approach at the institute and the benefits that will be obtained after the entire complex of work is carried out through staff training and certain events.
5. Development of systems of legal support, control and reporting, awareness and responsibility.
6. Development of a quality manual, guidelines for all the processes of the institute, work instructions for each employee.
7. The choice of the main directions (scientific topics, projects) to improve quality.
8. Formation of groups (teams) to improve processes. Process improvement groups can be created for areas such as: teaching methods, student assessment criteria, teacher assessment methods, improving contacts with students and parents, budgeting, improving contacts with employers, helping lagging students, etc.
9. Implementation of recommendations made by these groups.

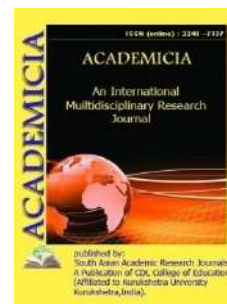
Based on the foregoing, the management of the TQM model is a well-planned, guaranteed and technologically oriented management aimed at creating the necessary conditions for the training of high-quality personnel in accordance with international standards and the needs of the state and society.

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DOI: **10.5958/2249-7137.2020.00790.9**

## TO ENHANCE THE DEVELOPMENT OF STUDENTS' COMMUNICATION SKILLS IN THE PROCESS OF TEACHING A FOREIGN LANGUAGE

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### ABSTRACT

*The article reveals the problems of how to increase the development of communicative abilities of students in the process of teaching a foreign language. Meanwhile, observations of the pedagogical process show that the described behavior of the teacher leads to disruption of the interaction between him and the class as a whole. We had to provide communicative motivation - a need that encourages students to enter into communication in order to change their relationship with the interlocutor, and not just answer the teacher's request and get a mark. Thus, communicative abilities, being the basis of communicative activity, develop through the same activity, providing a quick and lasting assimilation of knowledge, abilities and skills by a person; function in a holistic unity of structural components; have an individual degree of severity.*

**KEYWORDS:** *Learning A Foreign Language, Result, Communication Skills, Idea, Understanding.*

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## INTRODUCTION

The problem of the formation of communicative abilities is currently the most relevant, since the modern requirements for preparing students for adult life have changed. At the moment, it is important not only to equip schoolchildren with theoretical knowledge in the field of constructive interaction, but to integrate theoretical knowledge and practical skills.

In the lessons, students will actively participate in all aspects of the educational process: they will formulate their own hypotheses and surveys, advise each other, set goals, track results, experiment with ideas, take risks, understanding that mistakes are an integral part of learning.

The teacher makes sure that the work process is sufficiently complicated and diverse in order to maintain the attention of students, while providing them with the necessary skills and knowledge to complete the tasks.

Communicativeness involves the construction of the learning process as a model of the learning process. To give the learning process the basic features of the communication process, my colleagues and I switched from role-based communication with students to personal communication, which only ensures a normal psychological climate in the classroom. It is gratifying to note that when using interactive communication, there was an interaction between the teacher and students on the basis of some activity, and there was a perception of each other as individuals, the students and I exchanged our thoughts, feelings, and not phonemes, grammatical structures, as it usually happens in ordinary, current lessons. We had to provide communicative motivation - a need that encourages students to enter into communication in order to change their relationship with the interlocutor, and not just answer the teacher's request and get a mark. The path to communication in a foreign language lies only through communication specially organized in such a way that there is a gradual mastery of speech material.

Communicative abilities are a complex psychological formation that develops on the basis of communicative inclinations, including such structural components as cognitive, self-esteem, emotional, communicative-active, which are closely connected with each other and ensure the success of communicative activities. Communicative abilities as a dynamic formation are distinguished by such psychological characteristics as an individual degree of severity; the integrity of the functioning of structural components; ensuring the success of communication activities; the irreducibility of communicative abilities to communicative knowledge, skills.

The productive development of both the structural components of communication skills and the studied phenomenon as a whole is possible only in the process of communication, which is a type of human activity and the process of transforming sociocultural reality, the very subject of communication and the subject that the subject's activity is directed at.

Communication in the educational process can be most fully realized within the framework of such an educational subject as a foreign language, which contains great opportunities for the successful development of communicative abilities, since it is characterized by a communicative orientation (a foreign language educational subject is a specially organized communicative activity).

The development of students' communicative abilities in the process of learning a foreign language is a dynamic process of purposeful, progressive and qualitative change in communicative abilities in a specially organized educational activity. This process is notable for

its duration (the development of communication skills is carried out during the entire period of learning a foreign language at school); progressiveness (used techniques for the development of communicative abilities are introduced from simple to complex and correlate with the age-related capabilities of students); orientation (methods for the development of communicative abilities are intended for the purposeful development of each structural component of the studied phenomenon, and therefore, communicative abilities in general).

The criteria for the development of communicative abilities are - the presence of communicative knowledge, motivation for communicative activity, anxiety and self-esteem in communicative activity and the characteristics of the student as a subject of communicative activity, which are specified in the following indicators: knowledge about the features of transferring information to another person in various situations of interaction, self-perception and perception of other in this process; the presence of motives for making contact with other people; emotional state in communicative activity; adequate self-esteem; features of character and behavior in communication activities.

Thus, communicative abilities, being the basis of communicative activity, develop through the same activity, providing a quick and lasting assimilation of knowledge, abilities and skills by a person; function in a holistic unity of structural components; have an individual degree of severity. At the foreign language lessons, active teaching methods were used to enable students to be involved in communication activities, during which the development of the students' communication skills took place. In the process of foreign language communication, such social and value qualities of a person are formed as: worldview, moral values and beliefs, character traits.

Choosing forms and teaching methods that allow students to reveal their creative abilities, the teacher opens up new opportunities for them. At the same time, it is very important to take into account all factors, including the psychological one, since students overcome a certain psychological barrier, learn to communicate, interact in a foreign language environment.

Communicative learning, which implies the use of such effective forms as interactive, requires the teacher to create situations of active interaction in the lesson.

The use of interactive teaching methods increases the efficiency of the educational process, as it creates real life situations and encourages students to adequately respond to them through a foreign language, thus forming students' communication skills. Interactivity in relation to teaching a foreign language is understood as the speech interaction of two or more people in the process of communication [3].

Forms of interactive learning allow achieving goals of such levels as knowledge, understanding, application (according to B. Bloom), which is very important for the formation of communication skills. [1].

There are various interactive forms of teaching foreign languages, such as educational games (role-playing, business, educational), creative tasks, excursions, exhibitions, performances, presentations, discussions, brainstorming, etc.

The educational process is organized in such a way that all both the teacher and students are equally involved in the process, actively interact with each other. All become active participants in the pedagogical process.

Interactive forms of teaching foreign languages contribute to the development of communicative skills, teamwork, listening to the opinions of others, and defending one's point of view. In the process of using interactive forms of learning, educational and cognitive activities of students are activated, a general interest in learning and motivation for learning a foreign language are formed.

During specially created educational-speech situations, the teacher and students have the opportunity to freely express their opinions, speak the language being studied. Students, finding themselves in real conditions of communication, requiring verbal interaction, practice foreign language speech. The learning process thus becomes emotionally rich, memorable for students, which is important when learning a foreign language.

It is in the course of group communication that motivation for learning increases. Solving a specific educational and speech task, students find themselves in a certain "framework" of communication; this means that they follow the norms of communicative interaction in the context of a specific educational-speech situation. In this way, students build adequate speech behavior skills.

In foreign language lessons, various interactive forms of lessons can be used, such as a lesson-tour, a virtual tour, a lesson-discussion, group work, etc.

Let's take a closer look at the virtual tour. Virtual tour - a software and information product (video, audio). During the virtual tour lesson, students develop: speech, memory, thinking, imagination, attention. During the lesson-virtual tour can be studied topics: "Travel", "Customs and Traditions", "Study Abroad", etc. A virtual tour is conducted using information and communication technologies, which helps to increase the effectiveness of the educational process, interest, student motivation, allows the teacher to use the whole arsenal of teaching methods. Bright slides, visualization, information richness of the material increase the activity of students, help to overcome the language barrier, the formation of speaking and listening skills, all this creates favorable conditions for the formation of communication skills. Without leaving the office, students will learn a lot of interesting facts, travel around cities, join the culture of the country of the language being studied.

A virtual tour lesson can be divided into several stages: preparation, conduct, conclusion, results. First, determine the purpose, place and time. Necessary equipment: computers, laptops, web-cameras, multimedia projector, Internet. Most often held in a computer class. It is necessary to clearly define the plan, educational tasks, content, prepare questions for discussion. A virtual tour begins from the organizational moment, the teacher reports the goal, tasks. At the beginning of the virtual tour, it is advisable to inform students of any other facts, information related to the topic; after there is a demonstration of a virtual tour; the teacher periodically asks students questions on the topic (How do you think ...? Do you understand ...? Can you imagine ...?). The teacher can organize independent work of students in groups, while consulting them, helping. Also, the teacher himself can reveal the contents of the virtual tour, and then organize the independent work of students on assignments. Then each group reports on the work done, the teacher checks all the tasks, supplements, corrects. At the end, the teacher announces that the students learned new things during the tour. A virtual tour is suitable both for the presentation of a new topic, and for consolidating the material covered.

During the virtual excursion, the following positive trends were observed in high school students: concentration of attention, increased interest in new material, a desire to take an active part in discussing problems, overcoming shyness and stiffness in previously inactive students was observed, the lexical, grammatical, and pronunciation sides of speech improved.

The effectiveness of interactive forms of teaching foreign languages lies in the fact that students in the process of such learning are as active as possible, that is, they are included in the search for information. In choosing a specific interactive form, students overcome the psychological barrier, communicating with each other, learn to transfer the experience acquired in the learning process into the real language environment.

In conclusion, I would like briefly to dwell on the role of a teacher in the process of communicatively directed teaching of a foreign language. This orientation changes the teacher's behavior in the classroom: outwardly, he plays a less noticeable role, but he solves the extremely difficult task of organizing students' communicative activities and tactfully helping them during this activity, act as an adviser, not an examiner. To solve this problem, you need to know your students well, their inclinations, hobbies and opportunities, and accordingly distribute educational material, dispense help when working in the classroom, and differentiate requirements. It is important to have a clear idea of motivation that encourages the student to learn a foreign language and on this basis to help him achieve the goal that he sets for himself.

In order to properly build their relations with students, the teacher first of all needs to understand the psychology of a particular child. The crazy use of "ready-made" recipes for training and education does not bring the desired results. The pedagogical skill of the teacher consists precisely in catching the uniqueness of each child, being attentive to everything that happens in the lesson, and promptly and correctly reacting to the behavior of students, their attitude to the subject and teacher.

The teacher's ability to get away from stereotypes in organizing interaction with students is also important. An example of such a stereotypical behavior of a teacher can be his predominant cooperation with well-performing students, as well as sometimes observed liberalism in assessing their activities, even if they are poorly prepared for the lesson. Meanwhile, observations of the pedagogical process show that the described behavior of the teacher leads to disruption of the interaction between him and the class as a whole. That is why the teacher needs to possess the following skills: to unite schoolchildren in a team through personal and socially significant, interesting for him and students communication activities, coordinate their actions with the actions of schoolchildren and the actions of the latter with each other, organize a pair and group forms of work, play with children conducting various interesting workouts. It is important to remember that a teacher can play the role of a partner in communicating with students only if he is trained and brought up in the spirit of justice for them, solidarity with and tolerance for them, if he is able to be open in manifesting his interests and emotions and knows how to critically interpret his behavior. At first glance, the list of these skills and qualities is quite simple. But this is only at first glance, because building the right relationship with children is not as easy as it seems. The named skills and qualities are not given to man by nature, they can be the result of a lot of hard work aimed at mastering science and the art of communicating with children.

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DOI: **10.5958/2249-7137.2020.00790.9**

## **WATER AND LAND REFORMS IN KASHKADARYA OASIS: THE CONSEQUENCES AND LESSONS**

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### **ABSTRACT**

*The article contains the issues of land and water reforms of Kashkadarya region, a large and influential region of Uzbekistan in the 1920-30's of the 20<sup>th</sup> century, their consequences, water supply and land development. An attempt was made enlight the history of land and water reform in the oasis on the basis of historical written sources, the sources of the independence period and archival data. The author aimed at objectivity and truthfulness as a result of studying the available sources.*

**KEYWORDS:** *Uzbekistan, Kashkadarya Region, Land And Water Reforms, "Qushchi" Union, "Batrak" Committee, "Pilla", "Miob", "Karz" Companies, Land Development, Working As One Community, Social-Economic Life, Agricultural Changes.*

### **INTRODUCTION**

The analysis, study and observation of the history of independent Uzbekistan, including the Kashkadarya oasis from the 1920's to the 1930's, related to land and water reform in agriculture from the 1920's to the 20<sup>th</sup> century, leads to the final questions like, what are the consequences of this reform, what is its main purpose, what is its essence and claim, and what lessons can today's generation learn from them?

Today's people, as well as young generation, learn about the history of the land and water reform through books, manuals, archives, scientific and popular pamphlets, historical research on this reform, and texts in works of art.

Well, how do they imagine this history? The observations show that in many historical studies and sources created during the former Soviet period, this topic has been interpreted in a way that has a completely different content and essence, form and aspect. Almost all of the information, written in the spirit of the ideas of the Communist Party, the idea of Marxism and Leninism, was created by the demands of the times and its ideological interests, and also the pressures of that time.

The researchers have not been able to fully reveal the agrarian changes in the history of Uzbekistan, including Kashkadarya region, the process and essence of land and water reform, positively assessed all events and facts, available evidence, negative situations, deliberately omitted clear and unambiguous facts based on the ideology of the former Soviet Union. The process of land and water reform, the series of historical events that followed, was analyzed by the demands and pressures of the former Soviet regime, and the land reform of the Communist Party was glorified, praised. The researchers of the history of land and water reform have been forced to remain silent about the consequences of the liquidation of entrepreneurial, wealthy farms in Uzbekistan, including in the villages of Kashkadarya region, and also the deprivation of farmers of property, means of production, and free labor in general. This can be verified when looking at the historical research created in this area, the history of provinces, districts, collective and state farms, villages.

Today, we do not intend to condemn their work, to discredit the research they have created, it is not in line with scientific logic and etiquette, we just want to emphasize that their work should be approached in a critical spirit, impartiality and justice. We would like to emphasize that some of their studies also contain the works related to scientific truth.

