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## CONTENTS

S.NO	TITLE	AUTHOR/S	PAGES
1	THE AIR TEMPERATURE CHANGES IN THE IRRIGATED AREAS OF THE REPUBLIC OF KARAKALPAKISTAN	G.Kh. Kholbayev G. Khadjaeva	1-5
2	ENVIRONMENTAL STEWARDSHIP AND ORGANISATIONAL COMPETITIVENESS OF THE OIL AND GAS INDUSTRY IN NIGERIA	Dorcas Ifeakachuku Ochonogor Prof. B. Chima Onuoha	6-15
3	MONITORING AND ANALYSING SECURITY STATE OF IAAS AGAINST CYBER THREATS <a href="https://doi.org/10.36713/epra4369">https://doi.org/10.36713/epra4369</a>	Miss Pratiksha Bhagawati	16-20
4	ZOOMORPHIC SYMBOLS IN SOCIAL LIFE OF MOVAROUNNAKHR	Turobov Bekpulat Nusratullaevich	21-23
5	LOW COST APPLICATION MOTION HAND GESTURE CONTROLLER USING ADAPTABLE SENSORS <a href="https://doi.org/10.36713/epra4398">https://doi.org/10.36713/epra4398</a>	Mr. Akshay Kumar Mishra	24-28
6	ESTIMATION OF ONDANSETRON HYDROCHLORIDE BY RP-HPLC <a href="https://doi.org/10.36713/epra4412">https://doi.org/10.36713/epra4412</a>	Dr. Juluri Krishna Dutta Tejaswi	29-34
7	A DETAILED EXPLANATION AND SIMULATION OF CONVENTIONAL DROOP CONTROLLER FOR PARALLEL INVERTERS <a href="https://doi.org/10.36713/epra4403">https://doi.org/10.36713/epra4403</a>	Khodakhast Nasirian Hadi Taheri	35-43
8	COMMUNITY PARTICIPATION IN SOLID WASTE MANAGEMENT PROGRAMMES SPONSORED BY THE LOCAL AUTHORITY: A STUDY WITH SPECIAL REFERENCE TO KANDY MUNICIPAL COUNCIL IN THE CENTRAL PROVINCE OF SRI LANKA	Ihalagedara Mahesha Pinnawala Mallika	44-59
9	CAPITAL MARKET: IT'S EFFICACY ON NIGERIAN INDUSTRIAL GROWTH	Gbarato, Ledum Moses Cookey, Sunny Chekiri Monday Nwagu, Udochukwu Samuel	60-73
10	EFFECTS OF CAPITAL STRUCTURE, PROFITABILITY AND FIRM SIZE TOWARDS EARNING MANAGEMENT IN MANUFACTURING COMPANIES <a href="https://doi.org/10.36713/epra4334">https://doi.org/10.36713/epra4334</a>	Dian Primanita Oktasari	74-83
11	NEW METHODS IN TEACHING A FOREIGN LANGUAGE TO STUDENTS OF NON-LINGUISTIC UNIVERSITIES	Namozova Dilnoza Berdimurotovna	84-86
12	SOME HAEMATOLOGICAL PARAMETERS IN NEW-BORN: A CASE STUDY PORT HARCOURT,	Tawari Erebi Patricia Koikoibo Wariebi	87-91

	RIVERS STATE, NIGERIA		
13	BEATEN CLAY-PAHSA WALL METHOD IN KHOREZM OASIS CONSTRUCTION AND CONSTRUCTION TECHNOLOGY (BASED ON ETHNOGRAPHIC RESEARCH)	Salaev Ikhtiyor Bakhtiyorovich	92-94
14	IMPORTANT ASPECTS OF ENVIRONMENTAL EDUCATION IN THE EDUCATION SYSTEM	G'afforov Yarashbek Xolliyevich	95-99
15	SOCIO-PSYCHOLOGICAL MECHANISMS OF HUMAN KINDNESS IN THE FORMATION OF THE MICROENVIRONMENT IN THE FAMILY <a href="https://doi.org/10.36713/epra4433">https://doi.org/10.36713/epra4433</a>	Zubayda Fozilovna Sharopova Marat Normadovich Tojiboyev	100-105
16	STOCK EXCHANGES IN INDIA- NEED FOR A PARADIGM SHIFT IN ELECTRONIC ERA <a href="https://doi.org/10.36713/epra4434">https://doi.org/10.36713/epra4434</a>	Shacheendran.V	106-109
17	LEVERAGING EMPLOYEE POTENTIAL THROUGH DIVERSITY MANAGEMENT	Prof .Dr. Jyotsna Diwan Mehta	110-113
18	DESIGN AND IMPLEMENTATION OF WATER QUALITY CHECKING SYSTEM USING ARDUINO IN IOT <a href="https://doi.org/10.36713/epra3541">https://doi.org/10.36713/epra3541</a>	R.Rupa Srivallika Devi Dr.K.V. SubbaReddy Mr.K. Kranthi Kumar N.Harika P.Naga Anjali B.Prakasa Lakshmi	114-123
19	THE DEVELOPMENT OF OBJECTIVE AND SUBJECTIVE PRINCIPLES OF THE CONCEPT OF BEAUTY IN HUMAN'S SPIRITUAL EXISTENCE	Abdullayev Sardor Tuychiyevich	124-126
20	IMPACT OF ARAL SEA DRYING ON COTTON PRODUCTIVITY <a href="https://doi.org/10.36713/epra3426">https://doi.org/10.36713/epra3426</a>	Esbolova Miyrigul Bazarbaevna	127-128
21	SPEECH / TEXT NOTE APP USING JAVA SCRIPT AND HTML <a href="https://doi.org/10.36713/epra4456">https://doi.org/10.36713/epra4456</a>	Suma S	129-134
22	STUDY OF MUTANT BREAKER VARIETIES ACCORDING TO THE BASIC ECONOMIC-VALUABLE SIGNS UNDER THE CONDITIONS OF KARAKALPAKSTAN <a href="https://doi.org/10.36713/epra3424">https://doi.org/10.36713/epra3424</a>	Aytjanov Uzaqbay Echjanovich Aytjanov Bakhitjan Uzaqbaevich Sagatdinov Islambek Janabaevich	135-137
23	FRENECTOMY: A CASE REPORT <a href="https://doi.org/10.36713/epra4402">https://doi.org/10.36713/epra4402</a>	Dr. Shakir Hussain Rather Dr. Neeraj Kant Panwar Dr. N. Nisanth	138-141
24	MARKETING METHODS SUPPORTING ADVANCES IN THE HIGHER EDUCATION SECTOR	Nabieva Nilufar	142-149
25	MODELING THE SUPPLY OF LABOR IN THE RURAL LABOR MARKET	Tashpulatov Aybek	150-152
26	CREATING STYLE SHEET BY USING SPEECH RECOGNITION <a href="https://doi.org/10.36713/epra4478">https://doi.org/10.36713/epra4478</a>	Preethi.S	153-157
27	SOME PEDAGOGICAL AND PSYCHOLOGICAL ASPECTS OF PREPARING FUTURE FOREIGN LANGUAGE TEACHERS FOR	Gozieva Nodira Rustam Qizi	158-160

	PROFESSIONAL ACTIVITIES		
28	INFORMATION AND COMMUNICATION TERMS BASED ON TRANSTERMINATION	Adiba Turahojaeva Khalilullaevna Ehsonova Mavluda	161-163
29	DEVELOPMENT OF THE USAGE OF WATER-SAVING TECHNOLOGIES IN AGRICULTURE OF UZBEKISTAN	T. Farmanov F. Yusupova	164-166
30	ECONOMIC MATHEMATICAL MODELING OF THE REGIONAL SYSTEM OF PROFESSIONAL EDUCATION IN THE REPUBLIC OF UZBEKISTAN	Ganiev E Shodmonkulov M. Khandamov Y. Eshonqulova SH.	167-169
31	SOME RECOMMENDATIONS ON COMPILING THESAURUS DICTIONARIES	Sobirov Abdulhay Shukurovich	170-172
32	SOME CONSIDERATIONS ON FIRMONYMS	Jaxangir Siddikov Nasurullayevich	173-175
33	PHILOSOPHICAL INTERPRETATION OF SOCIO-POLITICAL ISSUES IN SADEDDIN TAFTAZANI'S "SHARH AL-AQEED"	Mirzakul Khidirovich Norkobilov	176-179
34	CURRENT ISSUES OF INFORMATION ETHICS	Tilavova Umida Kakhramanovna	180-182
35	NATIONAL PRIDE-AS A SOCIO-PHILOSOPHICAL CATEGORY	Sh. B. Turobova	183-185
36	THE UNIQUE TREASURE OF SAMARKAND	Makhkamova G.A Sultanova G.O Qoshaev Murod Mansurovich	186-188
37	SOCIAL AND MORAL VALUES IN INTELLECTUAL SUFISM OF AVICENNA	Nigina Shamsutdinova Karimovna	189-192
38	SOCIO-PHILOSOPHICAL AND SCIENTIFIC THOUGHT IN THE SPIRITUAL LEGACY OF BERUNI	Nigora Safarova Olimovna	193-195
39	SOCIOLOGICAL CULTURE - AS A MECHANISM TO INCREASE THE EFFECTIVENESS OF SOCIOLOGICAL RESEARCH	Fayzieva Farogat Bakhtiyorovna	196-200
40	THE SCIENCE OF TAJWID AND RECITATION IN MAWARANNAHR	ABDUMANNOB ISMATULLAYEV	201-206
41	THE ANALYSIS OF RESEARCHES ON KORAN AND THEIR DEVELOPMENT IN UZBEKISTAN	D.R.Maksudov	207-214
42	THE ROLE OF BAKHSHI EPIC ART IN THE SPIRITUAL EDUCATION OF YOUNG PEOPLE	Azizov Orifjon Ganievich Tursunov Abdurayim Ramazonovich	215-216
43	DEVELOPMENT OF FINE ARTS IN UZBEKISTAN (The concept of composition in the fine arts)	Sultanova Gulchekhira Ozodovna Izbasarov Izzatilla Uralovich	217-218
44	COMMENTS ON THE FORMATION OF SURKHANDARYA INSTRUMENTAL ART	Khakimov Orifjon Boboramazonovich Ochilov Ulugbek Musurmonkulovich Tursunov Khurshid Abdurayimovich	219-220
45	MUSICIANS FROM SURKHANDARYA AND THEIR GREAT CONTRIBUTION TO THE DEVELOPMENT OF MUSICAL PERFORMANCE	Zoirov Zarif Rashidovich Khamidov Shirmamat Urakovich Kosimov Abdulaziz Durdikulovich	221-222
46	MUSICAL SCIENCE OF ABDURAHMAN JAMI	Nasriddinova Nozima Khayrullaevna	223-224

47	THE SECT OF MYSTICISM IN THE INTERPRETATION OF ALISHER NAVOI	Abdullaeva Dildora Zumratbekovna Khudayberdiev Akram Akburovich	225-229
48	THE ROLE OF THE TIME NOTE OF WORK CREATION IN THE CONTENT EXPRESSION	Tojiddinov Toshpolat Shokirjon o'g'li	230-234
49	SOCIO-SPIRITUAL AND ETHICAL ASPECTS OF CIVIL POSITION FORMATION AT YOUNG PEOPLE	Ikromov Kh. O.	235-237
50	WHITE COLLAR CRIMES IN INDIA	Dr. Meenal Sukhlecha	238-247
51	DEVELOPMENT OF SOCIO-CULTURAL COMPETENCE OF FUTURE FOREIGN LANGUAGE TEACHERS	Yuldashova Nargiza Abdukhaliq qizi	248-253
52	EMERGING INFECTIOUS DISEASE AND BIOTERRORISM	Cebo Daniel	254-256
53	A CASE OF STEROID INDUCED CUSHING'S SYNDROME: CASE REPORT	Dr. Jay B. Patel Gaurav Rajauria Dr. Yogesh Kumar Kansara Dr. Kanchi Desai	257-259
54	INTEGRATION OF DIGITALISATION IN ROAD TRANSPORT: THE IMPACT OF E - TICKETING	M.Thangajesu Sathish G.Sudha	260-263
55	PSYCHOLOGICAL FACTORS OF MALADJUSTED TEENAGERS <a href="https://doi.org/10.36713/epra3743">https://doi.org/10.36713/epra3743</a>	Yusufaliev Elyorjon Mashrabovich	264-267
56	THE ISSUES OF CULTURE AND ETHNOGRAPHY OF SPEECH	Kholmatova Dilorom Abdusamievna	268-270
57	THE ESTABLISHMENT OF THE COTTON MONOPOLY OF THE RUSSIAN EMPIRE IN TURKESTAN AND ITS CONSEQUENCES (ON THE EXAMPLE OF FERGHANA REGION) <a href="https://doi.org/10.36713/epra3733">https://doi.org/10.36713/epra3733</a>	Erkaev Ergashali Maxsudovich	271-274
58	THE STUDY OF THE FUNCTIONAL FEATURES OF THE SYNTHESIZED ALUMINUM-NICKEL-MOLYBDENUM HYDROTREATING CATALYSTS <a href="https://doi.org/10.36713/epra4484">https://doi.org/10.36713/epra4484</a>	Ozoda Abdullaevna Salikhova Shakhzod Murodovich Makhmudov Miraziz Solikh ogli Zokirov	275-279
59	IMPACT OF LOCK DOWN IN THE STATE ECONOMY KERALA	Pradeep M B	280-282
60	BEST PRACTICES IN USING EDUCATIONAL TECHNOLOGY BY OUT- OF-SCHOOL TIME LEARNERS <a href="https://doi.org/10.36713/epra3773">https://doi.org/10.36713/epra3773</a>	Dr. Thadei A. Kiwango	283-291
61	IMPACT OF MODELLING TECHNOLOGY INTEGRATION FOR OUT-OF-SCHOOL TIME LEARNING ON ACADEMIC ACHIEVEMENT <a href="https://doi.org/10.36713/epra3369">https://doi.org/10.36713/epra3369</a>	Dr. Thadei A. Kiwango	292-299
62	DIGITAL ECONOMY: GLOBAL TRENDS AND DEVELOPMENT OPPORTUNITIES IN THE REPUBLIC OF UZBEKISTAN	Akhunova Marifat Hakimovna	300-306
63	INTERPRETATION OF ZAHIRIDDIN MUHAMMAD BABUR'S IMAGE IN UZBEK AND WORLD LITERATURE <a href="https://doi.org/10.36713/epra4156">https://doi.org/10.36713/epra4156</a>	Khayrullayeva Kamola Ravshanovna	307-310
64	MOTIVATION AND CAREER SUCCESS, ARE THEY RELATED? AN EMPIRICAL STUDY IN INDIAN IT INDUSTRIES	Dr.Aditi Banerjee	311-319
65	PROBLEMS AND PROSPECTS OF IMPROVING THE EFFICIENCY OF	Akhunova Shokhistakhon Nomanzhanovna	320-325

	INNOVATION ACTIVITIES IN UZBEKISTAN		
66	ADMINISTRATION AND MANAGEMENT: A DETERMINANT TO ORGANIZATIONAL EFFICIENCY AND PROGRESS <a href="https://doi.org/10.36713/epra4500">https://doi.org/10.36713/epra4500</a>	Akampwera Aloyzius Professor Jonah Nyaga Kindiki	326-335
67	MORPHOLOGICAL CHANGES IN TERRESTRIAL MOLLUSKS UNDER ENVIRONMENTAL FACTORS	A.T.Karimkulov	336-338
68	PHILOSOPHICAL ANALYSIS OF THE RELATIONSHIP OF LANGUAGE AND CULTURE	Boltaev Farrux Farxodovich	339-341
69	SPIRITUAL HERITAGE OF ALISHER NAVOI AND ITS INFLUENCE ON YOUTH EDUCATION	Shodmonov Aziz Azimovich	342-344
70	LEXICAL AND PHRASEOLOGICAL REPRODUCIBILITY OF SYNTACTIC CONSTRUCTIONS	Olimzoda Parvina	345-346
71	ABOUT PROBLEMS OF MATHEMATICAL MODELING OF DEVELOPMENT OF CHILDREN'S SPORTS IN REGIONS	Buribayev Bahridin, Buriboyev Alisher, Otabekov Akbar, Rahmatov Alisher, Egamov Sulton	347-349
72	THE BIOGRAPHY (SIYRAH) OF IMAM BUKHARI IN THE WORKS OF IMAM ZAHABI "AL-JAME AS-SAHIX" IS A CHAPTER ON THE INTERPRETATION OF THE QUR'AN	Azizkhoja Inoyatov	350-360
73	COMPARATIVE-TYPOLOGICAL STUDY OF PHONETIC SYSTEMS IN THE COMMUNICATIVE ASPECT	Rasilova Munisa Ruzievna	361-362
74	THE TEACHING METHODS OF THE PROPHET (S.A.V.)	Doniyor Murodov	363-366
75	OCCASIONAL WORDS IN THE POETRY OF A. ARIPOV.	H.T. Umarov, S.A. Rakhmatova	367-369
76	DESCRIPTION OF THE DOCUMENTS OF THE PERSONAL FUND OF THE BIBLIOGRAPHER E.K.BETGER KEPT IN THE NATIONAL ARCHIVE OF UZBEKISTAN	Xabibjon OLIMJONOV	370-374
77	THE EFFECTIVENESS OF USING VIDEO IN TEACHING FOREIGN LANGUAGES	Nazarova Dilshodakhon Ochildinovna	375-378
78	INNOVATIVE METHODS OF TEACHING A LANGUAGE	Azatbaeva Miyasar Satbaevna	379-382
79	THE USE OF MEDIA EDUCATION TECHNOLOGY IN THE SPIRITUAL EDUCATION OF PRIMARY SCHOOL PUPILS	Sheranova Maryam Bozorboevna	383-385
80	IMPROVING THE METHODOLOGY OF TEACHING FAMILY LAW IN HIGHER EDUCATION INSTITUTIONS	Mukhammadiev Pulat Kholmatovich Mukhammadieva Sayyorakhon Valijonovna	386-388
81	THE LEGAL EDUCATION OF THE BASIS FOR STRENGTHENING MILITARY DISCIPLINE <a href="https://doi.org/10.36713/epra3759">https://doi.org/10.36713/epra3759</a>	Makhmudov R.M Karimova B.N	389-392
82	LABOUR LEGISLATION AND ISSUES OF IMPROVING OF LABOUR RELATIONS <a href="https://doi.org/10.36713/epra3770">https://doi.org/10.36713/epra3770</a>	Usmanova Muborak Akmaljanovna	393-395
83	THE ISSUES OF COMBATING RELIGIOUS EXTREMISM AND TERRORISM IN	Abdumutal Zakurlaev	396-400

	ISLAMIC SOURCES <a href="https://doi.org/10.36713/epra3772">https://doi.org/10.36713/epra3772</a>		
84	MANUSCRIPTS OF ABU KHAFS NASAFI'S "AL-TAYSIR FI 'ILM AL-TAFSIR" AT THE SULAYMANIYAH LIBRARY OF TURKEY <a href="https://doi.org/10.36713/epra4507">https://doi.org/10.36713/epra4507</a>	Muratov Abdushukur	401-406
85	AN OVERVIEW OF GOVERNMENT'S MEASURES TO INDIAN ECONOMY DUE TO CORONA VIRUS- 19	Dr.Vijay Shivaji Mistary	407-410
86	THE STUDY OF THERMODYNAMIC COMPATIBILITY OF POLYMERS	Sayfullo Safoevich Musaeov Gulnoz Olimovna Samieva	411-420
87	INVESTIGATING COMMUNICATIVEPRAGMATIC FUNCTIONS OF GRADATION <a href="https://doi.org/10.36713/epra1469">https://doi.org/10.36713/epra1469</a>	Makhmudova Nilufarkhon Ravshanovna	421-423
88	FROM THE HISTORY OF TOLERANCE PRINCIPLE IN UZBEKISTAN <a href="https://doi.org/10.36713/epra1225">https://doi.org/10.36713/epra1225</a>	Ergashev Ravshanbek Rasulovich	424-426
89	ON POETESSES MENTIONED IN THE MEMOIR 'RUZE RAVSHAN' BY MUHAMMAD MUZAFFAR HUSSEIN <a href="https://doi.org/10.36713/epra4521">https://doi.org/10.36713/epra4521</a>	Tuychiyeva Oydin Sayfullayevna	427-432
90	INTERTEXTUALITY IN SCIENTIFIC TEXTS	Guzal Alijon kizi Sadullaeva S. A Glazirina, PhD	433-436
91	TECHNOLOGIES FOR IMPROVING HEALTHY BLIFESTYLES AND CULTURAL AND HYGIENIC SKILLS IN FUTURE EDUCATORS	Axmedova Nasiba Achilovna	437-439
92	RELAXATION EFFECTS IN SILICON DOPED WITH GOLD AT PULSE HYDROSTATIC PRESSURE	I.G. Tursunov U. Echniyazov	440-444
93	HOW GRAMMAR COMMUNICATIVE METHOD WORKS IN ESP SETTING	Rahmanova Dildora Abdulhamid kizi	445-446
94	THE HARMONY OF SCIENTIFIC FICTION AND MAGICAL REALISM	Mansurova Nodira	447-449
95	ABOUT INTERPRETATIONS OF THE CONCEPT OF CRITICAL THINKING	Mamadjanova Nozima Adhamovna	450-452
96	THE RESEARCH OF EARTHWORMS' FOOD PREFERENCES IN RELATION TO SUBSTRATES FROM THE SOLID WASTE	Askarhodjaeva Azizakhon Nodirovna Askarkhodjaeva Karimakhon Usmandjanovna	453-455
97	FORMATION OF FOLK GAMES	Nargiza ISAKOVA	456-458
98	AXIOLOGICAL CONTENT AND UNIVERSAL SIGNIFICANCE OF THE PRINCIPLES OF DEVELOPMENT OF GLOBAL ECOLOGY	Zarina Abduazimova	459-463
99	DEVELOPMENT OF TRANSPORT AND LOGISTICS SERVICES MARKET	K.Mukhitdinova S.Yuldasheva	464-466
100	PROSPECTS OF THE DIGITAL ECONOMY IN THE INFORMATION SOCIETY	Ergashev Tolibjon	467-470
101	CLASSIFICATION OF COULD WORDS IN GERMAN AND UZBEK	Bekmuratova Shaxnoza Azamatovna	471-474
102	THE IMPORTANCE OF AN INNOVATIVE APPROACH IN ECONOMICS	Umarova Gulchexra Shavkatovna	475-477
103	AMPEROMETRIC DETERMINATION OF TUNGSTEN AND ANTIMONY WITH A SOLUTION OF NAPHTHOL DERIVATIVES	Yakhshieva Zuhra Ziyatovna Bakakhonov Anvar Akobirovich Kalonov Rustam Mamadierovich Muyassarova Kumush Ikrom kizi	478-480
104	IMPROVING TECHNOLOGIES FOR THE DEVELOPMENT OF METAMETHODICAL COMPETENCE OF FUTURE TEACHERS	Ganiyev Orif Abduxalikovich, Uralov Anvar Abdumalikovich	481-483
105	SCIENTIFIC-INNOVATIVE ACTIVITY OF	A.E.Norov	484-488

	THE HIGHER EDUCATION SYSTEM OF UZBEKISTAN		
106	IMPACT OF E-COMMERCE ON BRAND LOYALTY AND BRAND SWITCHING BEHAVIOUR OF CONSUMERS OF ELECTRONIC PRODUCTS: A STUDY <a href="https://doi.org/10.36713/epra4559">https://doi.org/10.36713/epra4559</a>	Y.V.Sujana Prof. G.L.Narayanappa	489-493
107	TRAITS INHERITANCE AND CLUSTER ANALYSIS OF F1 PLANTS OBTAINED ON THE BASIS OF HYBRIDIZATION OF G.BARBADENSE L.VARIETIES AND LINES <a href="https://doi.org/10.36713/epra4541">https://doi.org/10.36713/epra4541</a>	SH.A. Samanov B.KH. Amanov	494-500
108	PHOTOANALYTIC AURICULAR ASSYMETRY IN SOUTHEAST NIGERIANS	Onyinye Mary Ozioko Augustine Ogugua Egwu	501-508
109	TEACHERS' EVALUATION OF STUDENT-CENTERED LEARNING ENVIRONMENTS	Samatova Dilrabo	509-516
110	CALCULATION OF OPTIMAL SIZES OF REFLECTING ELEMENTS OF THE MOSAIC CONCENTRATOR <a href="https://doi.org/10.36713/epra4561">https://doi.org/10.36713/epra4561</a>	Kuchkarov Akmaljon Axmadaliyevich Muminov Shermuhammad Abdushukur ugli Egamberiyev Xomidjon Abdullayevich	517-521
111	SOME ASPECTS OF ETHICAL EDUCATION IN PENALTY INSTITUTIONS	Turakhanova Dildor Abidovna	522-524
112	HUMAN AND HUMANITY ISSUES IN THE FIELD LITERATURE AND ART AT THE PERIOD OF RENAISSANCE IN EUROPE	D.Normatova	525-528
113	AESTHETICAL ESSENCE OF LABOR IN PERSONAL DEVELOPMENT	I.A. Arzimatova	529-531
114	ETHNODYNAMICS OF THE CITY POPULATION OF THE FERGANA VALLEY OF THE FIRST HALF OF THE XX CENTURY	H. Rakhmatillaev	532-535
115	GREEN PRODUCT AND CONSUMER BEHAVIOR: AN ANALYTICAL STUDY <a href="https://doi.org/10.36713/epra4467">https://doi.org/10.36713/epra4467</a>	Mrs.P.Sathyapriya Dr.P.Sekar	536-540
116	DEPENDENCE OF MEAT PRODUCTION ON THE POTENTIAL OF FODDER PRODUCTION IN UZBEKISTAN	Rajabov Furqat Turakulovich Ismoilov Azamat Arslanboyevich	541-545
117	STUDY ON DETERMINANTS OF ENTREPRENEURSHIP AMONG THE STUDENTS	Gautam Parmar Yasmeen Pathan Jenis Chauhan	546-551
118	AWARENESS, ACCESSIBILITY AND ABILITY TO USE COMPUTERS BY PRIMARY SCHOOL PUPILS <a href="https://doi.org/10.36713/epra2773">https://doi.org/10.36713/epra2773</a>	Dr. Thadei Kiwango	552-557
119	THE EXTERNAL EAR HEALTH STATUS AMONG STUDENT NURSES AT THE UNIVERSITY COLLEGE HOSPITAL, IBADAN	A Akinbohun O. A. Lasisi G. T. A. Ijaduola	558-566
120	PROCESSES OF URBANIZATION IN THE TOWNS OF KARAKALPAKSTAN IN THE XX-TH CENTURY <a href="https://doi.org/10.36713/epra4547">https://doi.org/10.36713/epra4547</a>	Esnazarova Zulfiya Baltashevna	567-573
121	EXTRA-LINGUISTIC FACTORS IN DEVELOPING A FOREIGN LANGUAGE SPEECH OF STUDENTS AT THE RUSSIAN LANGUAGE LESSONS	Rakhmatova Odina Kadirjanovna	574-576
122	THE ISSUES ON DEVELOPING READING SKILLS IN TEACHING A FOREIGN LANGUAGE	Tashmatova Madina Abdukarimovna	577-580
123	COMPARATIVE ANALYSIS OF ECOLOGICAL TERMINOLOGY IN THE	Nigmatullina Almira Shamsunovna	581-583

	ENGLISH, UZBEK AND RUSSIAN LANGUAGES		
124	COMPARATIVE ANALYSIS OF ELECTRIC POWER INDUSTRY TERMINOLOGY	Galiakberova Albina Rinatovna	584-586
125	PRESTRESSED LOSSES FROM SHRINKAGE AND NONLINEAR CREEP OF CONCRETE OF REINFORCED CONCRETE ROD SYSTEMS	Mirzaakhmedov Abdukhalim Takhirovich	587-593
126	METHODS AND TECHNIQUES OF SPEECH DEVELOPMENT IN CHILDREN OF PRESCHOOL AGE	Yuldasheva Dilafruz Matmusayeva Mukhayyo Qipchoqova Yorqinoy Mamurova Mushtari	594-597
127	TEMPERAMENT AS A FACTOR OF ACTIVITY	Usmonova Mukhtasar Akbarovna Rasulova Shoira Azizovna	598-600
128	PERSONALITY AND ITS DEVELOPMENT AS A PSYCHOLOGICAL AND PEDAGOGICAL PROBLEM	Urinboeva Maftuna Sodikovna Mamayunusova Matluba Ismailovna	601-603
129	INTERFERENCE OF THE NATIVE LANGUAGE IN THE PROCESS OF TEACHING A FOREIGN LANGUAGE	Khujanazarova Gulbahor Gofurjonovna	604-606
130	DEVELOPING TEACHING SKILLS IN A FOREIGN LANGUAGE TEACHING	Burkhonova Guyokhon Gulomovna	607-609
131	ASSESSMENT OF AMBIENT AIR QUALITY AND DEVELOPMENT OF GREEN BELT AROUND INDUSTRIES IN ASSAM USING SELECTIVE TREE AND PLANT SPECIES <a href="https://doi.org/10.36713/epra4575">https://doi.org/10.36713/epra4575</a>	Jiban Jyoti Das	610-613
132	ENHANCING INTEGRITY AS A POSITIVE VALUE FOR EFFECTIVE LEADERSHIP AND GOOD GOVERNANCE IN NIGERIA	Usung Isaac Akpan PhD	614-618
133	PATIENT HEALTH MONITORING USING ARDUINO THROUGH IOT <a href="https://doi.org/10.36713/epra4554">https://doi.org/10.36713/epra4554</a>	Dr.B.Srikanth P.Divya P.Nandini., Sk.Sabira , T.Bharathi.	619-633



# THE AIR TEMPERATURE CHANGES IN THE IRREGATED AREAS OF THE REPUBLIC OF KARAKALPAKISTAN

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## ANNOTATION

*The study examined the maximum and minimum values of air temperature in January and July for years and days and seasons, based on meteorological station data in the irrigated areas of the Republic of Karakalpakstan. Changes of an average temperature by the date and finding of the changing dates of temperature to 0°, 5°, 10° 15°C are mentioned in the graphs. The average air temperature change was analyzed about the sea level.*

**KEY WORDS-** *station, data, average, maximal, minimal, temperature, agrometeorology*

## INTRODUCTION

The temperature distribution in the atmosphere is determined by the heat exchange with the absorption of the surface and the solar radiation. The lower layer of the atmosphere absorbs less solar radiation than the upper layers. The main source of the warming of the troposphere, particularly its lower layers, is the temperature of the active surface of the earth. In the daylight, the active surface radiation balance is heated, it is warmer than the air, and turbulent processes occur in the air due to temperature changes. The active substance during the night is cooler than the air under effective lightning and cools the contact layer that is touching it [Muminov F.A., Abdullaev Kh.M. 1997, Chirkov Yu.I., 1979].

For every agricultural crop, a certain amount of heat and moisture is required in accordance with its biological characteristics. Some partly studies of air and soil temperature have been conducted in the exploring areas.

More than 40 years have elapsed since the publication of the Agrocultural climatology Resources of the Region [Agroclimatic..., 1976].

During this period Aralkum was replaced by the Aral Sea and in addition to agro-climate conditions under the influence of industry, rapid agricultural development, population growth, climate change and anthropogenic factors, the agro-climate conditions have changed significantly in the global

and regional scale, and the agro-climate dimensions have changed.

It determines the importance of analysing meteorological changes in the irrigating areas of the Republic of Karakalpakistan.

## MATERIALS AND METHODS

There have been used information about meteorological (Nukus, Takhiatosh, Takhtakupir, Kungrat) stations situated in the irrigated areas of the Republic of Karakalpakistan which belonged to the Archive of Uzhydromet

These calculations were performed with mathematical statistical methods. The purpose of the study was to investigate the fluctuations of the air temperature during the dates, months, years, and seasons, and the main tasks were to analyze their value changes.

## RESULTS AND DISCUSSION

First of all, it was studied the data on the change of air temperature in January and July based on the data of the stations located in the irrigated areas over the long term (1991-2018). Picture 1 shows the year-round change in the maximum and minimum values of air temperature in January and July.

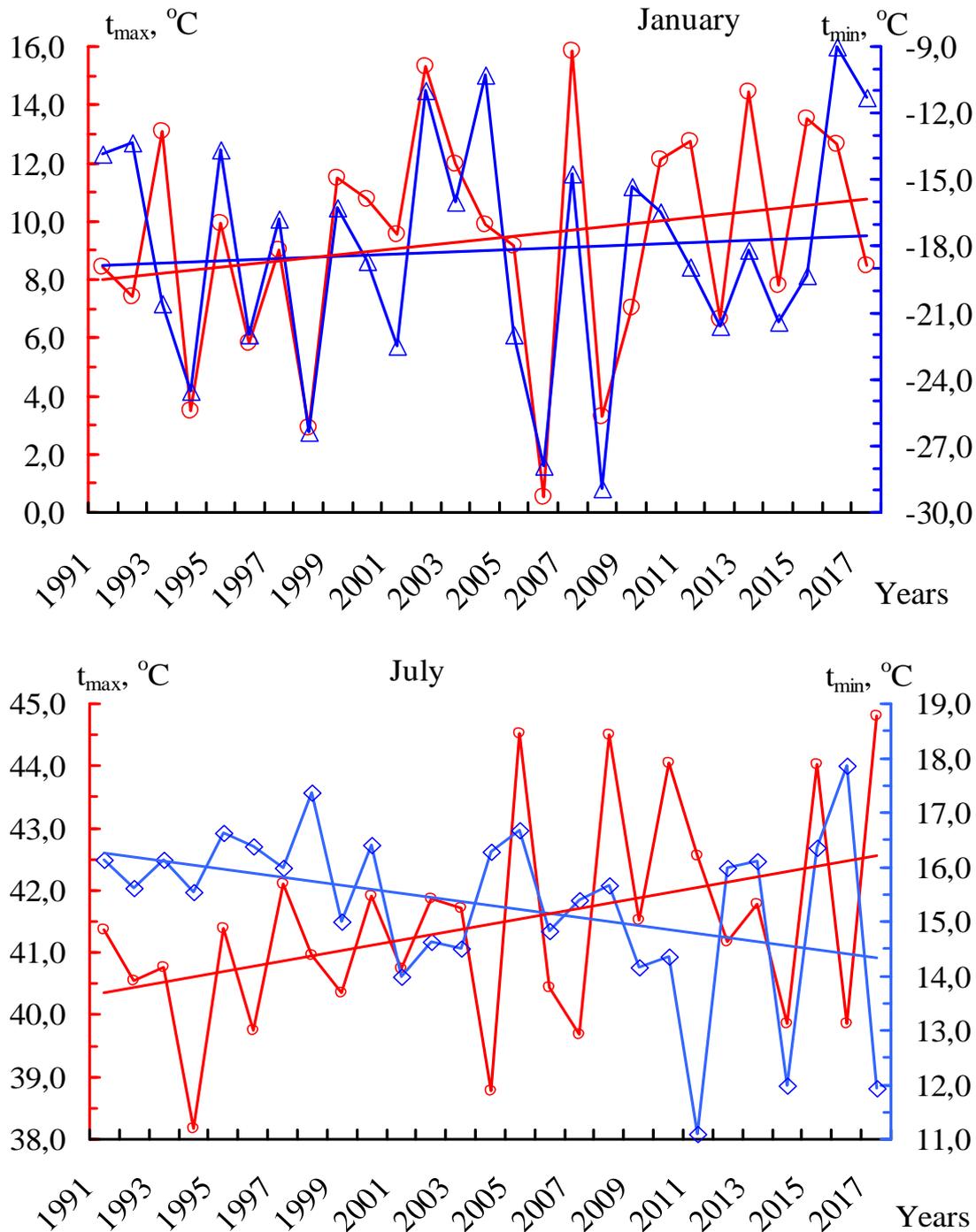
As shown in picture 1, the absolute maximal observed values of the air temperature in January in



2002 (15,3°C) and 2007 (15,9°C) expressed the warmest year, and the absolute minimal observed values in 2006 (-26,9 °C) and 2008 (-29,0 °C) expressed the coldest year.

In July, the absolute maximum values were expected to reach the maximum values in 2005 and 2008 (44,5°C) and 2017 (44,8°C) and absolute

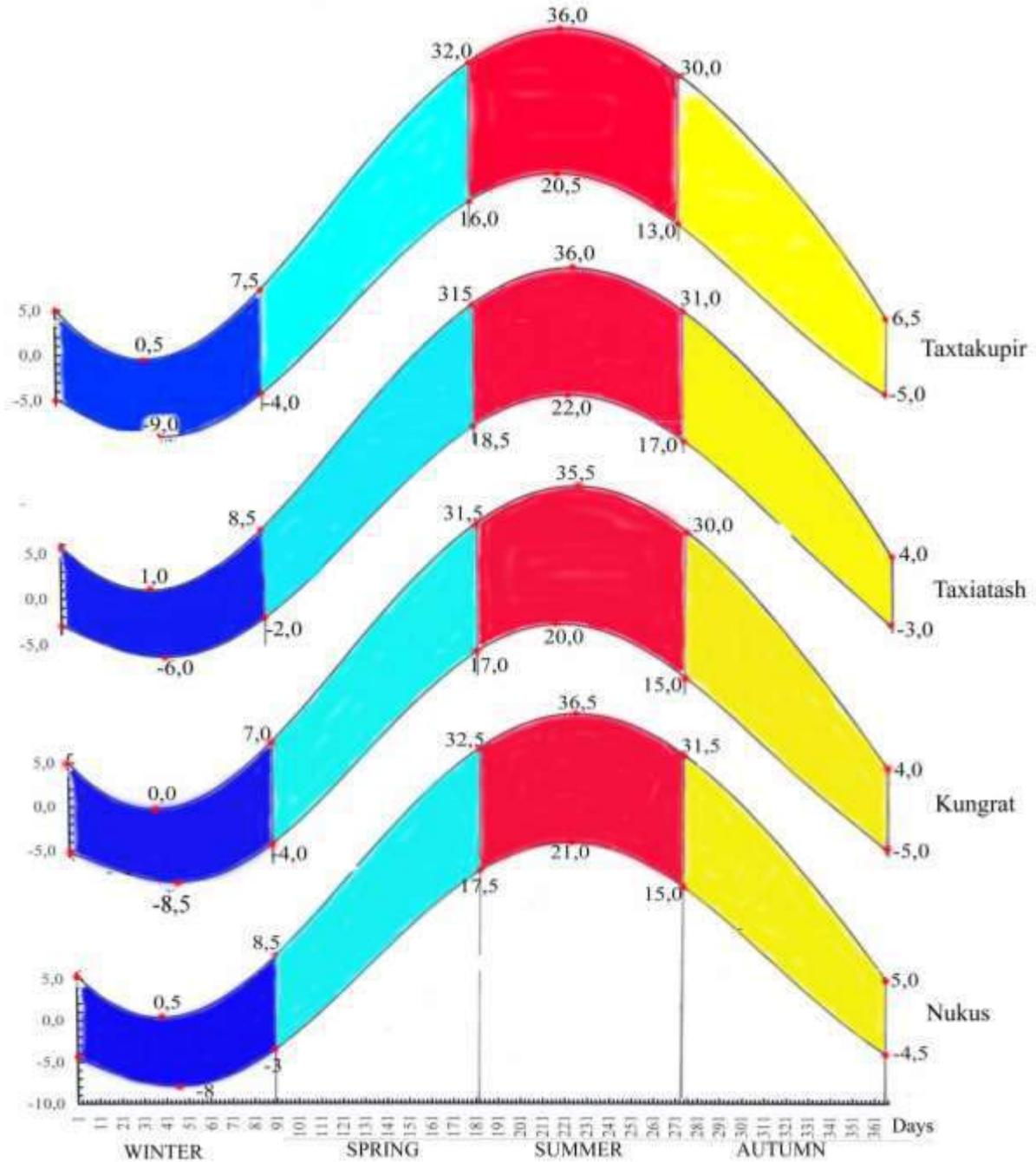
minimum values in 2011 (11,1°C), 2014 and 2017 (12,0°C). The results of the analysis show increasing of the absolute maximal and minimal values in January and July in the last 15 years and mark the corresponding synoptic processes to the conditions in the future.



**Picture 1. Changes in maximum and minimum temperatures in the irrigated areas in January and July**



Below presented a graph of change of average maximum values of maximal and minimal air temperature on each separated stations in the dates (seasons) (Pic. 2).



Picture 2. Annual change of maximal and minimal values of air temperature in irrigated areas

If we focus on picture 2 the temperature changes as follows:

- minimal – in winter (1-91 days) in Nukus  $-4,5^{\circ}\dots-8,0^{\circ}\dots-3,0^{\circ}\text{C}$ ,
- Kungrat  $-5,0^{\circ}\dots-8,5^{\circ}\dots-3,0^{\circ}\text{C}$ ,
- Takhiatash  $-3,0^{\circ}\dots-6,0^{\circ}\dots-2,0^{\circ}\text{C}$ ,
- Taxtakupir at  $-5,0^{\circ}\dots-9,0^{\circ}\dots-4^{\circ}\text{C}$ ;
- in spring (92-183 days) in Nukus  $-3,0^{\circ}\dots+17,5^{\circ}\text{C}$ ,
- Kungrat  $-4,0^{\circ}\dots+17,0^{\circ}\text{C}$ ,
- Takhiatash  $-2,0^{\circ}\dots+18,5^{\circ}\text{C}$ ,

- Taxtakupir  $-4,6^{\circ}\dots+16,0^{\circ}\text{C}$ ;
- in the summer (184-273 days) in Nukus  $+17,5^{\circ}\dots+21,0^{\circ}\dots+15,0^{\circ}\text{C}$ ,
- Kungrat  $+17,0^{\circ}\dots+20,0^{\circ}\dots+15,0^{\circ}\text{C}$ ,
- Takhiatash  $+18,5^{\circ}\dots+22,0^{\circ}\dots+17,0^{\circ}\text{C}$ ,
- in Taxtakupir  $+16,0^{\circ}\dots+20,5^{\circ}\dots+13,0^{\circ}\text{C}$ ;
- in the autumn (274-366 days) in Nukus  $+15,0^{\circ}\dots-4,5^{\circ}\text{C}$ ,
- in Kungrat  $+15,0^{\circ}\dots-5,0^{\circ}\text{C}$ ,
- Takhiatash  $+17,0^{\circ}\dots-3,0^{\circ}\text{C}$ ,
- Taxtakupir  $+13,0^{\circ}\dots-5,0^{\circ}\text{C}$ ;

- maximal - in winter (1-91 days) in Nukus



+5,0°...+0,5°...+8,5°C, in Kungirat  
 +5,0°...0,0°...+7,0°C, in Takhiatash  
 +5,0°...+1,0°...+8,5°C, in Taxtakupir  
 +5,0°...+0,5°...+7,5°C; in spring (92-183 days) in Nukus +8,5°...+32,5°C, in Kungirat +7,0°...+31,5°C, in Takhiatash +8,5...+31,5°C, in Tahtakupir +7,5°...+32,0°C; in the summer (184-273 days) in Nukus +32,5°...+36,5°...+31,5°C, in Kungirat +31,5°...+35,5°...+30,0°C, in Takhiatash +31,5°...+36,0°...+31,0°C, in Taxtakupir +32,0°C...+36,0°...+30,0°C; in the autumn (274-365 (366) days) in Nukus +31,5°...+5,0°C, in Kungirat +30,0°...+5,0°C, in Takhiatash -+31,0°...+4,0°C, in Taxtakupir +30,0°...+6,5°C.

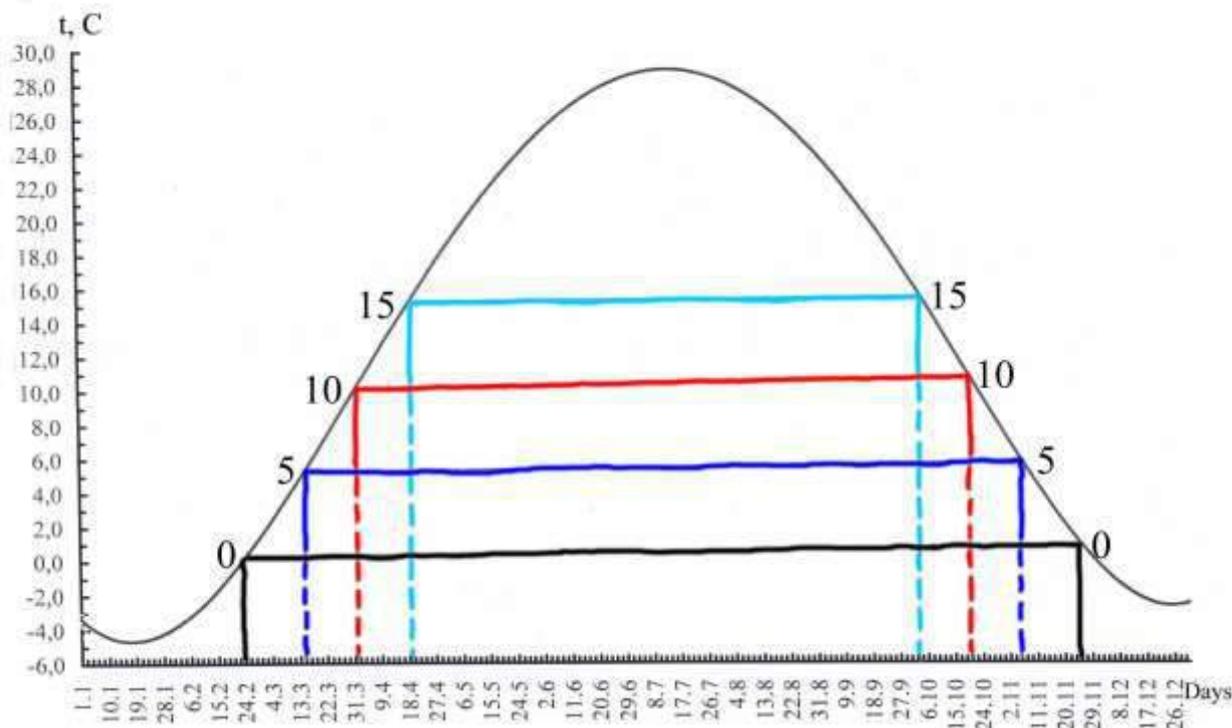
In general, according to the multi-year data (1991-2018), the minimum value of air temperature in Nukus, Takhiatash, Kungirat and Takhtakupir stations indicates January and the maximum value in July.

The main focus of agricultural services is the study and evaluation of thermal resources of the

regions [Sultosheva OG, Kutlimuratov Kh.R., 2008, Satimova L.F., Yuldasheva G.B., Kholbaev G.X. 2017]. Usually, there is used average air temperature. Therefore, the 3rd picture shows the change of the multi-year value of the average and transition temperature to 0°, 5°, 10° and 15°C in the irrigated areas of the Republic of Karakalpakstan

As you can see from 3rd picture, the minimal value of an average temperature refers on 15-16th January, and the maximum value is 15-16 July. This picture shows the average temperature of an annual observation.

Agrotechnical arrangements are carried out at positive temperatures. The results of the analysis show that the temperature variation in spring and autumn is as follows: 0°C – 24 February - 29 November, 5°C – 13 March - 8 November, 10°C – 31 March - 21 October and 15°C – April 18 to October 4 change. The duration of the cycle is 0°C – 278 days, 5°C – 240 days, 10°C – 204 days, and 15°C – 170 days.



**Picture3. The multi-year value changes of an average temperature in the irrigated areas of the Republic of Karakalpakstan**

As you know, the stations are located at different altitudes of sea level and in different soil contours. Therefore, the table shows the change of annual average air temperature in the territory of the Republic of Karakalpakstan relatively to the sea level. By using this table data, it is possible to know the average air temperature at various altitudes. Here the differences of temperature are ±1,5°C.

**CONCLUSION**

In summary, we can say that here is specified the maximal and minimal values of air temperature of the meteorological stations Nukus, Taxiatah, Kungirat and Takhtakupir.

The annual average temperature change for the irrigated area has been analyzed.

There were observed duration of the cycle



and the changes of the air temperature in spring and autumn to the different degrees.

The average air temperature change values were calculated for the sea level.

Provides the thermal resources needed for cultivation of agricultural crops in the regions.

Can be used in the placement of agricultural crops and agrometeorological services in irrigated areas of the Republic of Karakalpakstan.

**Table**

**Change of average air temperature (°C) to sea level (h, m)**

h, m	Winter			Spring			Summer			Autumn		
	Months											
	XII	I	II	III	IV	V	VI	VII	VIII	IX	X	XI
	Average air temperature, °C											
50	-3,9	-6,2	-3,9	3,7	13,5	20,5	25,6	27,3	25,1	17,7	9,6	1,9
55	-3,3	-5,5	-3,1	4,4	14,0	21,0	26,1	27,7	25,6	18,4	10,3	2,6
60	-2,7	-5,0	-2,4	5,0	14,4	21,4	26,6	28,2	26,0	19,1	10,9	3,2
65	-2,3	-4,5	-1,8	5,5	14,8	21,8	26,9	28,5	26,4	19,6	11,4	3,7
70	-1,9	-4,1	-1,4	5,9	15,1	22,0	27,2	28,8	26,7	20,1	11,8	4,1
75	-1,7	-3,9	-1,1	6,2	15,2	22,2	27,4	29,1	27,0	20,5	12,2	4,4
80	-1,5	-3,7	-0,9	6,4	15,4	22,3	27,5	29,3	27,2	20,8	12,4	4,6
85	-1,5	-3,7	-0,8	6,5	15,4	22,4	27,5	29,4	27,3	21,0	12,5	4,8
90	-1,5	-3,7	-0,9	6,5	15,4	22,3	27,5	29,5	27,4	21,2	12,5	4,8
95	-1,7	-3,9	-1,1	6,4	15,2	22,2	27,3	29,6	27,4	21,2	12,4	4,8
100	-1,9	-4,1	-1,4	6,2	15,0	22,0	27,1	29,5	27,4	21,1	12,2	4,6

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# ENVIRONMENTAL STEWARDSHIP AND ORGANISATIONAL COMPETITIVENESS OF THE OIL AND GAS INDUSTRY IN NIGERIA

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## ABSTRACT

*Competitiveness has been known to improve several aspects of organizational life. However, it does not come that easy, as it takes a lot to be competitive in today's challenging business world. Only organizations that go beyond maximizing profit are the ones that could survive these challenging times. This study seeks to investigate whether environmental stewardship can induce competitiveness of organizations in the oil and gas industry in Nigeria. 92 managers, supervisors, and foremen in 10 oil and gas firms were surveyed. Relying on the census technique, the entire population (92) was sampled, and copies of the questionnaire were administered accordingly. Only 76 copies were retrieved and used for analysis. In conducting analysis for this study, Kendall\_tau Rank Correlation Coefficient statistical tool was used in analyzing copies of the questionnaire retrieved. The analysis for the study revealed the following: Resource conservation ignites the competitive capability of business organizations. Pollution prevention practices by an organization gives them a good public image; and occupational health and safety practices benefits all stakeholders especially the practicing organization, in terms of competitive edge. Environmental stewardship induces organizational competitiveness of firms in the oil and gas industry, and competitiveness improves several aspects of organizational life.*

**KEYWORDS:** *Environmental Stewardship, Resources Conservation, Pollution Prevention, Occupational Health and Safety, Organizational Competitiveness, and Oil and Gas Industry.*

## INTRODUCTION

Nigeria is perceived as the largest producer of oil and gas in Africa, and her oil exploration to have started since 1903 (Thomas, 1995). Fast-forward to today, the oil and gas industry in Nigeria have been forecasted to suffer a huge setback in the coming years. This prediction came across as an estimated decline of approximately 7.93% in crude oil production in the country, especially between 2018 - 2025 (Mordor Intelligence, 2020). However, increasing investments in the upstream and downstream sectors has been the major factors that has sustained the market for some time now. Thus, oil and gas production has seriously nose-dived due to oil theft, which has been the central factor responsible for the huge losses experienced by operating firms in Nigeria. Consequently, this line of

event has led to lack of infrastructure and/or infrastructural deficit which has hampered production capacity and process in the sector (Jeremiah, 2019). Other factors may include uncertainty in regulations and other security concerns which has made Nigeria, unfertilized her refining capability which has made the country a major importer of refined petroleum products.

As stated earlier, Nigeria is one of the oldest and largest oil producers in the continent of African, and its oil and gas sector is the principal sector that drives the economy as it accounts for over ninety percent (90%), and about eighty percent (80%) of the revenue of the economy. To buttress this point, it is pertinent to point out that as at 2017, the largest gas reserves in Africa was traced to Nigeria, with over thirty-seven (37) billion barrels of oil and 47.2 billion cubic meter



(BCM) of gas. Thus, Nigeria alone contributes approximately over twenty-four percent (24%) of the aggregate oil production in the continent, representing about one point nine million (1.9) barrels per day in the same period under view. Notwithstanding, the global commodity downsizing of 2014 was a serious blow to the Nigerian economy which resulted in a sharp decline in investments in the Nigerian upstream oil and gas sector at about thirteen percent (13%) per annum 2015 - 2017 respectively due to a decrease in the price of crude oil (Yusuf, *et al.*, 2016). This resulted in one of the greatest declines in government spending in the year 2016, with respect to militating disruptions on major oil fields across the country. Interestingly, oil production tends to recover to an estimated two million barrels from 2017 to 2018 (Jeremiah, 2019; International Energy Agency, 2019). No doubt, oil and gas and other drilling activities are raring up, and this is projected to maintain this level of growth and find as well as finance projects across board. Meanwhile, oil production is however not expected to rise in the coming years, due to the rapid drop in crude prices as a result of the novel COVID-19 pandemic and its negative consequences post the pandemic. Hence, to survive and thrive in this industry, organizations need to build her resources to compete favourably.

To out-compete others, organisations need to put all their resources to work. In this sense, competitiveness has two basic colourations, namely; national/global level and firm level. In essence, competition can be viewed from a matrix of two by two - external and internal, as well as national and firm/industry level. The latter is induced by a number of factors extraneous to the firm and those that are endogenous (Cole, 2010). At firm-wide/industry level competitiveness, the focus is on the capacity of an organisation to increase profit and grow on a sustainable basis; which is comprehensible owing to two explanations. First, effect of policy on industry and firm-based factors in competitiveness draws attention to the issues of trade policy, investment and business environment and government policies and their impact on competitiveness of the industry. Second, the need for sustainability underscores concern for competitive edge based on strategic values and a vision that enables a company to remain consistently more competitive than others especially, when inventory management strategies as well as cost control measures and/or cost leadership strategies are introduced (Cole, 2010).

An organization is said to have cost advantage when it produces and offers its products and services at a lower or cheaper rate as compared to other competing firms. This according to David (2013) shows they

produce higher quality products because they benefit from access to relatively low-cost raw materials, effective management of operational activities, adoption of an efficient technological process, and low sales/distribution cost. He noted that organizations can capitalize on low cost advantage by pegging the price of their goods and services a little lower than the price that competitors offer. David (2013) further explained that profit will still be made because the firms may want to sell at lower cost due the fact that they enjoy the privilege of buying raw materials at lower costs. It was further elucidated by Wisner, Tan and Leong (2012) that they can even lower the prices of their goods below that of the competitors with the aim of attracting more customers; thereby increasing their market share. They equally noted that the significant effect of technology on the business operations has prompted organizations to constantly improve its daily activities by the use of relevant technological devices. This is because, organizations that have technological advantages as compared to others achieve more in terms of efficiency in operation, communication, research capabilities, stewardship, and so on.

Interestingly, being or having characteristics that portrays one as a steward to the environment requires a lot. This because it encompasses going out of ones' way to make moves that could help in fostering environmental sustainability for as long as possible. Some of such moves could come in form of initiating and/or volunteering in environmental programmes, minimizing the carbon emission or other negative impacts on the environment in general, and on consumables in particular, participating in environmentally charged public events, employing dynamic ways in the mode of transportation, staying informed and giving complete support for various environmental-friendly policies (Rinkesh, 2019). Essentially, stewardship of the environment entails protecting the environment through recycling, conservation, regeneration, restoration, and reuse (Rozzi, *et al.*, 2012). Practically, there are several benefits of implementing a stewardship programme for the environment. Some of these benefits come in different dimensions such as; economic benefits, human health benefits, protection and conservation benefits of the environment (Welchman, 2012), just to mention but a few.

Established by the points buttressed above, organizations that operate within the oil and gas economy in Nigeria may wish to consider practical steps that could give them competitive edge over their rivals and increase the possibility of having an enhance survival ratio within this context. Thus, one of the ways



in which these organizations could enhance their activities and boost the visibility of their presence is by being environmentally responsible. Based on the strength of this argument, this research work is designed to ascertain whether environmental stewardship could influence organisational competitiveness of the oil and gas industry in Rivers State, Nigeria. Hence, this study was prompted by the lack of sufficient studies on organisational competitiveness and environmental stewardship respectively, as well as activities of organizations in the oil and gas sector of the economy.

## REVIEW OF RELATED LITERATURE

Within the context of this study, the review of related study captures other scholars and researchers with regards to environmental stewardship, organisational competitiveness, their proxies, as well as an undergirded theory and review of other empirical studies.

### Meaning of Environmental Stewardship

Environmental stewardship represents activities of an individual, organization, or other entities with respect to protecting the environment through recycling, conservation, regenerates and restoration, while taking responsibility for their choices and the environment (Jha, 2015). Thus, environmental stewardship is canvassing support for the “Green” concept. The Green concepts are designed to ensure that the activities of the organization should consider the triple bottom line; profit, people, planet”. The triple bottom line, otherwise known as 3BL or TBL is a framework that has three components; profit-financial, people-social, and planet-environmental (Elkington, 2018). The framework is adopted by some organizations to put in check their and in a wider perspective with the aim to create higher business value. The aim of environmental stewardship is to achieve recycling, resources, life cycle costing, green building, green procurement, green office, green building, etc. Bennett, *et al.*, (2018) noted that this thinking towards green activities are conceptualized as; (1) using non-toxic, recycled, and environmentally friendly supplies and products (ecological). (2) using as little energy and other resources as possible with minimal amount of waste (3) Will regulate the visual, noise, and physical pollution as possible. The core principles/dimensions are; (1) resource conservation, (2) pollution preventives, (3) occupational health and safety.

**Resource Conservation:** Resource conservation represents the ethical application and protection of resources valuable to the organization, and society as

well as protection of the environment. Resources in this context represents minerals, plants and/or trees, wildlife, water (rivers, streams, lakes, creeks, valleys, and so on), and others. The central focus is in maintaining the ecological world in order to protect the main sources of natural resources, which is turn is a source of other firms of resources (Raymond, *et al.*, 2010). In essence, it is a process of maximal and optimal use or application available resources while ensuring the management and preservation of natural environment with all its resources. To further buttress this point, resource conservation helps in the reduction of the amount of solid waste generated and other resources of the organization in this sense. The need to support the preservation of natural resources cannot be overrated. Some of the reasons why resource conservation is necessary are as follows: (1). To ensure the sustenance and survival of the human race, (2). To ensure the continuous existence of biodiversity, (3). To minimize use of non-renewable resources, (4). To reuse and recycle non-renewable resources, (5). On the other hand, the general objectives of resource conservation are to; (1). To reduce or stop work processes that are against nature, (2). To interfere with non-human species only to meet basic needs, (3). To minimize resource wastages, (4). To protect environment from degradation, (5). To ensure their operations are in congruence with nature (Raymond, *et al.*, 2010).

**Pollution Prevention:** Pollution prevention is an approach or method adopted with the sole aim of waste reduction, especially wastes that are released or introduced into the environment, which causes a huge (sometime lasting) damage to the environment. These wastes are known to be released into the environment by stakeholders such as individuals, institutions, or other organizations. These wastes could be organic, solid, liquid, recyclable, hazardous, and so on (Chittock & Hughay, 2011). Pollution prevention is more like an action plan with the aim of reducing contaminants that has been released into the environment by any of the stakeholders/individuals or the sustainability of the environment, which is what has led to legislative bodies enacting measures to prevent pollution of the environment by the introduction of environmental laws namely; clear Air Act Amendment of 1990, and the pollution prevention Act of 1990 by the congress of the united states. This is a significant more to ensure the implementation of my such processes that is designed toward reducing the amount hazardous waste that the environment is exposed to. In essence, pollution prevention approach tends to water-down the amount of pollution related issues by individuals, organizations



and industries (Environmental Protection Agency, 2014). Pollution prevention approaches are expected to manage and control pollution and its related issues with the aim of salvaging the environment and reduce its impact on the environment. The central focus is to ensure the activities of individuals, organizations, and industries does not jeopardize the environment so that the unborn generation could have something to inherit and use. Nevertheless, pollution prevention is used interchangeably with pollution control, pollution reduction, pollution minimization, pollution elimination, and so on.

### **Occupational Health and Safety:**

Occupational Health and Safety is also known as occupational safety and health, occupational safety, occupational health, and so on. This is a multi-dimensional construct that is designed to foster the growth of safety measures in work organizations. Thus, occupational health tends to address all facet of health and safety issues in work organizations, with strong emphasis of the prevention of hazards in the workplace (Golovkova et al., 2018). It is pertinent to imply here that the health and safety of workers in any work organization in key to attaining the goal of the organization. Researchers and practitioners have advocated for practical safety measures to be introduced to help the workers, this is because several factors find to serve as a determining factor on the health and safety of employees some of these issues are risk factors that could result in cancerous illuminant, musculoskeletal diseases, accidents, respiratory disease, circulatory disease, hearing loss, and other stress related illuminates (John, 2019). On the other hand, employment conditions, working conditions, and labour laws accepts other determinants that fosters the growth of health and safety within the organizations. These measures may include; salary, working hours, maternity leave, health promotion, etc. accordingly, a day was set aside to observe health and safety measures global consumption. That day is April, 28 and it is organized by the international labour organization, as a “World Day for safety and health” (Golovkova et al., 2018; John, 2019).

### **Meaning of Organisational Competitiveness**

A deep and profound peep into literature have demonstrated that organisational competitiveness is multidimensional, multifaceted, and multilayered. This seemingly implies that, its components and outcomes changes with industry and periods. Competitiveness within organisational life has been perceived to have encompass divergent philosophies, theories, and approaches (Cole, 2010). One of such classical theories

is the theory of mercantilism. Mercantilism tends to connote the idea of rivalry at every level. Such rivalry could be introduced into a business relationship owing to seemingly competitive, absolute, and/or comparative advantages. What this means is that, an organization may for instance, be technologically feat more than another, while the one which is deficient in terms of technology may have access to more raw materials at a cheaper rate that could change everything about their production and distribution cost. This may translate to cheaper products and services (Cole, 2010). In a more logical sense, organisational competitiveness tends to represent the economic strength of an entity as compared to other entities in the same line of business or industry. In specific terms, factors such as efficiency, innovation, sophistication, and availability of both human, and material resources. Others are, total output or productivity, market share, profitability, finance and investments, ability to export, good corporate governance practice, favourable business environment, sustainability, and entrepreneurial approach, low prices, high product quality, cost leadership ability, and ability to harness resources and turn same into output optimally (David, 2013; Roman, 2012). In the end, strategizing a way to compete favourably with a rival is key to winning the war of business.

### **THEORETICAL FRAMEWORK**

The theoretical framework permits the researcher to adopt and apply relevant theories to the study by dissecting and discussing relevant theories that are tailored towards the concepts under review. In the light of this, stewardship and game theory were adopted to serve as undergirded theories for the study, and would be held constant throughout the study.

**Stewardship Theory:** It is widely believed that, stewardship theory was put forward by Theodore Roosevelt Jr., an American statesman, politician, and writer. it has been argued that the discuss regarding stewardship is linked to his article. The idea he sold on the subject matter was that, managers if unsupervised will naturally act in a responsible manner in demonstrating stewardship even when resources are put in their care and control (Contrafatto, 2014). In the light of this, stewardship theory tends to assume pro-organisational and self-serving behaviours are available to a steward (manager, in this case). Nevertheless, a steward will place higher premium or value on doing that which will in all be more beneficial to the organization than that which will be beneficial to himself. He insisted that, stewards are assumed to be trustworthy, pro-organisational, and collectivists



(Contrafatto, 2014). An example of stewardship in this sense could be painted in a picture in which elected government official(s) would do anything within their reach, means, and/or whatever necessary to ensure the protection of lives and property for the national good, especially when that duty and responsibility is within the purview of the constitution, instead of engaging in activities that could be perceived to be in their own best interest.

**Game Theory:** Game theory is believed to be a scientific model relating to a strategic interaction between conflict and corporation of rational, practical, and logical decision-makers (Watson, 2013). Although, game theory was extensively enhanced in the 1950s by several scholars (Watson, 2013). In reality, game theory is applicable to a wide range of behaviours or social interaction and science. Instructively, modern game theory began with the notion of mixed-strategy balances between two persons. In the light of this, game theory is linked to the ability of managers to devise a means of strategizing and competing with rivals in the same line of business or the same theory. Meaning, organizations are advised to devise a means using a game thinking that may allow them compete favourably with their competitor and seemingly beat them at their game. In this vein, the game theory is directly connected to organisational competitiveness as it is designed to explain the ways in which organizations may outsmart their competitors with little or no much efforts. Tende and Ekanem (2018) citing Gintis noted that this thinking has been applied to ascertain, predict, and explain competitive behaviours of consumers, organizations, markets, and humans on a general note with regards to a broad spectrum of decision and a higher concern for understanding competitiveness scientifically.

### **Link between Environmental Stewardship and Organisational Competitiveness**

Competition being an involvement in business rivalry for the bigger market share or customer tend to paint a picture in which an organization attempts to outperform other market players to incorporate value-creation strategy through delivering superior value for customers (Varanavicius & Navikaite, 2016). In this sense, it can be stated that organizations can stimulate the creation of organisational competitiveness and superior value to customers by identifying new means to conduct the activities in the value chain. Meaning organizations dominant role and their activities on the planet, have a major impact on the social and natural environment. So, nowadays understanding the

sustainable environment actions have the same importance as following competitors" financial situation, marketing and development actions. Varanavicius and Navikaite, (2016) explained that organizations are no longer being valued only on financial earnings achieved for shareholders but they are also being assessed on the contributions they make to stakeholders and society. Therefore, organizations' management are analyzing the environment actions of competitors as this has become necessary conditions to improving green consumption and behaviour. Hence, implementing the environmental sustainability could translate to hug profit and that would naturally put the organization in a more favourable position than its counterparts.

### **Empirical Insight**

Kpurubu (2019) studied effect of environmental regulations on adoption of green innovation by small and medium agro-enterprises in Rivers State. 35 copies of the questionnaire instruments administered to agro-enterprise owners/operators was drawn from a population estimated slightly above 80 small and medium agro-enterprise that are into production processing marketing and distribution in Rivers State using the purposive and snowball sampling techniques. The analysis was conducted using descriptive statistics, Tobit regression, Ordinary Least Square Regression, and Analysis of Variance was used to analyze the data collected, with the aid of the EView 9 Econometric Package. The result revealed that Enterprise Age, (Z-Stat = -3.200,  $p < 0.01$ ), Pollution Abatement Cost and Expenditure (Z-stat= -2.508,  $p < 0.05$ ) and Number of Branches of agro-enterprise (Z-stat= -3.051,  $p < 0.01$ ) negatively affected the adoption of green innovation. While awareness of existing environmental regulations (Z-Stat = 3.140,  $p < 0.01$ ) positively influence green innovation. Kpurubu (2019) recommended that with higher level of awareness of environmental regulations, environmental subsidies being provided by government and knowledge of the economic and environmental benefits of green innovation, adoption of this practice will be enhanced. That, there should be effective policy coordination between government departments in charge of innovations, agricultural sector development and the environmental management agency, to integrate innovation policies with environmental policies. Whereas, Urban and Govender (2012) conducted a study on empirical evidence on environmental management practices in south Africa. They noted that the aim of the paper was to enable the understanding of individuals, organizations and industries in this subject matter generate empirical data on the activities of firms



in environmental management issues, especially within the industrial coating industry using supply chain primarily. They surveyed 84 respondents and had 64% response rate. After using descriptive Statistics in analyzing the data, they found out that, some of the organizations already incorporate environmental management into strategic process of the organization, and concluded that a significant portion of the organizations under review tend to show commitment to advancing environmental sustainability.

Romm, *et al.*, (2012) reviewed about 486 articles with regards to organisational competitiveness and some factors that relate to it, consequently, they came to the conclusion that several organisational factors have the tendency to influence competitiveness at the organisational level. These factors may include the following; human capital, reliability, strategic alliances Knowledge, flexibility, cost, cultural factors, innovation, quality, customer relations, speed, control system, social responsibility, production techniques, and information communication technology. While, Krishnamoorthy and D'Lima (2014) attempted to review benchmarking as a component of competitiveness, according to them; benchmarking in the recent times occupies a prominent place, helping quality up gradation. Benchmarking is imperative for performance and the study highlights the diverse crucial aspects of benchmarking process, which proves essential for successful implementation. This study demonstrates benchmarking as a basis of competitive positioning and shares valuable information from managerial personnel on benchmarking. In this paper, the authors have reviewed benchmarking literature and sought responses from managerial personnel to facilitate researchers and academicians to take a closer look at the expansion, progression and application of benchmarking.

## HYPOTHESES

The following testable null hypotheses were formulated:

**HO<sub>1</sub>** There is no significant relationship between resource conservation and organisational competitiveness of the oil and gas industry in Rivers State.

**HO<sub>2</sub>** There is no significant relationship between pollution prevention and organisational competitiveness of the oil and gas industry in Rivers State.

**HO<sub>3</sub>** There is no significant relationship between occupational health and safety and organisational competitiveness of the oil and gas industry in Rivers State.

## METHODOLOGY

We adopt the quasi-experimental research design, specifically, the cross-sectional research design. This research design is suitable because it is descriptive in nature and the researcher does not have control over the respondents. The cross-sectional survey design is also suitable for the study because data was collected from different locations and the analysis carried out at the same time. Nevertheless, the target population for this study consist of managers, supervisors, foremen of oil and gas firms in Rivers State. Record from the human resources desk of the various firms showed a total of 92 managers, supervisors, foremen among the 10 oil and gas firms. One of the criteria of selecting these firms is that they must have been in operation for a minimum of 10 years, and the quality of service they offer, as well as how highly trained their staff is. In determining the sample size, we adopted the census technique. The census technique has to do with adopting the population (92) as the sample size, and copies of the questionnaire are administered accordingly. Only 76 copies were retrieved and used for analysis. This is because the population is within the control of the researcher. The study further adopted the convenience sampling technique which is a non-probability sampling technique. This sampling technique was chosen because of the level of accessibility and availability of the size of the population.

Again, the sources of data for the study was primary and secondary sources. The primary source of data for the study will include information from personal interviews and the administration of questionnaire. While, the secondary data for the study will include information from publications such as: periodicals, journals articles and the internet. The instrument will consist of multiple-choice questions with responses of descriptive answers. The instrument was divided into three sections which will consist of section A; containing seven (7) questions specifying the demographic characteristics of the respondents. Section B will comprise of eight (8) items describing environmental stewardship. Section C will also comprise of eight (8) statement items on organisational competitiveness of oil and gas firms in Rivers State. Furthermore, both face and content validity were observed. The Cronbach alpha reliability was applied in this study; according to Nunnally and Bernstein (1994)



the acceptable requirement for Cronbach coefficient should be greater than 0.70. Lastly, data for the study was collected and analyzed by means of the Spearman's Rank Order Correlation Coefficient (Rho), a non-parametric statistical test, and considered appropriate because the data is ordinal.

**Test of Hypotheses**

The hypotheses formulated were tested as follows:

**Ho<sub>1</sub>** There is no significant relationship between resource conservation and organisational competitiveness of the oil and gas industry in Rivers State.

**Table 1: Correlations between Resource Conservation and Organisational competitiveness**

		Resource Conservation	Organisational Competitiveness
Kendall's tau_b	Resource Conservation	1.000	.628**
	Correlation Coefficient		
	Sig. (2-tailed)	.	.000
	N	76	76
	Organisational Competitiveness	.628**	1.000
	Correlation Coefficient		
	Sig. (2-tailed)	.000	.
	N	76	76

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table 1 shows the correlation between resource conservation and organisational competitiveness. The result reveals that there is positive and significant relationship between the two variables (tau\_b = .628; n = 76; p > 0.05). From the outcome the null hypothesis which states that, there is no significant relationship between Resource Conservation and organisational

competitiveness was rejected. Thus, the alternative was accepted.

**Ho<sub>2</sub>** There is no significant relationship between pollution prevention and organisational competitiveness of the oil and gas industry in Rivers State.

**Table 2: Correlations between pollution prevention and organisational competitiveness**

		Pollution Prevention	Organisational Competitiveness
Kendall's tau_b	Pollution Prevention	1.000	.722**
	Correlation Coefficient		
	Sig. (2-tailed)	.	.000
	N	76	76
	Organisational Competitiveness	.722**	1.000
	Correlation Coefficient		
	Sig. (2-tailed)	.000	.
	N	76	76

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table 2 shows the correlation between Pollution Prevention and organisational competitiveness. The result reveals that there is positive and significant relationship between the two variables (tau\_b = .722; n = 76; p > 0.05). From the outcome the null hypothesis which states that, there is no significant relationship between Pollution Prevention and organisational competitiveness was rejected. Thus, the alternative was accepted.

**Ho<sub>3</sub>** There is no significant relationship between occupational health and safety and organisational competitiveness of the oil and gas industry in Rivers State.



**Table 3: Correlations between occupational health and safety and organisational competitiveness**

		Occupational health and safety	Organisational Competitiveness
Kendall's tau_b	Occupational health and safety	Correlation Coefficient	1.000
		Sig. (2-tailed)	.543**
		N	.000
	Organisational Competitiveness	Correlation Coefficient	.543**
		Sig. (2-tailed)	.000
		N	.76

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 3 shows the association between occupational health and safety and organisational competitiveness. The result reveals that there is positive and significant relationship between the two variables (tau\_b = .543; n = 76; p > 0.05). From the outcome the null hypothesis which states that, there is no significant relationship between occupational health and safety and organisational competitiveness was rejected. Thus, the alternative was supported.

**DISCUSSION ON FINDINGS**

In conducting analysis for this study, Kendall\_tau Rank Correlation Coefficient statistical tool was used in analyzing copies of the questionnaire retrieved. The said analysis was conducted using Statistical Package of Social Sciences (SPSS) version 21.

The analysis for the study revealed the following findings:

**HO<sub>1</sub>** Resource conservation ignites the competitive capability of business organizations.

Based on this outcome, it was clear that resource conservation sparks competitive capability. This outcome is in line with the findings of Surya, *et al.* (2020), in which they revealed that, conservation of natural resources is positively correlated to increasing the productivity of community economic enterprises.

**HO<sub>2</sub>** Pollution prevention practices by an organization gives them a good public image. This is in itself a competitive edge.

Based on this outcome, it is easy to imply that pollution prevention practices induce organizational competitiveness. This outcome is supported by the findings of Landrigan, *et al.* (2018), where it was stated

that successful pollution prevention strategies brings about collaborations among relevant stakeholders.

**HO<sub>3</sub>** Occupational health and safety practices benefits all stakeholders especially the practicing organization in terms of competitive edge.

Based on this outcome, it is safe to say that religiously sticking to occupational health and safety practices brings about organizational competitiveness. This outcome is reinforced by the findings of Ncube and Kanda (2018). In this research piece, they found out that, occupational health and safety is a legal framework which requires reformation and harmonization for the collective benefit to employees, employers, and regulatory authorities.

**CONCLUSION AND IMPLICATIONS**

In reality, the activities of organizations in the oil and gas industry has impacted negatively on the environment. These activities which ranges from exploration to production, shipping, trucking, and storing of raw materials, pipeline transmission, and converting the raw material into petroleum products such as; gasoline, jet fuel, heating oil, asphalt, and premium motto spirit, are components of upstream, midstream, and downstream sub-sectors that has made life uneasy and unbearable to some oil producing localities across the world. Indeed, being a steward of the environment operating in this sector gives such an organization an edge as it is helpful in terms of resource conservation, pollution prevention, and occupational health and safety. Hence, resource conservation is known to reduce soil erosion, improves water quality and availability, and increases organic matter. While, pollution prevention reduces cost of operation, improves operational efficiency, and reduces the burden of environmental regulation on relevant authorities.



Whereas, strictly observing occupational health and safety reduces cost related to accidents and incidents, improves business efficiency, and improves compliance to environmental regulations. Owing to these submissions, environmental stewardship induces organizational competitiveness of firms in the oil and gas industry, and competitiveness improves several aspects of organizational life.

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# MONITORING AND ANALYSING SECURITY STATE OF IAAS AGAINST CYBER THREATS

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## ABSTRACT

*Considering the sensitivity and damage of data that can be caused by cyber-threats in a cloud computing model, this work is proposed to study the impact of various cyber threats and methods to minimize them. A comprehensive SIEM architecture to detect cyber-threats and create immediate reports to mitigate them has been proposed. SIEM shall thus provide analysis of security alerts, review logs and perform auditing.*

*The proposed methodology will continuously monitor the security state against compute, networking, storage, data and application. It shall extend security posture management and threat protection to on-premises VMs. Another great advantage is that it shall provide global HTTP load balancing with instant failover.*

**KEYWORDS-** *SIEM, cyber-threats, security alerts, logs, auditing, on-premises, global HTTP load balancing, instant failover.*

## I. INTRODUCTION

Since the invention of cloud computing, large scale industries having been using it in order to take the advantage of quicker deployment, greater scalability, and cost saving of services. Enhancement of existing security features and addition of new features have led to the growth of cloud computing. In this era of rapid growth of IT industry, a cloud provider must keep track of consumer demands and requirements in order to keep up with the pace.

This project provides insights into some of the latest cloud practices and technologies information security practitioners must be aware of as IT and sensitive data extends beyond the traditional corporate perimeter. Providers, regulators, and the enterprise must cooperate to establish baseline security requirements across these services.

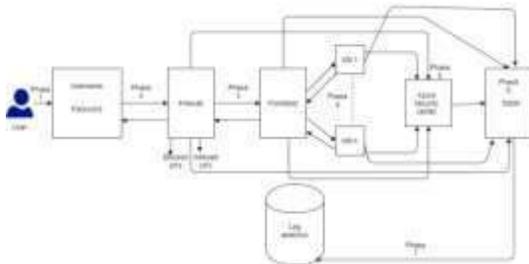
Understanding the use of cloud and related technologies along with the roles and

responsibilities of data security and ownership up front will improve the procurement and long term management of these services.

The SIEM architecture here focuses on detecting cyber-threats and putting on a timely action thus by providing immediate incident response and creating reports which helps to meet compliance requirements. This is nothing but log analysis and auditing.

An analytical engine analyses the data and machine learning synthesizes it. This engine shall thus provide recommendations and threat alerts for protecting our workloads. We will know right away if there's been an attack or anomalous activity.

A secure endpoint service will provide HTTP load balancing and path-based routing rules for applications which are distributed across the globe. It will try to reach the destination using the fewest hops amongst the other routes available.

**Figure 1. Architecture flow**

## II. LITERATURE REVIEW

<sup>[1]</sup>In this paper author proposed a safety protection framework for VMs to eliminate partial security risks, which contained access control, network abnormality detection, memory and files scanner for VM. The problem of VM information security monitoring in the cloud environment was studied, a VM monitoring method was proposed by online analyzing VM security state, networks, applications and data in the virtualization layer.

<sup>[2]</sup>The main contribution of this paper is the configuration of VMs with security tools for security-aware allocation of VMs in cloud systems. Based on the security analysis and evaluation of the virtual machine state, we have developed an architecture where the VMs can be placed following the best practice in security-aware manner. With the help of this the cloud platform can be secured ensuring reduction of security risks.

<sup>[3]</sup>IaaS cloud platform requires new virtualization-aware security solutions that have the ability to externally monitor and protect the hosted VMs externally. In this paper, we presented some CloudSecurity tools, a solution that provides active, transparent and real-time security monitoring for multiple concurrent VMs hosted on a cloud platform. CloudSecurity tools utilizes VMI techniques to monitor the hosted VM's memory externally, without installing any monitoring code inside the hosted VMs.

## III. PROBLEM STATEMENT

The privacy of sensitive data and security of shared websites have become two major issues of cloud computing. The Infrastructure-as-a-Service (IaaS) landscape is dominated by the three major providers and their services often overlap with Platform-as-a-Service (PaaS) offerings. New capabilities further decouple hardware and software capabilities.

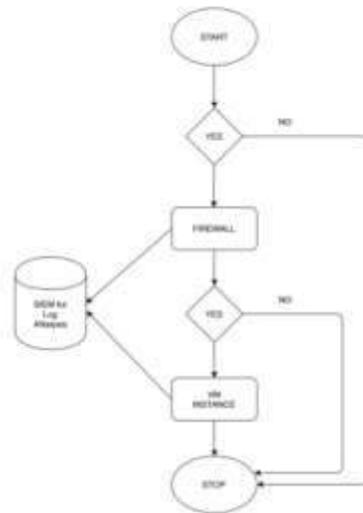
No matter how scaled the industry is and how many parties took the advantage of cloud services, but the cloud provider still cannot be trusted as a third

party. Cloud provider possesses a semi-trust nature because of which the traditional security models cannot be directly headed onto a cloud based security framework. Traditional Security usually leads to zero-day vulnerability.

## IV. SOLUTION

The proposed method will help cloud administrators to handle the cyber-threats flawlessly, check on network issues and to keep track on consumer requirements.

An analytical engine shall thus collect logs which can be very useful while at the time of analysis. These logs can be reviewed and further processed for auditing purpose.

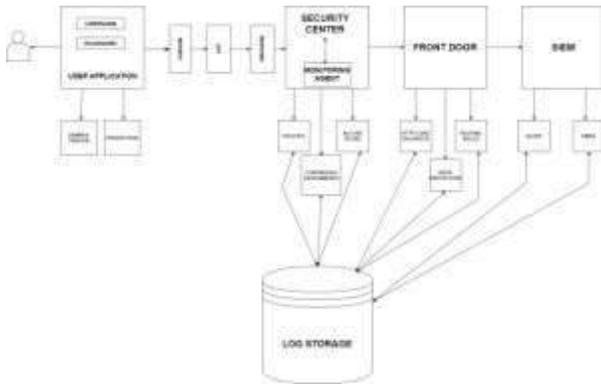
**Figure 2. Flow Chart**

In the above flowchart, initially users from internet tries to access the services that are provided by the VM instance that is hosted in private network using its public IP address. Later firewall filters the request whether the concern request is legitimate or not and allows the packet if it is authorized. If the data packet is trust worthy then access is provided to the services that are hosted in VM and all these logs are stored in SIEM for log analysis which can be used in future.



## V. IMPLEMENTATION

### 5.1 Working



**Figure 3. Model representation**

The above figure represents how each and every entity is dependent on each other and how data traffic is travelled throughout the architecture. When user tries to access the website firstly the request is being inspected by firewall and firewall checks for the rules that are inculcated in it that is both inbound and outbound rules that are configured in it. If request is free from all these vulnerabilities website will be available for access to the internet user. Now finally, all these request movement is logged using SIEM and further can be used to examine the logs in order to escalate any issue before it persists. Logs are collected from all the available devices in the network that are configured to SIEM and this tool stores logs in segregated manner that is like firewall logs are kept isolated from vm logs and vm logs are isolated from firewall logs etc. which results in easy maintenance and analysis of logs.

When we activate Security Center, a monitoring agent is deployed automatically into Azure virtual machines. For on-premises VMs, you manually deploy the agent. Security Center begins assessing the security state of all your VMs, networks, applications and data.

An analytical engine analyzes the data and machine learning synthesizes it. Security Center provides recommendations and threat alerts for protecting your workloads. We will know right away if there's been an attack or anomalous activity.

When we activate Azure Front door, it shall provide global HTTP load balancing for applications which are globally distributed among various regions. The way this works is that it caches the static content of an application which it returns when an user tries to access the application without the need to do a server trick. It uses AnyCast, which means it will try to reach

the destination using the fewest hops amongst the other routes available. So there can be multiple routes, but AFD(Azure Front Door) chooses the shortest and the fewest hops. User accesses applications, it goes to Azure Front Door Services and there it decides which region the request should be routed to.

This can be connected to SIEM and logs from both on and off premise can be made available in one centralized platform which reduces the workload on administrators by avoiding log management separately.

### 5.2 Software required

**Virtual machine:** A virtual machine is a virtual representation, or emulation, of a physical computer which provides the functionality similar to the physical computers i.e. they run operating system and applications on top of it and the fact that they are computer files, known as an images which runs on top of physical computers using the hypervisor, due to this the user has the liberty of running multiple operating systems on top of the main operating system without the need of buying additional physical resource. Just as the physical machine has two modes, however so must the virtual machine. Consequently, we must have:

- A virtual user mode
- A virtual kernel mode

Both of which run in a physical user mode.

The software inside a virtual machine cannot escape or tamper with the computer itself.

Hence virtual machine provides a computing environment which is ideal for testing and developing softwares, other operating systems including beta releases, creating operating system backups etc. It provides a faster booting process as well.

**Microsoft Azure Security Center:** Security Center provides security posture management for our cloud workloads. In Azure, it is important to understand that there are some sort of security within the workload that you put in azure on your side as a consumer. When it comes to security of the workload you put in, it is shared responsibility between customer and azure. These responsibilities include storage, virtual machines, application etc. So, the purpose of Azure security center is to monitor those security scenarios within the azure environment and then highlight any vulnerabilities identified. Thereby, this helps us to ensure that we are following best practices and fix common misconfigurations for Azure infrastructure as a service (IaaS) and platform as a service (PaaS) resources that may include:



- Failure to deploy system updates on virtual machines (VMs).
- Unnecessary exposure to the Internet through public-facing endpoints.
- Unencrypted data in transit or storage.

Security Center has the ability to both detect and help protect against threats. This tool alerts us against threats such as remote desktop protocol (RDP) brute-force attacks and SQL injections. And it provides actionable recommendations for mitigating these threats.

**Microsoft Azure Front Door:** Azure Front door service ensures application availability and maximize performance.

It provides the following features:

- Application and API acceleration.
- Global HTTP load balancing.
- SSL offload.
- WAF at the edge.

It additionally provides better performance and instant failover. Users experience better performance because it uses AnyCast and split DCP which provides lower latency thereby providing higher performance. Also it provides global HTTP load balancing enabling us to create applications that are globally distributed. One of the other features is that it provides SSL offload. This in turn takes that load off the web contents which do not have to encrypt or decrypt the request and that overhead is thus taken over by Azure Front Door. Finally it provides WAF( Web Application Firewall) for applications to provide security from DDoS attacks.

## VI. EXPERIMENT

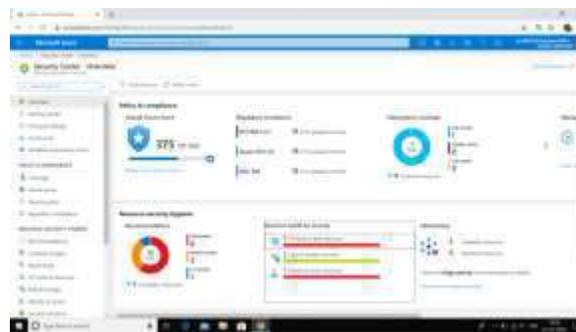
Things to configure:

- VMs for hosting webserver
- Azure Security Center for monitor those VMs.
- Azure Front Door for global HTTP load balancing and WAF.

## VII. RESULT ANALYSIS

### 1. Security Center

It shows the resource security hygiene of all the VMs such as which resources are under high security, medium security and low security and so on. It also detects networking issues with healthy and unhealthy resources, shows an overall Security Score etc.