Well, where should our young people learn the information in this area, which is not biased, not praised, written objectively. In this regard, we would recommend that our young people study the pre-independence and post-independence studies comparing each other. Only then they will know the true history and be able to draw conclusions by distinguishing evil from kindness.

According to the above given, in this article we will try to compare the research on land and water reform in the Kashkadarya oasis, a significant region of such a glorious and great country as Uzbekistan, and learn about land reform and its consequences. We will also try to enlighten the necessity by means of some examples. It should be noted that in the history of the former Soviet Union, the history of the period of land reform in Kashkadarya region is one of the most incompletely studied issues.

It is known that in November month, 1925, the Second Congress of the Communist Party of Uzbekistan decided to carry out land and water reform. It was lead in two stages by the government. The reforms began in the central and northern regions of Uzbekistan in 1926-1927.

According to the decision of the Central Executive Committee of the Uzbek SSR and the Council of People's Commissars on September 1<sup>st</sup>, 1928, the land reform in Kashkadarya was carried out in 1928-1929 as a result of studying the experience of other regions in the field of

land reform [1]. And according to the archives, as a result of the reform, 900 farms were liquidated, and more than 7,000 farms were provided with land [2].

Also, in accordance with the document, which is kept in the State Archives of Kashkadarya region, as a result of land and water reform, the idea of working as a team on their land appeared in the minds of farmers. In order to create conditions for farmers to work as a team, a number of organizations were established, such as the “Batrak” committee of the “Koshchi” union, “Pilla”, “Mirob” and “Karz” compans. “Koshchi” union formed in the district headed the “Koshchi” unions, which were formed from all village councils. There were more than two thousand members of the Koshchi union, who were united in the Koshchi cells in the villages.

The research on the Soviet era and the years of independence, in particular, on the topic of land and water reform in the Kashkadarya region, can be conditionally interpreted as follows:

#### 1. The research on land and water reforms in Kashkadarya region during the former Soviet era.

During this period, several PhD and doctoral dissertations related to the socio-economic life of the villages were defended. In some sections of this work, attention is also paid to cases related to water reform. Those books are M.Kodirov’s “Social reformation of the agrarian economy of Kashkadarya Region / Uzbek SSR (1925-1941) (candidacy work, 1970); A. Mavlonov “Implementation of the agrarian policy in uzbekistan (1965-1980) (doctocal work, 1987). A. Jumanov’s “Kokdala boshqarlari”(the corns of blue field) (1988), “Kashkadarya Mash’ali” (1990) can also be seen among those books.

M. Kadyrov's research on the socio-economic life of the villages describes the organization of agricultural work in Kashkadarya region in 1925-1941 and the measures taken in its various branches on the basis of archival materials. During the years of independence in Uzbekistan, the attention to rural life has changed radically. This is clearly reflected in Uzbek historiography.

A. Jumanov, a historian, in his book "The Flare of Kashkadarya ", writes about the 60-year history of the former Engels collective farm in Shakhrisabz district, its achievements, agrarian changes in the collective farm villages, land and water reform in a following way:

“The party committee has attached great importance to the proper use of water and the timely distribution of water to the farms. That is why, in 1927, the company "Suv" was established. By 1928, the company had merged 10 water companies around it. Companies, named as “Suv” and established in the Navkat and Kunchikar village councils of Shakhrisabz have done a great work in supplying water to the newly formed collective farms, despite the water shortage. [4].

In Chirakchi district, land and water reform was fully implemented in 1928-1929. During the land and water reform, 30,000 desiatins of fertile lands belonging to the Bukhara Emirate in the villages of Mozorli, Suvlik, Tukmor, Jamboz, Chuvillak, Jarkuduk, Moylijar, Karayontak were confiscated and given to poor farmers. [5].

According to archival documents, during this period in the Kokdala region canals were dug and water was brought to the farms. These companies also had extraneous elements either which was not exception any more. In February 1927, in a meeting of the district party committee the activities of the company "Suv" were analyzed and studied. 53 unknown subjects (elements) penetrated into the company and tried to disrupt the water supply. They broke the canals of their farms or deliberately did not water them [6].

Most of the tractors allocated to the Kokdala state farm were foreign tractors. "International" and "Caterpillar" tractors were brought from America. There were 20 such tractors. Chambers was a representative from the Caterpillar plant to service the tractors. Until June 1930, he worked as a technical engineer at the state farm [7].

It was very difficult to plow the land at that time. The lands of Kokdala consisted of hard maple lands. Land reclamation continued day and night [8].

In 1930, the Kashkadarya District Department of Land Management allocated 42,000 hectares for state farms. The land area consisted of two parts, the southern part was 30,000 hectares and the northern part was 12,000 hectares. Out of this, 32,000 hectares consisted of low-lying areas were very difficult to develop according to the terrain [9].

The ideals of land and water reform were hotly debated at village meetings. The batraks, the poor, and the share tenants closely assisted the Soviet organizations in carrying out the reform. Because the main part of the land in this area was in the hands of the rich, the officials, the grain-growing batrak was hungry and naked, the shepherd who fed the rich man's cattle did not have sour milk himself, the batrak gardener grew sweet fruit but did not enjoy it. The Karshi region was located at the end of the Kashkadarya River, and water was insufficient. That is why the farmers here were needed water which was not enough. The district party committee attached great importance to the proper use of water and the timely distribution of water to farms. In 1927, a water company was established in the Dasht village council. Choli Begimkulov, a batrak, was elected as a chairman of the water company.

During the land reform, the property of rich people, such as Jiyanboy, Kholmurod Juvozrang, Shoyiboy, Haji Eshan, Abdulaziz Jevachi from the of Upper, Middle, Lower Lands and the villages Shilvi, Akish, were confiscated, more than 400 hectares of irrigated land and 750 hectares of arable land, 40 horses, 35 oxen, more than a thousand sheep were generalized and handed over to the state [10]. However, the research focuses on praising the "role" of the Communist Party, highlighting the real way of life.

2. During the years of independence, the study of the history of each district and village in the Republic has become one of the most important issues in history. Among the researches conducted during the years of independence in Uzbekistan, in particular, in Kashkadarya region, directly and indirectly related to land and water reforms, the following can be pointed out, in particular, a study of the history of socio-economic and cultural life of districts and villages of Kashkadarya region in different periods as R.X. Aminova, O. Jo'raqulov, R. A. Golovanov, R. Shamsutdinov, M. Saidov, P. Ravshanov N. Quvvatova's researches [11].

"Rural and social life", A.Juraev's monograph in the last years of Soviet rule studied the problems of rural production, family income in the social sphere, the level of service to the population, ensuring the welfare of the people on the basis of new theoretical and methodological.

A historian N. Quvvatova's dissertation on "Socio-economic life of rural areas of Uzbekistan in the 1920-80s' of the 20<sup>th</sup> century (on the example of Kashkadarya region)" [12] is commendable for its objective, critical account of the negative consequences of land and water reforms. The author writes: "Uzbekistan's policy of forced land and water reform, the policy of artificial collectivization of farms, and the illegal actions of officials have provoked protests among the

rural population. As a result of the reform, the socio-psychological order that had existed in Uzbek villages for centuries was disrupted; - thirdly, as much food, raw materials and labor as possible were taken from Uzbek villages, and almost nothing was given in return. Although the state realized that large capital investments were needed primarily for agricultural development, it was limited to the supply of machinery to basic aid farms.

This was exactly what the Soviet reforms meant. The liberation struggle in Kashkadarya, which lasted until the late 1920's, delayed the Soviets' intention to plunder for at least 8-9 years. Land and water reform in the country ended in the end of 1929 and in the beginning of 1930.

As a conclusion it can be stated that the history of water and land in Kashkadarya has almost not been studied. It is natural that the scientific study of the pages of our recent past which is full of struggles for freedom, goodness and peace will add realistic chapters to the history of our country's independence.

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DOI: **10.5958/2249-7137.2020.00635.7**

## THE ROLE OF UZBEK FOLK GAMES IN EDUCATION OF YOUTH

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### ABSTRACT

*This article scientifically analyzes the role of Uzbek folk games in educating a harmoniously developed generation, ie the role of Uzbek folk games in developing the qualities of courage, initiative, moral depth, intelligence, respect for the past in young people.*

**KEYWORDS:** Folk Games, Didactic Games, Educational Games, Developmental Games, Education, Youth.

### INTRODUCTION

Every developed nation (ethnos) in the world has its own customs, traditions, relics, in short, a rich material and spiritual culture. Turning to historical sources, we see that the national sports and folk games of the Uzbek people are different, depending on the living conditions of the population and prepare young people for active, productive activities. The total number of such national games is not less than 3-5 thousand. The identification, study and re-promotion of ancient folk games will serve to raise our spirituality to a new level, further deepening the content of educational work.

We can now divide games in preschool into three main groups. They are:

1. The purpose of didactic games is to expand the world of children's thinking, to expand cognitive activity, to develop the ability to apply their knowledge in practice.
2. The purpose of educational games is to cultivate in children independence and will, to form moral and aesthetic qualities, to teach them to play together.
3. The purpose of developmental games is to develop attention, memory, speech, thinking, teaching comparison, improving interest in learning processes.



The works of encyclopedic thinkers Mahmud Kashgari, Abu Rayhan Beruni, Farobi, Babur, Alisher Navoi contain information on children's games and folklore.

In the last quarter of the XX century, scientific articles on games were published by researchers such as L.V.Byleeva, V.M.Grigorev, D.B.Elkonin, A.S.Makarenko. A.Qahhor, P.Qodirov. In the stories and novels of contemporary writers such as G. Gulom, T. Murod, Sh. Kholmiraev, we find some Uzbek children's games.

Uzbekistan is a country rich in various children's games listed below. ("Horseshoe", "chillak", "bekinmachoq", "white poplar, blue poplar?", "Argument", "cowherd", "wolf came", "rooster and chicken", "lame wolf and sheep", crowded race, storm, forty stones, wormwood, shotgun, slingshot, a stick, shoulder wrestling, riding, etc.). These games not only served to strengthen people's health, but also led to the emergence of sports (eg, the game of "cowboy", "hockey", "sniper", "archery", etc.).

The games that have stood the test of time are still preserved and passed down from ancestors to generations. Despite the fact that boys and girls play and play songs such as "Chillak", "Erda baland", "Oq terakmi, kok terak", "Toptosh", "Chizgi" in different regions of the country, under different names, they are aimed at the same content. Let's talk in more detail about the "chillak" that our ancestors played since ancient times. This game was loved and played by the village children on the hillside. There is no need for a special place for the game "Chillak", it is enough to have a handle to "throw" a chillak (made of willow or poplar twigs) with two ends. Depending on which side of the game the coin is thrown into the air by throwing the lottery or throwing the coin in the air, it is determined by which team the game will start. The leader of the group, who starts the game, puts the chilla next to a specially dug pit, hangs it with a stick, lifts it into the air, and then strikes it on the handle with a punch and flies it as far as possible. On the other side of the field, the opposing team, with their skirts on their ears, try to catch the hit chill as much as possible. If they are caught, it will be their turn to launch the chillak immediately. But catching a chill flying in the air at high speed is no easy task. Now you need to manually throw the chilli from where it flew to where it flew. It should be thrown in such a way that, as far as possible, it goes to the pit where the straw was hit. This task should now be performed by a child who has got a lot of air in the game. If the re-thrown chillak falls into the pit or when a bunch is in the meat position when measured on the chillak-handle, the opposing group is considered to have won the chillak throwing turn. If, when measured with a pile, there is a distance of not one pile, but 3–5 piles, the opposing team is considered to have failed to win the chilling order. When the chillak shooting team measures how many piles are left to the place where it falls, it hits the chillak standing on the chil with the pointed end and lifts it into the air. At the same suspension, he is kicked and thrown to the field. This situation is repeated many times depending on how far it goes. Now it's the turn of the rules of the game. Accompanied by a representative or representatives of the opposing side, the player must reach the finish line with a deep breath. If the snoring child seems to breathe again, then the opponents are the winner. The losing player must carry the representative of the group or representatives on his back to the finish line. This way the game can last 3-4 hours.

If we briefly analyze the game "Chillak", which is part of the Uzbek folk movement, this game is of great importance in the physical training of young people, as an exercise in health and fitness.

Mahmud Qashqari (10th century), a well-known historian, ethnographer and linguist of Central Asia, left interesting information about the types and directions of ancient games in his famous work "Devonu lug'otit turk". For example, when playing with the ankle, the bone-covering person is required to carry the ankle with him at all times, and even if he is in the bathroom a few months later, he can win the game if he can show the requested time as "here". So it may be a habit to hang on to the heel. Sh. Shomaqsudov, Sh. Shorahmedov's book "Hikmatnoma" also contains the following information about the ankle game: "When one of the players is asked to show the ankle bone immediately, otherwise it is a game that requires his teammates to fulfill certain conditions."

The above information is very close and similar to each other. In the "Turkish Words Office" he said, "Take my heels with me," that is, he argued with me in heel shooting. There are brief comments on which of us argued about trying our skills on this issue.

Kochorma game is a game called "fourteen". Draw four lines on the ground like a fortress, and when ten doors are made on it, a round stone, a walnut, is thrown. This game is still well preserved in the Fergana Valley.

The play also provides extensive information on sports such as hunting, javelin throwing, archery, sniping, wrestling, horseback riding, rowing and chess. Devon is also an important source of information about a number of games played by children of the X-XI centuries. Including: "Go-go" game. This game is played as follows: the children sit in a circle, one of them pushes the child next to him and tells him to "jump-pass", that is, "push the one next to you". What is required in this game, what the game ends with, unfortunately, the game does not comment on this. This game taught children to move fast as a team. M. In his work, Kashgari also gave examples of games played by Turkish tribes. One of the games is done with the ball and the ball is hit separately without having to draw lots to start the game. Whichever team's ball goes the farthest, that team starts the game. As a result, hitting the ball hard required special preparation from each team member. One of the most popular games in the 11th century was the "Horse Band" game. In this game, the children take a long stick, lighten its head, lower its tip, and ride it like a horse. This "Horse Bandal" game, played in the dark, may have originated from the defense of war, city, castle.

In the process of historical development of each nation, games and competitions have become a key part of the culture of this nation. They stemmed from labor, life, war, and other socio-economic lifestyles.