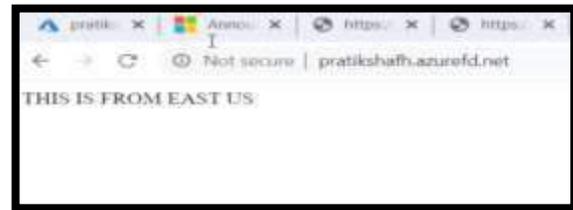


### 2. Front Door

Considering an application which is distributed across two different regions, say, Central US and East US, Azure Front Door shall perform global HTTP load balancing using AnyCast. When the User tries to access this application, it goes to Azure Front Door Service and there it decides which region the request should be routed to.

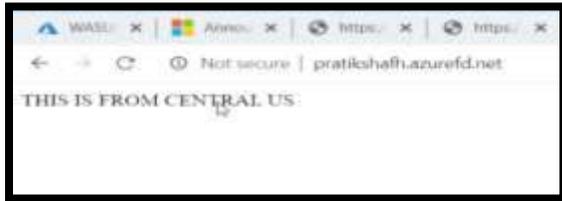
Scenario I:

If the user tries to access the application and the region East US contains less hops (this is done through AnyCast) , then it shall load the one in East US.



Scenario II:

If the user tries to access the application and the region Central US contains less hops (this is done through AnyCast) , then it shall load the one in Central US.



*Software SystemsCloudSec: A Security Monitoring Appliance for Virtual Machines in the IaaS Cloud Model, 2011*

Here Azure Front Door (AFD) has performed HTTP load balancing for applications which are globally distributed. When the application at one region has gone down or has more hop count, the application from the other region has been put into play thus by caching the static content of an application which it returns when an user tries to access the application without the need to do a server trick.

## VIII. CONCLUSION AND FUTURE ENHANCEMENT

We can implement a tool which should be able to show the virtual machines which do not have endpoint protection and then we should be able to install endpoint protection immediately with just a click away.

Apart from visibility, I would also like to add a feature where I can add Just in Time access configuration for VMs for maintenance purpose because it requires most protection from severe threats than some others. It will be done either through the graphical console or through powershell. It will basically work by selecting a management port that I want and selecting the maximum time that I want it to be open and then activate it. So after 20 minutes when we are down with our maintenance it will automatically lock those ports.

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3. *Electrical and Computer Engineering, Tennessee State University, Nashville, TN 37209, USA*
4. *China Internet Network Information Center, National Engineering Laboratory for Naming and Addressing, Beijing, China*
5. **Author:** Amani S. Ibrahim, James Hamlyn-Harris, John Grundy and Mohamed Almorsy  
*Centre for Computing and Engineering*



## ZOOMORPHIC SYMBOLS IN SOCIAL LIFE OF MOVAROUNNAKHR

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### ANNOTATION

*In the early years of Islam, despite the religious beliefs, zoomorphous patterns and ornaments were of particular aesthetic significance in the Aesthetic-Ideological Perspectives of the IX-XV centuries. The zoomorphic patterns applied in the art of ceramics have formed in the X-XV centuries in the influence of Islam in the Central Asia (VIII century) and have shown a versatile artistic talent of folk masters. In pottery, birds and wild animals are able to function as an independent element in artistic design, which means that they occupy the surface of the object. This event is aimed at bringing the picture under the product design to the foreground and ensuring the compositional integrity. Zoomorf tiles are often found in the bundles of the church walls. It is a description of the evolution of life, the development of the spiral, the connection of the universe, the end of life and the universe, the material ends and the spiritual enlightenment, the death and resurrection of the living being with the most advanced scientific views of their times.*

### DISCUSSION

In the 9th-10th centuries, art was an important part of social life and aesthetically-ideological views of the people of the time. In their creations, the naqqos used different patterns, such as plants, animals, and birds<sup>1</sup>. These embellishments also contain a picture of real-life events<sup>2</sup>.

In the early days of Islam, despite the religious beliefs, madrasahs, palaces, mausoleums, ceilings decorated with natural and living images<sup>3</sup>. Bird, animal, plant, geometric and other elements are replicated in a certain order. Symbolic patterns:

consists of patterns depicting pigeons, lions, fish, state emblems and others<sup>4</sup>.

S. Bulatov links the development of painting as symbols of images: "Following the requirements of Islam, descriptions of poultry, animals and humans have disappeared<sup>5</sup>." The Khumortegin mosque of the X century, found in Mauritius, is found in the hole found in Khorasan, with a horseshoe-shaped bird image<sup>6</sup>.

Located in Samarkand in the 9th and 10th centuries, the finds of pottery made of ceramic clay, such as a bird, a bird, a bird, a tulips, and a tulips, indicate the use of reliefs of relief. In Samarkand's mystic ceramic items (bowls, bowls, pans), various birds and birds (doves, rooster, tustovuk, horses, mountain goats, lions, fish), runs, flying, head. It is also possible to meet with a man, a hunter. This is evidenced by the fact that the V-VII century ceramic

<sup>1</sup> Олдин берилган мақола сноска қилинади қайси журналда чиққан бўлса. // [www.bulgari-istoria-2010.com](http://www.bulgari-istoria-2010.com)

<sup>2</sup> Абдуллаев Н. Санъат тарихи. 2 томлик. Тошкент. «Ўқитувчи» нашриёти. 1986. 178 б.

<sup>3</sup> Султонова Д.Н. Ўзбекистон меъморчилигида тасвирий ва бадиий воситаларни уйғунлаштириш услубияти. Архитектура доктори илмий даражасини олиш учун тақдим этилган диссертация. Тошкент. 2012. 12 б. // [referat.arxiv.uz](http://referat.arxiv.uz)

<sup>4</sup> Булатов С.С. Фуломова Н. Амалий санъат. Тошкент-2014. Б.11.

<sup>5</sup> Булатов С Ўзбек халқ амалий безак санъати.- Т.:Мехнат,1991.-142 бет. // <http://www.buxdu.uz/>

<sup>6</sup> Нозилов Д.А. Ўрта Осиё дизайни тарихидан. Т., 1998.



art was still in the 9th-10th centuries. It should be noted that in the V-VII centuries, birds were part of the decorative ornament, although the image of wild animals was realistic. In the X-XII centuries, birds in the Samarkand ceramics, the depictions of wild animals, began to function as an independent element in artistic decorations, ie, occupy the surface of the object. This event is aimed at bringing the picture under the product design to the foreground and ensuring the compositional integrity.

In the X-XII centuries, birds in the Samarkand ceramics, the depictions of wild animals, began to function as an independent element in artistic decorations, ie, occupy the surface of the object. This event is aimed at bringing the picture under the product design to the foreground and ensuring the compositional integrity<sup>7</sup>.

Ceremonies in the XIV-XVII centuries pottery are the leading places. Decorative hues in warm colors - instead of colors, the elegant patterns are brightly colored in white. Tachshines are also used as a circular ornament. Flower, fruit, bird, fish images are made on the tail's surface<sup>8</sup>.

It is known from the 15th century that masters of the mysterious ceramics had great experience in this regard. One of such masterpieces is sponsored by Alisher Navoi. He had a lot of experiments in the making of china in Herat, and he was able to make bottles of the Chinese porcelain, but the color of the container was not quite clear. Examples of pure Chinese china, made of hard rubber, are included in the luxury bottles. Inside images are riding horses and adolescents. However, symbolic themes from Chinese porcelain have also been widely used. For example, pomegranate, mushroom (everlasting life), peach, herbal teas, dragon and other images<sup>9</sup>.

Rishtan is the most brilliant ceramic center in the Fergana school. The Rishton Center for Ceremonial Art is a set of patterns that define the local artistic features - geometric and flower-designs, symbolic signs, fragments of objects, animal world and anthropomorphic subjects. One of the determining features of the Bukhara-Samarkand school and its decorative design is symbolic patterns of birds and flora. Especially used in Gijduvan ceramics center: "tail burgug", "muroolsalihid" (white bird), "rich bird", "flowerpot" and more. Describing the elements of the animal world demonstrates genesis of the patterns of this school in classical

Afrosiab ceramics of the IX-XI centuries. A few wallpapers on the well-known ceramics of Afrosiyob can be seen in the image of a white dove. Pigeon, duck, cock and horse portraits present in ceramics in this period almost real. The basis of the collection of applied art in Uzbekistan is composed of geometric and herbal compositions, symbolic characters, animal world and anthropomorphic themes and materials<sup>10</sup>.

Zoomorf tiles are often found in the bundles of the church walls<sup>11</sup>. For example, in the Surkhandaarya region, the White Ostah grandfather mausoleum (X-XI centuries) reflects all aspects of the life of the plant, animal world and human life in the center of the ornament. This is the "Life Lifecycle" symbol of the Life Power, which is associated with the floods and floods, the development of certain plants, the snakes and the horns. The white composition of the grandfather's grandfather is a masterpiece of the great composition of the emblems that incorporates the concepts of the structure of the world. It is a unique philosophical system with a developed scientific foundation. It is a description of the evolution of life, the development of the spiral, the connection of the universe, the end of life and the universe, the material ends and the spiritual enlightenment, the death and resurrection of the living being with the most advanced scientific views of their times. According to An-Nasafi, a religious scholar of the Ishmaelite who lived in Movarounnakh in the X century, God created the worldly intelligence from his own body, which in turn produced the Spirit of the World. Worldwide Pyh created seven worlds. After them, land, water, air, later plants and animals from them were created from them. These views are reflected in the symbolic composition of the White Dome grandfathers<sup>12</sup>.

The walls of the Termez Palace of the XII century have been partially preserved. The patterns make more complex lines, the scarf strips. There are also different patterns on the back of the handkerchiefs. On the southern wall of the palace, the animals are pictured in gilded style<sup>13</sup>. Samarkand's Sherdor and Nodir Devanbegi madrasah, Anau

<sup>10</sup> Алиева С. Ўзбекистон бадиий кулолчилик санъатида нақш эволюцияси Ўзбекистон Бадиий академияси санъатшунослик илмий тадқиқот институти Ўзбекистон санъатшунослиги// Илмий мақолалар тўплами. Т. 2003.

<sup>11</sup> Арапов А., Булатов М., Гуйчиева Ю. Забытый «язык» символов Ак-Астана-баба. Эхо истории. 2(14). 2002. С. 12-16.

<sup>12</sup> Арапов А., Булатов М., Гуйчиева Ю. Забытый «язык» символов Ак-Астана-баба. Эхо истории. 2(14). 2002. С. 14-16.

<sup>13</sup> Додо Нозилов. Ўрта Осиё дизайни тарихидан. Тошкент. "Ўзбекистон" 1998. 8 бет.

<sup>7</sup> Додо Нозилов. Ўрта Осиё дизайни тарихидан. Тошкент. "Ўзбекистон" 1998. 8 бет.

<sup>8</sup> Додо Нозилов. Ўрта Осиё дизайни тарихидан. Тошкент. "Ўзбекистон" 1998. 25-26 бетлар.

<sup>9</sup> Амир Темур жаҳон тарихида. Т. «Шарқ». 2001. 162 б.



mosque with a snake in Turkmenistan, Nodir Devonbegi in Bukhara, and Abdulazizkhon madrasahs have legendary and real animals - lion, lion, lion, and lion. Later, man refuses to paint the human and the living, and replacing them with embroidery and epigraphy. By the 16th century, any type of paintings depicting living things in Central Asia would be banned even in palaces of palaces<sup>14</sup>.

The rapid development of realistic ideas in the 15th century was reflected in the creation of works of various genres<sup>15</sup>. The madrasah of Ulugbek in the Registan Square, Sherdor madrasah, Tillakori Mosque-madrassah are a unique example of the creative genius of Samarkand architects, and the Sherdor madrasah<sup>16</sup>, "The symbol of Yalangtosh is a lion's laughing bellows under two sun rays looking at the madrasah ridge<sup>17</sup>. Pulat Zokhidov says about the ornament of Sherdor madrasah: "Samarkand scholar Abu Takhirhodja says in the 1930s in the 19th century, in the book Samaria, the interpretation of Sherdor madrasah is slightly different. It describes the content of the picture in the muslim astrology, linking the widespread symbols of the heavenly stars. According to Abu Tohirhoja, the sun-shaped shape of the sun was merged with the Sher-bang (starry family): the lion who wants to keep his ocean is turning the sun's rays. It is as if the light is turning away from the disaster.

<sup>14</sup>Султонова Д.Н. Ўзбекистон меъморчилигида тасвирий ва бадий воситаларни уйғунлаштириш услубияти. Архитектура доктори илмий даражасини олиш учун тақдим этилган диссертация. Тошкент. 2012. 17 б. // referat.arxiv.uz

<sup>15</sup> Эльмира Гюль. Темурийлар санъатида секуляризм..... 11-12 бетлар

<sup>16</sup> Булатов С. С., Маймаков Р. Темурийлар давридаги меъморий безакларнинг фалсафий ғоялари. Самарқанд шаҳрининг умумбашарий маданий тараққиёт тарихида туган ўрни. Самарқанд шаҳрининг 2750 йиллик юбилейига бағишланган халқаро илмий симпозиум материаллари. Тошкент - Самарқанд Ўзбекистон Республикаси Фанлар академияси. «Фан» нашриёти. 2007. 254-255 бетлар. // <http://www.bulgari-istoria-2010.com/>

<sup>17</sup> Самарқанд. Фафур Фулом номидаги адабиёт ва санъат нашриёти. 1986. 118-бет // "Translations of William Shakespeare's Tragedy "Hamlet" In Uzbek Literature Studies" , International Journal of Innovative Technology and Exploring Engineering, 2019

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# LOW COST APPLICATION MOTION HAND GESTURE CONTROLLER USING ADAPTABLE SENSORS

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## ABSTRACT

*Today we are surrounded by innovative technology and it is evolving day by day. Among these technologies, the hand gesture is one of such techniques that helps humans to interact with the computer and control its functions using some pre-defined gestures. Usage of hand gesture technology eliminates the use of hardware we use traditionally such as mouse and keyboard as our interaction with the computer is going to be contactless making it a more affordable approach. This technology uses ultrasonic sensors that work on the principle of ultrasonic waves produced by the gesture making the interaction process faster. This technology is thus time-saving, cost-effective, and efficient. The hardware requirement of this technology consists of Arduino UNO board, low in cost sensors, and a personal computer making it highly affordable. This technology not only brings advancement human-computer interaction but also speeds up the process, making it a productive approach to choose. [4]*

**KEYWORDS-** *Arduino, Ultrasonic Sensors, Leap motion, Gesture, Laptop, PySerial, PyAutoGUI, Python,*

## I. INTRODUCTION

In this world, between technologies like automation, artificial intelligence, data analytics, etc., the use of gesture-controlled computers and laptops is getting very famous. In this technique, one can control the functions of their computers or laptops by only a wave of their hand. This technology is called leap motion. It may sound simple and interesting, but the system used in this technology is not very affordable. The proposed model uses the power of Arduino and Python which not only makes it a cheaper and affordable approach to leap motion, but it is also easier to build.

The proposed model uses two ultrasonic sensors which help to locate the position of our hand. The equipment used in making this model is what makes it a highly affordable choice over the existing one. In this model, we can control a media player (VLC) based on the gesture type and the position of our hands. The media player used in this model is for the demonstration purpose, but once the working mechanism of the model is understood, one can follow the same procedure to control any desired function or operation of their system however they want by just modifying a few lines of code.

The advantage of using this approach over the existing one is the cost-effectiveness and the simplicity of the concept that this model offers. In this approach, the distance value between the sensors and the hands is collected, it is then

analyzed resulting in the action being performed. The actions that need to be performed are carried out with the help of Python PyAutoGUI library. The Arduino commands are then sent to the computer through a serial port (USB). These data are then analyzed using Python codes which are written in Python that is installed on the computer.

### A. Motivation

Automation of the existing technology is my motive in this project. This project is not only advanced but also cost-effective when compared to the traditional approach. With very low-cost IoT devices we can achieve this technique. If we will buy a laptop with leap motion technology or gesture deduction technology it will cost us a huge amount of money as these devices are very costly. So with this approach we can make our own gesture control laptop or system at a very low cost.

### B. Benefits of the projected system

- A number of functions of computers can be operated by using ultrasonic sensors.
- Using this technique, it is easy to interact with the computer and there are no language barriers
- This technique may be very useful for those who do not know the functionality of computer
- Using this technique, you can control your laptop without touching it physically



- We can control our laptop with a small distance and it can help to control laptops in conference room presentations.

## II. LITERATURE REVIEW

- In this paper the author had told about how gesture has become an important means of communication in the physical world interaction with machines become very important and how we can control some of our application with a gesture with the help of IoT devices such as Arduino UNO and ultrasonic sensors[1]
- This paper states that problem cause by keyboard and mouse sometimes can be helpful with this gesture-based application as it is very easy to use. It uses very simple gesture to control the video to the people don't have to learn machine-like skills only the people have to remember the type of gesture to control the application[2]
- In this paper the author proposed that lots of techniques are there to interact with humans and machines and one of them is the hand gesture technique in this technique hand gesture is used to control the machine instead of mouse and keyboard. It is an effective and faster technique. To determine the user hand an ultrasonic sensor is used. By using this technique there is no need for a physical connection between the humans and the machine.[3]
- In this paper the author states that gesture is an expression of emotion and physical behavior. Gesture can be used as a tool that can be used to interact and communicate between the machine and the computer. The hand gesture is different from the traditional hardware-based method gesture that has been proposed has different types of concepts like SVM, neural network, HMM, Arduino coding, etc.[4]

Here we are able to see that there are two Ultrasonic Sensors(HC-SR04) are connected to the Arduino UNO R3 board is connected to the laptop through USB cable. The ultrasonic sensors accommodate the transmitter and receiver. The transmitter emits ultrasonic waves. The waves get better when comes in reality with any obstacle (example hand) and therefore the sensors catch it. supported the gap of the article is set. Then the information is received by the Arduino and check for the particular keyword within the code in keeping with the gap that's to be the python code. Python catches the keyword and creates a virtual keystroke of hotkeys. The ultrasonic sensors measure the gap between the hand and therefore the sensors and supported the gap it performs an action like volume increase or decrease and the same thing happens with play or pause of the video.

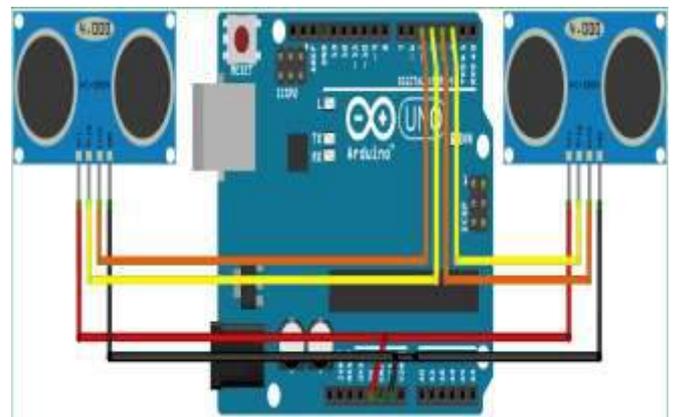


Fig 1.1 circuit diagram[12]

As we can see in Fig 1.1 there are two ultrasonic sensors that is connected to Arduino UNO board and the board is connected with the laptop with the help of USB cable. The VCC pins of both the sensors are connected with the 5V output port in the Arduino board. The grounding of the sensors is attached to the GND. The echo and trigger of the sensors are connected with the Arduino board according to the code written. The ultrasonic sensors emit ultrasonic waves from the transmitter present on it the waves it. The waves hit the object that is present in front of the sensors and received by the receiver present inside the sensors. Based on the intensity the distance of the object is going to be determined. Then this data is sent to the Arduino and looks for the keyword that is present in the code then it is sent to the python code that is running in the background. Python takes the keyword and generates the hotkeys for the VLC media player. This process will keep on continuing to control the media player either audio or video file. The ultrasonic sensors read the gesture produced by the hand and the distance from the hand to the sensors. If we will bring our right hand near to the sensors the volume will decrease and if we will take our hand back from the sensors, then the sound will decrease, the same action will be done with the left sensors it will perform forward and backward of the video.

## III. WORKING

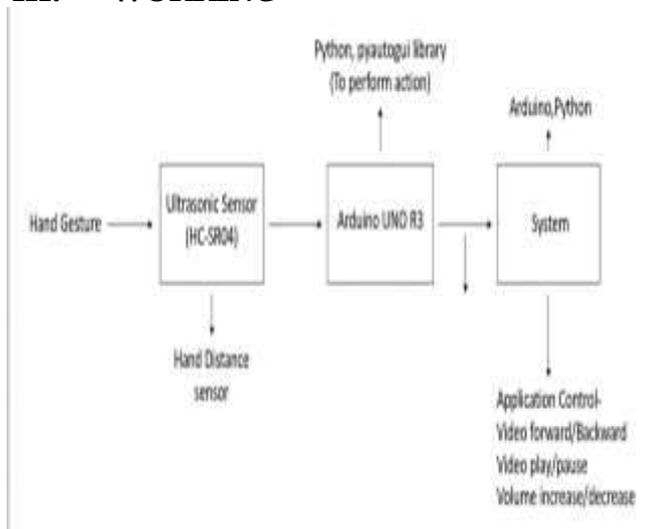


Figure 1.0 Architecture



**A. HARDWARE USED**

1. Arduino – It is an open-source electronics platform based on easy to use hardware and software. It is a microcontroller you can do programming on it's as it supports Arduino programming language and will be able to perform some task with the help of Arduino as shown in figure 2.0 [1]



**Fig 2.0 Arduino UNO**

2. Ultrasonic sensors(HC-SR04)- it is a type of sensors that are used to deduct the distance of an object using ultrasonic waves. It consists of transistors and receivers the transistors emit the ultrasonic waves and after hitting the object it will be cached back by the receiver present in the sensors. Ultrasonic sensor is shown in figure 2.1 [2]



**Fig 2.1 Ultrasonic Sensor**

**B. SOFTWARE USED**

1. Arduino IDE - The Arduino Integrated Development Environment (IDE) is an application that is platform-independent and is written using C and C++. This IDE is used to write programs for Arduino compatible boards.
2. Python IDLE – A Python IDE (or Integrated Development Environment) is a program dedicated to software development that uses Python codes to operate.
3. PySerial library – It is a library used for connecting serial ports with various devices such. It is also used to connect to remote serial ports via RFC 2217.
4. PyAutoGUI library – PyAutoGUI is a library used to control the hardware such as mouse and keyboard. We are using it to perform actions.

**Table NO: 1**

Hand gesture	Output made by system	
	video	audio
Right hand push in	Volume down	Volume down
Right hand pull out	Volume up	Volume up
Left hand push in	forward	forward
Left hand pull out	backward	backward
Both hand straight	Play	Play
Both hand straight	pause	pause

**IV. IMPLEMENTATION**



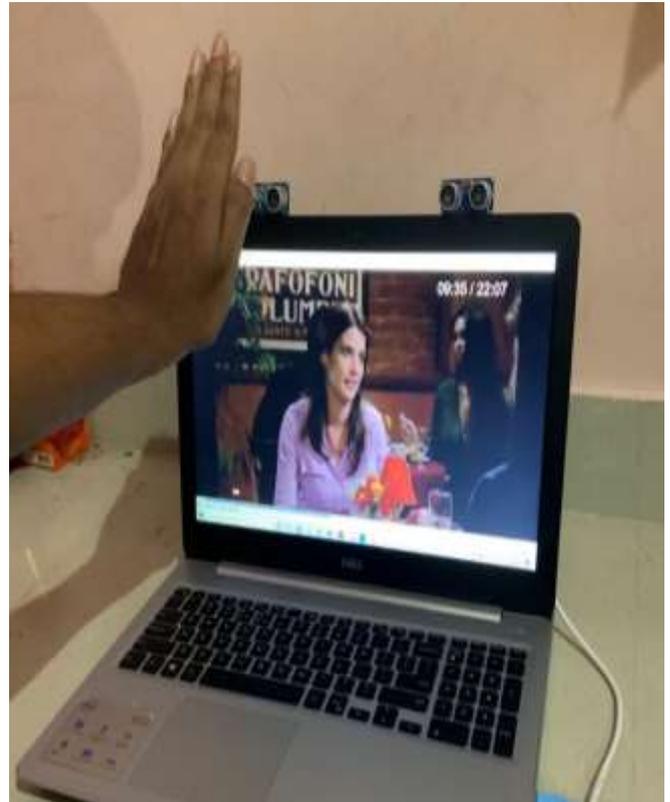
**Fig 3.1 python GUI output screen**



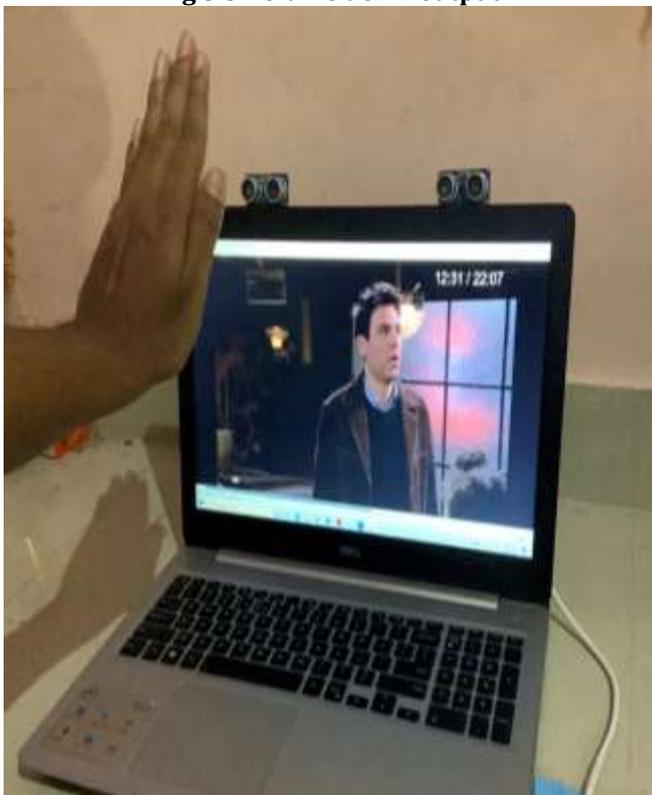
**Fig 3.2 Volume up output**



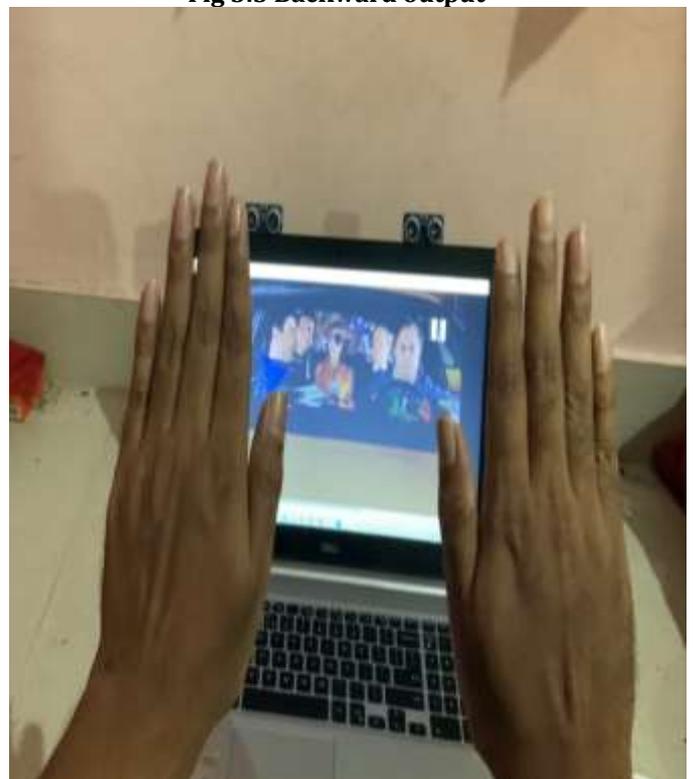
**Fig 3.3** Volume down output



**Fig 3.5** Backward output



**Fig 3.4** Forward output



**Fig 3.6** Play output

**Fig 3.7 Pause output**

## V. CONCLUSION AND FUTURE DEVELOPMENT

### A. CONCLUSION

The gesture control system uses two ultrasonic sensors, Arduino UNO, and a system to carry the operation of video player controller. Its main motive is to reduce the effort of interacting with the system with the input devices and using simple hand gestures instead of that. It increases interactivity with computers. This type of technology can be used in giving presentations, classrooms for easier and interactive learning, gaming, etc. with this kind of techniques, we can also make other gesture reorganization system like opening taps without touching it only waving hand in front of it to open it, using hand wash without touching it by hand gesture and many more.

### B. FUTURE DEVELOPMENT

1. This project can be further implemented on many other gesture controls machines
2. We can control many applications with this by just changing some of the codes
3. We can integrate this type of module for many applications like browsers, designing and editing applications, gaming, etc.
4. The knowledge is ever-expanding and so are the problems that mankind strives to solve.

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## ESTIMATION OF ONDANSETRON HYDROCHLORIDE BY RP-HPLC

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### ABSTRACT

A RP-HPLC method was developed for the estimation of Ondansetron Hydrochloride in Bulk drug using high performance liquid chromatography. Ondansetron was a serotonin 5-HT<sub>3</sub> receptor antagonist used mainly as an antiemetic drug to treat nausea and vomiting after cancer chemotherapy. The separation was achieved by Promosil C-18 (250 mm x 4.6 mm x 10 μm) column because it allows higher separation and Acetonitrile: Methanol (50:50) as mobile phase with a flow rate of 1.2 ml/min. The detection was carried out at 216 nm. The retention time of drug was found 2.64 min. The developed method was validated. The proposed method shall prove equally effective to analyze Ondansetron Hydrochloride in the corresponding drug sample and may prove to be of great importance in pharmaceutical analysis.

**KEYWORDS:** Ondansetron, Acetonitrile, Antiemetic, Methanol.

### INTRODUCTION

Ondansetron<sup>(1-2)</sup> was a serotonin 5-HT<sub>3</sub> receptor antagonist used mainly as an antiemetic drug to treat nausea and vomiting after cancer chemotherapy by reduces the activity of Vegas nerve which deactivates the vomiting centre in medulla oblongata and also blocks serotonin receptor in the chemoreceptor trigger zone.<sup>(3-4)</sup> It was chemically 4H-Carbazol-4-one, 1, 2, 3, 9-tetrahydro-9-methyl-3-(2-methyl-1H-imidazol-1-yl)methylmonohydrochloride,(±)-,dihydrate.(±)-2,3-Di hydro-

9-methyl-3-(2-methylimidazol-1-yl)methylcarbazol-4(1H) onemonohydrochloride dihydrate. After through literature survey, the present method was developed as per ICH Guidelines<sup>(5-7)</sup>. In the present work, an attempt was made to provide a newer, simple, accurate and low cost HPLC method based on solubility for the determination of Ondansetron Hydrochloride as an active pharmaceutical ingredient as shown in Fig. 1.

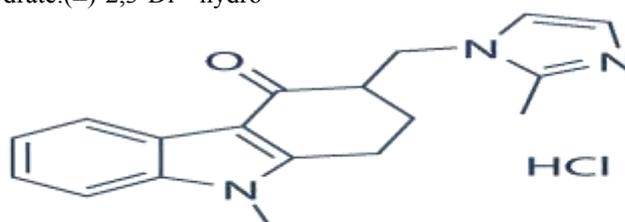


Fig. 1: Structure of Ondansetron Hydrochloride.

### MATERIAL AND INSTRUMENT

HPLC method was developed and validated on Younglin HPLC model (Acme-9000. Double beam UV-Visible Spectrophotometer of company-Systronic, Model (2101) with a 1 cm matching quartz

cell was used. Ondansetron Hydrochloride was obtained from different companies as gift samples for research and was authenticated by Symed Lab. Ondansetron HCl Tablet (Zofron 4mg) of Cipla company was used. Methanol and



Acetonitrile were of Merck Company. Potassium di hydrogen phosphate was of Rankem company.

**STANDARD SOLUTION**

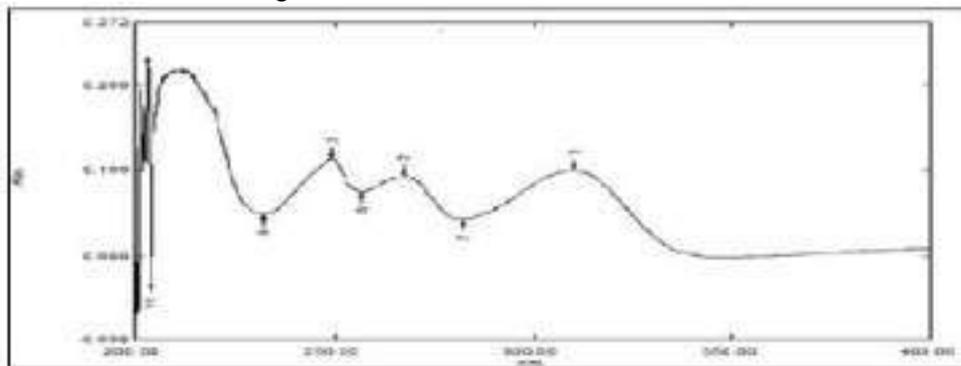
**PREPARATION**

Dissolved 9 mg of Ondansetron Hydrochloride working standard into 100 ml volumetric flask and volume was made up to the mark with mobile phase and dilute quantitatively with mobile phase to obtain a solution having

concentration of about 90 µg/ml and Filtered through 0.45µ.

**ABSORPTION MAXIMUM (λ<sub>Max</sub>)**

Selection of Ondansetron Hydrochloride (10µg/ml) was prepared in mobile phase. The max was determined on Shimadzu UV – visible spectrophotometer (Model UV – 1800 PC) in the range of 200-400nm and λ<sub>Max</sub> was found to be 216nm as shown in Fig. 2.



**Fig. 2: UV – Absorption Spectra of Ondansetron Hydrochloride.**

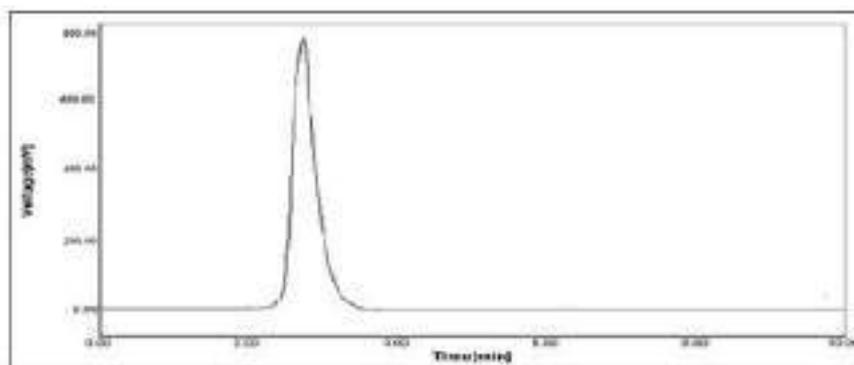
**METHOD OPTIMISATION**

Optimum condition of mobile phases was investigated in the development of an HPLC method suitable for analysis of Ondansetron hydrochloride in the bulk drug. The same solvent mixture was used for

extraction of the drug from the formulation containing excipients as shown in Fig. 3 and Table 1.

**Table 1: HPLC Chromatographic Conditions of Ondansetron Hydrochloride.**

S. No.	Parameters	Description
1.	Instrument	A HPLC instrument (Younglin series) with Model Acme-9000.
2.	Column	Hypersil C <sub>18</sub> column (216 mm, 4.6 mm, 5 µm).
3.	Mobile Phase	Acetonitrile: Methanol (50:50).
4.	Flow Rate	1.2 ml/min.
5.	Detection wavelength	216 nm.
6.	Injection Volume	10µL.
7.	Auto Sampler Temperature	5°C.
8.	Run Time	10min.



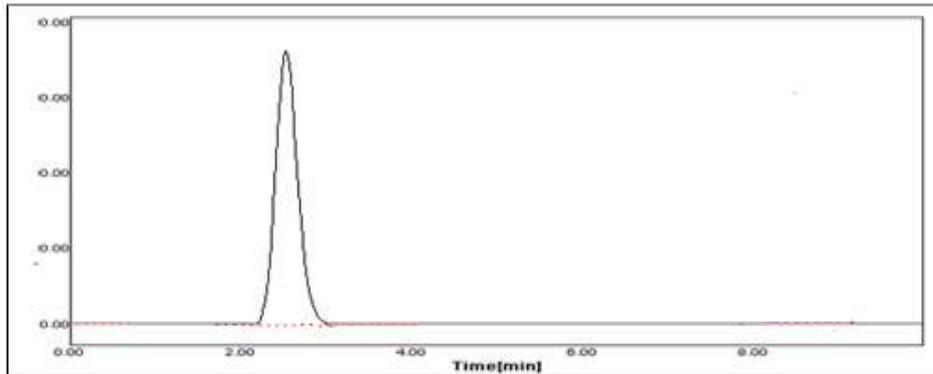
**Fig. 3: Optimised Chromatogram of Ondansetron Hydrochloride.**



**ASSAY PROCEDURE**

Twenty tablets were weighed and average weight was determined. It was finely powdered and mixed thoroughly. Accurately weight tablet power equivalent to 9 mg of Ondansetron hydrochloride and was transferred to dry stopped 100 ml volumetric

flask and made up with mobile phase and filtered through Whatmann filter paper. Further dilution was done with mobile phase to get concentration of 90 µg/ml. The chromatogram was recorded and response i. e peak areas of major peaks were measured as shown in Fig. 4 and Table 2.



**Fig. 4: Assay Chromatogram obtained by using marketed preparation.**

**Table 2: Analysis of Marketed Tablet Formulation**

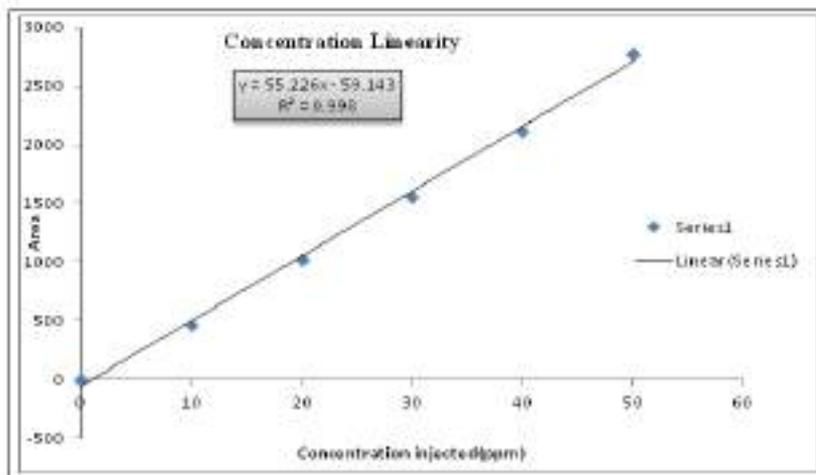
S.No.	Weight Taken (mg)	Standard Peak Area	Sample Peak Area	Amount Estimated (mg)	Labeled Claim (%)
1.	495	48807	48897	4.21	100.18
2.	495	48807	48857	4.03	100.10
3.	495	48807	48604	3.98	99.58
4.	495	48807	48402	4.11	99.17
5.	495	48807	48381	4.10	99.13
<b>Mean</b>					99.63
<b>S.D</b>					0.496
<b>%R.S.D</b>					0.50

**METHOD VALIDATION**

**Linearity**

Accurately weighed quantity of 10 mg Ondansetron hydrochloride was transferred to 10 ml volumetric flask and from the standard stock solution 1,2,3,4 & 5 ml was transferred to 100 ml volumetric

flask and the volume was made up to the mark with mobile phase to obtain concentration 10, 20, 30,40 & 50 µg/ml. Then dilution was injected and peak area was recorded. The graph concentration of drug Vs peak area depicted in Fig. 5 and Table 3.



**Fig. 5: Standard curve of Ondansetron Hydrochloride.**

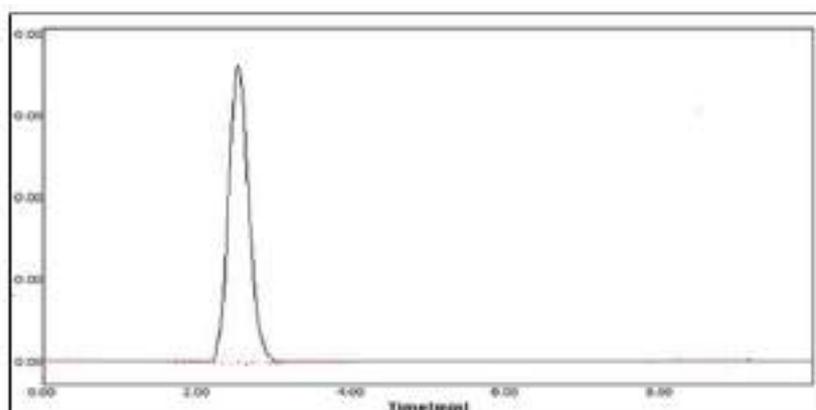
**Table 3: Linearity Results of Ondansetron Hydrochloride.**

S.No.	Concentration (µg/ml)	Peak Area
1.	10	465
2.	20	1018
3.	30	1561
4.	40	2122
5.	50	2763

### System Suitability

Accurately weighed quantity of 9 mg of Ondansetron Hydrochloride was transferred to 100 ml volumetric flask and dissolved in mobile phase and volume was made up to the mark with mobile phase to obtain solution of 90 µg/ml. A 20µl standard

solution was injected separately and their system suitability parameters were recorded. The tests were performed by collecting from five replicate injection of standard drug solution as shown in Fig. 6 and Table 4.



**Fig. 6: System Suitability Chromatogram of Ondansetron Hydrochloride.**

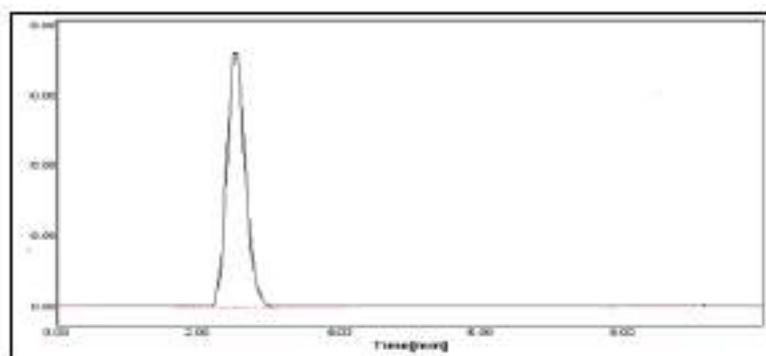
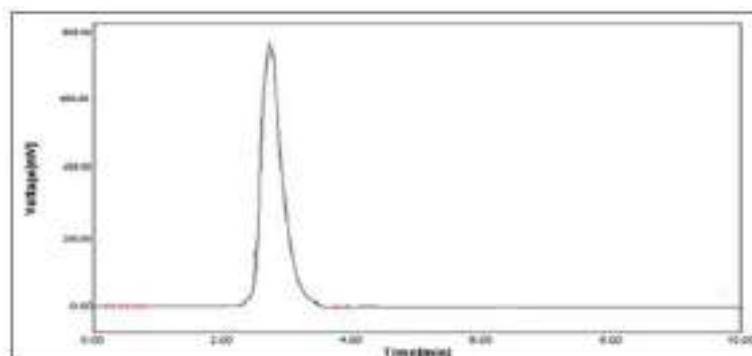
**Table 4: System Suitability Results of Ondansetron Hydrochloride.**

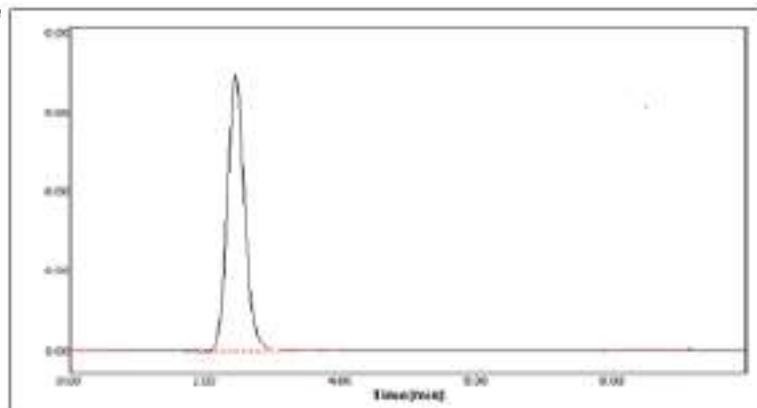
S.No.	Rt (Min)	Peak area	Tailing Factor	Resolution	Theoretical Plates	Asymmetry Factor
1.	2.64	48901	0.81	10.2	43264	1.25
2.	2.64	48904	0.81	10.2	43270	1.25
3.	2.62	49402	0.80	10.3	43560	1.29
4.	2.64	48504	0.80	10.3	43106	1.23
5.	2.63	47910	0.79	10.1	42897	1.20
MEAN	2.634	48772.8	0.802	10.22	43219.4	1.234
S.D	0.0089	629.77	0.008	0.083	243.6	0.02
%RSD	0.338	1.29	1.0	0.81	0.56	1.62

**Accuracy**

Recovery of the method was evaluated by standard addition method in which appropriate portion of stock solutions of Ondansetron hydrochloride were spiked into blank placebo matrix to produce concentrations of 80, 100 and 120% of theoretical concentration. The mean recovery of

spiked samples obtained was in range of 99.96 to 100.36 reveals no interference of excipients. The total amount of drug estimated using formula given below and results of recovery studies are shown in Fig. 7 – 9 and Table 5.