According to the informants, at each circumcision ceremony, the lungs of the slaughtered novvos were removed, washed, and milk was poured into it. The two wrestlers come out and undress up to their waists. At a height of one meter above the ground, a pole is driven and a stake is installed across it. Two wrestlers ride on it from both sides. Both wrestlers are given freshly slaughtered novvos lungs filled with milk. The wrestlers had to hit each other in the lungs and fall on the pole. Traditionally, wrestlers hold the pole with both hands, even though they are holding the pole firmly with their feet. As a rule, they had to hit each other on the head, chest and shoulders and be the first to fall from the pole. In the process, they were required not to stand up, to keep their distance, not to fight over the bitterness and injure each other. The winner received the wedding prize, which was applauded by those gathered. Sarpo is gifted. In this respect, this game

is very popular among the people and has aroused great interest. Unfortunately, such folk games have recently gone out of consumption, and are now completely forgotten.

Indeed, folk national games have been one of the most important components of culture at all stages of the history of human society. Uzbek folk games have long been formed as a criterion of spiritual and physical perfection of oriental education.

It is expedient to carry out the following tasks in order to preserve the forgotten Uzbek folk dances and pass them on to future generations:

- Compilation of Uzbek folk educational games, publication of manuals and visual aids for preschool educational institutions;
- The use of ancient games performed in the Republican festival "Alpomish Games" in physical education classes;
- Competition of creative essays on "The role of Uzbek folk games in the education of a harmoniously developed generation";
- Wide coverage of educational games in the media;

So, the role of Uzbek folk games in educating a harmoniously developed generation, that is, in developing in young people the qualities of courage, initiative, moral depth, intelligence, respect for the past, is incomparable.

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# ACADEMICIA

## An International Multidisciplinary Research Journal

(Double Blind Refereed & Reviewed International Journal)



DOI: **10.5958/2249-7137.2020.00595.9**

### THE ORETICAL FRAMEWORK FOR TARJE-BAND AND TARKIB-BAND GENRES IN UZBEK CLASSICAL LITERATURE

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#### ABSTRACT

*This article focuses on classical and literary genres, which are problematic issues. The theorists of literary researchers` theoretical views and opinions about genres have been studied. Contributions to the development of genres by Alisher Navo`i, Hafiz Khorezmi, Ogahi and others are mentioned. Literary types and genres determine the extent to which a particular nation has made its own genres by creating, developing, progressing, and transcending traditional historical stages.*

**KEYWORDS:** *Sheikh Ahmad Tarazi, Navo`I, Uvaysiy, Nodira, Komil Husaynoglul, Khaliq Ipakten, S. Aliyev, Persian, Arabic, Turkish Literature, Tarje-Band, Tarkib-Band.*

#### INTRODUCTION

The study of literary type and genres is one of the most pressing and problematic aspects of literary studies. Literary types and genres are reflected in the formation, progress, historical development and perfection of the literature and art of each people, nation. Literary types and genres determine the extent to which a particular nation has made its own genres by creating, developing, progressing, and transcending traditional historical stages. From the eleventh century on the theory of Muslim oriental literature theoretical views on poetry began to emerge. In particular, literary scholars such as Muhammad Rashid Rudiani, Rashiduddin Watwot, Abu Mansur al-Sa'ali, Shams Qays Razi, Sheikh Ahmad Tarazi, Atoullah Husseini, Hussein Voiz Koshifi commented on art, rhyme, poetry, dimension and literary variety.

Also, the great thinker and poet Mir Alisher Navo'i gave his important scientific views based on literary criticism in the works of "Muhokamat ul-lughatayn", "Mezon ul avzon", "Majolis un nafa'is", "Mufradot", "Mahbub ul kulub" and "Hayrat ul abror".

The king and poet Zahiriddin Muhammad Babur expressed his views on the theory of poetry in the works "Baburnoma" and "Risolai aruz".

After that, theoretical considerations on literary type and genre took place in the work of Abdurauf Fitrat "Rules of Literature"

In the scientific works of both writer and literary critics Sadriddin Aini and Maqsud Sheikhzoda theoretical points on literary type and genre were expressed.

After that, in literary studies, information about the literary type and lyrical genres was given in textbooks on literary theory published in different years. In Prof. R. Orzibekov's monograph "Genres of Uzbek lyric poetry" information about lyrical genres in Uzbek classical literature were substantiated.

## MATERIALS AND METHODS

It is known that the issue of literary varieties in classical literature, as mentioned above, was given in the works and treatises of classical theorists. We present and analyze in detail the views of theoretical scholars on tarje-band and tarkib-band of the classical literary varieties, which are the object of study of our work.

**1. Tarji-band** - is one of the most sophisticated forms of poetry in Uzbek classical literature, which has a complex structure and expresses romantic, mystical and philosophical considerations and observations. There are some aspects of this genre that it is sometimes easy to use for creators and it also limits their opportunities. The fact is that its largeness in size and foundation based on a multitude of verses and lines, allows them to broaden the scope of the ideas expressed by the size of the volume, and gradually develop vital, philosophical thoughts and perceptions. That is one of the easiest features of tarje-band. At the same time, their typical complexity is that it is multi-byte, multi-verse and multi-rhyme. If we look at the tarje-band created in our classical literature, we can see that most of them are eight, eleven, twelve verses, and the lines are from seven-eight to eleven-twelve or more than those. The complex philosophical and mystical ideas expressed in the verses of tarje-band must be interconnected. Because its each and every repetitive tool byte ensures interconnected content.

The linguistic and terminological meanings of the tarji-band are found in the works of oriental classical poetry. In this case, the views of theorists such as Rashiduddin Watwot, Shams Qays Razi Shaykh Ahmad Tarazi, Atoullah Hussein and others are worth thinking.

**Giyosiddin Muhammad** explained the linguistic meaning of tarje-band as "repetition", "recurrence" in his book "**Ghiyos ul-lughat**": "The meaning of tarje-bands is the repetition of verses. In reformation the poet wrote a poem in a certain bahr but different rhyme, repeating a single dimension, but different rhyme line after each verse, which corresponds to the content of the last line."



Rashiduddin Watwot who lived and created in the XII century interpreted tarji-band as a form of poetry: "tarje - refers to the repetition of poem in Persian. Poets call it tarje, and they take line by line, and in each verse they take five or ten bytes. The rhyme of each verse differs from the other ones. At the end of each verse, they bring another byte, and then they move on to the next one. That another byte among the verses is called tarje and poets take three types of byte: at the end of each verse a vary byte is duplicated, or for the each of the individuals rhymes are assigned with different bytes (mukhtalif), their quantity is equal to the quantity of the bytes of one verse. If these bytes come together, another verse will be created. "Apparently, talking about the tarje-band's tool byte, Rashiduddin Watwot refers to the tarkib-band's tool byte, "... If these bytes come together, another verse will be created." It's known to us that the tool byte of tarje-band is repeated at the end of each verse. However, the maqta byte of tarkib-band is not repeated, totally different bytes are given. In other words, when the maqta bytes of tarkib-band gather, a line is created, and they must be mutually exclusive in terms of content and sequence of events. Hence, Watwot's last thoughts belong to the tarkib-band, not tarje-band.

Atoullah Hussein in the book "Badoi'i us-sanai" wrote about that tarje-band that it was typical to Arab and non-Arab poets and their different points:

"The Tibyan" is one the types of repetitions. Tarje is the kind of poem that poets repeat the same meaning of the word, and if we pay attention closely, we can assume that: If they say a word they usually refers to another thing, giving the other thing they mention the first thing. Using this structure a lot of repetitions are emerged depending on the wish. This is the tradition of Arab fuss. "Atoullah Hussein also noted that the Arab poets repeat tarje-band as they wish. (It is referred to the tool byte- K.D). Later, Rashiduddin Watwot quoted his thoughts on tarje in his book "Badoi'i us-sanai": According to Arab poets, Rashid said: tarje is a type of poem that is told verse by verse, each verse includes five or more bytes even to ten, the rhyme of each verse differs from the other verses, when each verse reaches the end a strange byte follows then it goes to another byte, and that byte is called tarje-band. This byte has three types: It is either only one byte, that is repeated at the end of the verse, or they are different bytes, that have their own rhymes, or the bytes are in the same rhymes and in the same quantity as the one of bytes of tarje-band, when the strange bytes come together, there will be another verse. The types of tarje are famous, and there is no chance to give all of them in this concise book". ...The importance of it is that if there is a change in the style of word the listener pays more attention to it and the process of listening is stronger. If tarje-band is only one byte, the attention id drawn to its meaning again and it takes places in the memory easily. Tarje means to make it to dictionary. In this case, it is called tarje as a word is converted into another style". Atoullah Hussein gave his theoretical views on tarje-band in this way, but did not give examples to it. In his work, he described tarje-band in the context of tarje, that's to say, "Some call the last type as tarje"

**Shams Qays Razi**, the theorist, unlike Rashiduddin Watwot and Atoullah Hussein, describes the tarje-band in the following way: "Tarje-band is: Poets devide the ode into parts, the measure among the parts is the same, while the rhyme is different. They consider each of the parts as a room and place a separate byte in the middle of the room and call it tarje-band. If they wish, they may mention the byte of tarje-band in all places, at the end of each piece or at the beginning of the next one. And if they wish, they mention each room of tarje-band individually. If they wish,



they set up the tarje-band on a rhyme so that it is a separate piece..." We learn from the thoughts of Shams Qays Razi that he gave the tarje-band within the ode and considered each of the parts as a room. He said: bring a byte in the middle of these rooms, and turn it into tarje-bande. We can deduce from the thoughts of Shams Qays Razi, that he and mentioned some types of tarje-band.

- tarje byte placed in each parts of the ode is given at the end or at the beginning of each verse;
- each verse of tarje-band is quoted separately;
- tarje-band is based on the same rhyme.

After the definitions mentioned above, Shams Qays Razi gave a line of tarji-band devoted to prophet Muhammad by Jamaluddin Muhammad Abdurazzak, as an example. It consists of 198 lines, 11 verses, each verse includes 9 bytes.

Content:

Oh, the soul of the kings,  
 Oh, in the ninth sky  
 Unique both in beauty and knowledge  
 Your refuge and sense of shame  
 Your heart is as pure as this clear sky  
 The moon takes spot around its neck,  
 As it is full at night  
 The earth is also under your feet.  
 Everything is in Your presence  
 The whole earth is in bow to you  
 Everything will be so  
 In front of you it is nothing.

By observing all eleven verses of the above tarje-band, we see that the tarje, that's to say tool bytes, are not repeated in the same ways. Each verse is interconnected in terms of meaning, bytes of tarje at the end of each verse are specifically different. In the work of Shams Qays Razi "Al-Mu'jam", we find no information about tarkib-band. However, there is enough information with examples devoted to tarji-band.

A detailed description and information about tarje-band can be found in the fifteenth-century Turkish poet and theorist **Sheikh Ahmad Tarazi's** book "**Funun-ul-Balagha**".

"Tarje is a tool that is told as a poem, it is in the same bahr, each verse consists of five or in maximum nine bytes, and at the end of every byte there is a repetition of another one... So it's called tarje" – Tarazi gave explanations to the five types of tarje-band. For the each type, he added examples of the work by Turkish poets Siyaqa, Minvol and Tarazi and Persian poets Sheikh Sadi, Khoja Kamal Khojandi, Nosir Adib. We will talk about the five types and their examples with special characteristics in the book "**Funun-ul-Balagha**" in the next chapters.

There are some explanations of the tarje-band and tarkib-band in dictionaries in Persian-tadjik literature. In particular, there is an explanation of tarje-band in the dictionary "**Farhangi Exploitation Literature**":

“Tarje-band consists of several ghazals, all ghazals are written in the same rhyme, which, in its essence, is associated with the previous one that precedes it by repeating one byte at each end. This byte, which connects ghazals and comes in repetition form, is called "baytvosila" or "sariband" (head band).

## RESULTS AND DISCUSSIONS

Literary scholar and writer **Sadriddin Aini** analyzed Sadi Sherazi's tarjes. He commented on the features of tarje-band:

“... a poet combines several poetic passages in the form of ghazals. At the end of each passage two poetic lines, which are in the same weight of ghazal but in a different rhyme, are repeated. The lines in all pieces of poetry must be inextricably linked to those two lines that are repeated at the end of. Two lines that are repeated in tarje-band are called head of line. Sadi's tarje-bands are considered as the ones included the most lines. It consists of 22 verses, with each verse covers from twenty to twenty-four verses except the beginning part ...”

We can see the initial samples of tarje-band in the work of Nijimi in Azerbaijani literature. He has 3 large volumes of tarje in his Azerbaijani devan and 2 large in Persian ones. Azerbaijani literary critics have also expressed their theoretical views on the genres of tarje-band and tarkib-band. They mainly show the genre features of tarjeband and tarkib-band in comparison with each other. They studied the forms of Azerbaijani poetry **S. Aliev**: “In the form of tarkib-band the refrain comes within means of lines at the end of paragraph (the same rhymes, the same times) in tarje-band only one byte comes within paragraphs” - said he emphasizing maqta` bytes of tarje-band and tarkib-band. The Azar literary critic **Komil Husainoglu** highlights the unifying characteristics of these two genres for two reasons in his article "Tarje-band and Tarkib-band": There are two reasons for the forms of tarje-band and tarkib-band: the first is that they are forms of poetry in the history of literature that have a similar structure, created in the modern era and from the same source. Second, these poetic forms are combined and studied in classical poetry theory under the same term - tarje. “Tarje” is the common name for these two forms of poetry, created in Persian poetry. Both forms relate to the forms of musammat poetry and constitute its complex variations.”

**The Turkish literary critic Holik Ipakten** points out the convenient and acceptable aspects of tarje-band in the following: "The linking of the main points at the end of each verse to the clauses strengthens tarje-band's drawbacks than tarkib-band." From the views mentioned above, it can be seen that theorists interpret the essential principal features of the tarje-band and tarkib-band with their tool byte and the differences.

Prof. **Abdurauf Fitrat** gave a brief comment to tarje-band in his book "Rules of Literature": "A long ridge can be divided into several parts. Each part has its own rhyme. If the last two verses of the first part are repeated at the end of each part, they are called "tarje-band." In tarje-band, the last byte of each verse is repeated as the means of byte.