**Fig. 7: Accuracy at 80 % Chromatogram of Ondansetron Hydrochloride.****Fig. 8: Accuracy at 100 % Chromatogram of Ondansetron Hydrochloride.**

**Fig. 9: Accuracy at 120 % Chromatogram of Ondansetron Hydrochloride.****Table 5: Results of Accuracy studies of Ondansetron Hydrochloride**

Amount Added (%)	Total amount Added (mg)	Amount Recovered (mg)	%Recovery $\pm$ SD	%RSD
80	7.2	7.12	99.96 $\pm$ 0.30	0.31
	7.2	7.13		
	7.2	7.11		
100	8.0	7.81	99.77 $\pm$ 0.41	0.40
	8.0	7.80		
	8.0	7.82		
120	8.8	8.92	100.36 $\pm$ 0.52	0.51
	8.8	8.90		
	8.8	8.94		

SD: standard deviation, % RSD: Relative standard deviation

**Limit of Detection and Limit of Quantitation**

LOD and LOQ were estimated from single to noise ratio using  $3.3 \sigma/s$  and  $10 \sigma/s$  respectively. LOD and LOQ were found to 1.7 and 5.26  $\mu\text{g/ml}$ .

**CONCLUSION**

The developed method was validated for various parameters and found to be reliable and accurate. The detection was carried out at 216 nm. The retention time of drug was found 2.64 min. The proposed method shall prove effective to analyze Ondansetron Hydrochloride in the corresponding drug sample.

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# A DETAILED EXPLANATION AND SIMULATION OF CONVENTIONAL DROOP CONTROLLER FOR PARALLEL INVERTERS

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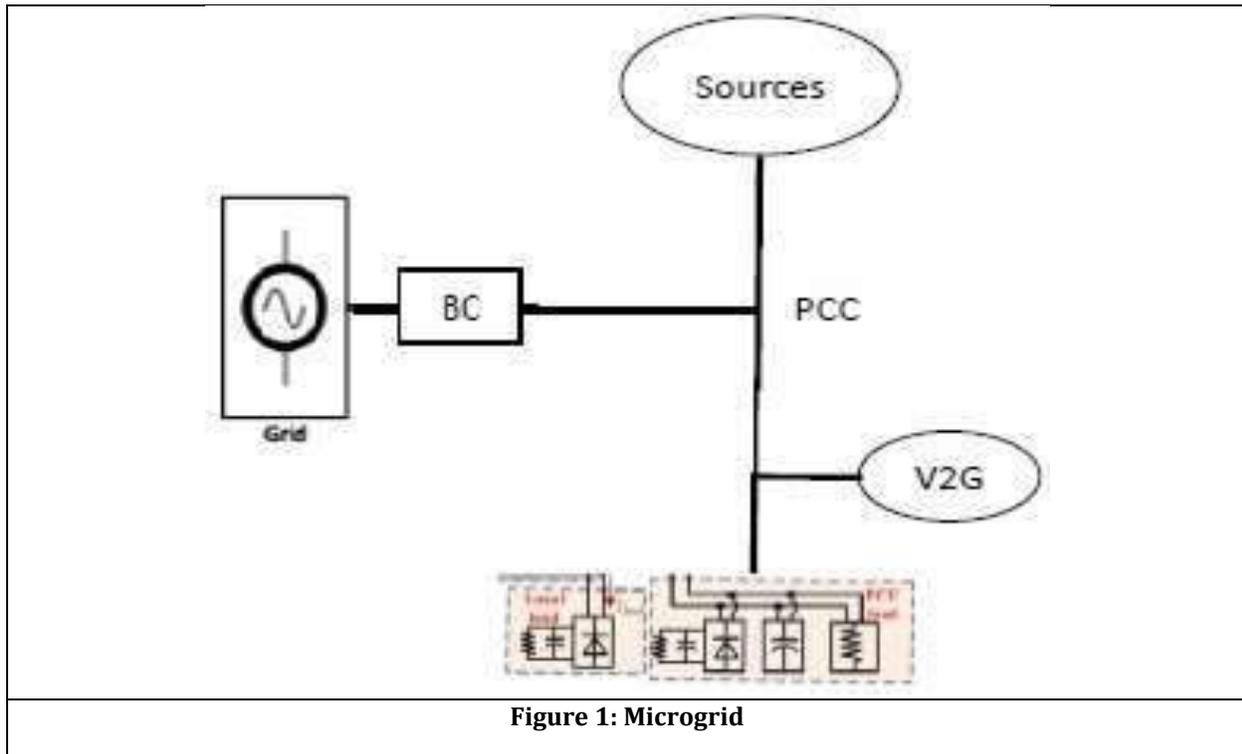
Article DOI: <https://doi.org/10.36713/epra4403>

## I. INTRODUCTION

By increasing the dependence of modern life on Electric equipment and computer systems, power quality and reliability are two essential needs. This need for critical loads such as hospitals, -Telecommunication systems, and information centers is felt more and more. On the other hand, the production of power at the centralized power plants and its transmission face many problems, such as environmental pollution, occupation a lot of ground for transmission lines, and voltage drop Which causes the huge cost of electricity to be consumed. According to these facts, in recent years the necessity for considering other technologies for generating electricity which need less investment with better quality and reliability has been quite tangible. Recent Developments in Small-scale power generation technologies and utilization Renewable Energies such as photo-voltaic as well as innovation-In power electronics, it causes a high tendency among power companies to explore of Distributed Generation Recourses (DGR) in the distribution system and Near to consumers [1-9].

For continuous feeding of sensitive loads and use other benefits of DGR, a concept that has been called the Microgrid has emerged. Figure (1) shows a defined microgrid. Microgrid components Include DGR,

sensitive loads, and energy storage devices, and it works in two modes: interconnecting to the grid and independent mode (islanding). A lot of research such as planning, optimization, power quality improvement, have been conducted with this new concept. Meanwhile, other research such as investment methods, cost, forecasting, political aspects, and so on should be taken more seriously for microgrids. some software is using for microgrids simulation such as MATLAB, PSCAD, and LTSpice [10-13]. Controlling Microgrid is the most important challenge for getting the most advantages of them. The main purpose of control in a Microgrid is preserving two major parameters voltage and frequency of the Microgrid in the allowed range and supplying the required power for loads. Other goals such as power quality, reliability, or proper sharing of power may also be other attractive goals. For better control, Distributed Generations connect to Microgrid with inverter interfaces and therefore the main purpose of control is finding the applicable strategy for controlling inverters. Several methods for controlling interface inverters have been proposed which Master/Slave method, Droop control, and difference with the average amount of power can be named here.



**Figure 1: Microgrid**

In this project, a control plan based on the droop control technique for islanding mode is proposed which will be able to meet all the control objects. The main advantage of this suggested method is that this method does not need a Master unit for controlling voltage and switching between inverter controllers in isolated mode. Because only one controller for all operating modes is used. The conventional droop strategy has been explained in detail and formulated. The Simulation results are taken from MATLAB/SIMULINK to show the capability of the control strategy.

## II. MICROGRID SYSTEM

Figure (1) illustrates the arrangement of a micro-grid. It includes three Distributed Generation units with inverter interfaces, a storage unit, and a sensitive load. A microgrid has been connected to the distribution network through an isolator breaker. During normal operation, the Microgrid is a part of the Distribution network. In this condition, the distribution network maintains the bus voltage and frequency of the system. Therefore, in this mode, the goal of controlling the inverter is to generate a constant value of Active and Reactive power that is named PQ control. When a fault occurs in the distribution network, the breaker in point

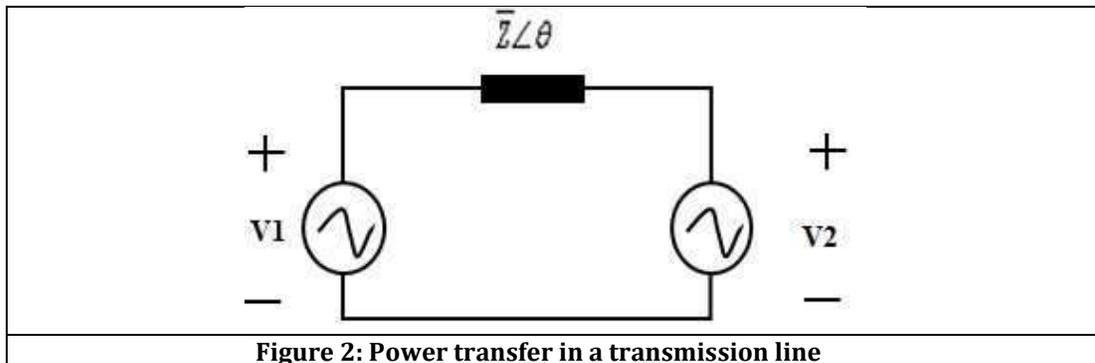
coupling has been disconnected and the Microgrid operates independently and thus ensures increasing reliability in the system. In this mode, the inverter controller must work in such a way that the load voltage and frequency of the microgrid are in one acceptable scale around nominal values and needed power for demand load should be provided [1-4].

In independent mode, another important issue is the proper allocation of the required power to the micro-grid loads between generation units. In other words, the purpose of the control in the DGs is to share the shift of load variation along with maintaining voltage and frequency. Based on conducted research, the droop controller is one of the most effective methods for synchronization of power generation among several generators because they are capable to set up power output for system stability quickly. Besides, the droop does not require a communication system between Distributed Generation units. A transmission line with negligible resistance, as in figure (2), active and reactive power injection equations can be written as follows:



$P = \frac{V_1 V_2}{X} \sin \alpha$	(1)
$Q = \frac{V_1}{X} - \frac{V_1 V_2}{X} \cos \alpha$	(2)

That is here, P is active injection power, Q reactive injection power to the line,  $\delta$  power angle,  $V_1$ , and  $V_2$  are voltages on both sides of the line and, X is the transmission line's reactance.



For the small value of  $\delta$ ,  $\sin \delta = \delta$  and  $\cos \delta = 1$ . So, the above equalities can be reworked in terms of power and voltage angle:

$\delta = \frac{XP}{V_1 V_2}$	(3)
$V_1 - V_2 = \frac{XQ}{V_1}$	(4)

equations (3) and (4) indicate that the  $\delta$  alters directly with the active power while the voltage variation differs on reactive power. In other words, controlling the active power angle will be regulated, and similarly, with reactive power regulation, the voltage also can be controlled. Since the generation units do not accept the primary period quantities of new components are

independent, in droop method, each generation unit uses frequency as an alternative of power angle to regulate transitional active power. Frequency management vigorously controls the  $\delta$  and similarly, the Reactive power regulation can also control the voltage. These results lead to droop control equations for the frequency and voltage.

$f = f_0 - k_{pf} (P - p_0)$	(5)
$V_1 = V_0 - k_{vf} (Q - Q_0)$	(6)

Where  $K_{qv}$  the and  $k_{pf}$  the droop control parameters and both are positive.  $F_0$  and  $V_0$  nominal frequency and voltage correspondingly,  $P_0$  and  $Q_0$  are default setting

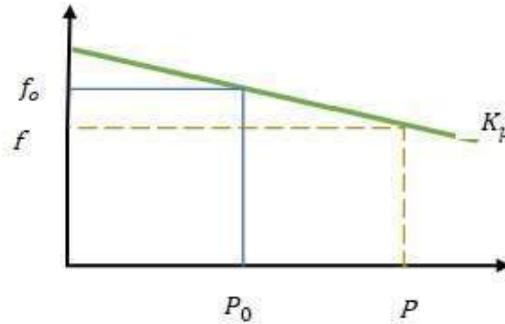
goals for active and active power. Equation (5) can also be used in terms of power is:



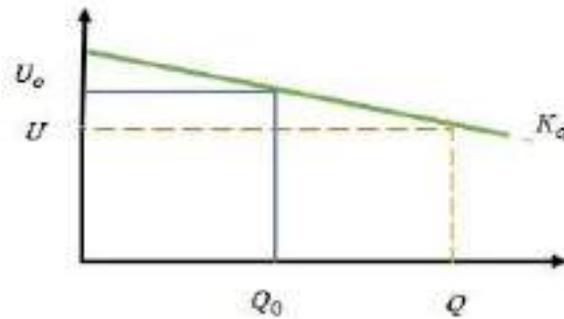
$\delta = \delta_0 - k_{p\delta} (P - p_0)$	(7)
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That is here  $\delta_0$ , Base power angle,  $K_{p\delta}$  is the droop control parameter. The results obtained from the droop method represent the voltage and frequency (or

power angle) that must be provided by the inverter to be produced. The characteristics diagram of droop control is shown in Figures (3) and (4).



**Figure (3): Characteristic Frequency-Active Power**



**Figure (4): Voltage-reactive power droop characteristic**

**III. CONTROLLING DG'S WITH INVERTER INTERFACE IN MICROGRID**

Fig. (5) Shows the proposed control plan diagram for an inverter. As mentioned earlier, the main goal of the inverter controller here is to sustain the voltage and frequency of the Microgrid and especially sensitive loads within the allowable limits. The sharing of load variation between DG's in microgrid It is also a secondary objective. These goals are considered in both modes of the microgrid, namely connected mode to the network and islanding. The proposed control method in this project has three sections which are composed of: voltage and frequency control, active and reactive power control and signal generation sector for inverter gate. The controller is active in both operation modes. Therefore, unlike other methods, no need to have a

master unit or central controller for having a connection between generation units. There is also no need to switch and change the controller at the time of islanding [5-7].

**VOLTAGE AND FREQUENCY CONTROL**

To monitor the load voltage and frequency of the microgrid, droop control with Frequency-active power and reactive power-voltage is used. Therefore, it is assumed that the inductance in transmission lines is, much larger than their resistance. In this part, inputs are frequency and voltage in inverter output, and measured and output powers are the default for DG. The characteristics of the F and V droop are applied to produce the active output power of each unit:

$P_{ref} = P_0 - k_{fp} (f_0 - f)$	(7)
$Q_{ref} = Q_0 - k_{vq} (V_0 - V)$	(8)

Power in each DG.  $V$  and  $F$  are frequency and voltage effective values in output bus  $K_{pf}$  and  $K_{qv}$  are droop coefficients. Coefficient and  $P_{ref}$  and  $Q_{ref}$  are modified reference active and reactive values. In the

interconnected approach, the bus voltage and frequency of the system will be saved by the nominal values of the distribution system. Therefore, generation units generate the default power values.

$f = f_0 \Rightarrow P_{ref} = P_0$	(9)
$v = v_0 \Rightarrow Q_{ref} = Q_0$	(10)

And voltage determined reference active and reactive powers.

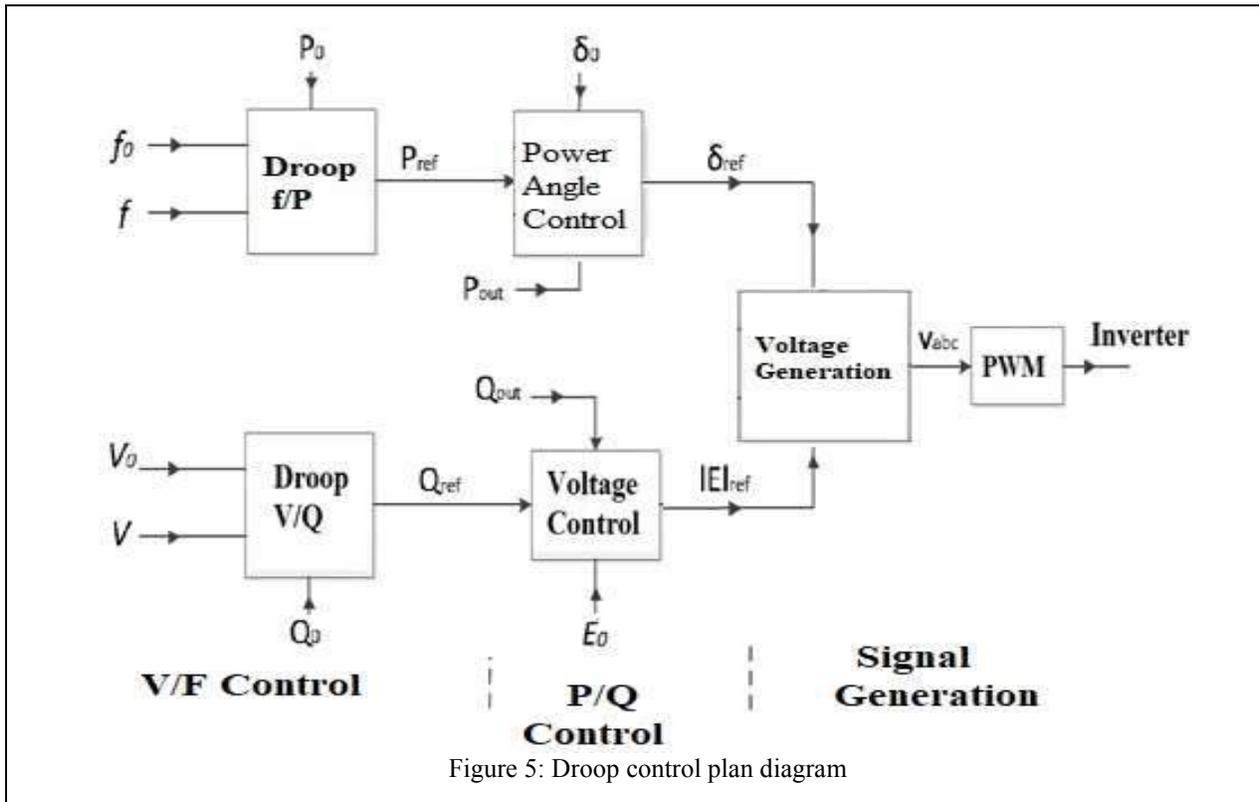


Figure 5: Droop control plan diagram

#### IV. ACTIVE AND REACTIVE POWER CONTROL

The purpose of this part of PQ control is to generate desire output powers. This part of control just

uses local measured powers. Fig (15) shows a simple model of Micro generator. Droop equations for this generator can be written as below:

$\delta_{ref} = \delta_0 - k_{p\delta} (P_{ref} - P_{out})$	(11)
$E_{ref} = E_0 - k_{qE} (Q_{ref} - Q_{out})$	(12)

$P_{ref}$  and  $Q_{ref}$  are reference power values which were calculated in the previous part.  $P_{out}$  and  $Q_{out}$  have measured the output power value of the inverter.  $K_{p\delta}$  and  $k_{qE}$  are droop coefficients for voltage and power angle.  $\delta_0$  and  $E_0$  are default values of power angle and

magnitude. These values are chosen which in interconnected mode active and reactive power from the inverter are close to default values ( $Q_0$  and  $P_0$ ). With determining  $E$  and  $\delta$  can control active and reactive output.

**V. GENERATION OF THREE-PHASE REFERENCE VOLTAGES**

Generating three-phase reference voltage is taken place with  $E_{ref}$  and  $\delta_{ref}$  with the below equations.

$$\begin{aligned} V_a &= E_{ref} \sin(\omega t + \delta_{ref}) \\ V_b &= E_{ref} \sin(\omega t + \delta_{ref} + 120^\circ) \\ V_c &= E_{ref} \sin(\omega t + \delta_{ref} - 120^\circ) \end{aligned} \quad (13)$$

And three-phase reference voltages will be transferred to gate signals by PWM [7-9].

**VI. SIMULATION RESULTS**

All characteristics of the proposed system are given in Table (1). Figure (3) shows the full design of the system with two parallel-inverters for both the conventional and the UDE-base droop. While Figure (4) shows the full design of the conventional droop control system in the Simulink. As mentioned before the poor

transient performance, reducing voltage and reactive power are some problems which the conventional droop cannot face. The simulation results are presented in Figure (5) and (6). In figure (5) poor performance of controller during load changing (between 1-2 (s)) is shown. It takes a long time for the controller to beat that oscillation of active and reactive powers.

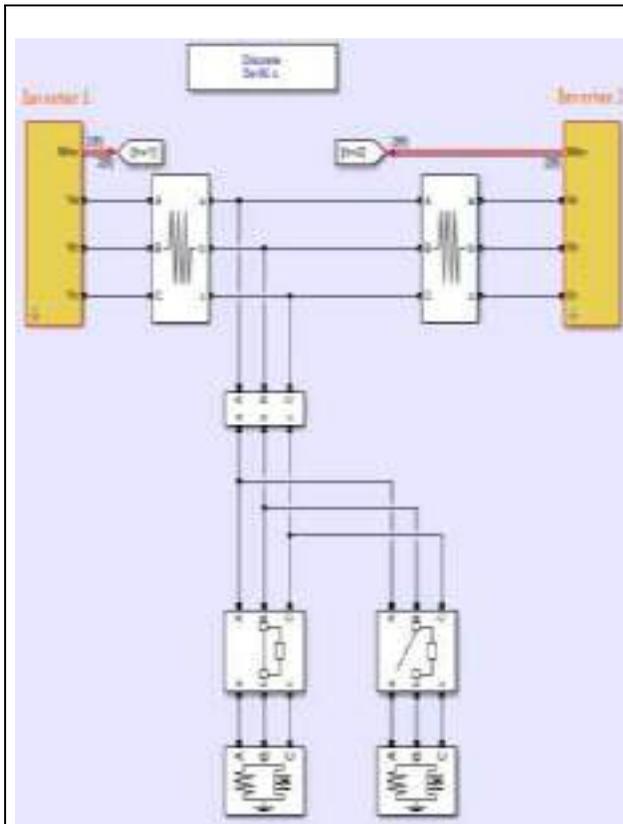
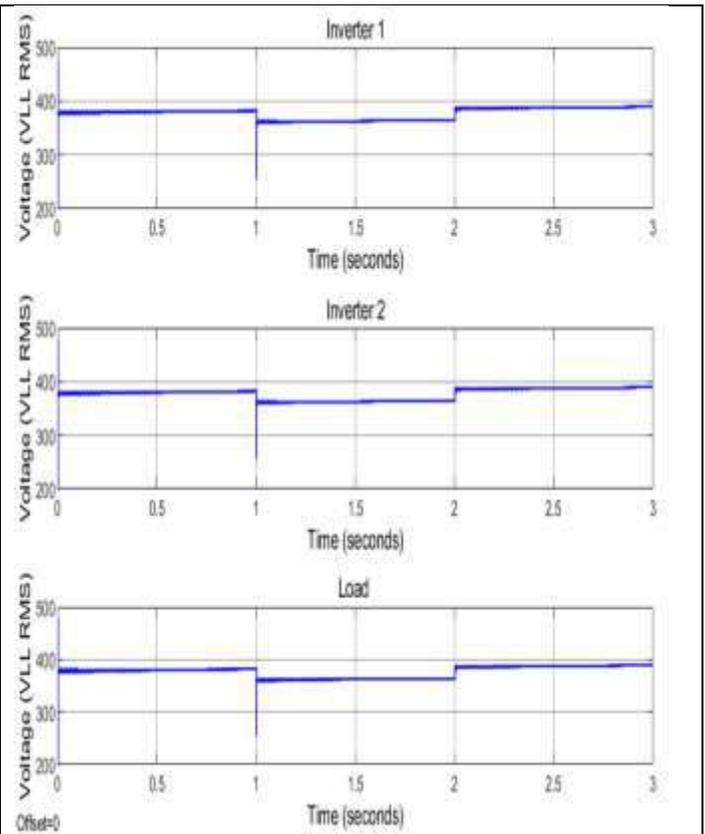
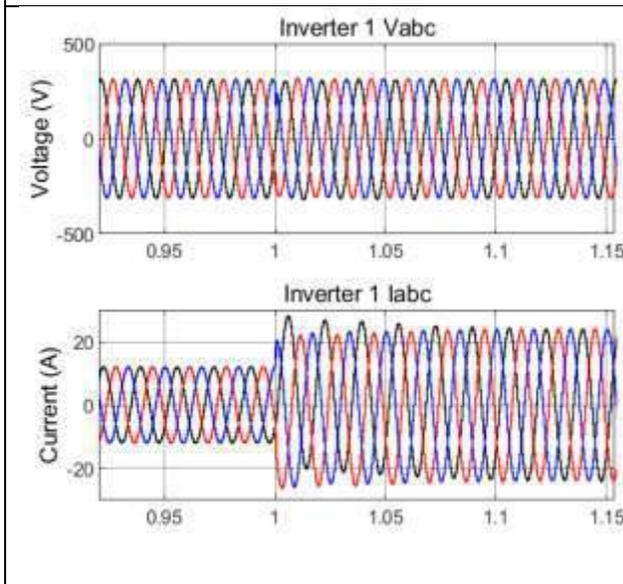
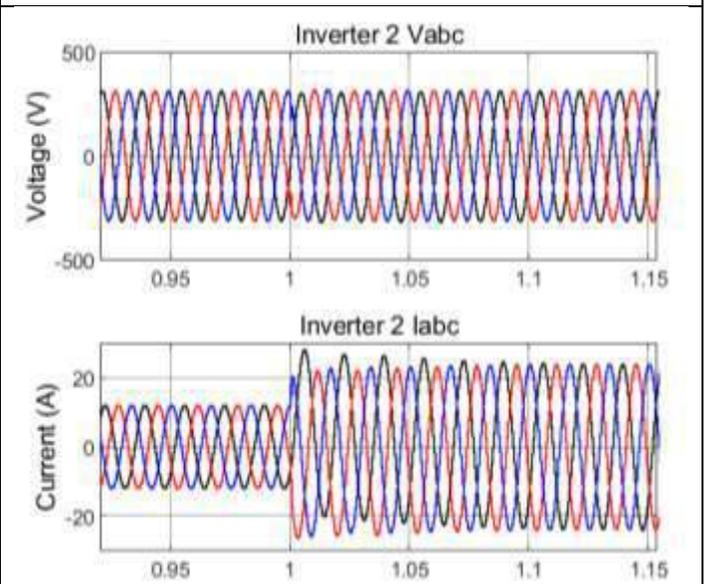
**Table- I: Characteristics of the designed system**

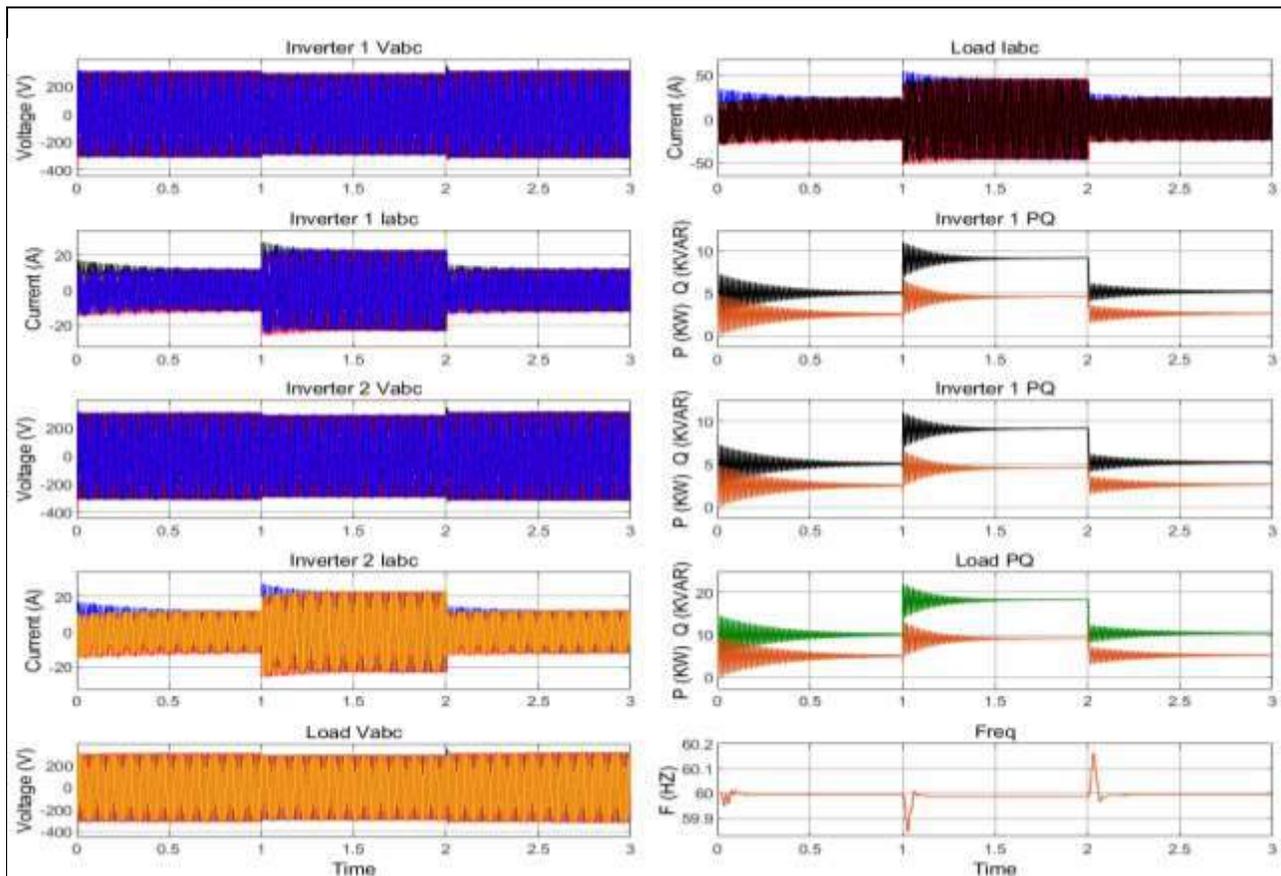
Vrms	400
Load	10 KW, 5Kvar and 20KW and 10 Kvar
Frequency	60
R line	0.5
Active Power DG 1	5 KW, and 10KW
Active Power DG 2	5 KW, and 10KW
Reactive Power DG 1	2.5Kvar a and 5 Kvar
Reactive Power DG 2	2.5Kvar a and 5 Kvar

The simulation results are presented in Figure (5) and (6). In figure (5) poor performance of controller during load changing (between 1-2 (s)) is shown. It takes a long time for the controller to beat that oscillation of active and reactive powers. As shown in figure (5) during a sudden change in load, the voltage drops and causes that the active and reactive power on the load could not be fed completely. For a better understanding of the drop voltage during the load changing, the RMS voltages from inverters and load are shown in figure (6).

**VII. CONCLUSION**

In this research, a conventional control for droop strategy for applying to DGR in parallel connection was presented. The initial equation for achieving the final equations was given based on two parallel synchronous generators. It was shown and proven that this kind of droop can be applied to new grids. The advantages and disadvantages of the proposed controller were explained. In the end, The Simulation results are taken from MATLAB/SIMULINK to show the capability of the control strategy

**Figure 6: Droop Control Simulation****Figure 7: Vrms****Figure 8: Voltage and current in DG1****Figure 9: Voltage and current in DG2**

**Figure 8: Voltage and current, and power in DG1, DG2 and Load**

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# COMMUNITY PARTICIPATION IN SOLID WASTE MANAGEMENT PROGRAMMES SPONSORED BY THE LOCAL AUTHORITY: A STUDY WITH SPECIAL REFERENCE TO KANDY MUNICIPAL COUNCIL IN THE CENTRAL PROVINCE OF SRI LANKA

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## ABSTRACT

Solid waste management has proceeded to be a foremost challenge and issue in urban areas in the world. With huge waste generation amounts in each year, Sri Lankan local authorities are facing difficulties in the systematic management especially, in the boundaries of municipal council. Solid waste management is one of the activities where community participation is a key to success as they are the main waste generators. Within this context, the study was examined community participation in local authority sponsored solid waste management programs executed in the area of study and to examine the success of the programs to promote community participation in their implementation. The study was carried out using qualitative data collection methods in Kandy Municipal Council in the Central Province, Sri Lanka. It found that community participation is active for the programs related to solid waste management executed under the rules imposed by the municipal council. These programs are successfully implementing in the area. Therefore, the participation appeared to be a mandatory requirement rather than an intentional involvement by community.

**KEY WORDS:** Solid Waste, Solid Waste Management, Community Participation, Local Authority, Bottom-Up Approach, Community Empowerment

## 1. INTRODUCTION

Solid waste is primarily a result of human activities. Hence, the increase of activities of people in any form invariably lead to the accumulation of solid waste. Therefore, it is not surprising that solid waste is closely associated with urban communities and industrial areas, which are characterized by high population density and high levels of activities related to production. The solid waste from industries together with domestic waste is a major issue found in contemporary societies. There is a long-term impact on the communities if the waste is not properly managed and disposed. It is also a serious health risk for the communities, which cost the national economy in the long term. At the level of the community and neighborhood, haphazard dumping of

solid waste also has become an issue related to the aesthetic beauty of the environment and a nuisance in day-to-day life. Therefore, solid waste management has become a sensitive issue for the community with political repercussions.

Experience in Sri Lanka and elsewhere shows that one major problem affecting the management of solid waste disposal is the inability of both the community and the local authorities (Liyanage *et al.*, 2015; Bandara *et al.*, 2014; Subash, 2006) work together in managing the waste. The inability of local authorities to coordinate their work, play their respective roles and hold responsibilities in an effective manner are the major reasons associated with the problem. Researchers have shown (Ndam, 2013; Joseph, 2014; Amoli, 2010) top-down



approach of solid waste management, which is centralized on state policies and administrative services though it has some impact, is not able to solve the problem of solid waste and solid waste management. Therefore, it goes without saying that an alternative is needed and there the bottom-up approach which, relies more on community participation, is a strong candidate. On the other hand, in developing countries where the state control is strong, citizens are accustomed to detach themselves from local authorities, expecting decisions on and administration services to be made on behalf them in a top-down manner (Mongkolnchaiarunaya, 2005, cited in Amoli, 2010).

Therefore, it is important to take community involvement for decision and policy making process which in turn enable them to take responsibility and sense of co-ownership (Nigbur et al., 2005, cited in Amoli, 2010) as highlighted in the bottom-up approach. Particularly, solid waste management as it is carried out today is generally recognized as engineering and administrative work (Liyanage et al., 2015) neglecting the community role. Further, realization of the failure of top-down approach has resulted in local authorities to adopt various community-centered strategies to manage solid waste disposal. This is primary because, community organization is complex and a range of socio-cultural variables and attitudes determines human activities. However, mobilizing the communities through participatory actions to manage solid waste remains a challenging issue (Karunasena and Amarathunga, 2010). It is therefore necessary to achieve a correct balance between the top level and the participatory strategies to make the community centered solid waste management a success.

Within this background, the study focused on collaborative actions between the community and the municipal council with regards to solid waste management programmes executed in the area of study. The term "Community Participation" has been used as "community involvement and their contribution" in this study to indicate within the process of solid waste management from its generation to the final disposal.

## 2. OBJECTIVES

1. To examine community participation in local authority sponsored solid waste management programmes
2. To examine the success of the solid waste management programmes of the local authority to promote community participation in their implementation

## 3. METHODOLOGY

The study was conducted in the Municipal Council of Kandy District of Central Province in Sri Lanka. The Kandy Municipal Council is the highest waste collected municipal council in the central province (Database of Municipal Solid Waste in Sri Lanka, 2005). It is one of the most affected areas, which faces a severe crisis with respect to the disposal of solid waste per day. The management of solid waste is carried out by dividing the area of the Kandy Municipal Council into the following five zones. Zone five is the most residential area out of the five zones as it comprises of 95% of households and rest of the units represent less than 5% in the zone. Therefore, zone five has been selected to conduct the study. It comprises eight village administrative divisions.

Since the study employed qualitative research design, aiming to collect attitudinal and behavioral aspects of community related to solid waste management, it was difficult to pre specify the study sample in order to get real picture of the community. Crosschecking methods had to adopt to address this matter and sample was selected focusing these two situations. Therefore, two non-probability sampling methods namely; snowball and purposive sampling were used to select respondents for the study. Total sample of the study consisted of 98 respondents. Out of 98, 8 were selected based on snowball sampling and rest of the 90 were selected based on purposive sampling.

The study used both primary and secondary data. Primary data collected from key informant interviews, in-depth interviews, focus group discussions, informal discussion and observations. Eight key-informant interviews were conducted with the respondents identified through snowball sampling representing one from each Village Administration division. Key-informant interviews were also provided a background in finding respondents for in-depth interviews. Thirty in-depth interviews were carried out with staff members of the municipal council and other governmental officials under purposive sampling method considering the designation, knowledge and experience. Further, 60 in-depth interviews were carried with household respondents under purposive sampling method considering the ethnicity and income. Three focus group discussions were conducted as part of the study. One focus group discussion consisted all eight community health assistants and two focus group discussions with labourers consisted of six labourers in each group were conducted. Informal discussions were also used to crosscheck the collected data from other data collection tools representing both the Kandy municipal council staff members and residents. All together 10 informal discussions were



conducted consisting two community health assistants, two with labourers and six residents. Observation method used as dual purpose in the study. At first it used as qualitative data collection tool at the field to examine the community behaviors related to solid waste management activities. Secondly, it used to crosscheck data gathered through other data collection tools. Secondary data for the study was collected from the records of the municipal council and the divisional secretariat, human artifacts, internet sources and journals.

Since the study adapted a qualitative study with its context, thematic analysis was used as the main method of analysis.

## **4. RESULT AND DISCUSSION**

### **4.1. Programmes on Solid Waste Management, Community Empowerment and Participation**

The municipal council conducts several programs incorporating the community as they are the main waste generators. The main aim of these programs is to minimize the amount of waste that would be finally disposed at the site situated in *Gohagoda*. Awareness and educational programs are carried out focusing the public in several ways in order to build up their awareness on the problem of solid waste. This has been strengthened with the support of environmental committee programmes. Further, waste separation and scheduled waste collecting services are also been executed within the limits of the municipal council. Moreover, there are some programs conducted by the municipal council which aims to popularize composting and recycling practices among the community. In addition, prohibition of open burning is another program conducted by the municipal council. Some of these programs are voluntarily accepted by the community by forwarding their active participation into them. However, for some programs the municipal council seems to use legal power over the community. The following section explains details of such programs which are currently being operated within the limits of the municipal council aiming at community empowerment and participation in the area of study.

#### **1. Conducting of Environmental Educational and Public Awareness Programs**

Community awareness is an important aspect to understand the prevailing issues, causes, effects, necessity of participation and expand their role for solid waste management (Shukor et al, 2011). Conducting of awareness programs on solid waste management is the first and foremost strategy used by the municipal council to receive the maximum participation of the community for solid waste

management. These programs first started in the year 2011 at present now they are continuously carried out with the headship of the Community Health Assistants (*Praja Sauwkya Sahayaka*) of the municipal council. This idea collaborates with previous researches. As Shukor, (2011) mentions, providing awareness is one of the most successful factors for community participation in activities related to solid waste management.

In a broader view, the municipal council conducts their awareness and educational programs in dual ways targeting the empowerment of the community. They are, event based environmental education programmes and continuous public awareness programs on solid waste management. The solid waste management division of the municipal council organizes such events aiming the general public on environment related aspects such as environmental problems, environmental pollution and solid waste management including solid waste management practices, 3R concept, etc.. Below are three such events held during the period of data collection for the study.

One of the events was named as 'Flea Market' where the community can buy and sell used household items such as kitchen items, electric items, furniture and exercise machines and other items such as garments, flower plants and toys. The main aim of this event was to promote the concept of reuse among the public. The Flea Market was held in a common place in the Kandy city where the community can easily reach. Similarly, another event was named as 'World Environmental Day Celebration in Kandy District' which was jointly organized by the solid waste management unit of the Kandy municipal council and the Central Province office of the Central Environment Authority. The theme of the celebration for the year was "Sustainable usage will protect the Earth". The celebration was organized as an 'Environmental Education Exhibition' which focuses on school children, business community and the general public in the Kandy district. A public awareness workshop was also held parallel to the exhibition. Furthermore, a 'Home Gardening Competition' was organized by the Agricultural Department and the Kandy Municipal Council and residents who are involved and interested in home gardening.

When considering the above mentioned events which are based on environmental education, it is clear that the main target of the events organized by the municipal council includes dissemination of knowledge on environmental education while practicing them in real contexts. Dissemination of knowledge was reflected in all three events held during the period of data collection. At the same time, such events addressed all kinds of people in the



community without any age, economic, social or cultural difference. Similarly, these events were held in the city area of the Kandy District where the public can easily reach. Another important aspect associated with these events was the practice of activities related to solid waste management in real contexts with the use of creative methods. It was organized by the municipal council in order to promote the concept of reuse. At the same time, incentives or reward giving methods were also included into the competitions while directing them on waste management practices. It was made possible by organizing home gardening competitions, which appears as a kind of strategy to receive a higher number of participation for the programs organized by the municipal council.

These events appear as a tool of community empowerment in activities related to solid waste management. It was initially made with the use of information sharing which creates a platform to both the community and the municipal council to share ideas and opinions about each other. On one hand it appears as a strategy to induce the decision making process of the community in relation to environment and its related aspects.

The concept of community participation shows that the process of community participation starts by providing information to the community and improving their awareness (Shukor, 2011). The venue where the community gatherings are held is also important to receive the support and attention of the local/religious leaders for the continuity of public awareness programmes. Religious leaders such as Buddhist monks have traditional authority over the community to make influences on their behaviors patterns. It was observed during the event based environmental educational programs which were held in a common a place in Kandy where anyone can reach easily. At the same time, some events have been organized in a very common places which are mostly used by the general public.

Similarly, community empowerment and dissemination of knowledge observed in event based awareness programs are seen as positive impacts on solid waste management practices of people. The majority of people who participate in home gardening competitions engage in home composting and they handover only the non-degradable waste to the municipal council. Therefore, these events can be regarded as of an appreciation for the community who produce waste in a responsible manner. It is also provides an encouragement for the others to follow them. Accordingly, the municipal council has identified the importance of these concepts and therefore, apply them into the real world. It will enhance the successfulness of community participation. However, the success depends on the

level of community support received in actual contexts.

According to the opinions of the officers of the municipal council, in actual context, an active participation could be seen for the event based environmental educational programs. The Community Health Assistants made attempts to gather the residents who were from their own village administrative division and tried to maintain a better relationship with them allowing them to participate in such events. However, unlike in other programs, residents who have not participated in usual programs seem to participate in these programmes. These programmes were held in the middle of the Kandy city and therefore, everybody could participate without any difficulty. Moreover, all these events were held during weekends when the city usually becomes populated. In addition, some of the residents have participated in these events with due to a short notice given by the Community Health Assistants. Therefore, as a whole, it is clear that the community actively participated in these events.