Drawing on the comments of our classical literary critics, the literary critics R. Orzibekov, A. Hayitmetov, O. Nosirov, and T. Boboev and A. Hodjiahmedov commented on tarje-band.

There are tarje-bands with 7, 9, 10 bytes in the Alisher Navo'i and 5, 7 ones in the work of Agahi.

Hence, the amount of the tarje-band determines the scope, ideological content and circumstances of the lyrical hero of the chosen subject. Even though the verses and the bytes increase or decrease in tarje-band, its genre and shape features are not harmed.

Tarje-band is mainly characterized by repetitive bytes at the end of each verse. Since the poem is a poem characterized by the repetition of each byte at the end of each verse, this repetitive byte is called a "the tool byte", "the head byte", "sari byte", and come in the masnaviy form of rhyme a-a, b-b, v-v. Therefore, this byte is a key tool for connecting tarje-bands' verses. But this byte is rhymed differently in the matla, the head byte of each verses of tarje-band poem. Because the rhyme of the initial byte of the verses is a-a, and the next bytes are rhymed in the each second lines, as ghazals, (**b-a, v-a, g-a**) and they last until the last tarje byte. At the end of each verse, in the same repetitive tarje byte, the idea of the poet's intentions is emphasized, and the reader's attention is always drawn to the conclusion in that byte.

Although the head and last bytes are not exactly the same, the rhyming in pairs creates the rhythmic state, the music, the emotional beauty in the poem. Therefore, it is no accident that there is a tune of shashmaqom in tarje-band poem. In music science, songs composed of repetitive turnovers, and the second part of the horns, are called "tarje." Rakhmonkul Orzibekov, a literary critic, commented on the process above:

“This case may sometimes hinder for the creative to express their views clear and precise. Paying more attention to the lines, verses and rhymes may disturb on the poet's association of passages, and rhymes may interferes to the meaning of the content. Thus, these genres of poetry are not only in terms of verses and byte structure, poetic techniques, but they are also more complex forms of poetry than other genres in terms of subject, image, and ideological world.

Thus, the first examples of the tarje-band in Uzbek classical literature are found in the works of the Turkish poets in the first half of the 15th century. There are early examples of this genre in the works of poets like Siyaqa, Minvol and Muqimi in “Funun ul-balaga”.

After that, in our classical literature Hafiz Khorezmi and Yusuf Amiriy applied to this genre. There is one tarje-band in the work of Yusuf Amiri and 3 tarje-bands in the work of Hafiz Khorezmi. These tarje-bands differ from the others mentioned in "Funun ul-baloga" with their artistic perfection.

There are four perfect tarje-bands of Alisher Navo'i, and they were given at the end of each devans in the "Khazoyinul Maoni". These tarje-bands were written on mystical, philosophical, and romantic topics.

Subsequently, these genres were followed by the traditions of Navo'i in classical literary studies by Mohlaroyim Nodira, Uvaysi and Agahi.

In the light of the foregoing, the tarje-band can be described as follows:

It is a lyric form of poetry, which consists of verses that are equal to a ghazal or more than it, and consists of a single byte that is repeated and rhymed at the end of all verses. Each verse in tarje-bands is called a "tarjexona". Bytes in tarje-band are rhymed in the form of a-a, b-a, v-a, g-a. Byte that is at the end of verses, and connects all the tarjexonas, is called a tool byte, a sare, or a tarje byte.

Tarje-bands are written on romantic, mystical and philosophical topics. All of them are intertwined with the chosen subject in the work, and more precisely, each item reflects some important aspect of the topic. The bands are interconnected, creating a holistic poetry work. The tool byte, at the end of the verses, serves to restate and emphasize the main idea.

Because of its large size, tarje-band has the potential to represent lyrical experiences, varied emotions, and express the world in a wide range. At the same time, the creation of these works requires a high artistic creativity from the creator. That is probably why such kind of lyrical works can be found only in the works of the most talented poets.

A classical poem of the same weight, rhyme, and consists of a union of the verses repetition of the tarje byte, and all of their verses linked in terms of meaning and form is tarje-band. In tarje-bands ideas of mystical, philosophical, romantic realism and romanticism were used actively.

2. Theoretical literature and dictionaries provide a brief overview of tarje-band. Specifically, the Giyosul Dictionary defines it as: "On ki shoir chan band bahri muvofiq va ba qavofin muxtalif tasnif namoyad va mobayni har band bayte alohida g'ayri muqarrari mutaffiq-ul qavofi hosil kunad" That's to say: The poet brings up several lines according to this bahr and the rhyme and adds a separate byte differs from the above rhymes at the end of each.

Tarkib-band means "structure" in Arabic and "linking" in Persian language. It is a large-scale lyrical genre with a specific composition structure in the classical literature. Each verse of tarkib-band is composed of several bytes, rhymed in the form of a ghazal, and a byte rhymed in the form of a masnaviy is followed. This is similar to the tarje-band, but the byte at the end of the verses is not a tarje, that's to say, it is not tool byte, at the end of each verse a completely new one, that's to say tarkib-band is introduced. The verses of tarkib-band are rhymed as ghazals, but unlike ghazals a pseudonym is not mentioned.

In the XX century, Rashiduddin Watwot described the tarje-band as saying that he had grown up inside it: "... At the end of each verse another byte is introduced and then moved to the next one. That another type of byte is called tarje and three types of it are usually applied: at the end of each verse, a byte is exactly repeated, or each of these bytes is assigned a different rhyme, or different rhymes are assigned to the same rhyme. If these bytes come together, another verse will be created". Apparently, Rashiduddin Watwot, referring to the tarje-band's tool byte, he talked about the tarkib-band's tool byte, "... If these bytes come together, another verse will be created." However, Watwot does not use the term tarkib-band. It's known to us that tool bytes of tarje-band are repeated in the same way at the end of each verse. However, the maqta bytes of tarkib-band are not duplicated, different bytes are used. In other words, when maqta (tool) bytes come

together, a new byte will be created and this might be mutually exclusive in terms of content and sequence of events. Hence, Watwot's last thoughts belong to the tarkib-band, not tarje-band.

Tohir Mawlavi's "Dictionary of Literature" describes the tarkib-band as follows: "Writing a tarkib-band in the form of a ghazal in weight is a form of muted address by a single byte. This byte is called "vasila", the manzumas created with these vasilas are called "verse" or "tarkib-band". Each of tarkib-band is called a "tarkibxona" and rhymed in the form of a ghazal".

In the "Rules of Literature", Abdurauf Fitrat briefly summarized the tarkib-band in the following: "A long ridge is divided into several parts. Each part has its own rhyme. However, the last part of each part is in a different rhyme or in several rhymes. It is considered to be tarkib-band".

There is very little information about tarkib-band in poetry or it is not found in most of the literature. Later information about tarkib-band was given in theoretical literature, dictionaries and textbooks. Rakhmonkul Orzibekov, a literary critic, believes that the tarkib-band appeared within ghazal and musammat: "Tarkib-band owns some features of both ghazal and musammat. In this sense they can be said to have been formed and shaped in the form of poems written ghazal and musammat. "

It is true that, the rhyming form of tarkib-band as ghazal is a character of ghazal, but we deny the scientist's view, and tell that each of the last two bytes of musammat does not apply different bytes, but applies tool byte.

## CONCLUSION

Thus, the following conclusions can be made from the above statements:

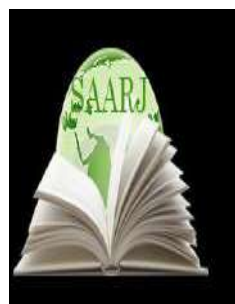
1. The first scientific and theoretical considerations of tarje-band are found in the works of some theorists such as Rashiduddin Watwot, Shams Qays Razi, Sheikh Ahmad Tarazi, Atoullah Husseini and in some dictionaries.
2. The first examples of tarje-band in Uzbek classical literature are presented in the work of Shaikh Ahmad Tarazi's "Funun ul-balaga".
3. In the first half of the XV century, we discovered that the first tarje-bands in Turkish language existed in the works of Turkish poets Minvol, Siyoka, Mukimi, Tarazi.
4. Then Yusuf Amiri and Hafiz Khorezmi applied to this genre. We see that there is only one tarje-band in the work of Yusuf Amiri and three tarje-bands in the work of Hafez Khorezmi's devons.
5. Alisher Navo'i has four tarje-bands in the Turkish language, which are considered as the most valuable examples of this genre.
6. Mohlaroyim Nodira, Uvaysi, Agahi applied to the genre of classical literary studies, continuing the traditions of Navo'i.
7. Tarkib-bands is a poetic genre with a complex structure in our classical literature. Tarkib-band has many similarities and differences to tarje-band.
8. The similarities of the tarkib-band to the tarje-band are that they consist of several verses, each verses contains several bytes, the beginning and the ending bytes of each verses are rhyming each other, the other bytes in the middle are rhymed in the form of ghazal.

9. The distinctive feature of the tarkib-band from tarje-band is that it does not duplicate the tool byte at the end of each verse, but at the end of each verse a totally different byte comes. The sum of the bytes at the end of each verse is the creation of a separate verse that has a certain meaning.
10. In Uzbek classical literature, very few artists have applied to tarkib-band. Examples of this genre can be seen only in the works of Hafiz Khorezmi, Alisher Navoi, Mohlaroyim Nodira, Uvaysi, Ghazi and Yusuf Saryomi

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DOI: **10.5958/2249-7137.2020.00596.0**

## TELEVISION IS THE MOST IMPORTANT INSTITUTION OF CIVIL SOCIETY

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### ABSTRACT

*The article considers the role of television in the development of a democratic society. It is noted that television of Uzbekistan, being one of the most important institutions of civil society, is intended to become a voice of public opinion, an effective force on the way to further democratization of all spheres of our life. It is emphasized that TV broadcasting is an incentive for action, as well as it promotes certain values that can form appropriate attitudes in people.*

**KEYWORDS:** *Television; Mass Media; Democratization Of Society; National Information And Media Space; Television Programs; Spiritual And Moral Education; International Experience; Private TV Channels; Legal Framework; Television Information; Civil Society Institute; Qualified Personnel Of Television Workers.*

### INTRODUCTION

At present, we are witnessing the birth of a new information world with an unprecedented high rate of development. And this whole world does not depend in any way on distances, borders, nor does it depend on ethnicity, age and gender. In fact, we are dealing with the emergence of a completely new type of culture, in which many of the evaluation criteria of real space have no meaning.

Over the past ten years, the number of electronic mass media in the Republic of Uzbekistan has increased 7 times. Almost 53 percent of active TV channels and 86 percent of radio channels are non-state media. It should be noted that independent media are developing more dynamically than state media [1]. The country's electronic media broadcast in seven languages of the Nations and nationalities living in Uzbekistan.

The monograph "History of international relations of the Republic of Uzbekistan" notes: "Today we can say that we have an extensive media system, a competing information market, a developed mass media infrastructure, and are active participants in the global information space" [2, p.218].

Life itself today challenges the country's TV broadcasting sector to cover Uzbekistan's foreign and domestic policy even more actively, taking into account the pluralism of opinions and events taking place in the country and abroad. And all the conditions have been created for this in Uzbekistan. Having these opportunities and being one of the most important institutions of civil society, domestic television today is intended to become the mouthpiece of public opinion, an effective force towards further democratization of all spheres of life, to ensure that every Uzbek citizen felt responsible for the fate of the country and sought to contribute to its future prosperity and access to the ranks of developed countries.

Currently, activities in this area are regulated by separate articles of the laws "on mass media", "on the radio frequency spectrum", "on telecommunications", "on Informatization".

In Uzbekistan, the provisions of international instruments on human rights and freedoms adopted by the UN General Assembly are clearly observed: the International Covenant on economic, social and cultural rights (December 19, 1966), the International Covenant on civil and political rights (December 19, 1966), and others. Uzbekistan has joined 21 UN declarations, covenants and conventions on human rights and freedoms[3,p.101]. Uzbekistan has recognized the acts of the Organization for security and co-operation in Europe and is cooperating with its Office for democratic institutions and human rights in the field of human rights protection.

There is no need to conduct special research to identify the role of television in modern society and in the lives of children. Every family has a TV, and more than one. Some studies show that the influence of media on human development, although not unambiguously, is generally positive. So, the American scientists Schram, Lyle and Parker in 1961 came to the conclusion that TV viewing accelerates the development of a child for almost a whole year, especially by the time he goes to school, because it teaches him to reason, gives knowledge, expands the horizons.

Television is called a "window to the world", a means to become a cultured person and a way to turn into a Philistine, a source of enlightenment and at the same time stupefaction. "Television, some say, is a new thing. It is like the wild West in the period of development." "Television," others argue," has lived the turbulent life of a promising child, a dangerous teenager, a gambler, a cold-blooded killer, a molester, and has already fallen into senility."

In reality, the negative impact of television on the audience is not the result of some "innate" property, but primarily of an inept or erroneous use of its rich capabilities. In our opinion, the true causes of social indifference, when they really arise under the influence of television, should not be found in the specifics of this means of propaganda and art as such, but in the content and nature of television programs.

There is a problem-the formation of a culture of what is seen. A flurry of information is a natural phenomenon of modern times, but not to drown in it, to remain yourself, to become moral – this is one of the most important tasks of a teacher and hence the educational side of broadcasting.

The great Leo Tolstoy wrote a lot about the importance of spirituality in people's lives. He identifies spiritual power with the power of thought, and this thought, in his opinion, should be aimed at creation, harmony, and good[4, p. 53]. V.V. Yartsev proved that it is the spiritual component that is the source of all evolutionary transformations on Earth[5]. Therefore, a person is given an opportunity and a chance to reveal all his spiritual potential during his life. The famous teacher K.D. Ushinsky wrote: "Moral influence is the main task of education"[6, p. 30].

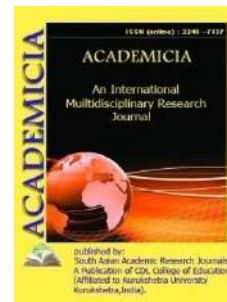
In this regard, television programs contribute to the spiritual and moral education of the Uzbek people. Today, TV broadcasts interesting and important programs about the sights of our ancient cities, about art, architecture, achievements of ancient civilizations of the East and Central Asia, about the activities of great personalities – Amir Temur, Babur, Ulugbek, Alisher Navoi, the educational movement of the jadids, reports on the celebration of Navruz, kurbankhayit, Independence day, significant dates, anniversaries of famous figures of culture and science.