In addition to the above mentioned events, continuous awareness programs are conducted by the municipal council. The programmes on solid waste management started along with the awareness programs in order to make the community aware about the waste separation waste collecting time table. At the beginning, "door to door" and "community gathering" methods were used to make the community about such programmes. The majority of community gatherings were organized at village temples and community halls. The establishment of Environmental Committees made the task easier as it induces community participation. Similarly, distribution of handbills and establishment boards indicating the boards of waste collecting timetable in each road, with the support of private and governmental institutions is another strategy used during the continuous awareness program conducted by the municipal council. The waste collecting boards in each road has been established with the sponsorship of both private and government institutions. It is important to create a public-private partnership for the success of programmes related to solid waste management. On the other hand, it is important to make the community aware and to get their active participation.

In real the context, the continuous awareness programs conducted by the municipal council are mostly oriented towards providing awareness on solid waste management rather than education. Except in 'door to door' or 'community gathering' programmes, others were always represented by a set of selected people in the community. 'Door to door' or 'community gathering' awareness programs were conducted covering all the residents of the zone who



were mainly targeted to get introduced to the new solid waste management programmes of the municipal council. According to the understanding of the community it is more about waste separation and waste collecting time table in the area.

Some awareness programs are carried out with a Japanese volunteer related to the Japan Overseas Cooperation. The Japanese International Cooperation Agency together with the solid waste management division of the Kandy municipal council conducts programmes to provide environmental education within the limits of the municipal council. These awareness programs cover a vast area in relation to the different aspects found in solid waste management including the experience of systematic solid waste management methods used in developed countries. During such programmes Japan strategically addresses different community groups. These programs are targeted for preschool and school children within the limits of the municipal council.

Awareness programmes for both preschool and school students are also conducted with the support of the Japanese volunteer under the supervision of the municipal council. Preschool programs teaches children about basic habits related to solid waste management. It is important to develop better sanitary and waste related habits and behaviors among children. There are 25 preschools operating under the Kandy municipal council and there are nearly 100 private preschools. These awareness programs which are not held in large scale are conducted with the help of Community Health Assistants in the area. They provide simple awareness such as do not litter everywhere and have a clean environment. However, this can be identified as one of the appreciable efforts made by the municipal council, since the preschools which were in the area of study are controlled by the municipal council. The students coming from the municipal council limits represent both poor and lower class of the society. It was revealed from their behaviors that these children have less awareness on the concept of clean environment and related sanitary activities. Therefore, the volunteer strategically attempts to take the attention of the children by providing them some toffees, attractive simple songs and exercises using their native language. All such attempts caused to change the attitudes of children and finally the behaviors of them to have a clean environment.

Similarly, school awareness programs for the students of grade 1 to 13 conducted with the support of Japanese volunteer under supervision of municipal council supervision. The school programs are a kind of an extension of the preschool programs which share more information on Solid Waste Management systems used in developed countries.

However, the support of the foreign volunteer was important to conduct the awareness programs although it was the duty assigned to him. The municipal council used him as a strategy to attract people for the programs as he is a foreigner. The community showed a natural persuasion to participate in these programmes, because talking with a foreigner in their native language was considered a novel experience for them.

Further, the solid waste management division of the Kandy municipal council organized an awareness program for the Public Utility Week of the Provincial Council. It provided the community with knowledge on; severity of the problem of solid waste, ongoing solid waste management programs, formal waste collecting methods, formal and informal disposing methods used in Sri Lanka and other countries, the waste dumping site in *Gohagoda*, solid waste management methods in developed countries, 3R concept, welfare arrangements for solid waste management section, political support and the role of the environment committee.

Majority of respondents mentioned that the municipal council provided awareness on solid waste management and that programmes were successful. The municipal council conducted these programmes in two different methods: door to door awareness programs and community gatherings. Although these programs are not oriented towards environmental education they provided awareness on the ongoing solid waste management system. This can be considered as a positive aspect of the Kandy municipal council in relation to solid waste management. However, the formation of environmental committees and their active participation is decisive for the conduction of these awareness programs.

## **2. The Formation of Environmental Committees**

The awareness programs on solid waste management are mainly conducted under the coordination of the environment committees. It is a specialized committee founded by municipal council which primarily addresses the activities related to solid waste management of the area. It consist is similar to any other normal committee and the village administrator of the division is the chairman of the committee. Vice chairman, Secretary, Vice secretary, Treasurer and Committee members are the other members of the committee. According to Community Health Assistants, there are committee members in each and every road. It is their duty to together once a month and discuss the problems related to solid waste management in their village administrative division. The committee has an annual meeting once a year with the participation of all members. The role of the environment committee is substantial in



empowerment of the community in relation to solid waste management in the area.

The role of the environment committee is directed to the empowerment of the community in relation to solid waste management. The environmental committee mainly organizes *Shramadane* programmes in the area. In addition, the environment committee jointly works with Dengue prevention programs conducted by the Ministry of Health, *Janavasa* committee and *Civil Arakshaka* committee in the area. In accordance with the above fact, Abeyewickreme *et al.* (2012) have stated that waste management has led to a significant reduction in dengue vector densities due to the removal of the places where water is being collected as, waste is a preferred breeding place for the vector. It has been successful with the establishment of partnerships among local authorities; the involvement of communities and households. This study illustrated the importance of local authorities and its coordination with the increasing responsibilities of households for the effective and sustainable control of dengue vectors. The environment committee coordinates all these activities along with the above mentioned committees and activities. Therefore, the role of the committee has been expanded than the early days of its establishment. The community inform the environment committee about their problems related to waste collection and illegal waste throwing practices. Therefore, it has caused to solve the solid waste management within the area without taking it up to the top level officials. The role of the Community Health Assistant is substantial in the committee because they coordinates the work between the municipal council and the community. It has helped to develop a close relationship with village administrator of the division. On the other hand, it can be considered as an advantage to them to make a close relationship with the community.

The environment committee can therefore, be considered as a Social Capital of the community as it provides social networks and reciprocity by making a common platform for the community to open up their voice for their own betterment. In other words, it provides a sense of responsibility and ownership to the community which is directly connected with empowerment. More elaborately, the environment committee appears as a place where the empowerment of the community can be identified with sharing control, ability to participate, influence on decisions and allocation of resources (Holcombe, 1995, cited in Claridge, 2004). It is an avenue which creates synergy and power to allow everyone collectively in building local capacities, involvement in decision making and empowerment. In other words, the environment committee is the place where

the active community participation in solid waste management can be seen in the actual world.

The environment committee has been formed with the aim of raising community empowerment. However, it depends on the level of participation of the community. The study found that community participation for the environment committee is not in a satisfactory level in the area of study.

While only a certain amount of respondents were members of the environment committee, a similar amount of residents were unaware about it. Some of the respondents have not heard about the environment committee. Even though, nearly half of the respondents have heard about it, they do not have its membership. Similar findings were revealed from the study conducted by *Araen et al.*, 2015 in Nigeria related to the collaboration on solid waste management in their area. The study found only few residents who agreed to collaborate with their neighbors and traders on solid waste management. However, the majority of residents did not agree to collaborate as it was difficult to make an agreement on how to deal with solid waste. A similar findings was made in the present study. Among all the members, very few of them play an active role in the committee by holding designations. There are several reasons behind the above finding. Although the municipal council is aware about the impact of the environment committee on the community, they do not pay enough attention to these types of commonly important collective activities. On the other hand, the conveying method used by the municipal council to make the community aware about the environment committee has to be more effective, other than simply informing. It should be conveyed with some enthusiasm by emphasizing the importance of the committee for managing the problem of solid waste. If it does not happen, the residents would not be interested to spare their time for collective actions.

The following fact was revealed while considering the amount of participation of the residents for voluntary activities. A *Shramadane* campaign has been organized mainly as a Dengue prevention programme under the headship of the environment committees and the Ministry of Health. Half of the residents participated in this voluntary activity while another half of them did not. The severity of the problem caused for the increased participation of the residents. Therefore, it is important to use enthusiastic conveying methods to enhance the participation of the community for collective actions. The residents would then like to spare their time for such activities. Their willingness for such activities in the future is also considered important for the sustainability of these programmes.

The majority of respondents showed their willingness to participate in voluntary activities in the



future. A certain amount of respondents did not like to join with them in the future especially due to their physical disabilities. A few of them were uncertain about their participation because they had a busy life style. However, these findings revealed the importance of utilizing attractive mechanisms to receive a higher participation of the community for such commonly important matters. It made the active involvements of the committee possible by holding different designations.

However, the participation of the members for meetings is in a satisfactory level. The majority of them participated in the last three meetings held by the committee without considering whether they hold designations or not. Out of all respondents, a very few of them hold designations in the committee and the majority of them were committee members. Among the respondents who hold designations, the majority of them belong to the age category of more than 60 years. There is a tendency for such people to spend their time for commonly important matters.

The views of the committee members of the environmental committee on its efficiency in managing the problem of solid waste in the area is decisive for the sustainability of the committee. Nearly half of the respondents from the members of the environment committee believed that environment committee is efficient in managing the problem of solid waste in the area.

Although it is an avenue for managing the problem of solid waste in the area, the study found that the community has a fewer participation for the environment committee and that their awareness on it is very low. Therefore, in real practice, the environment committee is not much popular among the community. The reason is that, the communication methods used by the municipal council for gathering people for collective actions are not much powerful and attractive. It is important to use powerful means of communication instead of addressing the public with the use of a loudspeaker during the day. People often give priority place to fulfill their individual sentiments rather than addressing commonly important matters. They are unaware that they are the primary waste generators and it is their responsibility to make a contribution in managing it effectively. It is the main reason why a selected community such as elders and retired people participate in these activities. Such people seem to have real intensions to find solutions for commonly important matters and make a contribution to solve the problem. Nevertheless, the study found that female associations also provide knowledge and engage in activities related to solid waste management since the majority of them were the members of the environment committee.

The community participation of an environment committee in the village administrative division has successfully operated due to the substantial roles played by the chairman of the committee, the village administrator and the Community Health Assistant. They have gathered the residents and organized various programs related to solid waste management including competitions for school children, award giving, song, beautification projects in the area, plating flowers in selected places and maintaining them and *Shramadane* programmes. Although some residents did not participate in all the events organized by the committee due their busy life styles, they tended to provide either monetary or material support for the events which can also be considered as a kind of a participation for the activities. Nevertheless, later on, the activities of the committee were not active as it were in the beginning due to the lack of enthusiasm of the community.

Therefore, it is clear that, creative methods should be adopted to induce the more participation of the community in collective events and these methods should be amended time to time in order to maintain the interest of the community. The same idea has been executed in Japan as "Association of Residents" (Iijima, 2015). Waste separation is another programme which is important for community participation.

### **3. Separation of Waste**

Waste separation at the place where it is being generated is another programme aiming to minimize the waste generation at the limits of the municipal council. This is one of the globally accepted components of solid waste management (Tchobanoglous and Kreith, 2002). The Kandy municipal council has adopted this strategy since 2014. According to the discussion made with the officer in charge of the solid waste management unit of the Kandy municipal council, the solid waste generated within the limits of the municipal council should be separated by the community into two main categories as degradable and non-degradable waste before handing them over to the garbage collectors. The non-degradable waste is again separated into four categories as plastic-polythene, paper-cardboard, glass and other. The municipal solid waste is divided into six categories as degradable, paper, plastic, glass, metal and other (Tchobanolous & Kreith, 2002). However, Kandy municipal council has categorized the waste as above by considering the nature of waste generation.

Waste separation programme is successfully continuing in the zone where a study has been conducted. As stated by the officers of the municipal council, labourers, village administrators and respondents have actively participated in the programme. All most all of the respondents tend to



separate waste before they are being disposed without any gender, education, income or ethnic variation.

The majority of respondents separate waste into four categories (degradable-non degradable (paper/plastic-polythene/glass)). As instructed by the municipal council a certain amount of respondents follow all waste separation categories (degradable-non degradable (paper/plastic-polythene/glass/other)). Yet, a certain amount of residents follow basic two categories (degradable-non degradable) waste separation by having all non-degradable waste into one. Other category includes metal, garments, coconut shells. However, the majority of residents collect those types of waste together with other categories for their convenience. A study in Nigeria recorded a different finding that waste is not sorted by its residents before disposal (Adogu *et al.*, 2015). Yet, the community follows a kind of waste separation as a result of the solid waste management programme carried out by the municipal council.

However, the majority of respondents mentioned that they do not have problems related to waste separation. Only a very few of them mentioned that they are having problems related to waste separation. Similar to this data, a majority of respondents revealed that waste separation does not take time and effort. Only a few number of respondents believed it as difficult as they consider it as a waste of their time and effort. However, among the respondents who have problems related to waste separation mentioned that they face difficulties due to lack of space available in their households. In addition, they face practical difficulties with children since their children tend mix the waste. This is common among the families who have more than two children. Similarly, residents who employed have problems related to time. Although the residents face these kinds of problems they try to separate the waste before it was handed over to the municipal council. This finding links with their awareness of law related to waste separation.

According to the bylaw of Kandy municipal council ordinance 2013/06/28, waste should be separated before handing them over to the municipal council. As per this bylaw, legal actions can be taken for those who are not following the law. As the study found, a majority of residents are aware about the law of waste separation. Only a certain amount residents did not know about the law. The reason behind the satisfactory level of awareness of the community is, the awareness provided by the municipal council. The above finding clearly reflects the satisfactory involvement of the community towards waste separation by following the rules imposed by the municipal council. The study found the following three main reasons for community involvement in waste separation.

1. Awareness programs
2. The compactor does not collect mixed waste
3. Monitoring procedure of the environmental police

The municipal council provided awareness to the community on waste separation. Similarly, strategically the compactor driver does not collect bags with mixed waste. They often collect the waste after checking up the content of the bag relevant to the day of waste collection. If they find any bag with mixed waste, they leave the bag by the road. On the other hand, the driver of the tractor and labourers are not following this method as much as the compactor driver and labourers do. The reasons is their less motivation for the duty. The environmental police monitor the waste disposal activities of the community and due the fear for them, the community tend to separate waste. The community has no alternative, except for handing over their waste bag to the labourers of the municipal council. This is because the residents live in a limited land plot and cannot maintain a waste disposal mechanism on their own. Therefore, the community tend to separate waste before it was handed over to the labourers of the municipal council.

Nevertheless, the study found that there are some residents who handover mixed waste bags to the municipal council although the community health assistants and labourers have informed them several times not to do so. At such situations, the labourers had to separate the waste in those waste bags before handing them to over the compactor. Similarly, some people blame to labourers without separating their waste. Such occasions, they try to use the political powers they have. Nevertheless, with the mediation of both community health assistants and the environment police such kinds of incidents have been lessened at present.

Although there are some exceptions, the programme of waste separation is successfully operating in the area of study area. As stated by Subash (2006) waste separation is, one of the individual actions done by community for the successful participation on the process of solid waste management. However, the study found that the community engages in waste separation just because they have no other alternative other than handing the separated waste over to the municipal council. Although a majority of residents mentioned that they do not have problems related to waste separation it seems that they do not engage in the process heartily.

In relation to the programme of waste separation, a waste bucket has been introduced by the municipal council to store degradable waste due to the problem of monkeys and dogs in the area. This waste bucket can be bought at a reasonable price. Most of the people who live close to the main road



and those who live by the side of the roads use the buckets. This bucket is mostly beneficial for the people who are employed and leave houses early in the morning. The introduction of a waste bucket for non-degradable waste is an example for a place where the municipal council listens to the problem of the community and hand over the responsibility and ownership to the community themselves.

However, the municipal council introduced this waste bucket due to the problems raised by the community in keeping waste. Their mediation is very much important to continue this programme in a better way. People who are suffering from problems related to animals mainly requested for buckets from community health assistants. The municipal council introduced this method as a solution for the problem of animals and according to the findings of the study the involvement of the community is positive in places where it is necessary.

Similarly, the study further found that the residents followed different methods to store degradable other than the method introduced by the municipal council. The majority of them used a plastic bucket of their own together with a shopping bag. A very few of them used garbage bags and a certain amount of residents used mixed methods to store organic waste until they are being dispatched by the municipal service. Only a few of the residents stored organic waste in the bucket distributed by the municipal council. This finding showed a relationship with the level of income of the residents.

The majority of residents who used the waste bucket distributed by the municipal council belonged to the category of high income earners. The municipal council does not show any opposition when the residents use other methods to store waste. They allowed community to use the most convenient method for them. The study also found that some residents used this waste bucket to store rice and sugar instead of using it to store waste.

Parallel to the introduction of waste buckets to store degradable waste, the municipal council has also distributed colour bags to store the major categories of non-degradable waste for free of charge. The orange color bag is used to store polythene and plastic while the blue color bag is used to store paper and cardboard. The red color bag is used to store glass and at the same time their own disposal bag is used to store other waste such as coconut shells, tins, plates. The municipal council has informed the community to use relevant bags when disposing waste and their main intention is to make the colours familiar with the type of waste that is being disposed.

However, the involvement of the community to use colour bags is not in a satisfactory level. Only a moderate amount of residents used it directly while a certain amount of residents used them with shopping

bags. The usage of the colour bags is popular among high income earners.

As labourers mentioned, the community does not use colour bags. Even the labourers who collect waste with the help of handcarts and three wheelers face difficulties when transferring the waste bags from one to another. The labourers, cannot directly lay the waste bag into the compactor or tractor as they have to return the bag to the relevant household once again. Hence, it is easy for them when the community uses their own waste bags as they do not have to return them back.

According to the study, there are two reasons behind the less usage of colour bags in storing non degradable waste. The main reason is that, these bags are not durable. The second reason is that the labourers of the municipal council take the bag along with the waste and they do not return it back. The labourers of the municipal council do not encourage the community to use these bags since they themselves face practical difficulties when the community uses them. However, the usage of these bags is relatively high among the people living in main roads compared to the people living in sub ways.

Yet, colour bags have been distributed by the environment committee of each village administrative division. The responses of the residents are significantly different in relation to their awareness on the environment committee and the use of colour bags. The majority of residents mentioned that they received waste bags from the municipal council to store non-degradable waste. The residents have taken the colour bags distributed by the environment committee although they are unaware about the committee. The main reason is that, these bags have been distributed free of charge and the community has get together to get them without any intension of managing the solid waste.

Although a waste bucket and color bags have been introduced by the municipal council to store waste at the level of the household storing waste is not a problem for the majority of residents. Only a certain amount of them have problems related to the storage of waste. As they pointed out, they face this problem mainly due to the lack of space available to store several types of waste in one place. In addition, they have to face problems due to animals such as monkeys, rats, dogs and cats. They further mentioned that they are unable to store waste for few days due to its nature as it has a bad odor and some other related matters. Nevertheless, the mediation made by the municipal council for storing waste is appreciable because it helps to manage the problem of solid waste to a certain extent. This waste separation program is linked the with scheduled waste collecting service of the municipal council.



#### 4. The Scheduled Waste collecting Service

The municipal council carry out a scheduled waste collecting service. It is done according to a time table in relation to the solid waste management programme, using a compactor, tractor, three wheeler or a handcart. Degradable waste is being collected every other day in a week whereas non degradable waste is being collected once a week in every weekend. When the labourers of the municipal council visit a neighborhood to collect waste, they inform it to the community using three different modes: horn, whistle and calling.

The participation of the community especially their awareness on both the time table and the mode of waste collection is very important to successfully continue this programme. The efficiency of services provided by the municipal council leads to the active participation of the community for the programme.

In relation to the scheduled waste collection service conducted by the municipal council, the awareness of community on waste collecting time table is considered very important to induce the level of participation for the programme. This is mainly because it is the responsibility of the community to discharge waste according to the relevant days assigned by the municipal council.

According to the findings of the study, a majority of residents mentioned that they are aware about the waste collecting timetable operating in the area. However, their real awareness is bit low than they actually mentioned. When asked about the waste collecting days of their area, the residents were successful in providing answers. All most all respondents were aware about both the waste collecting mode (compactor, tractor, handcart or three-wheeler) and the informing method (horn, whistle or calling).

When comparing all the facts related to waste collection (awareness on waste collecting time table, waste collection mode and informing method) the majority of the residents seemed to be satisfied with the waste collection service of the municipal council. Only a very few number of residents were not satisfied with the collection service rendered by the municipal council. A certain amount of residents had mixed ideas related to the collection service and mostly their ideas were negative. As a whole, the majority of residents had positive views towards the waste collection service. However, a certain amount of residents had negative views towards the existing service of waste collection mainly due to the following reasons.

1. The informing method used for waste collection are not audible enough
2. Lack of a regular waste collection service

3. Labourers do not come to collect waste from houses
4. The waste collection service is not punctual
5. Do not collect waste properly.

The informing method used to collect waste (horn, whistle, calling) is not audible enough to the residents especially for residents who live in hilly areas. Further, the residents mentioned that, the municipal council does not collect waste on some days and therefore, the service is not punctual. Hence, they face difficulties, to keep waste in their houses and waiting until the labourers come to collect waste. The main problem in keeping waste is that, they cannot keep waste bags outside of their houses due to the problems of animals. Some residents mentioned that they do not like to keep a waste bag in front of their houses as it is not decent. Therefore, they have to waste time until the labourers come to collect waste and also have to change their regular activities due to this problem. The other problem is that the labourers hesitate to come to collect waste from houses situated in hilly areas and therefore, the residents have to go down to handover the waste bag to the labourers. Due to the problems related to the absence and lack of punctuality of the labourers, the residents have to face great problems. Finally, the residents mentioned that the labourers, sometimes do not collect waste properly and it leads the environment to be unclean.

Nevertheless, the labourers mentioned that they had to face difficulties when collecting waste from the households. As it revealed, some people are not aware about the informing methods used to collect waste and as a punishment, the labourers do not collect them. Nevertheless, according to the point of view of the community, the horn is not clear for the people who live in hilly areas. The most important idea put forwarded by the community the labourers visit their houses only on some days. In other words, they do not have a proper and systematic collection service. From the point of view of the municipal council it has happened due to the problems related to resources that are available and it has caused difficulties to build up trust between themselves and the community.

Although there are some residents who do not follow the rules related to waste collection imposed by the municipal council, involvement of the majority of residents is satisfactory. The level of communication between the municipal council and residents is important for this satisfactory level of involvement. The community health assistants act as facilitators between the municipal council and the community in this process. Therefore, the residents communicate mainly with them.

The majority of residents are satisfied with the level of communication between themselves and the



municipal council. It leads to a higher level of community participation. As they mentioned, are allowed to inform the community health assistant directly if there are problems related to waste. In order to improve this relationship, both the office hot line and mobile phone numbers of the community health assistants have been given to the community to contact them where necessary. The identity cards are also given to them for the due recognition. Community participation can be induced by effective communication. Effective communication of the community members develop a broad understanding of an issue (Shukor, 2011). The present study reestablishes this fact in relation to the role played by the community health assistants and the community. However, they suffer due to the problems such as lack of physical resources as they do not have properly established office buildings with good sanitary facilities. Both labourers and the community health assistants had to use common wash rooms and they are also used by both males and females. Moreover, some of the residents mentioned that the community health assistants are not much active at present than the time that they worked during the probationary period. It seems that they just spend their time going here and there in their respective village administrative division and without doing much work. However a majority of residents have fulfilled their duty.

The Labourers connect with the community as the primary persons who collect waste from households. The study found that the residents provide different benefits to them. The labourers do not ask any monetary or material benefits from the residents as the municipal council informed them not to do so. The municipal council has strictly reacted against them in such cases. The residents willingly provide them with some benefits. Such benefits may mainly include food. Other than that, clothes and money are sometimes provided for the labourers. The community has positive views towards providing benefits. According to the residents, since the labourers collect their waste, they must provide benefits for them. The community follow this tradition especially during the festival season or *Sinhala Aulth Awruddha*. Yet, some residents mentioned that the labourers sometimes asked monetary benefits in order to collect waste. The study found that this practice is existing especially in hilly areas. The people who live in such places often give benefits to the labourers. However, the community gives benefits to labourers as an incentive.

The municipal council has provided identity cards for the labourers. The identity card is useful for labourers to stand as a service provider of the community and they have used it as a mode of defense from the community where necessary. These

are some of the strategies used by the municipal council to increase the service they rendered to the community. However, the labourers are doing their work with the limited facilities available for them. They do not have proper places to fulfill their cleaning needs after their service time and no proper system to take vaccinations in due period.

Further, a public health inspector is also working for the zone and he monitors all these activities. However, as he has to work for two zones at the same time, he faces great difficulties with the heavy load of work. There are only three public health inspectors working for the activities related to solid waste management in all five zones of the Kandy municipal council. Nevertheless, he often attempts to make a good environment in the zone by monitoring and investigating activities related to solid waste management. He manages both physical and human resources to provide a better service to the community under the authority of the scavenging officer and the municipal engineer.

Parallel to the scheduled waste collection service, the municipal council is also trying to popularize the composting practices among the community.

### **5. Popularizing the Composting Practice**

The municipal solid waste is largely consisted of degradable waste (World Bank, 2012). According to the Master Plan of Solid Waste Management in the Kandy Municipal Council (2013), degradable fraction of waste is in a high level. In the study area, this fraction is mainly generated in households (ibid). Composting is a viable option which provides numerous positive outcomes for both the natural environment and social beings. Composting requires a simple technology and it is environmentally friendly (Tchobanoglous and Kreith, 2002). It adds an economic value for it at the end. The Kandy municipal council is trying to popularize the method of composting among residents in order to reduce the amount of degradable waste which is going to the final disposal site. In order to fulfill the above objective, two types of compost bins are being distributed in the area of study. These compost bins are distributed under the *Pilisarua* National project and *Thakarura* compost bins.

The community participation for composting goes hand in hand with their level of awareness. The awareness of the community on composting is high in the area of study. The majority of residents were aware about composting. The residents were especially aware about the ingredients that can be used for composting and the benefits that they can receive. The municipal council is also providing awareness on composting to popularize it among the community.



According to the study, the majority of residents mentioned that the municipal council provided awareness to them on composting. These programmes caused to have a better level of awareness. This establishes the fact that information and awareness cause to increase the level of involvement of the community.

The municipal council has distributed both types of compost bins in the area of study. However, it was revealed that the compost bins distributed under the *Pilisar* National project is more popular than *Thakakura* compost bins in the area of study. Some knowledge is required to operate and continue the *Thakakura* compost bins. An idea put forward by the Japanese volunteer who promotes *Thakakura* composting in the Kandy municipal council is mentioned below *Thakakura* composting programme has failed since it needs people to have some knowledge when using it.

The compost bins distributed under the *Pilisar* project is sold at half a price of the market value. It is a reward for the community which increases their motivation for composting. A certain amount of residents are engaged in home composting. Very few of the residents used composting but now they are not in operation. It is mainly due to the problems that they face while using the bins. Some of the problems would include bad odor and worms and their busy life style. Similar findings revealed from the study conducted by Lekammudiyane and Gunatilake (2010). According to their study, the most abundant problems associate with the compost bin was leachate problems, unpleasant smell and worms. Yet the majority of the resident, do not have any kind of involvement for composting. As they revealed, that they do not have enough space for it. Since the study area is situated in an urban setup, most of the people have limited land area. Therefore, practically, they do not have a place to keep or maintain compost bins.

A certain amount of residents use plastic compost bins distributed by the Kandy municipal council. Yet, few of them use their own composting facilities. However, the motivation of the community for composting is beneficial for the municipal council as they have to collect a less amount of degradable waste from the community. In order to popularize the composting practice, the community health assistants monitor the compost bins distributed by them providing knowledge to maintain the bins properly.

Considering the collected data, it was clear that the municipal council attempts to popular the composting among the residents using strategies such as providing a reasonable price rates providing awareness on composting and monitoring compost bins. In addition, they provide rewards, information, awareness and backup support. Yet, the involvement of the community is below the average level due to

the limited land area they live and the busy life style they spend. This finding is different from the previous study conducted in the Galle municipal council by Anthony and Bandara in 2008. As the study showed, the majority of residents actively participated in the composting program (Anthony and Banadara, 2008 cited in Bandara, 2011). Moreover, the level of participation is high among those who have large land areas. However, it is clear from the present study that fewer participation for composting is due to the limited land area where the residents lived.

Further, a study conducted by Lekammudiyane and Gunatilake (2010) shows that the waste disposed to the waste disposal sites were reduced after the introduction of the composting technology. When applying this matter to the present study, it was revealed that composting resulted in changing the waste disposal methods of the residents. More elaborately, the findings revealed that after the introduction of the programmes by the municipal council, a certain amount of resident handover only the non-bio degradable waste to the municipal council service. However, the majority of them handover both degradable and non-degradable waste to the municipal council service. This is a positive trend found in the study that the residents have an aspiration (even for a certain extent) to be responsible for the waste that they dispose. Related to the practice of composting, the municipal council is trying to familiarize the concept of recycling among the community.

## **6. Familiarizing the concept of Recycling**

The Kandy municipal council operates a special waste collection service which collects selective recyclable material from the community. This service mainly collects plastic, polythene, paper and cardboard. It attempts to minimize waste, together with social inclusion and generation of jobs for low-income earners (ibid). The Kandy municipal council has established collecting centers to collect recycling items within the limits of the municipal council. These centers are identified as, "*Sampath Piyasa*" and they are situated in Kandy, *Katugasthota* and *Gohagoda*. The center situated in Kandy mainly target the residents who live close to Kandy. It was established in 3<sup>rd</sup> February 2012 from a peti cash of Rs. 20,000. The centre is open for the community in all seven days from 10.30 a.m to 6.00 p.m. the main objective of the center include the reduction of the amount of waste going to the *Gohagoda* dumping site and thereby reducing environmental pollution.

The prices of the items are ever changing based on the market price. The collecting items are sold to the buyers of recycling items following a tender procedure. Cardboard, box boards, iron, tin and water bottles are mostly received from the people. The labourers of the Kandy municipal council



often sell items collected from the community. In addition, the governmental institutions bring their recyclable items to this place. However, the involvement of the community to use the recycling items is not in a satisfactory level.

The involvement of the community to use recycling items depends on their awareness of the centre. Nearly half of the residents know about the recycling items collecting centre. However, the majority of them do not know about it. The residents have mainly received the awareness from the municipal council on this regard. They have especially received knowledge from the community health assistants. Although the community is aware about the recycling items collecting centre, a less number of them sell their items to it. The main reason for this behavior of the residents is that they do not have much necessity to sell the recycling items as the municipal council collects all non-degradable waste during the weekends. Nevertheless, a preference is shown by the people own vehicles to use this collecting centre more than the others.

The majority of residents who have sold their items to the collecting centre are satisfied with its service. They also suggested to have a centre for their zone. However, the involvement of the community for the recycling items collecting centre is not in a satisfactory level.

Nevertheless, the study found that there are some objections related to the collection of recycling items. The labourers of the municipal council are the main sellers of the centre. They sell non-degradable waste material collected from the households. Nevertheless, the profit goes to labour welfare once again. It revealed that portion of profit earned by the centre is used for the welfare of the labourers even though collecting recycling items is not a popular activity among the residents. Apart from the recycling items collecting center, the municipal council has prohibited the open burning and dumping.

### **7. Prohibition of Open Burning and Open Dumping**

The Kandy municipal council prohibited has open burning within the limits of the municipal council. Although it is a common practice at present, it causes a set of environmental impacts by emitting environmentally harmful gasses and soot to the environment (Bandara, 2011).

Although open burning is prohibited, the residents are still practicing it. However, as the study found, half of the residents follow the rule imposed by the municipal council. Yet, another half of the residents still practice it. The residents mainly burn plant leaves as the municipal council does not collect branches and leaves which are being collected from the home gardens of the residents. Some residents burn polythene as well. It is linked with the ethnicity

of the residents. Muslims are engaged more in open burning than other two ethnic groups. This is because Muslims generate more waste and they have less awareness about the matter.

Open dumping is not found in the study area as it is prohibited in the area of the municipal council area. This was a common practice among the community before the introduction of the solid waste management program by the Kandy municipal council. As the study found, a certain amount of residents dumped their waste to the waste pits situated near to their houses and a very few of them dumped waste to the waste rooms situated near their houses. This practice has completely changed now. Yet, the officers of the municipal council mentioned that illegal waste throwing is still practiced by the outsiders of the Kandy municipal council area. Legal actions have been taken against them by the environment police with the support of the community health assistants and the residents by filing cases in the court after the investigations. The environment police has played a substantial role with minimum human and physical resources and also with fewer dignity in return. Three police officers are in charge of the whole Municipal Council. They are involved with the matters related to the environment, conduct investigations and provide advices to the people in the households and the business units. However, a study in Nigeria recorded different findings on poor waste management practices. Among the residents of Owerri municipal council, 62.4% of them engaged in open burning whereas 66.3% of them were engaged in open dumping (Adogu *et al.*, 2015). Nevertheless, this much of poor waste management practices were not found in the Kandy municipal council area due to the rules imposed by the municipal council. In addition, after the introduction of the solid waste management programme and a rule to prohibit open burning, there is a reduction in open burning practices.

Before the introduction of the solid waste management programme, few of the directly burned their waste directly. A certain amount of the residents followed mixed methods including burning. They burned both degradable and non-degradable material including plastic and polythene. Nevertheless, after the introduction of the solid waste management programme, this practice has changed and a majority of the residents burn leaves at present. However, nearly half of the residents still practice open burning although it is prohibited to do so.

Considering the current waste disposal practices of the community, the majority of them have built up a trust on services rendered by the municipal council. Their satisfaction towards the services of the municipal council is crucial to increase



the level of participation of the community for the programs organized by the municipal council.

#### **4.2. Trust and Satisfaction of the community towards the Municipal Council and its services for Solid Waste Management**

The satisfaction of the community towards the solid waste management services of the municipal council and their trust towards managing the solid waste problem effectively plays a vital role in increasing the level of participation of the community for solid waste management programs conducted by the municipal council. Hence, it is important to provide a satisfactory service for the community in order to increase their level of participation.

The majority of residents are satisfied with the service provided by the municipal council for solid waste management. It is caused due to the trust towards the municipal council for managing solid waste.

Nearly half of the residents trust the municipal council in managing Solid Waste. Yet, this rate is relatively low compared to the satisfaction of the services rendered by the municipal council. Since, a certain amount of residents had no idea and some others had complicated ideas towards managing solid waste by the municipal council.

Considering the above findings, the residents who trust the municipal council in managing the solid waste problem had an optimistic attitude towards the municipal council and its ongoing programs. Moreover, they suggested to continue these programs in the future as well. However, more than half of the residents represented a pessimistic or neutral attitude. Among them, some of them had complicated views. The main reason behind this finding is that the residents do not have a complete trust towards the municipal council as to whether they have enough ability to continue these programs in the future with necessary changes that should be adopted timely. The community especially does not have a clear idea about the final disposal activities of waste. Therefore, it is important for the municipal council to consider important matters and should address those using creative methods in order to achieve the trust of the community.

### **5. CONCLUSION**

The municipal council conducts several programs on solid waste management incorporating the community aiming to minimize amount of waste that is going to the final disposal site directing community participation and empowerment. The conduction of environmental education and public awareness programs are the main methods used in

this process. The municipal council conducts these programs targeting the community in dual ways with the use of its own strategies. The first way is organizing events based on environmental education. The municipal council organizes these types of events in order to disseminate the knowledge and practice them in real contexts. For that, they use creative methods in order to take attention of the general public including solid waste management. The second way is the conduction of continuous awareness programs on solid waste management targeting the residents, preschool children and school children. Door to door and community gathering methods were used to make the community aware on solid waste management programs conducted by them. The establishment of environment committee made this task easy by aiming more community participation. However, only a selected community often participated in these programs and few of the residents played active roles in the environment committee. Therefore, in real practice, environment committee is not much popular or not much effective among the community. The reason is that, the communication methods are not much powerful and do not use attractive methods to gather people for collective actions.

Waste separation is another ongoing solid waste management program conducted by the municipal council. The study found an active participation of the community towards waste separation by following the rules imposed by municipal council. However, it was not a wholehearted action, rather it appears mandatory, for them since the community does not have an alternative other than handing over the separated waste to the municipal council. Nevertheless, three facts; awareness programs, the behavior of the compactor driver and especially the monitoring procedure of the environment police were the positive causes for this satisfactory situation. Related to the waste separation programs, two other methods to store waste have been introduced by the municipal council. The waste bucket to store degradable waste until it was dispatched by the municipal council is the first method. The study found that it is much popular among the high-income groups, as it should be bought from the municipal council. The second method was colour bags to store non-degradable waste. It was revealed that the community does not have satisfactory involvement in using them due to the practical difficulties that they face. On the other hand, the labourers who handle handcarts and three wheels do not encourage the community to use them as the practical difficulties that they face when transferring waste from one to another.

The community shows an active participation for the programme of scheduled waste collection.



Their awareness on waste collecting days, collecting mode and informing method is satisfactory. Although the majority of residents have positive views towards the waste collection service of the municipal council, certain numbers have negative views too. The reasons, which were revealed by them, include the problems related to the audibility of the informing method, no regular waste collection, labourers not coming to collect waste from houses, less punctuality of the collection service and not collecting waste properly.

Popularizing the composting practice is another programme. The study found that, although the community has the awareness on composting, majority of them do not use it due to the lack of space to maintain a compost bin and their busy life style. However, the majority of the residents who have a compost bin are using the bins distributed by the municipal council.

Familiarizing the concept of recycling for the community is another program related to solid waste management. Aiming the task, the municipal council has established collecting centers of recycling items. However, the community awareness and usage is poor. The reason is the lack of necessity, since the municipal council collects waste. Moreover, prohibition of open burning is still practiced although the majority of them do not engage in it.

However, considering the community participation for all solid waste management programs, the study found that community participation is a kind of mandatory requirement rather than an intentional involvement.

Community health assistants are the main mediators who connect the municipal council and the community in relation to solid waste management. They play a facilitating role in environment committee, awareness programs, monitoring with environment police and monitoring compost bins. Also, they play a mediating role in day-to-day waste collecting problems. They are appointed to take quick actions for complains. Their role is to contribute to build optimistic communication between the community and the municipal council. Moreover, the labourers also like the community in relation to waste collecting as the majority of residents use to give benefits for their service having an optimistic attitude towards the service they offer.

Finally, all these relationships and services can be linked with the satisfaction of the community towards solid waste management services rendered by the municipal council and the trust of the community towards the municipal council in managing solid waste problem. The study found that the majority of residents are satisfied with the service. Yet, trust is relatively low, compared to the satisfaction they had

about the service as they had complicated views towards waste problem.

The study found various kinds of solid waste management programmes conducted by the municipal council and the involvement of the community and contribution towards them. With the introduction of the solid waste management program, the waste management practices of the community have changed and they tend to provide their waste to the service of the municipal council which caused to increase the trust towards the municipal council managing the solid waste problem. However, the community shows a less active participation for the collective actions rather than the individual actions if they do not receive any rewards with less or no empowerment. Even the individual actions appears to be a kind of mandatory requirement rather than a volunteer involvement.

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## **CAPITAL MARKET: IT'S EFFICACY ON NIGERIAN INDUSTRIAL GROWTH**

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### **ABSTRACT**

*This study examined the impact of capital market on industrial growth in Nigeria, using time series data for the period 1986-2018. The co-integration and error correction model was employed for the empirical analysis and the selected variables were found to be co-integrated, suggesting that significant long run relationship prevailed among the variables of study. The empirical result of the error correction model revealed that Market Capitalization (MCAP) and All Share Index (ASI) exert positive and significant influence on industrial growth in Nigeria while Value of Transactions (VTS) exert negative and significant influence on industrial growth in Nigeria during the period of study. The significant influence of MCAP and ASI on Industry Growth indicates that they are strong capital market indices which are capable of accelerating industrial growth in Nigeria, if efficiently administered. The study therefore recommended that the Value of Transactions (VTS) should be increased in the capital market through the sale of alternative investment securities such as derivatives, convertibles, futures, swaps and options. Also, government should restore investors' confidence in the market by ensuring regulatory authorities portray efficiency, transparency, fair trading transactions and deal on in the stock market so as to drive the growth of the industrial sector in the country. Above all, tax holiday and other incentives should be given by the government to encourage foreign and local companies to list in the Nigerian Stock Exchange.*

**KEYWORDS:** *Market Capitalization, All Share Index, Value of Transactions, Industry Value Added, Nigeria*



## 1. INTRODUCTION

The role of capital market for business, industrial and economic growth of a country has been recognized by researchers, academics, investors, economists and policy makers around the globe. Capital market is a segment of the financial in which long term financial instrument with maturity in excess of one year are transacted (Ekiran, 1999). Capital market can be described as an aggregate of institution and mechanism through which long term funds are mobilized for investment purposes. It is a network of financial institution and infrastructures that interact to mobilize and allocate long term funds for the economy.

Capital market is a prime tool that drives the economy on the path to growth and development. It is the strong hub for long term investment and capital formation. In Nigeria, capital market provides government and listed companies opportunities to raise long-term capital to meet their need for long term project and expansion in business. The market also provides portfolio diversification which allows investors to maximize returns on theirs and reduce risks. With the provision of equity capital, the market reduces the over reliance of corporate sector on short term financing for long term projects and also provide opportunities for government to finance projects aimed at providing essential amenities in the country.

In Nigeria, empirical evidence from previous studies have shown that capital efficacy- industrial growth nexus has not been well researched. To the best of the researchers knowledge, studies carried out by Owolabi and Adegbite (2012); Shaibu, Osemwengie and Oseme (2014); Ifionu and Omojefe (2013); Okpoto (2015); Obiakor (2016), Ologunwa and Sadibo (2016); Taiwo, Adedayo and Evawere (2016); Odo, Anoke, Onyeisi and Chukwu (2017) and Ugbogbo and Aisien (2019) all examined capital market in relation to economic growth, with exception to Ibi, Joshua, Eja, and Olatunbosun (2015) and Owui (2019) that examines the impact of capital market (industrial loan, equity, market capitalization) on industrial sector development in Nigeria using industrial production index as proxy for industrial growth. Therefore, this paper bridges the gap by regressing Industry Value Added (IVA) variable against the explanatory variables. The IVA is found to be an International standard for capturing the manufacturing sector, mining, construction as well electrical operations in the economy (World Bank, 2018; OECD, 2018).

The objective of this study is to empirically examine the efficacy of capital market indices on industrial growth in Nigerian economy for the period

1986-2018 using co-integration analysis and error correction estimation model. Specifically the study aims to:

- i) Ascertain the influence of market capitalization on industry value added in Nigeria.
- ii) Investigate the nature of relationship between value of transactions and industry value added in Nigeria.
- iii) Determine the nature of relationship between all shares index and industry value added in Nigeria.

The rest of the study is structured as follows: Section two reviews the literature relating to capital market and industrial growth. Section three presents the methodology and model specification. Section four discusses the empirical results while section five presents the concluding remarks and recommendations.

## 2.1 CONCEPTUAL ISSUES

Capital market is a market where buyers and sellers meet to exchange a unique intrinsic commodity - shares, stocks, bonds- for the purpose of raising long-term capital for the modernization and expansion of projects by companies, governments, and allied parastatals (Obiakor, 2016). According to Ajayi and Odetayo (2001), capital is a market for sales and purchases of medium and long term securities. Osasze (2007) asserts that capital market is a segment of the financial system that accommodates certain institutions for the creation, custodianship, distribution and exchange of financial assets and management of long term liabilities and gross fixed capital formation. The participants in the capital market are brokers and dealers, issuing houses registrars, trustees and portfolio managers, investment advisors and securities exchanges that supervise the operations of the market.

Capital market is expected to have depth and breadth, price continuity and liquidity and above all to operate freely from all impediment. It channels savings and investment between suppliers of capital such as retail investors and institutional investors, users of capital like businesses, government and individuals. Capital market activities are segmented into primary and secondary market. The primary market is the market where new securities are traded while secondary market is the market where existing securities are traded. The secondary market provides opportunity for owners of shares or bonds to sell their holding quickly, thus assuring them high level of liquidity, which also enhance the effectiveness of the primary market. The capital market encourages the inflow of foreign capital



when foreign companies or investors invest in domestic securities. It also provides a means of allocating the nation's real and financial resources between various industries and companies (Osaze, 2007). On the contrary, industrial growth represent a deliberate and sustained application and combination of suitable technology, management and other resources to move an economy from a traditional low level of production to a more unformatted and efficient system of mass production of goods and services (Owui, 2019).