Today, television is called to participate in solving the country's two - pronged task: improving the effectiveness of public institutions and strengthening the state, since it can, on the one hand, stimulate and support the growth of social self-organization, and, on the other, act as a partner of the state in the development of society. So, in the new conditions, the importance of television as an active representative of society in the development of new processes is clearly defined. Television is an incentive for action. It also promotes certain values that can shape people's attitudes.

The ideological and artistic growth of television and its impact on the minds and hearts of people depend on the staff of TV journalists, Directors, cameramen and other specialists, their skills, professional and political training. Much has been done in this direction in Uzbekistan. In particular, in the current conditions of development of the Republic of Uzbekistan, much attention is paid to the training of a new generation of qualified television workers – correspondents, journalists, and announcers who meet modern requirements, using the most advanced information technologies and computer graphics, are working hard to strengthen the material and technical base of specialized higher education institutions, improve educational standards and curricula, improve the professional level and qualifications of teachers, and introduce modern pedagogical and innovative technologies into the educational process.

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DOI: **10.5958/2249-7137.2020.00536.4**

## USE OF LOCAL MATERIALS IN BIOLOGY LESSONS

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### ABSTRACT

*The article gives a broad understanding of the local material and about it. The role of teaching using local materials in biology education, the educational value of teaching using local materials in biology lessons, the use of local materials in the example of science are also described.*

**KEYWORDS:** *Local Material, Patriotism, National Pride, Study, Protection Of The Nature Of The Region*

### INTRODUCTION

In general education, teaching using local materials is very important in increasing the effectiveness of the teaching and learning process in secondary schools. What are local materials?

**First**, local material is the provision of information about subjects that are not included in the textbooks. In this case, without deviating from the description of the studied laws, it is necessary to explain the examples given to them through the use of local materials.

**Second**, to link the evidence on the specific plant, animal species and their biological characteristics for different regions of the Republic with the studied topic. This is due to the fact

that in the large natural-geographical regions of Uzbekistan, in the sandy deserts, in the Fergana and Zarafshan valleys, in the southern regions with subtropical climates, there are some species and families. There is no opportunity to dwell on each of them separately in the textbooks.

### **Main part**

It is known that since 1957, local materials were included in the program of botany and zoology. Textbooks on botany (EM Belskaya) and zoology (TV Bretigam, AM Kasimov) were written in this direction. Methods of using local material from Botany (EM Belskaya) and "General Biology" (AT Gafurov 1974) were developed.

Some advanced teachers of the republic are from local materials began to take lessons using.

Teaching using local material, first of all, increases the sources of knowledge imparted. That is, the teacher's verbal information, the student's ability to see and recognize this object, and work with it ensure that the knowledge is more solid. Second, it also plays an important role in instilling in the student a sense of patriotism, national pride, and the study and protection of the nature of the country. In studying this topic, it is necessary to provide information about the great scholars of our country in the past (Ibn Sino, Beruni, Farobi, Babur) and the contribution of modern scientists to the development of world science, scientific research and discoveries, as it plays an important role in shaping the Uzbek national ideology. To form a sense of patriotism requires exploring the country in which he lives.

The use of local materials also helps to improve the spiritual and moral education of students, to consciously master the content of the course, to look carefully at the living nature, to develop in them a sense of sophistication.

In biology lessons, the teacher uses local material in two ways. In some cases, in order to confirm certain laws, the textbook replaces some examples and samples that are not typical for the Republic with local data, and sometimes local material is added at the expense of partial reduction of textbook material, on the basis of which appropriate conclusions and conclusions are drawn.

After the declaration of independence of the Republic of Uzbekistan, this issue became especially important. The National Training Program requires radical improvement of teaching all subjects, deeper study of the nature of our Motherland, its rational use, inclusion in textbooks of materials showing the contribution of our scientists to world science, thinking about plants and animals suitable for hot climates. This plays an important role in the formation of the ideology of independence, fostering a sense of patriotism and national pride. The first steps have been taken in the performance of these tasks. From Botany (U. Prator, T. Odilov, M. Nabiev, U. Tashmuhamedov), Zoology (O. Mavlonov, G. Kamilov), Human Anatomy and Physiology (B. Aminov, T. Tilabov), General Biology (Acad. Yo. .X. Edited by Turakulov) created new textbooks. These manuals are used in most countries of the country. The main focus of these textbooks, along with the achievements of world science, is to cite examples from the scientific work of scientists of our country, Uzbekistan.

Aims to describe the unique fauna and flora of nature and, finally, to highlight the contributions of Uzbek scientists of the past and present to world science. It is based on the latest data on the development of world science. Currently, textbooks are being prepared not only for secondary schools, but also for university students, who are also writing based on these ideas.



The use of local material in the description of the subjects of botany in grades 5-6 and zoology in grades 7-8 of secondary schools can be considered as an example of some lessons. In the 6th grade, the local material can be used in the following order to protect the flora of Uzbekistan, the subject of plants included in the "Red Book".

First of all, we will talk about the history of the Red Book in Uzbekistan, the decisions made by our Government for its creation. It is followed by information about the plants and animals whose names are included in the Red Book. Currently, the names of nature reserves in Uzbekistan are listed.

Depending on the district in which our class is located, we will explain to you about the known and familiar plant species, why they are so rare and on the verge of extinction. If the biology room has herbariums of plant species, especially pictures of them, the lesson will be based on these materials using visual aids.

During the lesson, you can see the diversity of species of protected plants, flora and fauna, which are protected in the mountain and tugai forests of our country. It is not possible to describe all of this in a school textbook. For this reason, it is advisable to use them as more local material. It is emphasized that the nature of the mountainous region is relatively rich in flora and fauna and the species that need to be protected.

To some extent, local materials can also be used in the passage of each topic in the Human and His Health classes (Grade 8). In discussing the anatomical structure of the human body (bones, muscles, internal organs and diseases), it is necessary to use the ideas expressed in the works of the great Ibn Sina in this area. Although the study of the human body was forbidden, in the ninth and tenth centuries, scientists (including Ibn Sina) gained an understanding of the structure of human organs.

A special aspect of Ibn Sina's Laws of Medicine is devoted to elucidating this issue. In addition to the information described in the textbook, they can be used as local material. It should be explained that it was said 1000 years ago that infectious diseases are spread by invisible animal-microbes, and that in order to prevent diseases, it is necessary to protect the external environment and follow the rules of personal and social hygiene.

Physiological lessons should focus on the specific effects of hot climates on water, salt and oil metabolism, and describe the work of Uzbek scientists in this field. Academician Yo., A world-renowned Uzbek scientist who recommended the causes, consequences and treatment of thyroid dysfunction, one of the most dangerous diseases. X. It is said that Turakulov's contribution to world medical science.

The use of local material depends primarily on the teacher's knowledge, inquisitiveness, and dedication to his or her work. Otherwise it will not be able to deliver the content of the textbook topics either. The use of local material in the lessons "Fundamentals of Cytology and Genetics" is much more specific than previous biological subjects. Because this subject is taught on the basis of knowledge obtained in botany, zoology, anatomy. Discusses the general laws inherent in all large beings.

The use of local material in the teaching of "Fundamentals of Cytology and Genetics" Professor A. T. Gafurov's (1974) methodological manual is covered in great detail and a great deal of work



has been done. In general, it is recommended to use local material in 3 different directions during the lesson.

1. The contribution of the great scientists of Central Asia and Uzbekistan (Beruni, Ibn Sino, Farobi, Babur) in the history of the formation of the biological sciences, in the discovery of certain laws. Textbooks created during the Soviet era give very little space to ideas about this.
2. Use of information about the contributions and discoveries of our current biologists to the development of world biological sciences (Turakulov Yo. H., Musaev J. A., Kanash S. S., Rumshevich B. L., S. M. Mirakhmedov, J. K. Khamidov and others).
3. In the study of the laws of the basics of cytology and genetics, teach by giving examples and evidence specific to the region in which they live, making sure that students see this information not only from the book page, the teacher's story, but also with their own eyes (cotton, wheat, potato varieties, cattle, sheep breeds.).

When talking about the work of Central Asian medical scientists who lived in the IX-XI centuries, the following historical local materials can be used:

Initially, it focuses on the socio-economic and natural-scientific environment in Central Asia in the IX-XI centuries. Later, materials on the works of scholars of this period Beruni and Ibn Sina are described. In the IX-XI centuries, the Arab rule in Central Asia ended and the Samanid state was established. Attention was paid to science, art, construction. Many works of Greek and Roman scholars have been translated into Arabic. The Khorezm (Mamun) Academy of Sciences has played an important role in this area. During this and subsequent periods, great scientists such as Khorezmi, Farobi, Beruni, Ibn Sino, Mirzo Ulugbek, Babur lived and worked in Central Asia and made a worthy contribution to the development of world science. Rightly, the great scientists of Central Asia in the IX-XI centuries were worthy predecessors of the scientists of Europe in the XI-XII centuries.

Students will be shown portraits and some of the works of Abu Rayhan Beruni and Abu Ali Ibn Sina and given information about their life and work.

Abu Rayhan Beruni (973-1048) was born in Kiyat, the capital of ancient Khorezm. He knew Persian, Arabic, Hindi, Greek, Syrian. Beruni was a great encyclopedic scholar. He showed that nature is made up of 5 elements: space, air, fire, water and earth. Analyzing the earth's rotation around the sun, he said its sphericity and calculated the length of the earth's circle. (Before Copernicus) Beruni believes that the conditions for the infinite reproduction of plants and animals on earth are limited, and that there is a struggle for survival and infinite reproduction among living beings. According to him, the struggle between plants, animals, the desire to reproduce and preserve offspring in them, is the essence of the life of living beings. If the surrounding nature had not prevented the free study of any species of plants and animals, it would have occupied the whole earth. As a result of this struggle, they become more adaptable in nature. The idea of the struggle for survival and the survival of the more adapted was expressed 800 years before the creation of Darwinism. He says, "All actions belong to matter. Matter itself creates and changes the shape of objects. Therefore, matter is the creator. But Beruni believed that God was the first cause and creator of natural phenomena. Because he did not know the laws of natural development, he believed that bees originated from plants, worms from meat, and

scorpions from figs. This is, of course, an indicator of the level of scientific development of that period.

Abu Ali Ibn Sina (980-1037) was born in the village of Afshana near Bukhara. Like Beruni, he was aware of many fields of natural science, but he knew the science of medicine perfectly at the level of that period. His masterpiece, *The Laws of Medicine*, was taught as a textbook in European medical schools for 5 centuries. His first book is devoted to the structure of the human body and the origins and symptoms of diseases. The second book is devoted to simple drugs and their effects on the human body (80). The treatment of diseases in the third book. Fourth, his book on surgery, and fifth, his book on complex drugs, poisons, and the substances used against them. The most common at that time were believed to be invisible small animals that caused plague, measles, and tuberculosis. Like all animals, plants claim to feed, grow, and reproduce. According to him, plants are in the lower stage of development, animals are in the middle stage, and man is in the upper stage. In addition to Ibn Sina's *Laws of Medicine*, he had about 150 works, such as the *Book of Healing* and the *Book of Knowledge*. In Europe, he is known as Avicenna, the famous K. Linnaeus named in his honor a group of roses (Avicenna), a network of rough canopy from roses - Avicenna rough canopy. Ibn Sina acknowledges God, but believes that his power is limited. It tries to draw a line between science and religion. He died in 1160 in Hamadan, Iran.

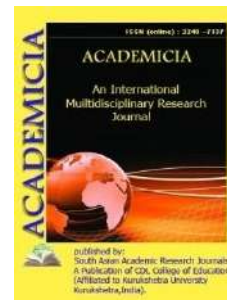
## CONCLUSION

At the end of the lesson, the teacher concluded that at a time when natural science was in crisis in Europe, in Central Asia, it flourished, and Beruni once again emphasizes the services of Ibn Sina.

When studying the evolution of living things on the planet, it is necessary to provide information about the fossil plants and animals found in Central Asia and Uzbekistan. For this purpose, the information and pictures given in the 1st volume of the 4-volume book "*Growth of Uzbekistan*" can be used as a visual aid. (Professor Khudoiberdiev R.X). Local material on genetics and selection is described in more detail in the textbook *General Biology* (grades 10-11).

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DOI: **10.5958/2249-7137.2020.00537.6**

## NEW APPROACHES IN THE ART OF LITERARY LANGUAGE

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### ABSTRACT

*The article analyzes the principles of social and political factors in the creation of poetic language. Classification of language according to its forms and ways of realization is given. In the process of hermeneutic analysis of the text as a work of art, one of the most important attributes of artistic literature is art, i.e. the relation of art to philosophical and aesthetic fantasy in the human mind, artist city is closer to the notions "originality", "exception", "normalization" and this is the first requirement for the art of existence. Society expects a new work and a new word from the creator. In this regard, "a new word" means a new idea. At the moment, the word "a new word" also means other meanings, in addition to the meaning of "a new idea", "guidance" in the press, "superiority" and "stability" in politics, "fulfillment of promise" and others.*

**KEYWORDS:** Art, National Language, Literary Language, Induction, Deduction, Individualism, Idea, Publicity, Poetry.

### INTRODUCTION

Art is the essence of human life. The idea that life without art is an act of cruelty is an axiom. However, listening, seeing, feeling art, and its enjoyment, as well as understanding it, is the problem of its comprehensive interpretation. The basis of art is a simple human culture. At the same time culture is the basis of human and international tolerance. In terms of understanding art, human beings use the highest form of emotion - a word.

Artistic literature is the art of words. Language is realized in different ways:

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- ☐ Human language;
- ☐ Animal language;
- ☐ The language of plants.

These forms of language can be used to respond to the social context of users. In this regard, as we consider the language of human-social communication, we must also distinguish ethnic-geographical categories of language:

- ☐ National language;
- ☐ State language;
- ☐ International language.

The national language is always expressed in different ways:

national language, literary language, official language, scientific and publicist language, book language, the language of an interview, Chinese language, native language, the language of different strata and groups, artistic language.

There are limited and unlimited language forms depending on the scope of its application.

### **Main part**

There are many classifications of language, and the division between them still occurs. However, we want to think about the way in which forms of language can be summarized; and in our opinion this is a literary language and artistic literature.