## 2.2 THEORETICAL FRAMEWORK

### a) Efficient Market Hypothesis (EMH)

The efficient Market Hypothesis (EMH) which was developed by Fama (1965) is an academic concept which provides a framework for examining the efficiency of the capital market. The theory states that an efficient market is one in which security prices adjust rapidly to the infusion of new information and that current stock prices fully reflect all relevant and available information about the affected security at any given time. Fama classified the efficient market hypothesis into the weak –form, semi-strong form and strong-form market efficiency, each depending on the nature of information available to each participant test of efficiency.

The weak-form of market efficiency postulates that current stock prices fully reflect all information implied by its historical sequences of prices, such that investors cannot use the knowledge of historical pricing trends to predict future price of the asset nor consistently beat the market to earn superior high return or profit. The semi-strong form of market efficiency proposes that current stock prices correctly reflect all publicly available information about the firm issuing the security, implying that no investor can use fundamental analysis of the securities to earn abnormal profit or above average returns in the market. The strong-form of market efficiency theorizes that current stock prices reflect all publicly and private information about the securities such that those who have access to privileged information or what might be considered insider information cannot use such information to earn superior returns or high profit in the market.

### b) Random Walk Theory

This is a financial theory popularized by Malkiel in 1973 in which the successive price movement of stocks in the market are assumed to be serially independent of each other and knowledge of the historical price of a security cannot be reliably used to predict the size or direction of future price movement using fundamental or technical analysis. The theory

holds that stock prices fluctuate randomly about their intrinsic value and that current stock prices fully reflect all available information about a security so much that an investor cannot outperform the market consistently. The protagonists of this approach advocate a buy and hold strategy as oppose to an attempt to beat the market, hence, the random walk hypothesis is a special case of the more general efficient market hypothesis (Fisher and Jordan, 1995; Owui, 2019).

### c) Fundamental analysis

This is an evaluation technique that was championed by Graham and Dodd in 1934 in which the authors argue that the intrinsic value or true worth of a security is estimated from a thorough analysis of underlying factors related to the economy, industry and company specify variables that affect the security. The theory posits that every security at any point in time has an intrinsic or true value, which is reflected in its market price and in principle, should be equal to the discounted value of all present value of dividends and future earnings or streams of income to that security. The fundamentalists believe that stock price movements can be explained and predicted in terms of the expectation of the investing public in regards to future dividends, earnings, growth rates and investment opportunities (Philippatos, 1973). The fundamentalists assume that current observable market price of a security differs from its intrinsic value; hence investors seek to profit from the market by trading on mispriced assets.

### d) Technical Analysis

This is an analytical approach that eschews the basic notion of intrinsic values for securities. The protagonists of this approach assert that psychological and other factors like investors emotion significantly determine the behavior of stock prices in the market. They argue that stock prices are determined by the forces of demand and supply in the market place and future prices of securities are observable, chartable and follow identifiable, self sustaining and recurrent pattern which constitute the basis for formulating profitable trading rules in the market. In fact users of this approach rely on market patterns to provide signals for timing market transactions to maximum advantage (Okafor, 1983; Osuala, 2011; Ogbulu, 2016).

## 2.3 EMPIRICAL REVIEW

Kolapo and Adaramola (2012) examine the impact of the Nigerian capital market on its economic growth using annual as a proxy for economic growth



and considered Market Capitalization (MCAP), Total New Issues (TNI), Value of Transactions (VLT), and Total Listed Equities and Government Stocks (LEGS) as proxies for capital market variables. Applying Johansen co-integration and Granger causality tests, results show that the Nigerian capital market and economic growth are co-integrated, implying that a significant long-run relationship exist between the study variables. The causality test results evidenced a bi-directional causality between GDP and the value of transactions (VLT) and uni-directional causality between Market capitalization and GDP and not vice versa. Besides there is no causation between GDP and total new issues (TNI) as well as GDP and LEGS. The study recommends that regulatory authorities should initiate policies that would encourage more companies to access the market and also to be more proactive in their surveillance role in order to check sharp practices which undermine market integrity and erode investors' confidence.

Victor, et al (2013) examines whether the growth of the Nigerian capital market has any significant impact on the growth and development of the industrial sector as well as the economy as a whole. The study examines the relationships between capital market and the industrial sector, such as the proportion of manufacturing sector in total market capitalization, or the relationship between GDP and market capitalization, manufacturing index, new issues, market access to credit, trading values etc. so as to determine the types of influence exerted on the industrial sector by the capital market. The review of available literature indicates that the capital market is a common feature in any modern economy and is reported to promote the growth and development of the real sector in our case there are indication of positive links between the stock market and industrial sector development but the impact has been severely limited by adverse economic environment such as poor economic infrastructures, bureaucratic bottlenecks corruption and poor corporate governance, regulatory and supervisory frameworks. To improve the situation the paper suggests the removal of stringent factors which impedes capital market development such as Improvement of the financial systems infrastructures and the general economic infrastructure. Besides, sound economic policies should be instituted to stabilize the economy and improve the savings and investment culture

By adopting multivariate co-integration and error correction model, Yadirichukwu and Chigbu (2014) investigate the impact of capital market on economic growth using secondary data covering 1985 - 2012. The study reveals that New Issues and Value of

Transactions exert positive and significant relationship with GDP while market capitalization and Total listing exert insignificant and negative relationship with GDP. The study recommends that relevant regulatory agencies should focus on enhancing efficiency and transparency of market to improve investor's confidence.

Ibi, Joshua, Eja and Olatunbosun (2015) examined the relationship between capital market and industrial sector development in Nigeria, utilizing annual time series data covering the period from 1980 to 2012. The study employed econometric techniques such as the unit root test, co-integration test, granger causality test and the error correction mechanism (ECM) in estimating relevant relationships among the variables. The results of the co-integration test showed the prevalence of significant long run equilibrium relationship among the variables. The results of the granger causality test confirmed that there is a bi-directional relationship between industrial output and market capitalization and between industrial output and number of deals, but a unidirectional causality running from industrial sector development to value of transaction. The results of the short run dynamics revealed that capital market has positive and significant impact on industrial output in Nigeria via market capitalization and number of deals. On the other hand, value of transaction has negative and significant impact on industrial output in Nigeria during the period of the study. The results further showed that real gross domestic product has a positive and significant impact on industrial output in Nigeria, while exchange rate and gross domestic investment have negative and significant relationship with industrial output in Nigeria. The study recommends that the government should implement appropriate reform policies that aim at ensuring efficiency in the operations of the Nigerian stock market. Besides is the need to reduce the cost of raising capital by firms and other bureaucratic delays which could limit the use of capital market as veritable source of raising funds for investment in Nigeria.

Okpoto (2015) by applying the Augmented Dickey Fuller unit root test, the Johansen co-integration and Error correction mechanism (ECM) technique examines the impact of capital market on economic growth in Nigeria over the period 1980-2013. The study used Gross Domestic Product (GDP) as proxy for economic growth and considered market capitalization (MCAP), total holdings of development stock (TDS) and total value of transaction (TVT) as proxies for capital market variables. The results showed that all the variables became stationary at first difference and that capital market and economic growth are co-integrated,



implying that a significant long-run relationship exist between the variables. The Error correction mechanism test results reveal that increase in the activities of Nigerian capital market with specific emphasis on total value of transaction (TVT) significantly boost output in the country while the coefficient of MCAP and TDS were not.. The study recommends that regulatory authority should initiate policies that would encourage more companies to access the market and also be more proactive in their surveillance role in order to monitor sharp practices which undermine market integrity and investors' confidence.

Obiakor (2016) explored the nexus between capital market and economic growth in Nigeria, using time series covering 1985-2015. Economic growth variable was proxied by gross domestic product (GDP) while capital market indices were proxied by Market capitalization (MCAP), Value of transactions (VTS) and All-Shares Index (ASI). Results confirmed that market indices had heterogeneous effects on the growth of the economy but on aggregate, capital market development significantly induced growth of the economy during the study period. The paper concludes that capital market development spurs economic growth, and hence recommend for sustained development of the capital market.

In yet another study, Ologunwa and Sadibo (2016) adopting a structural dynamic model examine the relationship between capital market development and economic growth in Nigeria for the period 1986 to 2014. The study found that capital market ratio and turnover ratio exert positive and significant effect on economic growth in Nigeria and that stock markets affect economic growth through savings mobilization. The researchers assert that large, liquid and efficient stocks markets ease savings mobilization, hence recommends that the stock market should be kept in a manner to attract foreign investors into the country.

Taiwo, Adedayo and Evawere (2016) evaluate the contribution of capital market to the growth of Nigeria's economy. Using Vector Error Correction techniques on annual time series data spanning from 1981 to 2014, the result reveals that market capitalization rate, total value of listed securities, labor force participation rate, accumulated savings and capital formation are significantly determine economic growth in Nigeria. The study recommends that capital market environment should be enabled to promote and encourage investment opportunities for both local and international investors, since the stock market operates in a macroeconomic environment.

Ugbogbo and Aisien (2019) by employing co-integration and error correction model examined the

impact of capital market development on economic growth using time series data for the period 1981-2016. The result of the co-integration test indicates that the variables are co-integrated, implying that significant long run relationship prevailed among them. The empirical result revealed that capital market development has significant and positive impact on economic growth in Nigeria both in the short run and in the long run. The study above all recommends that government should inject in to the market and to implement appropriate reform to ensure a reliable and efficient stock market trading in Nigeria.

Owui (2019) examines the impact of capital market indicators (industrial loan, equity, market capitalization) on industrial sector financing in Nigeria using data obtained from Central Bank statistical Bulletin and Nigerian stock Exchange fact book .The study relied on ordinary least squares of multiple regression statistical technique and found that industrial loan and market capitalization have significant and positive impact on the growth of industrial sector financing in Nigeria but did not find any significant impact between equity and the growth of industrial sector financing in Nigeria. The study recommend that Market capitalization should be looked into so as to improve on current share price and total number of stocks and that percentage ratio should be properly monitored during company's investment. Finally government should properly guide the activities of companies that are quoted on the nation's stock exchange.

From the reviewed empirical works, it is evident that capital market positively influences economic activities in Nigeria. Although most authors anchored their research on the influence of capital market on economic growth as captured in the studies by Ologunwa and Sadibo (2016); Taiwo, Adedayo and Evawere (2016); Ugbogbo and Aisien (2019), Owui (2019) examines the impact of capital market indicators (industrial loan, equity, market capitalization) on industrial sector financing in Nigeria, using industrial production index as a proxy for industrial growth. This therefore creates a gap in literature, necessitating Industry Value Added (IVA) variable to be employed against the explanatory variables. The IVA is found to be an International standard for capturing the manufacturing sector, mining, construction as well as electrical operations in the economy (World Bank, 2018; OECD, 2018).Consequently, this study is undertaken to examine the impact of capital market on Nigerian industrial growth.



### 3. MATERIALS AND METHODS

This paper hinges on hypothetical deductive ex-post facto research design as it relied on annual time series data set over the period 1986-2018 to analyze the efficacy of capital market indices on industrial growth in Nigeria. The absolute values of the annual data on a Industrial growth the dependent variable and proxy for Industry Value Added (IVA) was regressed on Market Capitalization (MCAP), Value of Transactions (VTS) and all Share Index (ASI) the independent variables and proxies for capital market indices. The time series data sets for the study were drawn from Central Bank of Nigeria Statistical Bulletin and International Standard Industrial Classification by World Bank. Industry value added (IVA) is used in this study to measure the value of industrial growth in Nigeria since IVA gives the annual increase in industrial production which includes manufacturing, mining, energy & public utilities, and construction. The study relied on Co-integration and Error Correction Model (ECM) technique to achieve its objective. The unit root test is also conducted in the study to ascertain the time series properties of all the variables as well as to avoid spurious result. The choice of these statistical tools is prompted by the desire of the researchers to ensure that the time series data sets are free from spurious result and also to addresses the issue of integrating short-run dynamic with long-run equilibrium.

To empirically analyze the efficacy of capital market on industrial growth in Nigeria within the study

period, the model for this study is specified in line with of Okpoto (2015); Ibi, Joshua, Eja and Olatunbosun,2015; Obiakor (2016) and Owui (2019). The functional notation of this model is implicitly specified as follows:

$$IVA = F (MCAP, VTS, ASI) \dots\dots\dots (1)$$

Where;

- IVA = Industry, Value Added
- MCAP = Market capitalization
- VTS = Total Value of Transactions
- ASI = All Share Index

By linearizing the model from its functional form is given as:

$$IVA = \alpha_0 + \alpha_1 MCAP + \alpha_2 VTS + \alpha_3 ASI + e \dots\dots\dots (2)$$

Where;

- $\alpha_0$  = Régression constant
- $\alpha_1 - \alpha_3$  = Regression coefficient
- e = Stochastic error term
- $\alpha_1, \alpha_2, \alpha_3 > 0$

### 4. RESULTS AND DISCUSSION

#### 4.1 Unit Root Tests

The unit root test was conducted in the study to ascertain the stationarity of the variables using the Augmented Dickey-Fuller (ADF) test. The result of the unit root test is shown in table 1 below:

**Table 1: ADF Stationarity (Unit Root) Test Result**

Variable	ADF test statistic	Critical Value			Order of Integration	Prob.
		1%	5%	10%		
IVA	-4.379353	-4.284580	-3.562882	-3.215267	I(1)	0.0080
MCAP	-5.220093	-4.323979	-3.580623	-3.225334	I(1)	0.0012
VTS	-5.847430	-4.323979	-3.580623	-3.225334	I(1)	0.0003
ASI	-5.613148	-4.296729	-3.568379	-3.218382	1(1)	0.0004

Source: E-view (Version 10) Output on 1986 to 2018 Data

N/B: Critical Values at 5% is Considered Significant

The ADF Unit root result in table 1 shows that all the variables became stationary at first difference given that the ADF statistic value for each of the variables is greater than the critical values in absolute terms and at various level of significance (1%,5% and 10%) respectively. On the basis of this result we proceed to estimate the presence or other wise of long-run relationship among the variables using Johansen co-integration test.

#### 4.2 Co-integration Test

Having established that the variables are integrated at order one I (1), we tested for the existence of long run relationship among the variables using the Johansen multivariate co-integration analysis based on trace test and maximum eigenvalue test. The result of the co-integration test is presented in table 2 below:

**Table 2: Johansen Co-integration Test Result**

Date: 11/04/19 Time: 11:13  
 Sample (adjusted): 1989 2018  
 Included observations: 30 after adjustments  
 Trend assumption: Linear deterministic trend  
 Series: D(IVA) D(MCAP) D(VTS) D(ASI)  
 Lags interval (in first differences): 1 to 1

**Unrestricted Cointegration Rank Test (Trace)**

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value
None *	0.834876	88.54064	47.85613
At most 1 *	0.545850	34.50888	29.79707
At most 2	0.284166	10.82902	15.49471
At most 3	0.026309	0.799827	3.841466

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level

\* denotes rejection of the hypothesis at the 0.05 level

\*\*MacKinnon-Haug-Michelis (1999) p-values

Source: E-view (Version 10) Output on 1986 to 2018 Data

From table 2, the result of the Johansen's co-integration analysis based on trace statistics shows two co-integrating equations which imply that the variables are co-integrated and that significant long-run relationship exists between the various indicators of capital market and industrial growth in Nigeria. We therefore reject the null hypothesis of no co-integration and proceed to determine the adjustment for the discrepancies between the long-run and short-run

interaction of the times series using error correction estimation mechanism.

**4.3 Error Correction Mechanism**

The error correction mechanism (ECM) is used in this study to determine the speed or rate at which the dependent variable will adjust to changes in the independent variables. The error correction mechanism result is therefore presented in table 3 below:

**Table 3: Error Correction Estimate Output for the Model**

Dependent Variable: D(IVA)  
 Estimation Method: Least Squares  
 Date: 11/04/19 Time: 11:21  
 Sample (adjusted): 1989 2018  
 Included observations: 30 after adjustments

Variables	Coefficient	Std. Error	t-Statistic	Prob.
<b>ECM(-1)</b>	-0.119213	0.02163	-5.51266	0.0000
<b>D(MCAP)</b>	0.437613	0.20516	2.13303	0.0355
<b>D(VTS)</b>	-1.035026	0.39547	-2.61724	0.0103
<b>D(ASI)</b>	0.136221	0.04229	3.22138	0.0017
<b>Constant</b>	-54.99115	175.384	-0.31355	0.7545
<b>R-Squared</b>	0.784857	<b>Log likelihood</b>	-245.0518	
<b>Adj. R<sup>2</sup></b>	0.740035	<b>Akaike Info Criterion</b>	16.73678	
<b>Sum Sq. resid</b>	21858605	<b>Schwarz Criterion</b>	17.01702	
<b>S. E. equation</b>	954.3454	<b>Mean dependent Var</b>	49.77113	
<b>F-Statistic</b>	17.51074	<b>S.D. dependent Var</b>	1871.753	
<b>Prob(F-stat)</b>	0.000022	<b>Durbin-Watson stat</b>	1.552794	

Source: E-view (Version 10) Output on 1986 to 2018 Data

From the ECM result presented in table 3 above, the coefficient of  $-0.119213$  show that the error correction term is correctly signed and significant, implying that the discrepancies between the short-run and long-run equilibrium can be corrected each year by the tone or speed of 11.9 percent. The F- statistics with the p-value of 0.000022 shows that the regression is statistically significant and the model has a good fit. The coefficient of determination of 0.784857 shows that about 78.5 percent of the total variation in Industrial growth as proxied by Industry Value Added (IVA) is jointly explained by the variation in capital market variables within the study period while the remaining 21.5 percent variation is attributed to other factors not included in the model. This implies that capital market indices exhibited high power in explaining the variations in the growth of Nigerian industrial sector.

Analysis of the short- run estimates showed that both Market Capitalization (MCAP) and All Share Index (ASI) have positive and significant relationship with Industry growth in Nigeria within the study period to the extent that a one percent increase in MCAP and ASI will all things being equal increase the growth of industrial sector in Nigeria by 0.44 and 0.14 percent respectively. The implication of the result is that MCAP and ASI are important capital market indices

that drive the growth of industrial activities in Nigeria, thereby spurring economic growth and development in terms of employment generation and improvement in standard of living. This finding agrees with a priori expectation and therefore supports the empirical submission of Ebi, Joshua, Eja and Olutunbosun (2015) and Owui (2019) that capital market variables have positive and significant relationship with industrial growth in Nigeria. On a contrary expectation, the Value of Transactions (VTS) showed a significant and negative relationship with industrial growth in Nigeria to the extent that a one percent increases in VTS will lead to a decrease in industrial growth with about 1.04 percent during the study period. The results imply that the value of transaction (VTS) has not been efficiently utilized for the growth of industrial output in Nigeria during the study period. This finding is consistent with previous study by Ibi, Joshua, Eja and Olatunbosun (2015); Owui (2019) where the value of transactions (VTS) had negative and significant impact on industrial output in Nigeria during the evaluation period.

## 5. CONCLUSION AND RECOMMENDATIONS

This paper set out to empirically examine the efficacy of capital market indices such as market capitalization (MCAP), Value of transaction (VTS) and



all share index (ASI) on industry value added (IVA) in Nigeria for the period 1986-2018. The study adopted the Augmented Dickey-Fuller (ADF) unit root test, co-integration analysis and error correction model estimation techniques. The results of the unit root test reveal that all the variables achieved stationarity at first difference at the order of 1(1). The co-integration test showed that the variables are co-integrated, implying that significant long-run relationship exist between the study variables. From the ECM result, market capitalization (MCAP) and all share index (ASI) prove to have positive and significant relationship with industrial growth in Nigeria while the value of transaction (VTS) has a negative and significant relationship with industrial growth during the study period. The implication of the result is that MCAP and VTS are important capital market indices that drive industrial growth and development in Nigeria. Based on the above results, the study recommends that the value of transactions in the capital market should be increased through the sale of alternative investment securities such as derivatives, convertibles, futures, swaps and options. Government should restore investors' confidence in the market by ensuring regulatory portray efficiency, transparency, fair trading transactions dealings in the market which has the capacity to drive the growth of industrial sector in Nigeria. Also, considerable attention should be given to market capitalization and all share index so as to improve current share price and total number of stocks. Besides, foreign and local companies should be encouraged to list in the Nigerian stock exchange through the provision of tax holiday, reduction in transaction cost and other incentives.

### Contribution of study

In attempt to examine the efficacy of capital market on industrial growth in Nigeria, the Industry Value Added (IVA) variable was employed as a proxy for industrial growth in Nigeria in relation to the explanatory variables (Market Capitalization, Value of Transactions and All Share Index). The IVA is an International standard for capturing the manufacturing sector, mining, construction and electrical operations in the economy (World Bank, 2018; OECD, 2018). Hence, the activities of the manufacturing, mining, construction and power sectors have greatly been promoted by the operations of the capital market especially, market capitalization and all share index in Nigeria.

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## APPENDIX

### Appendix 1: Data of Employed Variables

Year	IVA	MCAP	VTS	ASI
	N' B	N' B	N' B	N' B
1986	18.78027	6.8	0.4979	163.8
1987	37.14856	8.2	0.3824	190.9
1988	44.21466	10	0.8503	233.6
1989	94.51812	12.8	0.6103	325.3
1990	121.12000	16.3	0.2254	513.8
1991	142.82500	23.1	0.2421	783
1992	282.27000	31.2	0.4917	1107.6
1993	291.92600	47.5	0.8044	1543.8
1994	295.68300	66.3	0.9859	2205
1995	889.58400	180.4	1.8388	5092.2
1996	1311.27000	285.8	6.9796	6992.1
1997	1236.73000	281.9	10.3305	6440.5
1998	908.93300	262.6	13.5711	5672.7
1999	1209.19000	300	14.072	5266.4
2000	2392.12000	472.3	28.1531	8111
2001	1931.23000	662.5	57.6838	10963.1
2002	2109.53000	764.9	59.4067	12137.7
2003	3119.01000	1359.3	120.4026	20128.94
2004	4802.99000	2112.5	225.82	23844.5
2005	6340.06000	2900.06	262.9358	24085.8
2006	7781.69000	5120.9	470.2534	33189.3
2007	8397.62000	13181.69	1076.02	57990.2



2008	10078.80000	9562.97	1679.144	31450.78
2009	8480.91000	7030.84	685.7173	20827.17
2010	13826.40000	9918.21	799.911	24770.52
2011	17853.10000	10275.34	638.9257	20730.63
2012	19587.70000	14800.94	808.9942	28078.81
2013	20853.80000	19077.42	2350.876	41329.19
2014	22213.00000	16875.1	1338.601	34657.15
2015	19188.60000	17003.39	978.0471	28642.25
2016	18641.20000	16185.73	620.018	26874.62
2017	18969.10000	21128.9	1078.492	38243.19
2018	20469.30000	21904.04	1284.976	31430.5

Source: CBN Statistical Bulletin, 2018 and World Bank Report, 2018.

### Appendix 2: Error Correction Model Results

Vector Error Correction Estimates

Date: 11/04/19 Time: 11:21

Sample (adjusted): 1989 2018

Included observations: 30 after adjustments

Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1			
D(IVA(-1))	1.000000			
D(MCAP(-1))	3.374341 (1.14899) [ 2.93679]			
D(VTS(-1))	-25.10214 (5.79187) [-4.33403]			
D(ASI(-1))	1.534275 (0.25896) [ 5.92471]			
C	-4050.674			
Error Correction:	D(IVA,2)	D(MCAP,2)	D(VTS,2)	D(ASI,2)
CointEq1	-0.119213 (0.02163) [-5.51266]	-0.128190 (0.05922) [-2.16460]	-0.003850 (0.01039) [-0.37052]	-0.706635 (0.22175) [-3.18660]
D(IVA(-1),2)	-0.290788 (0.10110) [-2.87611]	0.191125 (0.27688) [ 0.69029]	0.000184 (0.04859) [ 0.00379]	0.279116 (1.03675) [ 0.26922]



D(MCAP(-1),2)	0.437613 (0.20516) [ 2.13303]	-0.415978 (0.56183) [-0.74039]	0.216377 (0.09859) [ 2.19475]	0.143757 (2.10377) [ 0.06833]
D(VTS(-1),2)	-1.035026 (0.39547) [-2.61724]	-2.619392 (1.08299) [-2.41868]	-0.925075 (0.19004) [-4.86784]	-7.988183 (4.05520) [-1.96986]
D(ASI(-1),2)	0.136221 (0.04229) [ 3.22138]	0.228190 (0.11580) [ 1.97051]	-0.013560 (0.02032) [-0.66730]	0.512918 (0.43362) [ 1.18288]
C	-54.99115 (175.384) [-0.31355]	46.10227 (480.292) [ 0.09599]	-9.510337 (84.2797) [-0.11284]	-326.8713 (1798.43) [-0.18175]
R-squared	0.784857	0.497344	0.632079	0.508239
Adj. R-squared	0.740035	0.392624	0.555429	0.405788
Sum sq. resids	21858605	1.64E+08	5047629.	2.30E+09
S.E. equation	954.3454	2613.486	458.6043	9786.104
F-statistic	17.51074	4.749277	8.246281	4.960832
Log likelihood	-245.0518	-275.2742	-223.0666	-314.8826
Akaike AIC	16.73678	18.75161	15.27111	21.39217
Schwarz SC	17.01702	19.03185	15.55135	21.67241
Mean dependent	49.77113	25.77800	6.867203	-228.5130
S.D. dependent	1871.753	3353.447	687.8084	12695.19
Determinant resid covariance (dof adj.)		2.62E+24		
Determinant resid covariance		1.07E+24		
Log likelihood		-1000.257		
Akaike information criterion		68.55046		
Schwarz criterion		69.85825		
Number of coefficients		28		



System: ECMPROB  
 Estimation Method: Least Squares  
 Date: 11/04/19 Time: 11:22  
 Sample: 1989 2018  
 Included observations: 30  
 Total system (balanced) observations 120

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.119213	0.021625	-5.512658	0.0000
C(2)	-0.290788	0.101105	-2.876108	0.0050
C(3)	0.437613	0.205160	2.133027	0.0355
C(4)	-1.035026	0.395465	-2.617237	0.0103
C(5)	0.136221	0.042287	3.221376	0.0017
C(6)	-54.99115	175.3842	-0.313547	0.7545
C(7)	-0.128190	0.059221	-2.164597	0.0329
C(8)	0.191125	0.276877	0.690288	0.4917
C(9)	-0.415978	0.561834	-0.740392	0.4609
C(10)	-2.619392	1.082986	-2.418676	0.0175
C(11)	0.228190	0.115802	1.970510	0.0517
C(12)	46.10227	480.2917	0.095988	0.9237
C(13)	-0.003850	0.010392	-0.370519	0.7118
C(14)	0.000184	0.048585	0.003787	0.9970
C(15)	0.216377	0.098588	2.194753	0.0306
C(16)	-0.925075	0.190038	-4.867841	0.0000
C(17)	-0.013560	0.020321	-0.667296	0.5062
C(18)	-9.510337	84.27968	-0.112843	0.9104
C(19)	-0.706635	0.221752	-3.186601	0.0019
C(20)	0.279116	1.036755	0.269221	0.7883
C(21)	0.143757	2.103769	0.068333	0.9457
C(22)	-7.988183	4.055201	-1.969861	0.0517
C(23)	0.512918	0.433618	1.182880	0.2398
C(24)	-326.8713	1798.435	-0.181753	0.8562
Determinant residual covariance		1.07E+24		

$$\text{Equation: } D(\text{IVA},2) = C(1) * ( D(\text{IVA}(-1)) + 3.37434129827 * D(\text{MCAP}(-1)) - 25.1021446812 * D(\text{VTS}(-1)) + 1.53427533761 * D(\text{ASI}(-1)) - 4050.67428746 ) + C(2) * D(\text{IVA}(-1),2) + C(3) * D(\text{MCAP}(-1),2) + C(4) * D(\text{VTS}(-1),2) + C(5) * D(\text{ASI}(-1),2) + C(6)$$

Observations: 30

R-squared	0.784857	Mean dependent var	49.77113
Adjusted R-squared	0.740035	S.D. dependent var	1871.753
S.E. of regression	954.3455	Sum squared resid	21858606
Durbin-Watson stat	1.552794		

$$\text{Equation: } D(\text{MCAP},2) = C(7) * ( D(\text{IVA}(-1)) + 3.37434129827 * D(\text{MCAP}(-1)) - 25.1021446812 * D(\text{VTS}(-1)) + 1.53427533761 * D(\text{ASI}(-1)) - 4050.67428746 ) + C(8) * D(\text{IVA}(-1),2) + C(9) * D(\text{MCAP}(-1),2) + C(10)$$



$$*D(VTS(-1),2) + C(11)*D(ASI(-1),2) + C(12)$$

Observations: 30

R-squared	0.497344	Mean dependent var	25.77800
Adjusted R-squared	0.392624	S.D. dependent var	3353.448
S.E. of regression	2613.487	Sum squared resid	1.64E+08
Durbin-Watson stat	2.001874		

$$\text{Equation: } D(VTS,2) = C(13)* ( D(IVA(-1)) + 3.37434129827*D(MCAP(-1)) - 25.1021446812*D(VTS(-1)) + 1.53427533761*D(ASI(-1)) - 4050.67428746 ) + C(14)*D(IVA(-1),2) + C(15)*D(MCAP(-1),2) + C(16) *D(VTS(-1),2) + C(17)*D(ASI(-1),2) + C(18)$$

Observations: 30

R-squared	0.632079	Mean dependent var	6.867203
Adjusted R-squared	0.555429	S.D. dependent var	687.8083
S.E. of regression	458.6042	Sum squared resid	5047629.
Durbin-Watson stat	2.224347		

$$\text{Equation: } D(ASI,2) = C(19)* ( D(IVA(-1)) + 3.37434129827*D(MCAP(-1)) - 25.1021446812*D(VTS(-1)) + 1.53427533761*D(ASI(-1)) - 4050.67428746 ) + C(20)*D(IVA(-1),2) + C(21)*D(MCAP(-1),2) + C(22) *D(VTS(-1),2) + C(23)*D(ASI(-1),2) + C(24)$$

Observations: 30

R-squared	0.508239	Mean dependent var	-228.5130
Adjusted R-squared	0.405788	S.D. dependent var	12695.19
S.E. of regression	9786.104	Sum squared resid	2.30E+09
Durbin-Watson stat	2.033866		



# EFFECTS OF CAPITAL STRUCTURE, PROFITABILITY AND FIRM SIZE TOWARDS EARNING MANAGEMENT IN MANUFACTURING COMPANIES

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## ABSTRACT

*This study aims to examine the effect of capital structure, profitability and company size on earnings management. The population in this study is companies with manufacturing types listed on the Indonesia Stock Exchange in the period 2013 to 2017. Samples were obtained using a purposive random sampling method. Data analysis uses fixed effects. The results showed that the capital structure, profitability and size of the company affect earnings management*

## INTRODUCTION

The development of the state of the economy in Indonesia is still not stable in line with the presidential election event, so the manufacturing industry market is currently experiencing a decline from the previous year. According to Arif (2016), influencing factors are due to a decrease in demand in key markets, increasing global trade tensions and the need to stay at the forefront of future technology. The manufacturing industry has become one of the important sectors in the development of a fairly stable national economy and is supporting the economy with a positive growth rate. With the current challenges, both internal and external challenges, the government needs to implement several strategies. These strategies are focused on how to create a manufacturing industry that is resilient to crisis shocks and industrial conditions or climate that can attract investors.

The phenomenon that often occurs in relation to earnings management usually arises due to a form of error and negligence of the subject of financial management itself, which is directly or indirectly influenced by various factors, both internal and external (Mahawyahrti and Budiasih, 2016).

Mahawyahrti and Budiasih, (2016) said that if a condition in which the management did not succeed in achieving the specified profit target, then management would utilize the flexibility allowed by accounting standards in preparing financial

statements to modify reported earnings. Management will be motivated to show good performance in producing maximum value or profit for the company so that management tends to choose and apply accounting methods that can provide better earnings information. The interesting to be traced is management behavior in carrying out earnings management practices. The importance of profit information for its users makes each company competing to increase its profits. But for certain parties there are doing unhealthy ways to achieve individual goals of company profit information. This is usually used as a practice of profit manipulation carried out by company management who know the conditions in the company (Dinda Dwi, 2019).

Management behavior that regulates earnings as above is usually known as earnings management. Earning management initially appears and is done by the compilers of financial statements in a company's financial reporting process because they expect a benefit from these actions (Mahawyahrti and Budiasih, 2016). Earnings management is one of the conditions where management intervenes in the process of preparing financial statements for external parties so that they can flatten, increase and decrease profits (Fathiani, 2016). If the company's earnings management is correct and in accordance with existing regulations, earnings management can be efficient, meaning that it can increase the informativeness of earnings in



communicating personal information. However, if earnings management is not done in the right way then it can be opportunistic, meaning that earnings management reports its profits opportunistically to maximize its personal interests (Scott in Hartanto, 2011). Although some writers interpret earnings management in different languages, but thus have the same meaning of determining earnings in such a way by playing with the numbers in the financial statements of a company not based on the actual situation by obtaining expected profits.

### **Problem Identification**

1. Does the capital structure affect earnings management?
2. Does profitability affect earnings management?
3. Does the size of the company affect earnings management?

## **LITERATUR REVIEW**

### **Capital Structure**

According to Hery (2015) capital structure is the ratio or balance of long-term funding of the company which is shown by the ratio of long-term debt to equity. Meanwhile, according to Fahmi (2015) capital structure is a balance between the use of loan capital consisting of short-term debt that is permanent, long-term debt with own capital consisting of preferred shares and ordinary shares. Furthermore, according to Mulyawan (2015), the company's capital structure is a mixture or proportion of long-term debt and equity, in order to fund its investments (operating assets). Based on some of these references, the author can conclude that capital structure is an important issue for the company because of the good or bad capital structure will have a direct effect on the financial position of the company, especially with the existence of a very large debt will burden the company (Hirdinis, 2019).

### **Profitability**

Profitability according to Harahap (2015) is describing the ability of a company to get profits through all capabilities and existing resources such as sales, cash, capital, number of employees, number of branches of a company, and so forth. Meanwhile, according to Brigham and Houston (2009), profitability is the final result of a number of policies and decisions made by the company. Based on the opinions of the experts above, the conclusion can be drawn is the company's ability to generate profits by using existing resources within the company itself.

Profitability ratios according to Weston and Copeland (2010) are measuring the effectiveness of management based on the results of returns generated from sales and investments. Profitability ratio according to Kasmir (2016) is a ratio to measure how much the level of profit that can be obtained by the company. Based on the above theory it can be

concluded that the profitability ratio is a ratio to measure how much a company is able to generate profits by using all the factors that the company is in to produce maximum profit.

### **Firm Size**

According to Riyanto (2013) firm size is amount of equity, sales or asset values. According to Torang (2012), firm size is the size of the organization is a context variable that measures the demands of the service or product of the organization. Furthermore, according to Kasmir (2016) firm size is a scale where the size of the company can be classified according to various ways, including the size of income, total assets, and total capital. The greater the size of revenue, total assets, and total capital will reflect the company's condition that is getting stronger. Based on some of the above understanding, it can be seen that the size of the company is a scale that describes the size of the company with various values such as equity, sales, and company assets, the greater the value reflects a stronger company.

### **Earning Management**

According to Scott (2012), opinion that earnings management is earning management intervention in the process of preparing financial statements for external parties so that they can flatten, increase, and decrease earnings reporting, where management can use the leeway of using accounting methods, making policies (discretionary) which can accelerate or delay costs and revenues, so that the company's profits are smaller or larger as expected. According to Kieso (2011) earnings management is defined as the time planning of revenues, expenses, gains and losses to flatten earnings fluctuations.

### **Past Research And Framework**

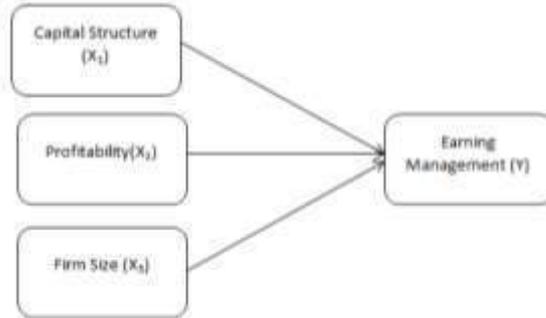
There is a gap research regarding the effect of Capital Structure, Profitability and Company Size on Profit Management. Research conducted by Agustia and Elly (2018) and Indracahya and Dewi (2017) shows that the capital structure has a positive and significant effect on earnings management. The results of this study contradict the research conducted by Minabari, et al (2017) and Widianingrum and Sunarto (2017) that the Capital Structure has no significant effect on earnings management.

Research conducted by Agustia and Elly (2018) shows that profitability has no significant effect on earnings management. This is contrary to research conducted by Tata and Herman (2017) which shows that profitability has a positive and significant effect on earnings management.

Research conducted by Ali (2015) and Medyawati and Astri (2016) shows that company size has a positive and significant effect on earnings management. This contrasts with research conducted

by Kingsley, et al (2016) and Widianingrum and Sunarto (2018) which shows that company size has

no significant effect on earnings management.



**Figure 1.**  
**Framework**

**Hypothesis**

- H1 :Capital structure has a positive and significant effect on earnings management
- H2 : Profitability has a positive and significant effect on earnings management
- H3 : Firm size has a positive and significant effect on earnings management

**RESEARCH DESIGN AND METHOD**

**Operationalization of Variables and Measurement of Variables**

**Table1. Operationalization of Variables and Measurement of Variables**

No	Variabel	Indicator	Scale
1.	Earning Management (Y)	$\frac{Net\ Income_t - Net\ Income_{t-1}}{Market\ Value_{t-1}} \times 100\%$	Ratio
2.	Capital structure (X <sub>1</sub> )	$\frac{Total\ Debt}{Total\ Asset} \times 100\%$	Ratio
3.	Profitability(X <sub>2</sub> )	$\frac{EAT}{Total\ Asset} \times 100\%$	Ratio
4.	Firm Size (X <sub>3</sub> )	$ln(Asset)$	Nominal

**Population and Research Samples**

The population in this study are all manufacturing companies listed on the Indonesia Stock Exchange. This study uses secondary data from the financial statements of manufacturing companies in 2013 - 2017. Data in this study were taken by purposive sampling method, with the following criteria:

1. Manufacturing company
2. Publish financial statements in rupiah and issue audited financial statements as of December 31.
3. No de-listing during 2013 - 2017.

4. Have complete data following the needs of the author

**Data Analysis Method**

Data analysis was performed using the Eviews 8 program which included analysis as follows: 1) Test Descriptive Statistics. 2) Inferensial Statistic , Common Effect. Fixed Effect. Random Effect.3) Model Testing (Selecting the Data Panel Model); Uji Chow (F Statistik) and Hausman test. 4) Regression Testing Model 5) Feasibility Test Model consisting of Analysis of the Determination



Coefficient (R2 test), Simultaneous Regression Coefficient Test (F Test) and Partial Test (t Test).

## RESEARCH RESULTS AND DISCUSSION

Description of Research Object Based on data obtained from the official website of the Indonesia Stock Exchange or <http://www.idx.co.id>, it is known that the companies that entered the criteria in purposive sampling during the study year (2013-2017) were 25 companies. Criteria specified in sample selection:

**Table 2. Sample Selection Results**

No	Results of Determination of Sample	Criteria Amount
1	Manufacturing companies listed on the Indonesia Stock Exchange	154
2	Companies that publish Annual Reports are incomplete during the research year	(27)
3	The company must issue a financial statement that lists the values of the variables to be sent	(40)
4	Publish financial statements in rupiah and issue audited financial statements as of December 31.	(62)
<b>Companies that meet the criteria Number of Samples (26x5years)</b>		<b>25 125</b>

### Test Assumptions and Quality of Research Instruments Descriptive statistics

**Table 3 Descriptive Statistics Test Results**

	Earning Management	DER	ROA	SIZE
Mean	-0.297056	95.33769	5.936440	14.41197
Median	0.003000	57.09200	5.449000	14.02700
Maximum	14.87000	539.0170	25.32400	19.50500
Minimum	-26.58900	3.867000	-10.73300	11.48000
Observations	125	125	125	125

The table above shows a general description of the descriptive statistics of the dependent and independent variables. Based on the table above, it can be explained: it is known that the number of observational data is 125 (25 Companies for the period 2013-2017) and no missing data (all data successfully processed). In the measurement of earnings management there is an average value of -0.297. This shows that manufacturing sector companies listed on the IDX make profit management with Income Minimization and are often done with taxation motivation. According to Sulistyanto (2008), Positive earnings management value, means that the company conducts earnings management by raising earnings, if the earnings management value is negative, it means that the company conducts earnings management by lowering profits, and if the earnings management value is zero / there is 1 (one) number zero behind the comma, meaning there is no indication of earnings

management in the company. The largest earnings management value of 14,870 was achieved by PT. Lionmesh Prima Tbk in 2017. The minimum value of -26,589 was achieved by PT. Lion Metals Works Tbk.

In the Capital Structure variable, it is known that the average value is 95.33%. This shows that manufacturing sector companies have a high proportion of debt compared to owned capital. This can result in high financial risk of the company and be a negative signal for investors. Companies with a high DER ratio of 539.02% achieved by PT. Jaya Pari Steel Tbk in 2015. The DER with the lowest value of 3.86% was achieved by PT. Jaya Pari Steel Tbk in 2013.

In the profitability variable represented by the ratio of return on assets (ROA) has an average value of 5.93%. This shows that manufacturing sector companies are able to manage their assets to generate profits. The highest value of 25.32% was



achieved by PT. Merck Tbk in 2014. While companies with the lowest ROA value of -10.73% were achieved by PT. Kertas Basuki Rachmat Indonesia Tbk in 2017.

In the Firm Size variable an average value of 14.41 was achieved. The companies with the smallest company size of 11.48 achieved by PT. Kedaung Indah Can Tbk in 2014. While the company with the highest company size of 19.50 was achieved by Astra International Tbk in 2017.

**Selection of Panel Data Regression Model**

Before testing the influence between variables, it is necessary to select 3 (three) approaches from the panel data regression analysis.

**Chow Test**

Chow test is performed to determine whether the model used is a common effect (pooled least square) or fixed effect. Chow test is performed in panel data testing by selecting fixed effects in the cross section panel option. The hypothesis used:

H0: Common Effect Model is better than Fixed Effect Model

H1: Fixed Effect Model is better than Common Effect Model

The provisions that must be considered in choosing a model as follows (Ghozali, 2013: 62):

a. If the probability is > 0.05, then H0 is accepted and H1 is rejected, or using the Common Effect Model is better than the Fixed Effect Model.

b. If the probability is <0.05, then H0 is rejected and H1 is accepted, or using the Fixed Effect Model is better than the Common Effect Model.

**Table 4 Chow Test Results**

Redundant Fixed Effects Tests  
Equation: Untitled  
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	2.198862	(24,97)	0.0037
Cross-section Chi-square	54.300960	24	0.0004

Test results Table 4 above shows that the probability value of 0,000 or <0.05 so it can be concluded that H0 is rejected and H1 is accepted, or using the Fixed Effect Model is better than the Pooled least square Model.

**Hausman Test**

The Hausman test is used to determine whether the right model is the fixed effect model or the random effect model. In this study the Hausman test was performed in panel data testing by selecting a random effect on the cross section option. The provisions that must be considered in choosing a model are as follows:

The hypothesis used:

H0: The random effect model is better than the Fixed Effect Model

H1: Fixed Effect Model is better than Random effect Model

The provisions that must be considered in choosing a model as follows (Ghozali, 2013: 64):

a. If probability > 0.05, then H0 is accepted and H1 is rejected or using the Random effect Model is better than the Fixed Effect Model

b. If the probability is <0.05, then H0 is rejected and H1 is accepted or using the Fixed Effect Model is better than the Random effect Model

**Table 5 Hausman Test Results**

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	26.375986	3	0.0000

Test results Table 5 above show that the probability value of 0,000 or <0.05 so it can be concluded that H0 is rejected and H1 is accepted or using the Fixed Effect Model is better than the Random effect Model.