The art of artistic literature has a generalizing character, because artistic work shows the social reality and characters in it. "In the development of artistic literature, the author studied the wisdom of the folklore, the collective creative work of countless descendants, the experience of creating images, the richness of language and the horizons of imagination." However, a work of art can be directly applied to any expression of the language through the author's personality and the figurative linguistic scale. Scientific, official, public, dialectal, restricted and unrestricted language is its expression aspect. Therefore, the art of artistic literature has a mass character. It is this popularity that turns the Hermeneutics of artistic literature into a social phenomenon.

In the process of hermeneutic analysis of the text as a work of art, one of the most important attributes of artistic literature is art, i.e. the relation of art to philosophical and aesthetic fantasy in the human mind, artist city is closer to the notions "originality", "exception", "normalization" and this is the first requirement for the art of existence. These meanings arise in the shape of the literary sample. Figures and directions are the specific aspects of logic. Knowing - thinking is the activity, and this activity of the mind reflects the language. Fiction is also a language of its kind in art literature. Artist city is artistic language.

Another important feature of the artistic literature is that it is an example of individual creation. The most important phenomenon in fiction is that individualism is the essence of the creator's work that he is trying to convey to humanity through his work. This principle covers the entire category of creation. The existence of the universe is expressed in a straightforward

manner: by forms of expression, language and speech. Artistic work is a realistic version of artistic speech.

### **MATERIAL METHOD**

Language is the state of the nation's consciousness. As a rule everyone realizes his thoughts through language. Language is the key to intelligence in the world. Speech is a written, oral, intuitive form of language.

The expression is the speech that can be seen in the sound of an actual language. All of these phenomena are common in the national language, and individual creativity is unique. Individual creativity requires a single language, namely the new language.

With the exception of the real form of art, the fact that literary literature is a shadow of artistic imagination and a particular artwork, we recognize that such contexts are connected only to one form of artistic existence. Artistic literature is a figurative perception of the existence of these realistic material processes and their appearance is proportional to the nature of human beings.

Creativity is based on the artistic personality of art. Everything is empty, but it is the simplest form of unbroken originality. In the phenomena of the universe, only infiniteness is involved. Any femoral event indicates a general association. It leads us to syllogism. The weakest place of human thought is that it is the syllogisms - the denial of denial or the fact that the causes and consequences remain. This is the case of materialism, which is realism.

The uniqueness of the work is often the subject of the genius's efforts to break through the shell. This category is the state of the human mentality in understanding the laws of nature and society. Human beings should be able to enlarge the history and the future with what is happening, to keep them in mind, to imagine and to reconsider the events, and most importantly, to make their own conclusions, concepts. A phenomenon that can offer such an opportunity can create an idea of existence of an individual and the universe of existence through it. Any phenomenon is manifested primarily by human imagination. The imagination works with images. This phenomenon confirms the art as the most important precondition for understanding of the existence.

When the thoughts turn into speech, they can turn into pearls of thought. Everyone has an individual world, his or her own land, dreams, nations and oceans, and all the existence of the Earth is in a way that one which is in human beings' mentality. So, every human being has a unique world. The literary reflection of this world literally means creativity.

Hermeneutic individualism is the most important condition of living. The only work which discovered the universe individually or discovered the individual state of the mind makes its author famous and it lives for the next generation as a classic example: fame - popularity, popularity - celebrity. A prominent person is a person who has come up with a material, a real shell. This happiness favors only talented people. Talented ones are geniuses and creators. In the community, the idea is merely materialized, enslaved to reality, and destroys creativity. That is why creativity is a great land of thought.

Individual thinking is celestial, the celestial is originality innovation is uniqueness, uniqueness is creativity. Creativity and individuality are united in this system. As we have already seen,

any individuality is still associated with social thinking because its meaning should be understood by society. If society is unable to understand individualism in it, a person of this kind of individualism is considered to be unreasonable, and society does not accept it. Individuality and creativity are understood only by the unique form of language. In this regard, we consider thinking and consciousness as a key to the reality. However, it should be noted that realism restrains creativity. Connecting individualism to creativity and emotion is one of the requirements of Romanticism (England, the romanticism of the 19th century). Emotion denies intelligence, logic, and rationality. All the events call for events to be governed by passion, emotion, heartbeat, and heart feeling, not by perception. These categories are reflected in the imagination and, therefore, the imagination is recorded as the state of existence. Any idea of the existence of the imagination can be processed by the author's desire.

The existence of creativity gives talented people the opportunity to feel the original appearance of the universe, and to imagine. This is the basis for Belinsky to admit that Shakespeare's works have become a means for humanity to have intelligence twice more than ever. The process of forming the artistic language in accordance with the work of the art will be reflected in the above requirements. The artistic language is often monitored by the use of linguistic and lingo-poetic means of the formation of hermeneutic means. The meaning of the words must be subordinated to the spirit, subtle, or conscious, intelligent work of the Creator, whether in the individual or in the background, according to the archetype of the work. This is in a variety of ways in the genre of the genre: in a small and short form of poetry, in a broad and detailed, dramatic, but periodically, system of events that occur rapidly in less time. In the theory of Aristotle's syllogism, inductive and deductive methods of creating whole and fragmentary gravity in the presence of one's being in the society, whether it is big or intelligent, strong, small, or mentally weak, artistic literature creates events based on social psychology of the time. Humanitarianism requires the proper understanding of each condition of existence and its adequate treatment, based on its own mentality.

Now, one of the important features of fiction, which should be taken into account in the formation of the work of art, is to become popular. Popularity is an important prerequisite for the function of functioning of art, its formation in hermeneutic conditions. Artistic work can only be a literary, artistic example when it is widely accepted by the general public. The public accepts the work based on three important qualities that are united: artistic purposes, aesthetic needs and individual creation created by a genius.

These three features reach the masses through the word of existence - the word of the speech, which has made the work of art. The word and its meanings are understood by the consciousness as the key to the true nature of the artistic work. This is how the linguistics and linguistic features of the art work can be seen.

Society expects a new work and a new word from the creator. In this regard, "a new word" means a new idea. At the moment, the word "a new word" also means other meanings, in addition to the meaning of "a new idea", "guidance" in the press, "superiority" and "stability" in politics, "fulfillment of promise" and others. When a human being is manifested through understanding and explanation of the existence of a man, he interprets it with words. So, the word lies on the basis of everything. The whole thing can be explained by a single word. This



fact proves that the form of existence of the artwork depends on the language in public. The diversity of action and situation and events are within the scope of human linguistic possibilities. The phenomenon of human consciousness - that is, its material hub - does not turn into a word. That is not a language phenomenon. In the process of discovery of the diversity of life, artistic creativity often names, creates and presents these unseen

events. Infertility in nature, in particular the aspiration to the center, emphasizes the most important role of generalization of events that is - phenomena, and their realization and generalization. Popularity is related to this feature of the language. At the beginning of the last century, European scientists have shown that sounds have different signs, like light. However, light lies in the origin of existence. Light appears in different colors. Hence, the sound that is sound-based, the sound that is based on them should be colored. Artistic force and power are determined by the same color spectrum.

A brief analysis of the literary language has shown that the artistic work is a creature of creativity and a speech in the mind of a popular idea of the art.

The perception happens through forms of emotion and language.

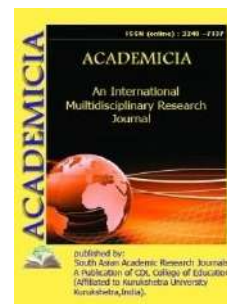
The real shell of the line is adequate to feel and speak. It is based on the fact that the artistic text is interpreted in a hermeneutical way by its language acquisition. The success of the artwork is linked to the diversity of the flames it creates and the originality of the color of the spark. The perfection, attractiveness and elegance of the artistic language are the most important guarantee of the success of the artistic work. Humanity accepts and promotes artistic work by means of this feature.

## CONCLUSION

Every member of the community sees, hears, feels and creates conclusions and thoughts from the relationships between nature and society. Katharsis is the key to social understanding in artistic literature.

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DOI: **10.5958/2249-7137.2020.00538.8**

## FRIEND NUMBERS AND THE CRITERIA FOR DETERMINING THEM

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### ABSTRACT

*The article provides information about the "Friendly Numbers" studied in the "Number Theory" section of mathematics and the history of their development, the criteria for finding friendly numbers, scientific research of Eastern and European mathematicians in determining friendly numbers. The article is intended for high school students, academic lyceums, university students and teachers of secondary schools specializing in mathematics.*

**KEYWORDS:** *Friend numbers, Pythagoras, Thabit ibn Qurra criterion, Al-Kashi criterion, Mahmud al-Wasudi criterion, Euler method.*

### INTRODUCTION

Secondary schools and academic lyceums use whole, fractional, rational, irrational, etc. in their mathematics programs. although numbers are taught, no information is given about the various other numbers studied in the field of 'Number Theory' of mathematics. They are not even taught in the math majors of universities or pedagogical colleges. Although books published in Russia in different years provide partial insights, the history of their development is not widely covered. We will talk about "Friend numbers", which is one of such numbers, and the history of their development, the criteria for finding friendly numbers. This topic helps to conduct math circle classes for high school students, academic lyceums, university students and teachers who specialize in mathematics, and increases the interest of young people in the science of mathematics. In it we use reproductive and productive methods of pedtechnology.

**Main part**

The purpose of the lesson: to get acquainted with Pythagoras and his school, to show the criteria for determining friendly numbers, to describe the scientific research of Eastern and European mathematicians in determining friendly numbers.

Required Textbook and Material: Some formulas, posters with numbers, calculators.

Educational side of the lesson: To teach students to draw logical conclusions, to develop a scientific outlook.

Teaching methods: Reproductive and productive methods.

Teacher: Friendly numbers are defined as follows: two natural numbers  $m$  and  $n$  are called friendly numbers if each of them is equal to the sum of the unique divisors of the other. For example,  $m = 220$  and  $n = 284$  are friendly numbers. Because the specific divisors of 220 are 1, 2, 4, 5, 10, 11, 20, 22, 44, 55, 110, their sum

$$1 + 2 + 4 + 5 + 10 + 11 + 20 + 22 + 44 + 55 + 110 = 284$$

and, conversely, the specific divisors of 284 consist of the numbers 1, 2, 4, 71, 142, the sum of which

$$1 + 2 + 4 + 71 + 142 = 220.$$

The ancient Greeks knew only a pair (220, 284) of friendly numbers.

What is the friendship of the disciples of Pythagoras, what is friendship? When asked, he replied that a friend is the second "I" and friendship is 220 and 284.

Respect for friendly numbers was so great that if the numbers 220 and 284 were written on two pieces of paper and put in the pockets of men and women, there would be love between them after a certain period of time.

Oriental mathematicians have made great contributions to the study of friendly numbers. Not all of their works have survived to our time. The arriving works have also not been fully explored. It is now known that four of the Oriental mathematicians worked on friendly numbers. Here are some of them:

1. Thabit ibn Qurra, who worked in Baghdad in the ninth century, was the first to give the criterion of making numbers friends in his booklet *On Finding Friendly Numbers Easily*.
2. The Tajik mathematician Mahmud bin al-Wasudi, in his work *Lubab al-Hisab* (The Core of Calculation) in 1228, in contrast to the method of Thabit ibn Qurra, gives the criterion for determining friendly numbers.
3. Ulugbek's student, mathematician Giyosiddin Jamshid al-Kashi from Samarkand, in his work "The Key to Arithmetic" deals with friendly numbers and gives the criteria for their friendship.
4. The mathematician and astronomer of Shiraz Mahmud ibn Masud Qutbiddin Shirazi (1236-1311) studied friendly numbers in his encyclopedic work "Durra at-taj" (Taj duri).

It is known that until the XVII century, mathematical works were written without formulas, only in words. When the above-named scholars write the criteria indicated by modern symbolism, they become the same, or by making certain substitutions, they can be made to look the same.

For example, the criterion of Thabit ibn Qurra is described in our modern mathematical language as follows:

The numbers  $p$ ,  $q$ , and  $r$  had the following appearance

$$p = 3 \cdot 2^{n-1} - 1, \quad q = 6 \cdot 2^{n-1} - 1, \quad r = 9 \cdot 2^{n-1} - 1$$

if there are prime numbers, then  $A=2^n pq$ ,  $B=2^n r$  the numbers will be friendly numbers. Now you do some calculations using a calculator. Substitute the number  $n = 2$  into the above formulas and calculate the numbers  $p$ ,  $q$ ,  $r$  and  $A$  and  $B$ .

*Students:*

$$p = 3 \cdot 2^{2-1} - 1 = 5; \quad q = 6 \cdot 2^{2-1} - 1 = 11; \quad r = 9 \cdot 2^{2-1} - 1 = 17;$$

$$A = 2^2 \cdot 5 \cdot 11 = 220, \quad B = 2^2 \cdot 17 = 68.$$

*Teacher:* So you found the first pair of friend numbers. Now continue the calculation by giving  $n = 4$ .

*Students:*

$$p = 3 \cdot 2^3 - 1 = 23; \quad q = 6 \cdot 2^3 - 1 = 47; \quad r = 9 \cdot 2^3 - 1 = 71;$$

$$A = 2^4 \cdot 23 \cdot 47 = 17296, \quad B = 2^4 \cdot 71 = 1136.$$

*Teacher:* The numbers  $A$  and  $B$  you find are the second pair of friendly numbers.

$n = 7$ ,  $p = 191$ ,  $q = 373$ ,  $r = 93727$ ,  $A = 9363584$ ,  $B = 9437056$  are formed. This result was discovered in 1638 by the French mathematician and philosopher Rens Descartes.

Using this method, friendly numbers corresponding to the values of  $n$  up to  $n$  ning 20,000 have been found so far. However, it is not known from history that Thabit ibn Qur'an himself found friendly numbers when he was  $n \leq 2$ .

We now turn to the Mahmud al-Wusudi criterion for finding friendly numbers.

$$p = (2^{k+1} - 1) - \frac{1}{4} \cdot 2^{k+1} = 3 \cdot 2^{k-1} - 1,$$

$$q = (2^{k+1} - 1) + \frac{1}{2} \cdot 2^{k+1} = 3 \cdot 2^k - 1,$$

$$r = 2^{k+1} \left( 2^{k+1} + \frac{1}{8} \cdot 2^{k+1} \right) - 1 = 9 \cdot 2^{2k-1} - 1$$

if each of the numbers is prime, then it is the first of the friendly numbers  $A=2^k \cdot p \cdot q$  and the second  $B=2^k \cdot r$  will be. Wusudi had shown the friendship of the numbers 17296 and 18416 using this criterion (corresponding to  $k = 4$ ).

Ghiyosiddin Kashi, in his work Miftoq al-Hisab (The Key of Accounts), written in 1427, describes the method of Thabit al-Qurra in a different way, showing the friendship of numbers with 2 pairs (220, 284) (2024, 2296).

According to al-Kashi, if

$$p_1 = 2^n \cdot \frac{3}{2} - 1, \quad p_2 = 2^n \cdot 3 - 1$$

if the numbers are prime numbers,

$$A = 2^n \cdot p_1 \cdot p_2, \quad B = 2^n \cdot (p_1 \cdot p_2 + p_1 + p_2)$$

It is known that the divisors of the number A

$$1, 2, \dots, 2^n, \quad p, 2p, \dots, 2^n p, \quad q, 2q, \dots, 2^n q, \quad pq, 2pq, \dots, 2^n pq$$

Last  $2^n pq$  We calculate the sum of the divisors other than:

$$\begin{aligned} & (1 + 2 + \dots + 2^n) + p(1 + 2 + \dots + 2^n) + q(1 + 2 + \dots + 2^n) + pq(1 + 2 + \dots + 2^{n-1}) = \\ & = (2^{n-1} - 1)(1 + (3 \cdot 2^{n-1} - 1) + (3 \cdot 2^n - 1)) + (2^{n-1} - 1)(9 \cdot 2^{n-1} - 1) + (2^n - 1)(9 \cdot 2^{2n-1} + 1) = \\ & 2^{n+1} \cdot 9 \cdot 2^{n-1} - 2^{n+1} + 1 + 2^n \cdot 9 \cdot 2^{2n-1} - 9 \cdot 2^{2n-1} - 9 \cdot 2^{n-1} + 9 \cdot 2^{n-1} + 2^n - 1 = \\ & 9 \cdot 2^n - 9 \cdot 2^n + 2^n \cdot 9 \cdot 2^{n-1} - 2^n = 2^n (9 \cdot 2^{n-1} - 1) = B \end{aligned}$$

Now the divisors of the number V.  $1, 2, \dots, 2^n, \quad r, 2r, \dots, 2^n r$  we determine the sum of s (the last hundred are not present):

$$\begin{aligned} & 1 + \dots + 2^n + r(1 + 2 + \dots + 2^{n-1})(2^{n+1} - 1) + (2^n - 1) + (2^n - 1)(9 \cdot 2^{n-1}) = \\ & = 2^n (2 + 9 \cdot 2^{n-1} - 1) - 9 \cdot 2^{n-1} + 1 - 1 = 2^n (9 \cdot 2^{2n-1} + 1) - 9 \cdot 2^{n-1} = \\ & 2^n (9 \cdot 2^{2n-1} + 9 \cdot 2^{2n-1}) = 2^n (3 \cdot 2^{n-1} - 1)(3 \cdot 2^n - 1) = 2^n pq = A \end{aligned}$$

So the numbers A and B are friendly numbers. In special cases, for example, for prime numbers  $n = 2$ ,  $p = 5$ ,  $q = 11$ ,  $r = 71$ , the Fixed Method gives a pair of friendly numbers found by Pythagoras (220, 284).

For other  $n = 4$ ,  $p = 23$ ,  $q = 47$ ,  $r = 1151$ , the numbers  $A = 17296$ ,  $V = 18416$ ,  $n = 7$ ,  $p = 191$ ,  $q = 383$ ,  $r = 73727$ ,  $A = 9363584$ ,  $V = 9437056$  the numbers will be friendly numbers.

Qutbiddin Sherozi, a prominent Persian-Tajik scholar of the 13th century, was also involved in identifying friendly numbers.

Over time, the above methods have been forgotten. By the seventeenth century, interest in friendly numbers was growing again. It is known from the history of mathematics that in the seventeenth century in Europe, P. Fermat and R. Descartes wrote a letter to Mersén about the discovery of friendly numbers independently of each other. We mentioned above that Vusudi found the numbers 17296 and 18416 friends. These numbers were rediscovered by Fermat and Descartes.

L. Euler delves into the problem of finding friendly numbers. Euler finds 60 pairs of friendly numbers, suggesting 5 different methods that are similar to the Thabit ibn Qurra method but more common. In his two-volume work, *La chasse aux nombres*, dedicated to the theory of numbers, the Belgian mathematician Paul Pulse cites 62 pairs of New Friend numbers. American E. Escott and Elvin DJ Lee were able to find New Friend numbers using Lar Euler methods. Of course, the calculations involved in finding friendly numbers are much more complicated, and doing it manually takes a lot of time. But in an electronic computer, this is much more

convenient and faster. Up to one million numbers were checked on the IBM-7049 computer (USA) and 42 pairs of friendly numbers were identified. 14 pairs of them are listed in the table below.

Interestingly, if one of the friendly numbers is even, of course the other will be even. Similarly, if one is odd, the other will be odd. Of the 60 pairs of friendly numbers that Euler found, 34 of the 34 pairs turned out to be even numbers, and 26 of the 26 pairs turned out to be odd numbers.

Calculations show that among the numbers up to 3 billion, one is odd and one is even. Perhaps it is not surprising that their friendship is the same.

Until recently, the friendly numbers 17296 and 18416 were said to belong to the Farm. It was later revealed that these numbers belonged to Ibn al-Banni, an Arab mathematician 350 years ago. Similarly (9363584, 9437056) the pair was discovered by Descartes in 1638.

Lejandr, Chebyshev, Nikola Paganin were engaged in finding friendly numbers.

At the moment  $3,06 \cdot 10^{11}$  there is information that all friendly numbers that do not exceed the number have been found.

The following figures are noteworthy:

13 pairs of friend numbers  $10^5$ , 42 couple  $10^6$ , 236 couple  $10^8$ , 1427 couple  $10^{10}$ , 3340 couple  $10^{11}$ , 4316 couple  $2,01 \cdot 10^{11}$ , and 5011 couple  $3,06 \cdot 10^{11}$  identified from the numbers up to. In addition, 11446960 even friend numbers were identified for the larger limit. There are a lot of odd friendly numbers among them. For example, (12285, 14959), (67095, 71145), (69615, 87633) even odd friendly numbers were found.

Below we present a table of fourteen pairs of friendly numbers:

	$220 = 2^2 \cdot 5 \cdot 11$	$284 = 2^2 \cdot 71$	Pythagoras
	$1184 = 2^5 \cdot 37$	$1210 = 2 \cdot 5 \cdot 11^2$	Paganini, 1866
	$2024 = 2^3 \cdot 253$	$2296 = 2^3 \cdot 287$	
	$2620 = 2^2 \cdot 5 \cdot 131$	$2924 = 2^2 \cdot 17 \cdot 43$	Euler, 1747
	$5020 = 2^2 \cdot 5 \cdot 251$	$5564 = 2^2 \cdot 13 \cdot 107$	Euler, 1747
	$6232 = 2^3 \cdot 19 \cdot 41$	$6368 = 2^5 \cdot 199$	Euler, 1750
	$10744 = 2^3 \cdot 17 \cdot 79$	$10856 = 2^3 \cdot 23 \cdot 59$	Euler, 1747
	$12285 = 3^3 \cdot 5 \cdot 7 \cdot 13$	$14595 = 3 \cdot 5 \cdot 7 \cdot 139$	Brown, 1939
	$17296 = 2^4 \cdot 23 \cdot 47$	$18416 = 2^4 \cdot 1151$	Al Banna, 1300 years
	$63020 = 2^2 \cdot 5 \cdot 23 \cdot 137$	$76084 = 2^2 \cdot 23 \cdot 827$	Farm, 1300 years
	$66928 = 2^4 \cdot 47 \cdot 89$	$66992 = 2^4 \cdot 53 \cdot 79$	Farm, 1300 years
	$67095 = 3^3 \cdot 5 \cdot 7 \cdot 71$	$71145 = 3^3 \cdot 5 \cdot 17 \cdot 31$	Euler, 1747
	$69615 = 3^2 \cdot 7 \cdot 13 \cdot 17 \cdot 5$	$87633 = 3^2 \cdot 7 \cdot 13 \cdot 107$	Euler, 1747
	$79750 = 2 \cdot 5^3 \cdot 11 \cdot 29$	$88730 = 2 \cdot 5 \cdot 19 \cdot 467$	Rolf, 1964 Rolf, 1964

As can be seen from the table, Euler's name is a common occurrence when finding friendly numbers. Indeed, until the twentieth century, Euler was at the forefront. In 1948, the Belgian



mathematician Pule identified 62 pairs of new friend numbers. In 1968-1972, American mathematicians Escott, and later Lee, identified 300 pairs of friendly numbers. On their ground lay the old Euclid-Euler method. A general method of determining friendly numbers has not been developed.

The constant Ibn Kurra method was just one of the ways to determine friendly numbers.

This table shows the number of even friend numbers up to a certain number:

Until the numbers	Number of pairs of friends
$10^5$	13
$10^6$	42
$10^8$	236
$10^{10}$	1427
$10^{11}$	3340
$2,01 \cdot 10^{11}$	5001

In addition, 11446960 even friend numbers were also found. These include odd even number numbers (12285; 14595), (67095, 71145), (69615, 87633).

The above even numbers are between numbers up to 105.

Fermat and Descartes used the constant method of finding friendly numbers. Euler generalized the Fixed method. Euler could not find new friend numbers because the primitive table table was up to 100,000 at the time. Later, new friendly numbers were found using the Euler method using exposure.

Below we present the Euler method:

$$p = 2^m(2^{n-m} + 1) - 1, \quad q = 2^n(2^{n-m} + 1) - 1, \quad r = 2^{m+n}(2^{n-m} + 1) - 1$$

If  $s$  are prime numbers, then  $A = 2^n pq$ ,  $B = 2^n r$  - There will be friendly numbers, here  $1 \leq m \leq n-1$  as,  $n = m+1$  when the Fixed criterion arises. In this method, when the trinities are (5; 11; 71), (23; 47; 1151), (191; 383; 73727), the following (220; 284), (17296; 18416), (9369584; 9437056) friendly numbers, respectively. arises.

Euler finds odd friendly numbers using another method. For example:

$$(3^2 \cdot 7 \cdot 13 \cdot 5 \cdot 17; \quad 3^2 \cdot 7 \cdot 13 \cdot 107),$$

$$(3^4 \cdot 5 \cdot 11 \cdot 29 \cdot 89; \quad 3^4 \cdot 5 \cdot 11 \cdot 2699)$$

It should be noted that

$$2^{11212}(2^{11213} - 1)$$

The friend number is 6751.

Calculations have shown that all identified friend numbers, or two even numbers, or two odd numbers (albeit less), in other words, one pair, one odd pair, have not been identified.

Similarly,  $10^{67}$  When searching between numbers up to, it was found that even mutually primitive friendly numbers are not known.

The biggest friend number right now is the number 24073, which is his appearance

$$(asp^{235} q_1, asp^{235} q_2)$$

way, here

$$a = 2 \cdot 5 \cdot 11, \quad q_1 = (p + q)p^{235} - 1, \quad q_2 = (p - s)p^{235} - 1,$$

$$S = 37 \cdot 173 \cdot 409 \cdot 2136109 \cdot 2578171801 \cdot 92109 \cdot 6834017442 \cdot 8454377539,$$

$$p = 9256169382 \cdot 4729754503 \cdot 7380170207 \cdot 6255962997 \cdot 9604536445 \cdot 121,$$

$$q = 2109584302 \cdot 1805411767 \cdot 9018601985 \cdot 0591076809 \cdot 8870743702 \cdot 5081822673 \cdot 599999$$

It should be noted that so far it has not been determined whether the number of friendly numbers is finite or infinite.

## CONCLUSION

From the history of finding friendly numbers, it is known that so far 11,446,960 pairs of friendly numbers have been identified. It has not been proven whether such mutually primitive friendly numbers exist or not. If there are such numbers, multiply them  $10^{67}$  there is an assumption that it will be larger than the number.

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DOI: **10.5958/2249-7137.2020.00568.6**

**THE GREAT THINKERS OF SOUTHERN ARAL CIVILIZATION**  
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## ABSTRACT

*This article discusses the scientific and spiritual legacy of medieval scholars on the South Aral Sea. "Everyone has the ability to do something, every nation has a passion for a profession," it is the wealth of knowledge that reveals their invisible abilities in people and develops their culture, intellect and abilities. In particular, in the South Aral Sea region, the field of science has become more active than in previous periods. As in all regions of the country, scientists from all over the South Aral Sea, known for their great discoveries, have entered the world of science and culture. In short, the scientific and cultural upsurge that took place along the South Aral Sea in the Middle Ages made a unique contribution to the development of science around the world.*

**KEYWORDS:** *Strategy, Thought, Sufism, Encyclopedias, Droit, Commentary, Competence, Aphorism.*

## INTRODUCTION

From ancient times the land of Turan is considered to be one of the most developed countries in science, art and culture - the South Aral Sea. The peoples of our country have achieved a lot in the field of science during its several thousand years of history. It is no secret that our great encyclopedic scholars and ancestors, who grew up among the peoples of the region, made a great contribution to this. The works of our ancestors in this period are not only the most mature examples of their time, but also today in the field of science.

The emergence of the Eastern Renaissance, many changes in the history of the peoples of Central Asia, as well as in all regions of the country, along the South Aral Sea, scientists who are known for their great discoveries in the field of science and culture. The discoveries made by these scholars and the works created by them have had an impact on the development of the whole state and society.

Since the years of independence, special attention has been paid to the preservation of our historical and cultural heritage, the spiritual riches created by our ancestors. It is no exaggeration to say that in recent years, scientists of the Republic have been conducting research together with foreign experts. This, in turn, shows that our people are very rich in cultural, spiritual and spiritual heritage, its history is thousands of years old, the spirit of the nation lives forever, a sign of greatness. Here, in the example of the words of wisdom of our great ancestor Abu Rayhan Beruni, "Everyone has the ability to do something, every nation has a passion for a profession," it is the wealth of knowledge that reveals their invisible abilities in people and develops their culture, intellect and abilities. In an educated country, high culture, high intelligence, great literature, inexhaustible spiritual and cultural wealth are created. Our people also have a high culture and knowledge.