**Regression Data Panel Results**

In this study panel data regression analysis (panel regression model) was used. That is because the data in this study are a combination of cross section and time series data. Through panel data

analysis testing, researchers will find out the influence between the variables tested to answer the problem formulation and research hypotheses. The following are the results of the panel data regression analysis in the study.

**Tabel 6 Regression Data Panel Results Fixed Effect Methode**

Dependent Variable: Earning Management

Method: Panel Least Squares

Date: 09/03/19 Time: 07:22

Sample: 2013 2017

Periods included: 5

Cross-sections included: 25

Total panel (balanced) observations: 125

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	34.15158	22.87443	5.493002	0.0000
DER	0.531488	0.007720	4.078609	0.0001
ROA	0.388338	0.101146	3.839383	0.0002
SIZE	1.980796	1.579491	2.254072	0.0028

**Effects Specification**

Cross-section fixed (dummy variables)

R-squared	0.865111	Mean dependent var	-0.297056
Adjusted R-squared	0.788389	S.D. dependent var	3.588893
S.E. of regression	3.233214	Akaike info criterion	5.379228
Sum squared resid	1014.006	Schwarz criterion	6.012770
Log likelihood	-308.2017	Hannan-Quinn criter.	5.636602
F-statistic	8.066022	Durbin-Watson stat	1.702203
Prob(F-statistic)	0.000025		

Based on table 6, the following is an explanation of the panel data regression test:

In the best capital selection, panel data regression model used is fixed effect. This is based on the results of the model selection through the chow test and the hausman test. The results of selecting a research model can be seen in the

appendix. Based on this, here is the equation of the research model.

$$Y = 34,151 + 0.531 X_1 + 0.388 X_2 + 1,980 X_3 + e$$

Constant value of 34,151 with a significance value of 0,000. Due to the significance <0.05, the value of the constant and can be interpreted that if all the independent variables are considered constant or



unchanged, the amount of Profit Management is 34,15.

The capital structure regression coefficient value of 0.531 with a significance value of 0.000. This shows that there is a significant influence. The regression coefficient number shows that if the Capital Structure increases by one unit, the Profit Management will increase by 0.531.

The profitability regression coefficient value is 0.388 with a significance value of 0.000. This shows that there is a significant influence. The regression coefficient number indicates that if profitability increases by one unit, the Profit Management will increase by 0.531.

Regression coefficient of Firm Size is 1,980 with a significance value of 0.002. This shows that there is a positive and significant influence. The regression coefficient number shows that if the size of the company increases by one unit, the Profit Management will increase by 1,980

The coefficient of determination (R-Squared) is 0.865. This shows that the percentage contribution of the influence of the independent variable on the dependent variable is 86.5%. In other words, it can be interpreted that the independent variables (Capital Structure, Profitability and Company Size) used in this study were able to explain the dependent variable Profit Management of 86.5%. While the remaining 13.5% is influenced by other variables.

### F Test

The F test is used to test whether the independent or independent variables entered in the model have a joint effect on the dependent variable (Ghozali, 2013). If  $F_{count} > F_{table}$  and F have a significant value  $< 0.05$ , the hypothesis is accepted, meaning the hypothesis is proven. If  $F_{count} < F_{table}$  and F have a significant value  $> 0.05$ , the hypothesis is rejected, meaning the hypothesis is not proven. Criteria for decision making are as follows:

If  $F_{count} > F_{table}$ ,  $H_0$  is rejected.  $H_a$  accepted

If  $F_{count} < F_{table}$ ,  $H_0$  is accepted.  $H_a$  rejected

Based on table 6 it is known that the  $F_{count}$  value is 8,066  $> F_{table}$  2,680 and the probability is 0,000  $< 0.05$  (Ghozali, 2013: 71). Based on this, it can be concluded that the Capital Structure (DER), Profitability (ROA) and Firm Size (SIZE) simultaneously (Together) have a significant effect on earning Management.

### T Test

The t test basically shows how far the influence of the explanatory / independent variables

individually in explaining the dependent variation (Ghozali, 2013). If  $t_{count} > t_{table}$  and t have a significance  $< 0.05$ , the hypothesis is accepted, meaning the hypothesis is proven. If  $t_{count} < t_{table}$  and t have a significant value  $> 0.05$  then the hypothesis is rejected, meaning the hypothesis is not proven. Criteria for decision making are as follows:

If  $t_{count} > t_{table}$  then  $H_0$  is rejected.  $H_a$  accepted

If  $t_{count} < t_{table}$  then  $H_0$  is accepted.  $H_a$  rejected

Based on the panel data regression test results, here are the results of the t test (hypothesis test) in this study. So it can be concluded that  $H_0$  is rejected,  $H_a$  is accepted or hypothesis 3 is accepted.

## DISCUSSION

### Effect of Capital Structure on Earnings Management

Based on research results, it is known that the Capital Structure has a positive and significant effect on Earnings Management. Capital structure in business organizations consists of two sources, namely equity and debt. The use of debt in a company's capital structure differs from country to country, industry to another, and also from company to company in the same industry and in the same country, depending on funding needs, and whether current shareholders have the will and ability to provide for the company's funding needs (Riyanto, 2013).

Horne and Wachowicz (2013) which states that it is important to determine how much debt and capital a company has to determine the level of debt use as a source of corporate financing that includes both short-term and long-term obligations in assessing financial performance. In addition, the increase in debt will affect the size of the net profit available to shareholders including dividends received because the obligation to pay debts takes precedence over dividend distribution (Riyanto, 2013). This can encourage management in carrying out earnings management practices because the company must finance the shareholders with the profits obtained, so the company must maximize the use of capital to get the maximum profit. So the company will get a good image of investors who survive or will come so they will continue to invest in the company. The results of this study are in line with research conducted by Nikoomaram, et al (2016) and Agustia and Elly (2018) that capital structure has a positive and significant effect on earnings management.



### **Effect of Profitability on Earnings Management**

Based on research results, it is known that profitability has a positive and significant effect on earnings management. Profitability is the company's ability to generate profits, the greater the profitability, the greater the management's ability to manage company assets to generate profits. This can influence investors to predict earnings and risks in their investments which have an impact on investor confidence in the company (Trisnawati, 2015).

Profitability shows the ability of management to manage profits. Companies that get big profits will try to maintain or even increase the amount of their income to prosper the company and investors. Besides that investors also want the stability of the company in making a profit. Therefore, management is motivated to practice earnings management. So this can increase investor confidence (Jogiyanto, 2015).

### **Effect of Company Size on Profit Management**

Based on the results of the study, it is known that company size has a positive and significant effect on earnings management. Firm Size is a scale that can be classified in large or small companies. Basically the size of the company is only divided into two categories, namely large companies (large firm) and small companies (small firm). The determination of the size of the company is based on the company's total assets (Riyanto, 2013).

Large companies have a broader stakeholder base, so that various large company policies will have a greater impact on the public interest compared to smaller companies. For investors, company policy will have implications for the prospect of large cash flows for the public interest compared to small companies (Jogiyanto, 2015).

## **CONCLUSIONS AND RECOMMENDATIONS**

### **Conclusion**

Based on the results of the analysis conducted in this study, it can be concluded that: 1) Capital structure has a positive and significant effect on earnings management. 2) Profitability has a positive and significant effect on earnings management. 3) Firm size has a positive and significant effect on earnings management.

### **Suggestion**

Based on the conclusions above, the following are suggestions made in this study.

- a. For investors as capital owners can find out the earnings management signals made by the company through the

movement of capital structure, profitability and company size that is not reasonable. In this case, the increase or decrease in financial performance is too sharp in a period.

- b. For the Indonesia Stock Exchange to tighten supervision of financial reports provided by companies listed on the Indonesia Stock Exchange. The audit process on financial performance, especially on capital structure, profitability and company size needs to be carried out strictly to minimize the possibility of earnings management practices
- c. For company management, it is advisable to avoid earnings management practices. This is intended so that the company still has a good reputation in the eyes of shareholders and potential investors so that the funds that have been invested in the company are not withdrawn and can continue to attract interest for potential investors for the company's sustainability in the future. By avoiding earnings management practices, the company's credibility will increase thus creating a competitive advantage in similar industries.
- d. The next research is expected to expand the research year or period so that the influence can be seen from a longer period of time
- e. For future research, it is expected to be able to test a number of variables or add other variables that are suspected to have an influence on earnings management such as the company's ownership structure, audit quality and others.

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# NEW METHODS IN TEACHING A FOREIGN LANGUAGE TO STUDENTS OF NON-LINGUISTIC UNIVERSITIES

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## ABSTRACT

*The article explores the communicative method of teaching a foreign language as content and language integrated learning (CLIL) that allows students to form linguistic and communicative competence in a non-native language in the same educational context in which they form and develop general educational knowledge and skills.*

**KEYWORDS:** *competence, communicative method, educational non-native language, effective, Internet resources*

## INTRODUCTION

The development of society has a huge impact on the content of foreign language teaching. The quantity and quality of information required by students is steadily increasing. Foreign language is no longer considered as a separate science, but as a necessary element in a complex, multi-level learning structure. Increasingly, the question arises about the need to form a student's professional mobility, that is, the ability to successfully switch to another activity or change the type of work.

With the traditional approach to learning a foreign language, the main focus was on developing skills such as reading and translation, students completed a huge number of grammatical tasks and retold long texts. As a result, the student, having spent a large amount of time memorizing sentences and grammatical rules, did not have the opportunity to apply these skills somewhere. Such educational programs are a thing of the past.

The criterion for the effectiveness of the education system of any state is how much this system fulfills the social order of society. The rapid pace of development of the economy and society as a whole creates a qualitatively new social demand, and the task of any modern educational institution is to meet this demand. The modern labor market imposes new requirements: highly qualified specialists in the field of Economics, Law and other leading fields must be fluent in the language of international communication. The column in the questionnaire "level of English language proficiency" is no longer a

formality, moreover, in many international companies, interviews are conducted in English. Thus, a change in demand leads to a change in the quality of the offer and new approaches to teaching English.

## OBJECTIVES

Teaching any foreign language is a complex process of interaction of two main components: teacher - student. The basis is a working program, on the basis of which this interaction takes place. To get a qualitatively new result, all three components must change.

One of the main problems faced by the teacher is the lack of a proper level of motivation for most students, since, unfortunately, English is perceived by students of non-linguistic educational institutions as a secondary subject. Therefore, one of the tasks is to develop students' motivation to learn English. At the same time, a foreign language acts as a means of developing the communicative component of the information culture of students in the course of their research activities on professional issues using information and communication technologies, participating in economic on-line conferences and projects, developing the ability to work in a group through computer networks.

Nowadays, there are many methods of teaching foreign languages. Ideally, the educational process should be based on a carefully thought-out combination of them. As a rule, the predominant communicative method is the one that best meets the



needs of students and expands the possibilities of communication. It should be noted that the communicative method involves not only the knowledge of basic words and phrases with a standard set of grammatical structures that are necessary for maintaining a conversation, but also the ability to apply language knowledge in their professional activities, navigate in journalistic and scientific publications. Therefore, foreign language training should not be held separately from the formation of professional competence of the future specialist. Foreign language tools are designed to provide a reliable language platform and serve as an incentive for career growth.

### LITERATURE REVIEW

In modern methods of teaching a foreign language, the experience of CLIL (Content and Language Integrated Learning) is increasingly taken as the basis. It allows students to form linguistic and communicative competence in a non-native language in the same educational context in which they are forming and developing General educational knowledge and skills. According to Loktyushina E. A. and Saytimova T. N., this method opens the door to attract an increasing audience of students of foreign languages, builds the confidence of young people in their abilities, and also gives support to those who were not successful enough in learning languages in the traditional form [1, p.325].

The CLIL provides for the management of a number of subjects that are basic for students, in the language of international communication. Thus, the student has a strong motivation to learn a foreign language not only as a means of communication, but also as a necessary tool in mastering a future profession. In addition, many educational institutions practice the use of English at international conferences held within their walls, which causes the need for a sufficiently high level of language proficiency not only for students, but also for teachers.

Unfortunately, at this stage, a number of problems arise when implementing CLIL in the educational process. On the one hand, teachers of a foreign language usually do not have the necessary amount of knowledge to teach a particular subject. In other words, he/she needs a second, special education. On the other hand, the level of foreign language proficiency of subject teachers is usually not high enough. Therefore, today educational institutions, more than ever before, need highly qualified specialists who are able to give lectures and conduct practical classes in two languages. In addition, the level of foreign language proficiency among students themselves remains quite low. Unfortunately, a relatively small percentage of high

school graduates are able to perceive and subsequently issue information in a foreign language. According to Yeremina N. V., Kabanova O. V. and Terekhova G. V., in the current realities, a gradual transition to a new teaching method is necessary, strengthening the links and continuity of education between schools, secondary professional educational institutions and higher educational institutions [2, p. 47].

### METHODOLOGY

At this stage of development of the educational system, one of the main methods in teaching a foreign language is the use of computer technologies: Internet sites, Skype, e-mail, blogs and other resources.

It should be noted that more than 50% of the total number of hours is currently allocated for independent work of students. Properly measured use of Internet resources is, of course, a necessary element of training, and the teacher, in this case, acts as an assistant, whose primary task is to direct the Internet addiction of students in the right direction. Internet sites, on the one hand, expand the horizons of students, increase motivation to learn a foreign language, and, on the other hand, contribute to the development of reading skills, translation, and vocabulary. The advantages of this type of activity is that the student gets the opportunity to organize it independently at a convenient time. Control by the teacher is carried out in the form of "round tables" with demonstrations of presentations and oral discussion of various topics. This type of training is usually popular among students and is highly effective.

One of the options for independent work of students is to search for additional information in newspapers and magazines. Articles can also be used by the teacher when preparing reading and translation tasks. The most popular sites are guardian.co.uk, economist.com, news.bbc.co.uk.

Recently, the use of video lectures from native speakers has become increasingly popular, both in the classroom and in the independent work of students. In the World Wide Web, there are so many of them that any teacher can choose for their students what will contribute to the solution of the tasks set. For example, on the site [videolectures.net](http://videolectures.net) video lectures from conferences and seminars on any subject are presented.

According to Artamonova L. A., and others, one of the ways to dive into the language environment and overcome the language barrier is to communicate with native speakers online, for example, via Skype. Communication with students of the same age is one of the ways to practice listening [3, p. 31]. Nowadays, it is not very difficult to find



someone to talk to online, but it is undoubtedly very useful. Communication with native speakers contributes to the enrichment of students' vocabulary, development and consolidation of basic grammatical structures. Here they can learn modern expressions and language constructions and slang.

In the educational process, it is necessary to use e-mail and blogs. Electronic correspondence has a number of advantages over paper correspondence. It is faster, more convenient and can be carried out with any audience and at any level of language proficiency, helps to establish friendships.

In modern conditions, there are many ways to use blogs in the educational process, that is, the author's (or authors') records, which are arranged in chronological order and provide for comments by readers. Blogs are divided into text, music, photos, and videos; they can be private or collective. Blogs of famous musicians and actors are very popular among students. Working with the blog contributes to the study of the rhythmic-intonation side of speech, allows you to perceive non-verbal means of communication, which are also important in the process of communication [3, p. 32].

## CONCLUSION

In conclusion, it should be noted that despite the advantages listed above, the Internet would certainly never be able to become an alternative to textbooks. Internet resources are one of the tools that help you learn the material in the classroom, the main role of which, of course, belongs to the teacher. But it necessary to note that the use of Internet resources has a positive impact on the learning of the material by students, since they are modern and relevant today. Therefore, a skilful combination of traditional teaching methods with modern ones is more effective and productive today.

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# **SOME HAEMATOLOGICAL PARAMETERS IN NEW-BORN: A CASE STUDY PORT HARCOURT, RIVERS STATE, NIGERIA**

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## **ABSTRACT**

The haematological parameters of apparently healthy new-borns in Port Harcourt, Rivers State, Nigeria were studied. One hundred neonates comprising of 48 males and 52 females were recruited for this study from Orogbum Health Immunization Centre Ogbunali, Port Harcourt, Rivers State, Nigeria. The aim of this research was to establish reference values for neonates in Port Harcourt and to determine if differences exist in the haematological parameters between males and females. Blood samples were collected by strictly following accepted procedures and analysed with a DIANA-5<sup>R</sup> automated Analyzer for packed cell volume, haemoglobin concentration, platelet counts, white blood cell (WBC) count (total and differential) and red blood cell (RBC) count while mean corpuscular volume (MCV), mean corpuscular haemoglobin (MCH) and mean Corpuscular haemoglobin concentration (MCHC) were calculated. The haematocrit was found to be  $56.5 \pm 6.04\%$  in males and in females was  $58.3 \pm 5.14\%$ . RBC counts ( $5.25$  million/ $\text{mm}^3$  for males and  $5.21$  million/ $\text{mm}^3$  for females). Haemoglobin concentration in males was  $20.6 \pm 1.93$  g/dl and females  $21.08 \pm 1.93$  g/dl. Platelet count was  $298 \times 10^3/\text{mcL}$  for males and  $265 \times 10^3/\text{mcL}$  for females. The total WBC count was  $20.10 \times 10^3$  cells/ $\text{mm}^3$  for males and  $19.40 \times 10^3$  cells/ $\text{mm}^3$  for females. The differential WBC count for neutrophil was  $13.39 \times 10^3$  cells/ $\text{mm}^3$  for males and  $11.09 \times 10^3$  cells/ $\text{mm}^3$  for females. Lymphocytes count  $4.23 \times 10^3$  cells/ $\text{mm}^3$  for males and  $4.11 \times 10^3$  cells/ $\text{mm}^3$  for females, the monocytes  $2.44 \times 10^3$  cells/ $\text{mm}^3$  for males and  $2.39 \times 10^3$  cells/ $\text{mm}^3$  for females while the basophil levels were inconsequential. The mean MCV for new-born was  $26.66\text{pg}$  for males and  $24.18\text{pg}$  for females, mean MCHC  $34\text{g}/100\text{ml}$  for male new-borns and  $33.00\text{g}/100\text{ml}$  for female new-borns and the mean MCV was  $88.44$  fl for males and  $78.49$  for female new-borns. Careful analysis of these values showed that there was no significant statistical difference between male and female values.

**KEY WORDS:** Neonates, Packed Cell Volume, Haemoglobin Concentration, Platelet Counts, White Blood Cell Count, Red Blood Cell Count.

## **INTRODUCTION**

Blood consists of plasma the fluid medium and the cellular elements (red blood cells, white blood cells and platelets) suspended in the plasma (Ganong, 2003). The haematological parameters of great importance in surgery and diagnostic studies includes packed cell volume, haemoglobin concentration, platelet counts, white blood cell count (total and differential) and red blood cell count. Values derived

from packed cell volume (PCV), red blood cell count (RBC) and haemoglobin content includes the mean corpuscular volume (MCV), mean corpuscular haemoglobin (MCH) and mean Corpuscular haemoglobin concentration (MCHC).

Packed cell volume (PCV) also referred to as haematocrit is a measure of the total volume of erythrocytes relative to the total volume of whole blood sample. In neonates (cord blood), the normal PCV is about 40 to 50% (Maconi *et al.*, 2005). This



volume is relatively high at birth averaging 60% and decreases to about 54% by the 10<sup>th</sup> day of life. The measurement of the PCV is the most accurate and simplest method of determining the presence or absence of anaemia (<10%) or polycythaemia (>65%).

Haemoglobin is a globular molecule whose primary function is the transportation of oxygen from the lungs to the tissues and carbon dioxide from the tissues to the lungs. Measuring the haemoglobin concentration determines the oxygen carrying capacity of the blood as well as provide information on the erythropoietic status of the reticuloendothelial system (Baker and Silverton, 1985). Haemoglobin concentration is higher in neonates at birth about 21g/dl and decreases to about 11.6g/dl at about 1 to 2 years (Jopling *et al.*, 2009).

Platelets also called thrombocytes are formed in the bone marrow and play important roles in blood clot formation. Platelets count is the number of platelets per cubic millilitre of blood. The normal platelet count for neonates ranges from 150 to 400 x 10<sup>3</sup>/mcl and remains relatively unchanged until childhood (Sitaru *et al.*, 2005).

White blood cell (WBC) also called leucocytes are the mobile units of the body's protective system. WBC count involves the total and differential white cells. The total WBC count is the number of white cells per cubic millilitre of blood in a known volume of accurately diluted blood sample results expressed cells per cubic volume while the differential WBC count involves counting the individual white cells (neutrophils, basophils, eosinophils, lymphocytes and monocytes) present in the circulating blood (Mckenzie *et al.*, 1994). The WBC count in neonates is high at birth ranging from 6000 to 30000 cells/mm<sup>3</sup> (Benitz 2010).

Red blood cell (RBC) count is the number of red cells per cubic millilitre of blood in a known volume of accurately diluted blood sample results expressed cells per cubic volume. At birth the RBC count is relatively high compared to any other period of life usually greater than 5.1 to 5.3 million/mm<sup>3</sup> (Henry and Christensen, 2015).

Haematological indices MCV is the volume of red cells derived from the PCV and RBC count ranging from 80 to 95 femtolitres. MCH derived from the haemoglobin count and RBC count is about 29.98 ± 5.56 picogram (Kelly and Munan, 1977) and

MCHC the average volume of packed cell calculated from the haemoglobin count and PCV ranging from 32 to 35.5 g/100ml (Mukiibi *et al.*, 1995).

Neonates are new-borns within the ages of zero to the 4<sup>th</sup> week of life (Kuehn, 2008). This study was carried out on apparently healthy subjects and considered normal only if their haematological parameters fell within the defined haematological values found in neonates. Information on the haematological parameters of neonates in Port Harcourt is not readily available and the evaluation of these parameters is of utmost importance in neonatal childcare. The major objective of this research was to determine the haematological parameters in apparently healthy neonates, to establish reference values that can be used for diagnosis of haematological diseases of new-borns and to determine possible sex differences on these parameters.

## MATERIALS AND METHODS

The study duration was for 1 month and blood samples were drawn from 100 apparently healthy new-borns (48 males and 52 females) at Orogbum Health Immunization Centre Ogbunali, Port Harcourt, Rivers State, Nigeria after informed consents were obtained from the parents. Blood sample collected were properly stored and transported to the laboratory within 6 hours and analysis by an automated cell counter (DIANA-5<sup>R</sup> Analyzer) for the following parameters; haemoglobin concentration, haematocrit, red blood cell count, platelet count, total and differential white blood cell count. The haematological indices (MCV, MCH, and MCHC) were calculated from data obtained.

Data were analysed Statistical Package for Social Sciences (SPSS) version 20 to determine relationship and associations and student t-test was used to find out significant differences between means.

## RESULTS AND DISCUSSION

Table 1 and Table 2 shows the minimum values, maximum values, median, mean and standard deviations of the haematological parameters of male and female neonates respectively.

**Table 1: Haematological Parameters of Male Neonates**

Parameters	Min	Max	Medium	Mean	Standard Deviation
RBC million/mm <sup>3</sup>	4.81	5.46	4.92	5.25	2.01
PCV (hct)%	50.00	62.80	55.3	56.5	6.04
Haemoglobin Conc (g/dl)	18.01	23.42	18.57	20.06	1.83
Platelet x 10 <sup>3</sup> /mcl	146.00	420.00	213.00	298.00	20.74
Total WBC x 10 <sup>3</sup> /mm <sup>3</sup>	9.0	32.04	24.79	20.10	24.08
<b>Differential WBCx10<sup>3</sup>/mm<sup>3</sup></b>					
Neutrophil	6.80	13.11	7.54	10.39	11.9
Lymphocytes	1.94	4.20	2.33	3.23	13.1
Monocytes	0.92	2.00	1.02	1.44	12.1
Eosinophils	0.50	1.11	0.74	0.89	1.65
Basophil	0.01	0.03	0.01	0.02	0.01
MCH (pg)	22.28	31.25	24.19	26.66	4.27
MCHC (g/100ml)	29.00	37.00	31.00	34.00	1.49
MCV (fl)	75.08	98.50	84.39	88.44	12.78

**Table 2: Haematological Parameters of Female Neonates**

Parameters	Min	Max	Medium	Mean	Standard Deviation
RBC million/mm <sup>3</sup>	5.01	5.23	5.04	5.21	0.11
PCV (hct)%	51.06	65.10	45.3	58.3	5.14
Haemoglobin Conc (g/dl)	19.01	23.42	20.03	21.08	1.93
Platelet x 10 <sup>3</sup> /mcl	131.00	400.44	200.08	265.00	19.74
Total WBC x 10 <sup>3</sup> /mm <sup>3</sup>	9.50	30.04	23.99	19.40	22.38
<b>Differential WBC</b>					
Neutrophil	5.37	14.11	6.55	13.09	14.9
Lymphocytes	1.94	4.20	2.33	3.23	13.1
Monocytes	0.92	2.00	1.02	1.44	12.1
Eosinophils	0.50	1.11	0.74	0.89	1.65
Basophil	0.00	0.01	0.01	0.00	0.00
MCH (pg)	21.06	33.27	25.29	24.66	3.97
MCHC (g/100ml)	29.00	37.01	32.00	33.00	1.51
MCV (fl)	72.08	93.50	80.11	78.49	11.78

Table 3 compared the haematological parameters between male and female new-borns. No significant statistical difference was obtained from both male and female parameters.

**Table 3: Comparison of haematological parameters between male and female subjects**

Parameters	Males n=48	Female n=52	t- value	p- value
RBC million/mm <sup>3</sup>	5.25	5.21	0.487	0.701
PCV (hct)%	56.5	58.3	0.598	0.845
Haemoglobin Conc (g/dl)	20.06	21.08	0.356	0.749
Platelet x 10 <sup>3</sup> /mCL	298.00	265.00	3.176	0.09
Total WBC x 10 <sup>3</sup> /mm <sup>3</sup>	20.10	19.40	0.401	0.672
<b>Differential WBC</b>				
Neutrophil	13.39	11.09	0.618	0.855
Lymphocytes	4.23	4.11	0.371	0.994
Monocytes	2.44	2.39	0.373	0.989
Eosinophils	0.89	0.89	0.376	0.909
Basophil	0.02	0.00	0.498	0.801
MCH (pg)	26.66	24.16	0.311	0.785
MCHC (g/100ml)	34.00	33.00	0.491	0.768
MCV (fl)	88.44	78.49	1.538	0.08

Red cell indices, RBC count, haemoglobin concentration and PCV are slightly higher several hours after birth because of the movement of plasma from the intravascular to the extravascular space (Keohane *et al.*, 2015). Haematocrit values obtained from this study in males ranged from 50.00 to 62.80% with an average of  $56.5 \pm 6.04$  % and in females 51.06 to 65.10% with an average of  $58.3 \pm 5.14$  %. These values are similar to reports of previous study by Cavaliere, 2004; but higher than values obtained from Zimbabwean neonates 41.8% (Mukiibi *et al.*, 2010).

Haemoglobin concentration count ranged from 18.01 to 23.42g/dl with an average of  $20.6 \pm 1.93$  g/dl and in females 19.01 to 23.42g/dl with an average of  $21.08 \pm 1.93$  g/dl and these values were similar to pre-existing research and fall within values expected in apparently healthy new-borns (Mukiibi *et al.*, 1995).

RBC counts ( $5.25$  million/mm<sup>3</sup> for males and  $5.21$  million/mm<sup>3</sup> for females) were relatively higher in our studies at birth which is in agreement with reports from other studies (Henry and Christensen, 2015, Dacie and Lewis, 1991).

Reports on platelet count by (Dacie and Lewis, 1991) revealed that the platelet count during

neonatal periods ranged from  $150$  to  $400 \times 10^3$ /mCL and results from our research fall with this range ( $298 \times 10^3$ /mCL for males and  $265 \times 10^3$ /mCL for females).

Benitz, 2010 reported that the total WBC count at birth ranged from 6000 to 30000 cells/mm<sup>3</sup> of human blood. Results from our data fell within this reference range with an average of  $20 \times 10^3$  cells/mm<sup>3</sup> for males and  $19.40 \times 10^3$  cells/mm<sup>3</sup> for females which is also in concordance with earlier reports by Guyton *et al.*, (1996). The differential WBC count revealed that neutrophils was approximately 70% of WBC  $13.39 \times 10^3$  cells/mm<sup>3</sup> for males and  $11.09 \times 10^3$  cells/mm<sup>3</sup> for females. Lymphocytes accounted for 20% of the WBC count  $4.23 \times 10^3$  cells/mm<sup>3</sup> for males and  $4.11 \times 10^3$  cells/mm<sup>3</sup> for females, the monocytes accounted for about 5% of WBCs  $2.44 \times 10^3$  cells/mm<sup>3</sup> for males and  $2.39 \times 10^3$  cells/mm<sup>3</sup> for females while the basophil levels were insignificant.

The haematological indices (MCV, MCH and MCHC) are derived indices calculated from the PCV, RBC count and haemoglobin count. Findings from our data showed that the mean MCV for new-born was 26.66pg for males and 24.18pg for females, mean MCHC 34g/100ml for male new-borns and 33.00g/100ml for female new-borns and the mean



MCV was 88.44 fl for males and 78.49 for female new-borns. This findings is in agreement with reports from previous studies (Dacie and Lewis, 1991; Christensen *et al.*, 2008).

## CONCLUSION

Haematological parameters are the constituents of blood and is of utmost important that they must be within normal ranges for proper metabolism in the new-born. Values ranging far below or above the reference ranges are an indication of serious haematological abnormalities or disease conditions such as leucocytosis, haemolytic jaundice in new-born, leucopenia, thrombocytopenia, severe malaria, pneumonia and measles. This study provides values that can be used as reference values for neonates in Nigeria which can aid in early detection, possible prevention and treatment of numerous haematological disorders plaguing new-borns in Nigeria.

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# **BEATEN CLAY-PAHSA WALL METHOD IN KHOREZM OASIS CONSTRUCTION AND CONSTRUCTION TECHNOLOGY (BASED ON ETHNOGRAPHIC RESEARCH)**

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## **ABSTRACT**

*The article is devoted to the architectural study of the basics of beaten clay-pahsa method and construction technology in the construction of the Khorezm oasis and is based on field research. The article analyzes the works of domestic and foreign ethnographers and architects, research work in chronological order.*

**KEYWORDS:** *Architecture, clay-pahsa wall, clay, master, foundation, hashar.*

## **INTRODUCTION**

Housing construction is one of the main objects of folk architecture and is a major part of urban and rural development. The style of building settlements in the Khorezm oasis is a product of many millennia of cultural development. The roots of housing construction in the oasis are very ancient and differ from other regions by its unique aspects such as its stunning majesty, sophistication, luxury and splendor. The natural climate of the region and the customs and traditions formed over thousands of years and preserved from generation to generation form the basis of these aspects. In this article, we would like to briefly tell about the experience and technology of building a house from a beaten clay-pahsa, which has been used in the construction of housing in the oasis for thousands of years.

## **THE CONTENT OF THE ISSUE**

The construction of houses and buildings from beaten clay-pahsa were a traditional method characteristic of the Khorezm oasis, and was considered cheap and convenient for the population. In an oasis, houses with beaten clay-pahsa walls were mostly built in villages. One of the reasons for this is that clay is cheap and there is an opportunity to prepare it sufficiently. Due to the lack of land in the cities and the difficulty of transporting soil around the city, it has become a tradition to build nigririk (using wood) and double nigririk buildings. The structure of the dwellings with the yard was the same both in the village and in the city. They differ from each other only in their materials (In the city there were mudbricks using

wood, in the village there were walls with beaten clay-pahsa), what they contain (village houses also included farm yards), and in the symbolic execution of their architecture (the fortified courtyards had a defensive character and are surrounded by a bare wall with minarets reminiscent of a castle)<sup>1</sup>.

As a result of research by archaeologists and historians in places, castles and fortresses related to the long history of Khorezm, it was found that the construction of castles and dwellings from beaten clay-pahsa walls in this oasis dates back to ancient times. One of the ancient fortresses of Khorezm, the walls of the Johnbozkala ruins IV-I centuries. B.C. are two-story, the lower part is made of beaten clay-pahsa 1m 30 cm thick, and the upper part is made of mudbrick 40x40x10 cm with straw crumb between the mud<sup>2</sup>. Another remarkable example of urban planning of this period was that the outer walls of the ancient fortress of Kuykirlgan were also made of mudbrick and beaten clay-pahsa more than 1 meter thick and about 7 meters high.

Despite the fact that snow and rain, sunlight and winds have destroyed for thousands of years, one of the main reasons why high walls are still proudly standing is the selection and preparation of clay, raw materials for construction. For the construction of these castles, clay soil was taken from 2-3 meters below the ground. This soil is

<sup>1</sup> Mankovskaya L. Khiva. - Toshkent: 1982, - p 19.

<sup>2</sup> Ahmedov M.K. History of Central Asian Architecture. Tashkent: Uzbekistan, 1995. - p 18.



very clean and pure soil and differs greatly from the soil at the top of the earth in terms of its viscosity, density and purity. The builders first identified the location of such soil and selected it as a mud ditch. The following procedure was strictly followed in the process from preparing the clay in the trench to placing it on the wall. While this process may seem very simple, it has its own unique Khorezmian style, responsible and important aspects. First of all, the area selected as a mud ditch was irrigated even for a year, and the soil was saturated, that is, the brine was thoroughly washed. Then the top 2-3 meters of the soil was removed and the reddish clay soil below it (the Khorezmians call it *tondir mud*) was turned upside down. The soil in the ditch itself was repeatedly turned over until it reached the norm of dirt. Finished clay was transported on carts or passing from hand to hand hundreds of people standing in line to the place where the wall was being built. Here, to prevent the mixing of raw soil with clay, clay was distributed on a ticket made from reed bark, and several people climbed on it and kicked it repeatedly until the dirt turned red, that is, the clay was prepared to normal. After processing, the clay passes a certain test, and beaten clay-pahsa is considered ready for the wall. The ready pahsa was cut with a sharp shovel and transferred to the master. Pahsa can range in height from 60 cm to 1: 1.2 m and in width from 40:50 cm to 3.5: 4 m and higher.

In addition to the above information, Nurmetov Husanboy, the master of information from Koshkopir, noted the following.

"First, the normal soil area is limited and watered 3 times (until dry). This soil was taken 1-2 km away from the house under construction. Irrigated soil is loaded onto a tractor (even earlier a horse cart). It was then removed from it. The soil brought home was processed. After that, it was watered again. The prepared clay is thrown by the "otarmon" (special throwing person) with the help of a special shovel - "kapcha" to the master. In each of these processes, the clay was processed and matured. That is why 5-6 processed clays adhere well to each other (do not break). Once the mud on the wall has hardened, the scraper master fills in the gaps with a special device. This device was used when the mud was not completely dry. Then the walls are smoothed and polished with a "Kattikirarkapcha". "Kattikirarkapcha" was used to smooth the wall by scraping the beaten clay-pahsa with water 3-4 days after the mud had solidified. If it is worked in a hurry at this stage, the beaten clay-pahsa wall will not come out flat, leaving a wavy ripple mark. However, another feature of the pahsa-walled house is that such houses were cool in the winter and cool in the summer. Given that the Khorezm oasis is very cold in winter and very hot in summer, the construction of pahsa-walled houses is one of the most effective methods of housing construction for the population<sup>3</sup>".

<sup>3</sup> Field Records. Information of the informant from Koshkopir X. Nurmetov (audio recordings).

The following legends are also spread among the people about the construction of a building from a beaten clay-pahsa wall, which has been used in the construction of housing in the Khorezm oasis for thousands of years. "It is said that when Ibrahim Khalilillah, the best of the masters, started to build a house, he wanted to build it all at once (from floor to ceiling). Then the devil came to Ibrahim Khalilillah to distract him, and said:

- "Build the pahsa-walls of the house piece by piece!

Then Ibrahim said:

- "Go, do not distract!" he expelled the devil and began to build a house from the beginning. He raised the walls from beaten clay-pasha and finished it, and when he looked, the house turned out to be from 4 pahsa. That is why it is said that it was customary to raise the house of 4 pahsa.

When our ancestors built houses from beaten clay-pahsa, they started 1-pahsa wide (70-80 cm) and shortened it to 40-50 cm in 3-4 pahsa. This ensured that the house was strong and earthquake resistant. Pahsa houses consist of a "tirnok" (foundation), 4-5 pahsa and a "pardevor". Let's take a brief look at the "tirnok" and "pardevor".

The "tirnok" is the foundation of the house, and this part of the house is built in a unique way. Our ancestors used reeds for the foundation of the house when there was no cement or roof felt. After drying the foundation made of clay at a height of 20-30 cm, it is lined with reeds until it dries. The height of the reed was 50-60 cm. After laying clay on it, it is pressed to 25-30 cm. The fact that the foundation of the house was made of reed increased the earthquake resistance of the house and did not allow moisture to enter the house. These houses stood for 120-130 years without demolition<sup>4</sup>.

The information provided by Matniyozov Otabek, another experienced master from Koshkopir, about the products used for the foundation, that is, about the "tyrnok" part of the house, is also very valuable. "Stairs and birch trees were used for the foundation of our main house, which was built 150-160 years ago". The trees were leveled, laid on the ground and covered with beaten clay-pahsa. There was no need to make a "tirnok" for these trees. The tree itself also served as a "tirnok." The reason is that these trees are very resistant to moisture, do not absorb moisture and do not rot<sup>5</sup>".

The "Pardevor" is the highest part of the house and is built after the last pahsa. The main function of this part is to keep the wood used in covering the roof of the house firm without moving. It also ensures that these woods are not visible from the outside.

Hashar is one of the most widespread traditions of the peoples of the East and has long played an important

<sup>4</sup> Field Records. Information (audio recordings) of the informant from Koshkopir X. Nurmetov.

<sup>5</sup> Field Records. Information (audio recordings) of the informant from Koshkopir O. Matniyozov.



role in the life of the Uzbek people. Hashar is when many people work together for a common goal<sup>6</sup>.

A distinctive feature of hashar is that it is done for free and gratuitously. In towns and villages, houses were built by hashar. Commenting on the ceremony and its peculiarities in the construction of housing in the oasis, the chief architect of Khiva Matchanov Komiljon noted the following.

“We used to have a tradition. In the mahalla, as they called for the wedding, they also called for hashar: “Today, we go to the neighbor to help (hashar) for pahsa 2.”. Everyone had to go. It was impossible not to go. If someone couldn't go, he had to send someone instead. People came to the house from the morning to help. The work was distributed by the age of those who came for support. For example, if a person was elderly, he processed clay. If he was younger, he would topple the clay, and if he was full of energy and strength, he would throw the clay up. But there was one main master who built the house. I witnessed such support when I was working as an architect in Bagat district. An elderly grandfather rises to the 4th pahsa of the house, collects clay and builds a wall. Then this grandfather also makes a “gultarosh” of the wall. Then I asked this man about the reasons for “gultarosh” of the wall, and I received the following answer. “When the sun falls on the wall on both sides, more than half of the shaved hole remains in the shade. Sunlight falls on 25-30 percent of the pit. As a result, the remaining 70 percent of the shade inside the pit keeps the wall cool and helps keep cool air in the house. For example, if we take the width of the house as 20 meters, then 12-14 meters of it will be in the shade. The wall does not heat up when the sun rises. If the wall is cool, cool air will prevail inside the house as well. That's why the outer wall of the house was made “Gultarosh”<sup>8</sup>.

There are various legends among the people that during the construction of the pahsa-walls of Ichan Qala, clay soil was taken from Govukkol near Khiva and as a result a small lake appeared there. One of such legends was told by Salaev Omonboy, a master craftsman from Khiva, about the delivery of high-quality mud for a pahsa-wall: “According to the legends, the population was involved in the construction of the pahsa-walls of the fortress through hashar. People brought clay to the castle on their carts. In order to participate in the hashar, a young man built a new cart. News of the young man who went out to carry the mud in the new cart soon reached the khan's ears. Khan orders to find the young man and beat him with 40 punches as a punishment. The main reason for the young man's punishment was that he went out to transport mud in a new cart. The reasons for this are as follows: “The wooden planks of old carts are covered with mud, which absorbs

water from the mud and hardens. This ensures that the loaded mud reaches the destination in a quality manner. As the planks of the new cart are new, it absorbs the water of the mud added to it. As a result, the quality of the mud is damaged and the water escapes and turns into soil until it reaches the destination. It can be seen that a great deal of attention was paid to the strength and durability of the wall<sup>9</sup>”.

In addition, from ancient times, to ensure the strength of the pahsa-wall, mud mixtures were prepared with the addition of natural and artificial chemicals, such as whey, vegetable broth, straw, animal hair, reed flakes and so on. At the same time, the hydrophobic nature of clay, that is, a decrease in water permeability, was known to builders. They well knew that these factors increase the stickiness of the wall structure material and increase the seismic resistance, and various additives keep the clay composition in a strong, sticky state, ensuring the stability of the wall<sup>10</sup>.

## CONCLUSIONS AND RECOMMENDATIONS

In conclusion, it should be noted that the requirements of life necessitate the consideration of local conditions in the conduct of construction work, especially in the construction of residential buildings. From this point of view, it is always advisable to take into account local conditions and national traditions in housing construction, to use construction methods that are fully formed and have proven their advantages. To date, dozens of architectural patterns that have arisen directly as a result of adaptation to climatic conditions and taking into account folk customs are being unreasonably forgotten.

<sup>6</sup> Sattor M. Uzbek customs. - Tashkent: Cholpon, 2007. - B 53.

<sup>7</sup> Gultarosh - cutting of a pahsa wall deep in the form of a crescent, and processing in the form of a flower.

<sup>8</sup> Field records. Information (audio recordings) of the chief architect of Khiva K.Matchanov.

<sup>9</sup> Field records. Information (audio recordings) of Khiva master craftsman O.Salaev.

<sup>10</sup> Durdieva G. Ancient Khorezm pahsa-wall architectural monuments. Khiva. 2017. - p 24.



## IMPORTANT ASPECTS OF ENVIRONMENTAL EDUCATION IN THE EDUCATION SYSTEM

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### ABSTRACT

*Our country has accumulated a lot of experience in solving environmental problems and eliminating their negative consequences. However, the scale and scope of work in this area has become an urgent issue in improving the environmental situation in the country and regions, strengthening the cooperation of government agencies, public organizations, civil society institutions, as well as the formation of environmental culture among young people. The article analyzes the study of important aspects of environmental education in the education system and cooperation in solving today's environmental problems.*

**KEY WORDS:** *Environmental problems, education system, law of nature, The Aral sea problem*

### I. INTRODUCTION

The emergence of the human race on Earth takes 70 million years. For so long, nature has been making, drinking, dressing and satisfying all human needs. Can we care enough and be kind enough to nature, our motherland, which is the basis of our existence in this bright world? To what extent can we fulfill our supreme duty to protect it? These questions should make everyone think equally. Mankind's mistreatment of nature is showing its negative consequences year after year. As a result of ignorance and disobedience to the laws of nature, the environment is severely polluted and serious changes are taking place in our land. During the spring and summer months, there are many cases of illegal hunting of various animals and birds, weeding of medicinal plants, collection and sale of plant species for personal gain before they are harvested. This leads to the extinction of rare animals and plants before they reach the breeding season. For example, 60 species of plants and more than 70 species of animals are at risk of extinction. The protection of nature and the environment is very important not only for today, but also for future generations.

The earth is made up of living beings and inanimate objects. It is this inanimate air, water, soil, light, moisture, temperature, sunlight, etc., that are vital necessities for the existence and functioning of living beings, as long as they are in harmony with

man. Living things, including man, unknowingly disrupt its natural balance by showing their positive and sometimes negative effects on nature. We call this a violation of the environment. It is no secret that the violation of the ecological balance has a negative impact on human health, especially for children with disabilities. Man cannot be separated from the earth, the Earth from man.

### II. MAIN PART

Unless we form a positive attitude towards the environment and nature in people, especially young people, today, our talk about improving the environment will not go beyond dry nonsense. In this regard, the active participation of the general public, law enforcement officers, people responsible for nature protection is required. It is the human duty of all of us to carry out propaganda work in the family, in the kindergarten, at school, among the public, without regular weakening. Environmental education is one of the most pressing issues of today. In this regard, President Sh.Mirziyoyev focusing on global security, the first priority is to focus on environmental sustainability, the Aral Sea, environmental cooperation and eco-tourism. Along with the use of modern scientific and technological advances, the unfavorable environmental situation has become a global issue in terms of coverage, that is, it has created a global environmental threat.