Today, in our country, on the basis of the Action Strategy for the five priority areas of development of the Republic of Uzbekistan for 2017-2021, huge changes are taking place in all areas and sectors. In this regard, it is important to deepen the values and traditions of society, in particular, to raise the spiritual and intellectual potential, consciousness and worldview of our people, especially the younger generation, to strengthen in their hearts a sense of love and devotion to our motherland and people. Particular attention is paid to improving the culture of reading.

From ancient times, our ancestors took great responsibility for the upbringing of the next generation, which was their duty to their children, their homeland and the future of their people. According to written sources, the South Aral Sea has always been the largest place in Central Asia where people and sages of science gather and international caravans stop. Many scholars educated in the South Aral Sea region have taught, mentored and trained students in the Muslim countries of the East. Written sources state that they were worthy of the civilization of that time, that by their own efforts they created many cities, scientific and cultural centers, spiritual values with deep meaning.

As historians, the study of sources plays a key role in transmitting to the next generation our great history, created by our great ancestors during the Eastern Renaissance, and in uncovering the hidden pages of our history.

The rich spiritual heritage of our great scholars, writers and thinkers, who grew up in our ancient and unique land, based on high humanistic ideas, has been rightly recognized by the world community as a great contribution to the development of human civilization and culture, secular and religious science. Unique works created by the intellect and artistic genius of our great ancestors, in particular, sources in mathematics, mineralogy, astronomy, chemistry, medicine, pharmaceuticals, architecture, history, literature, art, theology, philosophy and other fields, are available not only to our people but the world. is an invaluable asset.

The land along the South Aral Sea has long been considered one of the most developed countries in the field of science, art and culture of Turan. The peoples of this region have made great strides in the field of science over its millennial history, with the contribution of our great encyclopedic scholars and ancestors who grew up among the peoples of this region.

In the study of the history of the Renaissance culture in the South Aral Sea, the famous writer K. Mambetov's 1993 book "History of Oriental Literature" is a valuable source in the study of the history of this period. Also in the book of historians G.Khojaniyazov and O.Yusupov in 1994 "Sacred places in Karakalpakstan" it is devoted to our spiritual heritage, which is an integral part of historical and cultural heritage. Historians and literary scholars K.Bayniyazov and M.Tileomuratov have published their scientific books on the life and work of medieval scientists in the South Aral Sea.

The contribution of the peoples of our country to the development of world civilization is primarily associated with important discoveries in the field of exact sciences. If we look at the achievements of our thinkers in the field of science, scientists from the South Aral Sea and Khorezm were the first to introduce the achievements of ancient Indian and ancient mathematics to the medieval science called "Muslim East", and through it to European science.

As a result of the emergence of the Eastern Renaissance in the Middle Ages, many changes took place in the history of all the peoples of Central Asia. In particular, in the South Aral Sea region, the field of science has become more active than in previous periods. As in all regions of the country, scientists from all over the South Aral Sea, known for their great discoveries, have entered the world of science and culture. The discoveries made by these scholars and the works created by them have had an impact on the development of the whole state and society. Significant new changes have also taken place in the economic and social spheres.

During the Eastern Renaissance - IX-XII centuries in the development of science and culture in Khorezm and the entire South Aral Sea region, the service of scientific centers established in this country was invaluable. During this period, one of the largest scientific and cultural centers in the whole region was established in Gurganch (now Old Urgench), the center of the Khorezm state. This scientific center, called "Darul Hikmah and Ma'arif" ("House of Knowledge and Enlightenment"), was established in 1004 on the initiative of the ruler of Khorezm Ali ibn Mamun. This scientific center, the Khorezm Mamun Academy, as well as the Bayt ul-Hikma Scientific Center in Baghdad, included the greatest scholars of its time. The scientific center brought together scientists from different parts of the region.

Abu Rayhan Beruni (973-1048) and Abu Nasr ibn Iraq (10th century-1034), the greatest medieval thinkers of the Southern Aral Sea and Khorezm, contributed to the further development of this scientific center and the involvement of scientists from different parts of the region. As a result, it was later joined by such scholars as Abu Ali ibn Sina (980-1037), Abulkhair ibn Hammar (941-1048), Abu Sahl al-Masihi (970-1011), and Ibn Miskawayh. In general, the greatest contribution of the scientists of the Khorezm Mamun Academy to the development of world science was the critical study and further improvement of scientific theories discovered by the great scholars of ancient Greece, India and the Middle East.

In the Middle Ages, the territories along the South Aral Sea were under the rule of the Khorezmian kings, and were considered one of the areas where ancient caravan routes were connected. In this country, which has served as a unique bridge connecting the peoples of East and West, many achievements have been made in the field of science since ancient times. The discovery of many of the oldest specimens and astronomical instruments in the ruins of the ancient cities of our country shows that in this country several thousand years ago there were mature representatives of science.

In the Middle Ages, the encyclopedic scientists who grew up in our country were the most mature representatives of science in the world. Among them are the encyclopedic scholar Abu Rayhan Beruni, known for his great discoveries in the field of exact, natural and social sciences, his teacher and a leading scholar in the field of exact sciences Abu Nasr ibn Iraq, language and literature, commentary, jurisprudence, religious sciences, geography and ethnography. Mahmud az-Zamakhshari, who became famous all over the world for his works, Suleiman Bagirgani, a mystic who continued, propagated and contributed to the development of the Hodja Ahmad Yassavi sect in mysticism, Sheikh Najmiddin Kubra through the scientific and spiritual heritage he left behind, we can see how high the peaks of his religious and secular knowledge reached the shores of the South Aral in the Middle Ages.

Abu Nasr ibn Iraq was one of the leading scholars of his time working at the Khorezm Mamun Academy. His contribution to the development of world civilization and science is associated with the establishment of the Khorezm Mamun Academy and his involvement in the activities of many scientists, as well as his immortal works and discoveries in mathematics and astronomy. Another great contribution of him in the history of world science was as a teacher of a great thinker like Abu Rayhan Beruni, who taught him the secrets of science in depth. He was awarded the honorary title of "Ptolemy II" for his scientific works in the field of astronomy and his contribution to the development of this field of science.

First of all, let's take a brief look at the work and activities of the great scientist Abu Rayhan Beruni (973-1048), who made a great contribution to the world of science with his discoveries. He was born and raised in Kat, the capital of the medieval Khorezm state and one of the largest cities on the South Aral Sea. His interest in science from a young age became the basis for his later deep involvement in various fields of science.

Abu Rayhan Beruni's contribution to the achievement of great heights in the field of science is invaluable for his mentor, the mature scholar Abu Nasr ibn Iraq. Abu Nasr ibn Iraq (born in the middle of the 10th century, died in 1034) contributed to the success of his student Beruni in the field of exact sciences, proved the sine theorem [Sulaymanova, 215] and became famous in the field of medieval exact sciences. , At the Mamun Academy in Khorezm, and later at the Ghaznavid Palace with Beruni. During his entire scientific career, he founded various theories in astronomy and mathematics, as well as created 23 works in these fields. Of these, 12 dedicate his work to his student Beruni [Salim-Gareev, 22]. At one time, his scientific achievements in the field of exact sciences were highly praised, and he was called "the greatest scientist in mathematics."



Despite the fact that Abu Rayhan Beruni spent his youth and his whole life under the influence of various difficulties, including political conflicts, he managed to create more than 160 works in various fields of science. In particular, his works in the field of astronomy, mathematics, geodesy, geology, arithmetic, geography, history and other social sciences have survived to our time. Also, according to summer sources, the scholar studied many languages. He mastered the ancient Sogdian language, Arabic, Persian and Greek.

Beruni, along with Mahmud Ghaznavi, the ruler of the Ghaznavids, mastered the Sanskrit language during his visit to India, which enabled him to create an immortal work about this country. His famous work 'India' was written in 1030 and this work has not lost its value even today as one of the perfect guides in the study of Indian culture and history. Academician VR Rosen praised this work, saying that "there is no equivalent work among all the ancient and medieval scientific literature of the East and the West". The scholar also deeply studies the scientific works of famous Muslim scholars of ancient Greece, India and the East in the field of exact sciences.

He made changes and corrections to some of the scientific theories created by them. The scientist, who began his first astronomical observations in his homeland, later created one of his most famous works in the field of astronomy, The Law of Mas'ud. This work consists of eleven huge pieces, which the scientist calls an article [Qayumov, 60]. Today, several manuscripts of this work are kept in libraries around the world, and the scientific value of the work is very high. In general, every work created by a scientist is still highly valued today as an important scientific source in his field. The study and widespread promotion of the vast scientific and spiritual heritage left by a mature scholar has a positive impact on the development of our society.

The greatness of Abu Rayhan Muhammad ibn Ahmad Beruni is reflected in the unique scientific heritage he added to almost all the sciences of that period. Beruni's scientific potential was assessed by the well-known orientalist I.Yu. Krachkovsky, who said that "it is easier to list the fields of interest than the fields of science in which he was interested." M. Meyerhoff, a Western researcher, argues that "Beruni should be the most famous of the encyclopedic scholars who represent Muslim science." The great Khorezm scholar, encyclopedist Abu Rayhan Beruni left a great legacy to his descendants throughout his life, and this legacy still serves the people of the world. According to one of his contemporaries, "apart from the two festivals of the year, his hand was never separated from the pen, from the control of the eye, from the contemplation of the mind." Abu Rayhan Beruni, as a great scholar and philosopher, clearly states many socio-political and mature spiritual worldviews of his time.

According to the scientist O.Aleov, Beruni expressed his deep thoughts on the emergence of science and its tasks, saying that "the types of science were created by the needs of people in everyday life." Young people had to study the types of science in all its aspects, contribute to the further development of science and teach it to the next generations. That is why he said that the role of teachers in the study of science is great, that he must be a well-educated person, and that if the teacher is illiterate, the students will be illiterate. "As the teacher is, so is the student," he said. Beruni believes that the knowledge acquired in the study of science should be repeated frequently, in his opinion, "Knowledge is the fruit of repetition and repetition."

The teachings of Sufism, which are reflected in all spheres of culture and spirituality of the Muslim peoples, have spread beyond the South Aral Sea since the XI-XII centuries. During the development of mysticism, several of its sects were formed. The services of Suleiman the Magnificent in the widespread propagation of mysticism in the South Aral Sea, especially in the Yassaviya sect, which is widespread in the Muslim world, are enormous. Known among the Turkic peoples by the pseudonym Hakim ota, Suleiman Bagirgani is a close disciple of Khoja Ahmad Yassavi, the "sheikh of Turkestan's property," and a follower of his tradition of wisdom. He was reportedly born and raised in the village of Bakirgan on the South Aral Sea. Later, in Turkestan, he studied mysticism from Khoja Ahmad Yassavi and served to propagate the teachings of his teacher in the country where he was born and raised. contributed greatly to the development of mysticism through his ideas [Kamalov, 27]. He also contributed to the development of culture and spirituality of the peoples of our country, creating many wisdoms and lyrical poems. The priceless spiritual legacy left by this great figure shows that he was a great sage.

Suleiman the Magnificent says that enlightenment is to know Allah, to see Him. He explains the supreme love as the love of God. He sees the path of the sect as the path of educating the perfect man, the path to heaven. In his teachings, Suleiman the Magnificent also seeks to educate those responsible for the social inequalities, injustices, and other vices of his time by reminding them of the horrors of world suffering.

He exposes dishonest and unbelieving officials, those who engage in impurity, the greedy, the ignorant, and the invaders and robbers. The poems of Suleiman the Magnificent are known as the Book of the Magnificent. He also has epics such as The Book of the Virgin Mary and The Book of the End Times. Here he expresses his views on mysticism. Suleiman the Magnificent is one of the pioneers of Turkish poetry. His poems were widely spread among the Tatar, Bashkir and other Turkic peoples, and the Book of Bagir was published three times in Kazan in the early 19th and early 20th centuries.

According to Manojib, written by Joyborzoda in 1911, Hakimota (Hazrat Sulayman) had a special respect for the Qur'an and carried the Mushaf over his head on his way to school. Seeing this, Hazrat Ahmad Yassavi invited him to become a disciple. Hakim Hakim was educated in his hands and at the age of fifteen he became a murid. In the commentary "Lamahot min nafahotilquds" it is stated that Hakim ota said thirty thousand wisdoms on the Shari'a, thirty thousand on the sect and yes thirty thousand on the truth.

Mahmud az-Zamakhshari (1074-1144) was born and raised in the ancient village of Zamakhshar in Khorezm, one of the greatest representatives of medieval science who made a worthy contribution to the development of world civilization. Mahmoud az-Zamakhshari's creative activity was multifaceted, and he was able to show his talent in many areas. He is known for more than fifty works in the fields of language and literature, jurisprudence, commentary, geography, and the like.

Mahmud az-Zamakhshari's works on linguistics, especially Arabic linguistics and grammar, play an important role in his work. His works such as "Al-Mufasssal", "Muqaddimat ul-adab", "Asos

al-balaga" are important sources on Arabic linguistics. In particular, in his work "Muqaddimat ul-adab" information on the lexicon and grammar of the Arabic lexicon is given in Persian, sometimes in Khorezm and Vaturk translations [Rustamov, 10]. Today, manuscripts of this work are available in many libraries around the world. Another of the greatest works on Arabic grammar is Al-Mufasssal (written in 1121), which has been translated into several languages of the world.

Mahmud az-Zamahshari's works on Islamic history, tafsir, hadith and jurisprudence also form a large part of his work. It is known that after the creation of the holy book of Islam, the Qur'an, it became customary to write commentaries on it. In this regard, al-Kashshaf's work on the Qur'anic interpretation of al-Zamahshari testifies to the scholar's deep knowledge of religion. In general, Mahmud az-Zamahshari is famous all over the world for his immortal works in many fields. For this reason, in the East he was honored with such honorary titles as "Teacher of Arabs and Non-Arabs", "Honor of Khorezm".

In short, the scientific and cultural upsurge that took place along the South Aral Sea in the Middle Ages made a unique contribution to the development of science around the world. The scientific and spiritual heritage left to us by the mature figures who grew up in this country and had a great impact on the development of science and culture is an invaluable treasure for today's generation.

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