Causes of environmental threats The coordination of peaceful relations between nature, society and human technology, as well as the prevention of environmental threats has become a key issue today. This unfavorable environmental situation is important for man, a negative threat to his health, its causes, the coordination of relations between man and nature, society and nature, the prevention of environmental catastrophe is a topical issue of today.

Our first task as conscious human beings is to neutralize, that is, to neutralize as much as possible what is harmful to the environment. These are, of course, first and foremost opinions about drinking water, soil, and air. In this regard, first of all, we can protect the house, street, neighborhood, village and city where everyone lives from pollution, beautify it, plant greenery, preserve the natural beauty, fresh air, water, sanctuaries and use them effectively. . To do this, it is necessary to improve the ecological literacy, culture and attitudes of our youth, first of all, in the family, and then in schools and educational institutions.

In shaping the ecological upbringing in the family, it would be expedient if we begin with an analysis of the way of life of the ancient Eastern households. You see, our grandparents used to sprinkle water on the yard before cleaning it, then sweep it with a broom a little, throw the daily garbage in the yard, pull the soil on it, and in the fall they did not burn the weeds. This is because toxins are released into the air and pollute the atmosphere through the smoke of weeds. Therefore, they are converted into minerals that are well absorbed by plants by burying them in a pit and composting (i.e., rotting). During composting, the temperature of the waste rises, and in the process of intense heating, microorganisms dangerous to human health in it spontaneously die.

The plant world is a source of 20,000 different types of chemicals and medicines. All of them act as a "filter" that cleans the atmospheric air. It is known that a bush tree releases enough oxygen for an average of three people in 25 hours. A hectare of trees "absorbs" 220-280 kg of carbon dioxide and emits 180-200 kg of oxygen. How do we show compassion in response to a world of greenery that shows us so much "grace"? In the family, children should be taught by adults to plant trees, care for them, take care of them, plant seeds in the ground, and cultivate the soil. Now let's think about how many seedlings we plant each year in early spring and fall, but pay less attention to how many of them are sprouting and becoming our green zone. The second cousin of the saplings planted in the neighborhoods is the houseplants that are being cared for by the residents of some neighborhoods ... 1

Another problem is that many residents have dumped sewage from their backyards into ditches. During the summer months, the children of the population living in the lower reaches of the canals choose the most convenient place for them to bathe, namely the canals. As a result, they are more likely to get infectious diseases. Another source of environmental pollution is waste. In most cases, landfills are burned at night and environmental pollution increases by 2-3 times. There is no branch of science today that has been left out in solving environmental problems. Therefore, the history of the peoples of Uzbekistan, which has taken its rightful place, as well as environmental education in teaching the course "Man and Society" can not be ignored. It should be noted that the essence of social ecology, which studies the structure and characteristics of the environment that surrounds man, as well as the impact of environmental factors on the physical and mental state of man, is growing rapidly.

Social ecology is based on the following basic rules: "Nature-Society-Man" forms a single whole; part of human nature, its development is the basis of human life to change nature; the unity of natural history and social history is manifested in the process of labor. The laws of nature are primary in relation to social laws; the development of a new ecological culture represents a high level of individual responsibility to nature. The formation of a new cultural attitude to nature embodies the ideas of full-fledged humanism. Violating the laws of nature, pursuing only short-term benefits, wasting public funds, and approaching nature only from the point of view of one's own personal demands are as much against humanism as they are against nature[7]

The humanism of social ecology is especially close to the science of pedagogy. All aspects of school and public education are the idea of the new generation, which has long been a tradition - "we must make full use of the gifts of nature," "we do not wait for the gift of nature, we subdue it!" it requires a complete, decisive severance of its connection with its concepts, its protection, and the careful use of its gifts without harming it.

The school should cultivate in the younger generation such cultural qualities as constant care for nature, respect for its gifts.

Ecological culture should be an expression of the social activity of our students, a source of patriotic efforts to preserve and increase the natural resources of our independent Uzbekistan.

Environmental education is based on the formation of the general idea of the interdependence of general education, the responsibility of man for his environment.

In addition, environmental education requires students to radically change their attitude to the



environment, to carry out their activities in close connection with theoretical knowledge, to consistently enrich their skills and abilities in this area.

The following important requirements should be observed in the implementation of the goals and objectives of environmental education in the school environment, taking into account the specifics of the Republic:

- Perception of the spiritual and emotional unity of the natural environment and practical activities to improve it;
- Realization of interdependence and continuity of ecological education, its connection with subjects and interdisciplinary communication;
- and finally, the implementation of environmental education, taking into account the fact that environmental problems have a universal, simultaneous national and local history character.

Forming a sense of responsibility for the natural environment around students, plays an important theoretical and practical role in ensuring that the future of the Republic will be a strong state in the schools of independent Uzbekistan.

### III. RESULT AND DISCUSSION

Ecological education plays an important role not only in the formation of ecological and cultural culture in students, but also in solving many common problems of education and upbringing. Demonstrating the interrelationships between nature and society itself further enriches students' worldview-specific knowledge that the real world is a whole. Environmental knowledge helps students to more positively solve tasks that allow them to develop in terms of causal relationships, the structural structure of events and happenings. Understanding and communicating with nature encourages a person's moral upbringing, his human qualities - kindness, cheerfulness, compassion. Nature sincerely helps man to always be "conscientious, honest. Nature always reminds him that he is a MOTHER." Nature, which is an inexhaustible source of beauty, is an important means of aesthetic education in general, and greatly contributes to the perfection of man, who resists the forces that are brutally destroyed by nature[6] In the current integrated process, the formation of a conscious attitude of students to the environment, the development of their knowledge and culture of the environment is one of the most pressing pedagogical problems of the XXI century. Because one of the requirements of society is to improve the quality of ecological culture of future students, to provide them with environmental education through the protection of natural areas of the Republic, to become mature people who can contribute to the protection of nature. At the heart of

the ecological education system is the problem of forming ideas about the integrity of nature and human change in the environment. It envisages the solution of the educational process aimed at environmental education through the protection of natural areas, the treatment of natural areas. In this regard, attention is paid to the information provided by modern media and telecommunications. In the process of continuing education, it is combined with general tasks and systematized in connection with the preparation for the specialty. In this regard, a single concept of the Committee on Public Education, Protection of Natural Territories has been created, and on this basis, educational work is being carried out. Their ecological culture is formed by educating young people about the protection of natural areas, education about the environment. At the same time, the attitude of students to educating young people through the protection of natural areas comes first. This process, on the one hand, in the process of educating and educating young people through the protection of natural areas, leads to the formation of their understanding, imagination, attitude to the environment and their ecological activities. On the other hand, in the process of learning about the environment through the protection of natural areas, students develop a stable consciousness, thinking and worldview in relation to the protection of natural areas. Environmental knowledge plays an important role in labor education and training, as well as in the physical development and hygienic education of students. The First President of the Republic of Uzbekistan Islam Karimov in his book "Uzbekistan's own path to independence and development" spoke about the ecological situation in the country, "preventing the brutal use of natural resources, environmental damage and deterioration of the ecological situation in the republic." implementation of effective measures to improve the environmental conditions, the catastrophic economic and social consequences of these regions The whole world is one and interconnected[3]. Our common duty is to make the earth worthy for our children and grandchildren to live in prosperity and happiness. Uzbekistan has faced the most difficult challenges. The ecological condition of the island is recognized as a global tragedy. This tragedy cannot be prevented by Uzbekistan and its bloodthirsty neighbors alone. Habitat, nature and spiritual ecology are inseparable. It is necessary to restore the traditional value of good health and put it in a dignified place with the value of the family.

Didactic requirements are of special importance in the ecological education of students through the protection of natural areas. Accordingly, each educational process should be directly



coordinated with environmental education, and the following features will be studied.

1. To take into account the age and individual characteristics of students in environmental education through the protection of natural areas;
2. To allow students to take a unique approach and think independently in environmental education through the protection of natural areas;
3. Ensuring student self-assessment in environmental education through the protection of natural areas.

Experiments have shown that, taking into account the age and individual characteristics of the student, his psychological characteristics "set a goal for the study of biological and environmental"[4]. It should be noted that the role of specialized literature in increasing the effectiveness of environmental education is enormous. Therefore, special attention should be paid to this problem when integrating each school library with newspapers and magazines. Therefore, these newspapers and magazines should definitely be in multiple copies in each school library. The Uzbek people have a long history of learning to love and care for nature. This is a national holiday, an ancient tradition, evident in the customs. In particular, the holiday "NAVRUZ", celebrated annually by the peoples of Central Asia, for centuries has nurtured a love for the motherland and nature, care for it, respect for it, played an important role in labor education and spiritual upbringing. This holiday, which symbolizes the close relationship between man and nature, their unity, is not only a holiday of agriculture, but also a truly ecological holiday. Another historical tradition of the people with a purely ecological meaning is "TAGANAK". According to this custom, the people of the mountains and foothills gather in early spring and joyfully ride a long way, opening the eyes of the springs in the mountains, clearing the streams of branches and mud, and cutting off the dried branches of the trees [2]. National fiction also plays an important role in educating the population in the spirit of ecology, that is, the love of mother nature, the spirit of nature protection. The works of classic poets and writers of the Uzbek people, including Alisher Navoi and Zakhiriddin Muhammad Babur, are especially ecological.

#### IV. CONCLUSION

Uzbekistan's independence has opened a new stage in solving environmental problems rapidly and responsibly. The Constitution of the Republic of Uzbekistan stipulates that "Land, subsoil resources, water, flora and fauna and other natural resources are national wealth, which must be used wisely." [1]

Environmental issues are now under the constant control of the government. In the 1980s, there were important consultations and negotiations between UN member states to discuss several major environmental threats, including the ozone layer, in order to gain knowledge on controlling the transport of hazardous waste. In 1983, the UN established the World Commission on Environment and Development, which helps to preserve the environment in such a development, as well as to demonstrate a strong sense of need and the need for new awareness that can benefit the well-being of people living anywhere in the world. In some rich countries, the environmental downturn associated with industrial pollution remains an increasingly serious threat to developing countries. In a 1987 report to the General Assembly, the Commission, chaired by Jewreus Harlem (Norway), promoted the Concept of Sustainable Development as an alternative approach based solely on economic growth[5]. The new concept "meets the needs of the present generation, while meeting the needs of future generations without compromising the capabilities of future generations". While not all UN systems are involved in environmental protection in one way or another in their various areas of activity, its leading institution in this regard is the United Nations Environment Program (UNEP). UNEP assesses the state of the environment around the world and identifies problems that require international cooperation and monitors the implementation of a number of environmental agreements. One of UNEP's mission is to help gather knowledge and information about the environment. Study and analyze environmental information encouraged and coordinated by the organization. This organization has led to many reports on the state of the environment and has developed an understanding of the environmental challenges facing the world today. In particular, some of them have led to the adoption of a number of international environmental conventions. The ecological condition of the environment and the disturbance of the ecological balance of regions largely depend on the composition of atmospheric air and its negative changes under the influence of various industries. These changes occur on a planetary, regional, and topological (local) scale. The unique natural features of the Central Asian regions make it possible to divide it into ecological economic districts and to determine the basis of air pollution in each district. Such scientific predictions use the recurrence of major winds, how long the wind blows, and various other indicators. According to the data of the 1990s, there are 35,000 permanent sources of air pollution in Uzbekistan alone in the Central Asian Republics, about half of which have devices that trap and clean dust and various harmful gases,



and 4.1% of these devices are defective or very inefficient[2]

In recent years, Uzbekistan has witnessed a number of positive developments as a result of the efforts of the Ecosan International Environmental and Health Foundation. Thus, a new political worldview and ecological thinking will be formed in the humanity of the XXI century. This is of great importance in the interaction and relations of scientists of the world in the field of nature protection, solving environmental problems.

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# **SOCIO-PSYCHOLOGICAL MECHANISMS OF HUMAN KINDNESS IN THE FORMATION OF THE MICROENVIRONMENT IN THE FAMILY**

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## **ABSTRACT**

*In this article, kindness is the highest and most sincere love of a person for existence, the expression of individual high human feelings in society in an impressive, constant interpersonal social relationship, human kindness, its importance in social relations, categories, its evaluation through quantitative analysis, laughter, smiles, doing good, sincerity, helping, the emergence of mutual affection, but there are also factors that extinguish affection, such as slapping in the face, pushing from the chest, abusing, comparing to others, over-controlling, discrediting in front of others, not supporting when needed, in interpersonal relationships, especially today, to the child by the parents, the parents by the children, the grandchildren by the grandparents, the mother-in-law, the brothers, the relatives, methods of increasing the affection of members of society in general for each other have been analyzed.*

**KEYWORDS:** *social relations, social roles, kindness, affection, environment of kindness, service, expression of kindness, contact and non-contact kindness categories.*

## **THE URGENCY OF THE SUBJECT**

The concept of kindness, which has been relevant in all times and eras, has recently become one of the topics that has caused widespread discussion among people. This can be seen in conversations with different segments of the population, in people's discussions, in the media, in plays, in movies, in music, in street talk.

"He has no kindness for his parents", "He can't be kind with his child", "If he gave a little love, the bride would not leave", "Add a little kindness", "Where is the kindness market", "There is no kindness", "be mercy", Sentences like these have become a frequent part of our daily lives. It seems to me that this is the core of a number of social problems that have become a social problem. This can be especially seen in the upbringing of children, in the relationship of spouses, in-laws, brothers, sisters, and children to their parents. Cruelty is causing the closest people to distance themselves from

each other today. So let's do a little analysis of the concept of kindness.

Scientifically, the concept of compassion, kindness is related to a number of disciplines such as philosophy, psychology, theology, and sociology. We focus on the social aspect of the issue. In general, what is the social significance of the feeling of kindness in a person? How does it seen in interpersonal relationships? How to increase the feeling of kindness in society? This has been one of the most pressing issues of all time.

KINDNESS - it is man's highest and most sincere love to the universe. In society, an individual's high human feelings can be defined as the expression of emotions in interpersonal social relations on an impressive, constant basis.

Kindness, on the other hand, helps a person to embrace a certain environment in society - a sense of calm, trust, sincerity, freedom, happiness. They give a person a sense of happiness and confidence in life, hope for goodness, a sense of aspiration. At the same time, it



not only prevents the processes of disagreement and conflict in social relations, but also encourages consensus and cooperation.

Lack of kindness for a person causes a number of problems in society. One of the factors that lead to aggression in a child's character is lack of mothers affection, the need for parental upbringing.

Further strengthening the atmosphere of kindness in society, increasing the love of parents, children, grandparents, grandchildren, brothers-in-law, brothers, relatives, and members of society in general, especially in today's society, strengthens stability in society.

It seems to us that the concept of compassion, kindness is at the heart of many social problems that have become a problem of society today. This can be especially seen in the upbringing of children, in the relationship of spouses, in-laws, brothers, sisters, and children to their parents.

The passionate scientist, Professor G.B Shoumarov and his students' several years of scientific research in this area are commendable. But these studies do not allow us to take the problem to a completely positive level. The analysis shows that as a result of the research done so far, about fifty concepts have been scientifically clarified. In order to fully express affection in social relations, it will be necessary to take more than a hundred terms out of the mire of abstraction, to define and analyze them clearly.

Recently, the research of professors M.Kuronov and M.Bekmurodov in this area is also yielding positive results.

## METHODOLOGY

It relied on methods such as interview, observation, content analysis, and a "scale to assess the level of kindness in interpersonal relationships".

## EMPIRICAL ANALYSIS

It is well known that a social relationship represents a social relationship that arises from the fulfillment of the social status and social roles occupied by members of society. It reflects the relationships that take place directly or indirectly in society, between individuals and social groups. They arise as a result of influence and interaction, and take the form of dialogue, cooperation, conflict, compromise, alliance, association. Communication is manifested in the exchange of information, direct communication of their desires and inclinations to others by members of society in direct social relations.

The fact that people show kindness to each other in communication symbolizes closeness, understanding, solidarity. Human kindness gives people feelings such as peace, happiness, sincerity, confidence, joy. In sociology, this is studied in the context of affective action as one of the four most important social movements.

The family encyclopedia focuses on concepts such as kindness, its expression, and cruelty. "Kindness is a

person's sincere love for their relatives, loved ones, and the person in general. Although the environment in which children grow up in the family, their parents, and their attitudes toward children are the same, the expression of kindness is different. Kindness is not only formed during life, its basis is in many respects hereditary" [2].

According to many scholars and thinkers, the highest, most sincere love in human relations is the mother's love for her child.

We conducted a study to determine the social aspects of how a mother's love for her child is formed. To do this, interviews with mothers aged 28-55 were conducted in 5 groups of 20 people each. In the course of the research, the groups discussed the composition, formation and development of the mother's relationship with the child. It was the reasons why the mother became attached to her child, or more precisely, the reasons why she became attached. Let us consider in real life the emergence of endless love for the child.

Here are some of the discussions with them:

- "It is said that a mother's love for her child is highest feeling, how do you feel about that?"

- The answers are basically the same: "Yes, unique."

- "How do you understand the feeling of kindness?"

- "It is a very high sincere feeling", "It is a divine feeling", "Words cannot describe it" such answers were given.

When group members are asked to explain the current situation in detail and what kind of relationship it will be: "Carrying in the body for nine months, giving birth with fear and suffering, breastfeeding, feeding, singing lullaby, dressing, bathing, healing" We got answers like this, etc..

Another situation: As a result of many years of service, the employee's love for the office ... Our interlocutor worked as a teacher at school number 21 for 31 years.

- My school, where I have worked for many years, always attracts my affection, says our interlocutor.

- Did you also work at School No. 22?

- No, I only worked at School No. 21.

- Do you feel like you're walking past School No. 21, where you've always worked, as you walk past School No. 22? Both are schools.

- Of course not. As I walk past School No. 21 where I work, I get some special feelings, emotions, memories. I feel even if there is a small change. I'd like to go inside. Sometimes I even go in. Even though most of my co-workers are retired, it still attracts me.

- What about passing in front of School No. 22? It's a school, there are teachers, students, a principal, a desk, a table, a chair, it's all like in school number 21, isn't it?

- There is no such feelings.

- Is it just like passing in front of the ordinary building?



- Yes, just like passing in front of an ordinary building.

- If the building of the school where you work collapses and is replaced by a multi-storey building, will you feel the same way as you pass in front of it?

- No. It would be seemed strange to me.

We spoke with several employees who have worked in the same company for many years. We got the same answer from everyone.

This means that man, because of his service, causes such a connection not only with man, or with the living, but also with the inanimate.

Another situation:

- I have three uncles. One of them loves me more than the others. But I have the same attitude towards all three of them. I'm looking for reasons. I was three years old when he returned from military service,"he said.

- Since we lived in the next yard, he spent more time with me and played together. He was carrying me on his shoulders. When I watch even family photo albums, I saw a lot of pictures with my uncle. So far, if he see me at weddings and celebrations, he definitely come and sit in front of me. His love for my other brothers is not as like to me. Hence, kindness can also be formed unilaterally on the basis of labor.

Imagine: you are talking to a stranger you have never met before. You have no information about him, you don't even know his name. What kind of affection can there be with a person with whom you have never been in a social relationship before. Of course, these feelings are a gradual process. So, kindness represents a certain level of closeness in these interpersonal relationships.

Now, based on the above, we are looking for an answer to the question of how to create an increase in the level of kindness in interpersonal relationships.

Let us conditionally accept that in social relations love and kindness is the product of work, service. Increasing kindness does not require much effort on our part. Use your children in relation to each other. Because this method increases the mutual affection between them. Remember, clapping comes out of both hands. What people do for each other is small, and trivial things increase the love kindness between them. It is good that the number of these actions is greater. Apply this exercise to yourself and your loved ones. Mutual service becomes an important means of creating mutual love. A mathematician friend of mine called it the "Formula for Enhancing kindness."

Laughter, smiles, doing good, sincerity, helping will cause mutual kindness in a person. At the same time, there are factors that can dampen affection, such as slapping in the face, pushing from the chest, sighing, comparing to others, over-controlling, hitting the ground in front of others, not supporting when needed.

It is also a form of expressing affection when calling for loved ones attention to much. For example, some mothers focus on their children to the point of forgetting their own lives, or it can be said that it is an

abused kindness for children to deviate from the norm by taking advantage of parental kindness.

Kindness can be felt in the eyes, in the palms of the hands, in intimacy, in hugs, kisses, in missing. People look at each other with compassion, when they caress their foreheads with their hands, when they pat them on the shoulders, when they hold each other close to each other, when they hug, when they kiss, when they greet each other with longing. So it is possible to take, give, increase, decrease and even overuse love and kindness.

As a result of the analysis of about a hundred categories related to love and kindness, we have divided them into contact (lat. Contactus - touch; connection) and non-contact forms of communication [7].

Today, a clear, practical study of any relationship is required. Therefore, we cannot fully use the concept of kindness and its expression in the life of society without a clear, practical analysis. The problems in this regard are growing day by day. Of course, this is not a simple process. It is also very difficult to achieve a definite result. The reason is that we are talking about an emotional, i.e., a dynamic relationship based on qualitative methods. In addition, affective behavior will need to be quantified. To this end, we have taken a terminological approach to important aspects of interpersonal relationships in expressing affection. We collected them using a content analysis method. We analyzed about a hundred categories by experts and singled them out as concepts that express kindness. Based on the "assessment scale", we asked respondents to evaluate these categories. To date, we have compiled eight surveys based on these scale units, but differing in subject matter.

The following is an example of a "Questionnaire to Assess the Level of Motherhood in a Mother-Child Relationship". The questionnaire is based on an "Assessment Scale," in which the numerical representation of an action is determined by the objects being written or evaluated, not by the researcher. It will be necessary to develop the views of the respondents on the object of interest to the researcher. Based on the recommended scale, it is possible to assess the level of kindness in interpersonal relationships. Of course, research is being done to further improve this. In the questionnaire, the concepts that define kindness are listed as units of scale. The questionnaire assesses the level of kindness of one person (applicant) in the relationship with another person.

The person completing the questionnaire puts the daily average or overall average relationship on the scale in numerical order (i.e., how many times).

The numbers entered are summarized by the interviewer or electronic program and divided by 16. The result is an index of kindness shown by the applicant:

$$Mc / t = M$$

Here:  $Mc$  - kindness number,  $t$  - time,  $M$  - index of kindness.



Example: 48/16=3

**Table 1**  
**Questionnaire survey**

Full filling person: N.S.P.: _____ Age: _____ Sex: _____ Social background: _____ Job: _____ Address: _____	WHO IS FILLED FOR: N.S.P.: _____ Age: _____ Sex: _____ Address: _____
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**Table 2**  
**KINDNESS ASSESSMENT QUESTIONNAIRE:**  
**(A mother's love for her child)**

Nº	Concepts	The number of activities per day (can be determined approximately)
<b>1. Contact forms of kindness:</b>		
1.	Hugging	
2.	Shake hands, greet	
3.	Kissing on the face	
4.	touching face	
5.	Rubbing head	
6.	Feeding	
7.	Breastfeeding	
8.	Tapping on his shoulder	
9.	Rubbing his shoulder	
10.	Kissing on the forehead	
11.	caressing forehead	
12.	Carrying	
13.	carry on the back	
14.	Caress up under the armpits	
15.	Play a role together	
16.	Dressing	
17.	Giving gifts and presents to please	
18.	Tickle	
19.	Lift up and put to bed when sleeping	
20.	Kissing and cuddling while sleeping	
21.	Wake up in the morning with a hug	
22.	Waiting, watching	
<b>2. Contactless forms of kindness:</b>		
23.	A sincere smile	
24.	Showing sincere respect by placing your hand on your chest	
25.	Squeezing both eyes	
26.	Shake hands and say goodbye	
27.	Conversation (with sincere, humorous words)	
28.	Saying his name affectionately	
29.	Traveling together	
30.	Promote	
31.	Intimate conversation	
32.	Telling a fairy tale	
33.	Listening to the child	
34.	" I love you ", "my strong boy", "Mommy", " My dear" to say affectionate words like this	
35.	Consideration of wishes	



36.	Praise	
37.	Protection	
38.	Dancing	
39.	sing a lullaby	
40.	help in memorizing poetry	
41.	Blessing	
42.	Hearing the problems	
43.	Sing a song	
44.	Watching cartoons and movies together	
45.	Give useful tips	
46.	Concern for health	
47.	Send an SMS	
48.	Talking by telegram	
49.	Send emoticon jokes	
50.	<b>Communicate online</b>	

In our example, the number of operations performed by the questionnaire was 48. If we divide the result by 16<sup>1</sup>, the product is 3. So the kindness index is 3.

The average index on the scale is 7 points for 0-5 years, 3 points for 6-15 years, 2 points for 15 years and older<sup>2</sup>. Recommendations are issued to the client on the basis of units on the scale, based on the average age, by a specialist or on the basis of an electronic program.

For example, if the kindness index is 3 points as mentioned above and the object is 4 years old, it is a low indicator. Because at this age the index is the norm if the average is 7 points. In this case, the specialist pays attention to the scales of 0 and below, and develops recommendations on the number of times to increase these indicators, putting numbers in the units of the scale and the missing contact and non-contact kindness to the object.

### WHO CAN FILL OUT THIS SURVEY?

The "Questionnaire to assess the level of kindness in interpersonal relationships" can be filled by anyone. It shows the kindness and care of one person towards another.

In family relationships:

- mother's to child;
- father's to child;
- sister's to sister;
- brother's to brother;
- grandfather's to grandchild;
- grandmother's to grandchild;
- mother in law's to daughter in law

<sup>1</sup> A day and night is 24 hours, of which 8 hours is pure sleep, and we subtract 16. This was marked as a period of daily expression of kindness.

<sup>2</sup> Average indices such as 7, 5, 2 were obtained. As you grow older, the distance between interpersonal social distances increases. This in turn leads to a decrease in the index of expression of kindness. Also, the average ratio of the results obtained from the respondents was taken as the average normative indicator and the rate of differentiation according to age was determined. In generalizing the units of scale, the types of audialist, visualist, knesthetic, discrete personality of the subject's perception of information from the outside world were taken into account.

supplemented by an assessment of the level of kindness.

It is important to know how much the object feels or understands the kindness given by the subject. It is therefore important to determine the difference between a given kindness and a received kindness on the basis of a comparative analysis and to determine the dynamics of misunderstandings. Here you can also see the difference in how much the mother and child, the mother-in-law and the daughter-in-law understand each other. This will help resolve any disagreements that may arise in the future.

### CONCLUSION

Kindness gives a person feelings of peace, mutual trust, sincerity, freedom, happiness. It awakens in a person the confidence to live, the hope for goodness, the feeling of aspiration. It also prevents disagreements and conflict processes and strengthens consensus and cooperation.

In interpersonal relationships, especially today, increasing the love of parents for their children, parents of children, grandchildren of grandparents, mother-in-law, brothers, relatives, and members of society in general strengthens stability. Lack of kindness leads to aggression in the child's character and leads to the emergence of various negative vices in society. It serves as a tool for the effective organization of preventive work against crime.

The sense of kindness has a special significance in social relations as a product of mutual service, and the ways of showing kindness in interpersonal relations, receiving it, giving it, increasing it, decreasing it have been analyzed.

About sixty terms related to the concept of kindness were evaluated as categories that express compassion in interpersonal relationships. By further expanding the categories that represent this concept, it is possible to eliminate ambiguities in this regard and achieve a positive attitude in social relations.

About a hundred categories collected by the method of content analysis were analyzed by experts, and the selected ones were formed as units of the "Scale



of assessment of the level of kindness in interpersonal relationships." Eight surveys were conducted to assess this relationship, but differing in subject matter. Positive conclusions were obtained from surveys in expert and experimental studies.

Qualities such as aggression and cruelty were interpreted as psychological and sociological consequences of cruelty.

These approaches are important in modern family relations, as they are aimed at increasing the sincere love of family members for each other, the formation of new traditions and customs.

### **Recommendations for strengthening the atmosphere of kindness in Uzbek families**

– make it a habit for your child to live by strict adherence to family discipline.

– instill in your child the habit of doing everything assigned to him in a fluffy, mediocre, and beautiful way, teaching him to think that whatever he does, it should be more graceful and beautiful.

– teach your children to do each other's work. This leads to the strengthening of the bonds of kindness between them.

– have a friendly conversation with the child for 40 minutes every day on various topics (school, without emphasizing the responsibility for his studies, that is, without excessive advice).

– As a parent 5-10 times a day, show your children that you love him or her in different ways.

– At least 3 times a day, tell about the good behavior, good deeds your child did to other relatives in the family. Your praise will surely reach him.

– do outdoor activities with the child 2 or 3 times a week (walking, playing sports, driving).

– eat dinner together as a family 3-4 times a week for family counseling and conversation.

– allow the child to speak fully for 10 to 12 minutes each day: in a quiet, peaceful place, listen, allowing the child to say what he or she wants, without boundaries or notes.

Every day, find kindness stories about the lives of our great ancestors for your child, teach him or her, and turn the discussion together into a family picture.

Exaggerate the lives of peaceful neighbors and encourage them to learn from them.

Make it a habit for your child to take care of their brother or sister, and in return, emphasize that it is good to always show kindness without expecting an equal return from them, and that this work will be rewarded by Allah.

– Every day before going to bed to teach a child the basics of life, you can express your consent as a father by saying, "I felt very happy when you did such and such a good deed," "Looking at your brother is a big deal," "I am proud that you kept our agreement." let him know that you are proud of him.

Take your child close to you and express your love for him:

– Stroking the back of the head - symbolizes kindness and compassion;

– putting a hand on his head is an expression of pride;

– Placing the hand on the forehead - soothes;

– Holding hands - strengthens the bond between parent and child;

– if nervous, soothe by stroking the chest, hug.

Our Prophet Muhammad (peace and blessings of Allah be upon him) was an example to all in the matter of kindness.

By following these tips, make it a habit to express your love to your child sincerely and fully. By making the child feel what a great blessing kindness is, a strong stable bond develops between you so that he or she grows up to be a real person with good manners, obedient, respectful of adults, respectful of the little ones, and pleasing to their parents in the presence of you and others.

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# STOCK EXCHANGES IN INDIA- NEED FOR A PARADIGM SHIFT IN ELECTRONIC ERA

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## ABSTRACT

*Stock Exchange is regarded as an essential concomitant of the capitalistic system of economy. It is indispensable for the proper functioning of corporate enterprise. It is the citadel of capital and the pivot of money market. Since 1887, various regional stock exchanges have been set up in India. However, the performance records from 1993-94 to 2003-04 show that the trading initiated by them had been gradually declining. Hence, the present paper suggests, based on their performance records, to consolidate the secondary market for securities by merging them with the leading exchanges.*

**KEY WORDS:** *Stock Exchange, money market, liquidity, securities*

## 1. INTRODUCTION

Stock exchange is a market in which securities are bought and sold. It is an essential component of a developed capital market. The Securities Contracts (Regulation) Act, 1956, defines stock exchange as an association, organisation or body of individuals whether incorporated or not, established for the purpose of assisting, regulating and controlling of business in buying, selling and dealing in securities". A stock exchange, thus, by imparting marketability and liquidity to the securities, encourage investments in securities and assists corporate growth.

## 2. IMPORTANCE OF STOCK EXCHANGE

- It provides an organised market for transactions in shares & other securities and thereby facilitates, liquidity/marketability.
- It promotes the habit of savings and investment among general public by providing a secondary market and thereby helps capital formation.
- It ensures a measure of safety and fair dealing to protect investors' interests.

- It provides an instant valuation of securities caused by changes in the environment.
- Stock exchange is an essential concomitant of capitalistic system of economy.
- It induces companies to improve persons as the market price at the stock exchange reflex the performance.
- It promotes industrial growth and industrial investments.

## 3. STOCK EXCHANGES IN INDIA – HISTORY IN BRIEF

The Indian stock market is one of the oldest in Asia. The earliest records of security dealings in India are meagre and obscure. The East India company was the dominant institution in those days and business in its loan securities was transacted towards the close of the eighteenth century.

By the 1830's business in corporate stocks and shares in bank and cotton presses took place in Bombay (Now Mumbai). Though the trading list was broader in 1839, there were only half a dozen brokers recognised by banks and merchant.

In 1860-61, the American Civil War broke out and cotton supply from the United States of



America (USA) and Europe was stopped. This resulted in the 'sharemania' for cotton trading in India. The number of brokers increased to 250. However, at the end of the American Civil War, in 1865, a disastrous slump began. The share prices plummeted. At the same time, brokers found a place in Dalal Street, Bombay, where they could conveniently assemble and transact business. In 1887, they formally established the 'Native Share and Stock Brokers' Association'. In 1895, the Association acquired premises in the same street. It was inaugurated in 1899 as the Bombay Stock

Exchange (BSE). In November 1992 National Stock Exchange of India Limited (NSE) was set up, promoted by leading financial institutions at the behest of the Government of India. In 1990, the Over the Counter Exchange of India (OTCEI) was incorporated with an aim to aid enterprising promoter in raising finance for new projects in a cost effective manner. Following this, the various regional exchanges were also set up.

The number of regional exchange in each of the four zones – east, west, north and south - is shown in table 1.1.

**Table 1.1.Regional Stock Exchange**

North Zone	East Zone	West Zone	South Zone
Kanpur	Bhubaneswar	Ahmedabad	Bangalore
Ludhiana	Kolkatha	Vadodara	Chennai
New Delhi	Guwahati	Indore	Kochi
Jaipur		Bombay	Coimbatore
		Pune	Hyderabad
		Rajkot	Mangalore

Source: SEBI Bulletins.

As of 2003-04, there are 23 stock exchange in India. They are;

- |  |                                    |
|--|------------------------------------|
| 1. Ahmedabad Stock Exchange Association  | 2. Bangalore Stock Exchange        |
| 3. Bhubaneswar Stock Exchange            | 4. Calcutta Stock Exchange         |
| 5. Cochin Stock Exchange Ltd.            | 6. Coimbatore Stock Exchange       |
| 7. Delhi Stock Exchange Association      | 8. Guwahati Stock Exchange Ltd.    |
| 9. Hyderabad Stock Exchange Ltd.         | 10. Inter-connected Stock Exchange |
| 11. Ludhiana Stock Exchange Association  | 13. Madras Stock Exchange          |
| 14. Madhyapradesh Stock Exchange Ltd.    | 15. Manglore Stock Exchange        |
| 16. Mumbai Stock Exchange                | 17. Pune Stock Exchange            |
| 18. Uttarpradesh Stock Exchange Ltd.     | 19. OTCEI                          |
| 20. Meerut Stock Exchange Ltd.           | 21. National Stock Exchange Ltd.   |
| 22. Saurashtra Kutch Stock Exchange Ltd. | 23. Vadodara Stock Exchange Ltd.   |

Stock Exchange are governed by the Securities Controls (Regulation) Act, 1956. Securities and Exchange Board of India (SEBI) monitors their working.

#### **4. NEED FOR CONSOLIDATION: FINDINGS, SUGGESTIONS**

Until the introduction of electronic trading, it was necessary to have various regional stock exchanges covering all parts of the country. They followed their own rules. They provided access to deal in securities. However, in the electronic era, the concept of regional exchange are no longer relevant. Online trading and depository services offer better quality and convenient services for the investors from any part of the country. In addition, the regional stock exchanges have been displaying a dismal performance over the period 1992-93 to 2003-04 as depicted in table 1.2. (See Appendix)

The table 1.2. (See Appendix) shows the turnover recorded on cash segments of exchanges in India from the year 1992-93 to 2003-04. It shows that the turnover on cash segments of all the

regional exchanges have reduced substantially. Turnover of stock exchange in Bangalore, Bhubaneswar, Cochin, Coimbatore, Guwahati, Jaipur, Ludhiana, Madhya Pradesh, Magadh, Mangalore, Pune & Vaodara have plummeted to zero by the year 2003-2004; other regional exchange also have been recording falling turnover. The table shows that the Uttarpradesh stock exchange, which recorded the largest turnover among the regional exchanges amounted only to 1.1% of the turnover of NSE, Mumbai.

Table 1.3 (See Appendix) shows the quantity of shares traded and delivered and their value. It shows that regional exchanges in India deals only nominal portion of share trading & delivery in India. No regional exchange deals more than 5% of the total. Among them, the trading has been substantially reduced. For instance, Calcutta Stock Exchange which traded 19548 lakhs shares in 2001-02, which was 3.9% of the total trading in India, recorded only 0.39% trading in 2003-2004. The results show that there are stock exchanges which deal virtually insignificant trading in their bourses.



## 5. CONCLUSION

In earlier centuries India had a few reasons (such as widely scattered investors, regional differences etc.) for setting up of regional stock exchanges in various parts of the country. However, after the launching of electronic trading and depository services, they make it totally irrelevant to have regional exchanges. Investors from any part of the country can very well access the NSE/BSE from anywhere, even from the remotest village. Technological advancement also enables to have transparent, hasselfree and convenient mode of trading and settlement. Unlike paper form based trading, in screen based trading the price at which trade was executed and settled can very well be known to the investors. Hence, it is suggested that the regional exchange should be merged with the NSE / BSE. They may operate like a depository participant (DP) and trading member in NSE/BSE. Necessary legal amendments should be made for the purpose. Such a consolidation will indeed add strength to the efficiency of Indian capital market.

In the electronic era, the depository system has redefined the way of dealing in share market. Hence the conventional stock exchanges have no significant role to play. Having NSE and BSE as the central exchanges are well competent to lead share trading in India, other Stock Exchanges may either be closed down or merge with the big ones. Indeed such a consolidation will help the regulator too for carrying out its functions.

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**APPENDIX****Table 1.2. Distribution of Turnover on Cash Segments of Exchanges****(Rs. Crores)**

Stock Exchange	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
Ahmedabad	22183	23540	12452	20626	41065	31117	29928	37566	54036	14644	15459	4544
Bangalore	730	2316	712	897	4389	8637	7749	1115	600	70	0	0
Bhubaneswar	1899	814	303	211	231	203	74	68	0	0	0	0
Calcutta	NA	57641	52822	62149	105481	178779	172818	357167	355035	27075	6523	1928
Cochin	65	382	614	287	152	164	96	66	26	2	0	0
Coimbatore	27	2082	3192	5007	4798	4274	769	78	0	0	0	0
Delhi	7413	12099	9144	10083	48992	67936	50651	94528	82997	5526	11	3
Gauhati	443	452	285	616	484	120	52	0	0	0	0	0
Hyderabad	676	984	1160	1107	480	1868	1270	1236	978	41	5	2
ICSE	NA	274	237	70	53	0						
Jaipur	296	616	879	1048	1519	453	63	2	0	0	0	0
Ludhiana	1050	3150	4975	4849	5274	8316	6070	6872	9184	964	0	0
Madhyapradesh	356	132	118	202	5	1	1	10	2	1	0	0
Madras	3407	4618	6117	3259	3912	2458	739	500	218	48	76	101
Magadh(Patna)	NA	1938	797	1629	2755	323	1	9	2	0	0	0
Mangalore	12	108	62	39	380	314	11	0	0	0	0	0
Mumbai	49696	84536	67749	50064	124190	207112	310750	686428	1000032	307292	314073	503053
NSE	NA	NA	1805	67287	295403	370193	414474	839052	1339510	513167	617989	1099534
OTCEI	2	38	365	224	219	283	198	3603	126	4	0	16
Pune	782	3459	3672	7096	10084	8624	4827	6090	6171	1171	0	0
SKSE	265	614	329	452	395	17	0	0	0	0	0	0
Uttarpradesh	5508	6789	7923	12373	16070	15209	18429	23876	25112	13349	14767	11751
Vadodara	1681	3751	3855	2519	4344	4577	1749	159	2	20	3	0

NA : Not Available,

Source: Various Exchanges

**Table 1.3. Trading Statistics on Stock Exchanges**

Stock Exchanges	Shares Traded (Lakh)			Shares Delivered (Lakh)			Value of Shares Delivered (Rs.crore)		
	2001-02	2002-03	2003-04	2001-02	2002-03	2003-04	2001-02	2002-03	2003-04
Ahmedabad	7622 (1.5)	7239 (1.20)	2514 (0.23)	373(0.3)	115(0.10)	115(0.04)	435(0.04)	99	0
BSE	182196 (36.1)	221403 (3.64)	388748 (34.84)	57668 (46.9)	71131 (46.00)	144531 (45.09)	59980 (36.20)	50308 (36.95)	129312 (36.95)
Bangalore	35 (0.01)	0.0 (0.00)	3 (0.00)	8 (0.01)	0.0 (0.00)	3 (0.00)	20 (0.00)	0.0 (0.00)	0.5
Bhubabeswar	0	NA	0	0	0	0	0	0	0
Calcutta	19548 (3.9)	6837 (1.10)	4378 (0.39)	2062 (1.7)	904 (0.60)	1225 (0.60)	1810 (0.30)	400 (0.08)	266
Cochin	29	0	0	0.8	0	0	2	0	0
Coimbatore	0	0	0	0	0	0	0	0	0
Delhi	6811 (1.4)	34 (0.01)	0.03 (0.00)	3127 (2.5)	22 (0.00)	0.03 (0.00)	1872 (0.00)	2 (0.00)	0.14
Gauhati	0.13 (0.0)	0.21 (0.0)	0	0.13	0.05	0	0.03	0.21	0
Hyderabad	143 (0.03)	37 (0.01)	17 (0.00)	82 (0.07)	14 (0.01)	17 (0.01)	8 (0.00)	2 (0.00)	2
ICSE	123 (0.02)	30 (0.01)	0.06 (0.00)	0.65 (0.00)	0.1 (0.00)	10 (0.00)	0.1 (0.00)	0.1 (0.00)	0.03
Jaipur	0	0	0	0	0	0	0	0	0
Ludhiana	765 (2.0)	0 (0.1)	0	74	0	0	53	0	0
Madras	52(0.01)	0(0.1)	85(0.004)	5(0.00)	0(0.00)	0.96	2.19	0	0.19
Magadh	0 (0.00)	0.11(0.00)	0.19	0	0	0	0	0	0
Mangalore	0	0	0	0	0	0	0	0	0
MPSE	11 (0.0)	0	0	0.70	0	0	0.9	0	0
NSE	278409 (55.2)	364066 (59.8)	713301 (48.2)	82353 (53.20)	174538 (55.460)	71765 (63.46)	71765 (63.30)	87956 (62.95)	220341 (62.6)
OTCEI	5.41 (0.001)	1.8 (0.00)	22.21 (0.00)	0.07 (0.0)	0	0	0.03	0	0
Pune	396 (0.1)	0.5(0.01)	0.00	16	0.03	Nil	34	0.01	Nil
SKSE	0	0	0	-	0	Nil	0	0	Nil
UPSE	7997 (1.6)	9288 (1.50)	6737 (0.60)	202 (0.2)	235 (0.20)	74 (0.02)	232 (0.20)	230 (0.02)	76
Vadodaa	7.0 (001)	8 (0.00)	0 (0.00)	0	0	Nil	0	0	Nil
<b>Total</b>	<b>5,04,149</b>	<b>60,89,44</b>	<b>11,15,807</b>	<b>1,22,917</b>	<b>1,54,775</b>	<b>3,20,504</b>	<b>1,36,225</b>	<b>1,38,997</b>	<b>3,49,997</b>

Figures in parentheses indicate percentage to total

Source: various Stock Exchange



## **LEVERAGING EMPLOYEE POTENTIAL THROUGH DIVERSITY MANAGEMENT**

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### **ABSTRACT**

*Employers are increasingly taking notice of the fact that workforce diversity provides both obvious as well as hidden benefits. However, in order to reap the benefits of cultural diversity in the workplace, the management of the organization must communicate its commitment to addressing the challenges of a diverse workforce. This paper will explore the various benefits of work force diversity and assess the cost benefit trade-off including the social cost benefit analysis. This shall lead to assessing the advantages of workforce diversity and go on to explore how the benefits that accrue as a result of a diverse workforce can be maximized. The paper shall also examine the challenges that are likely to be encountered and overcome.*

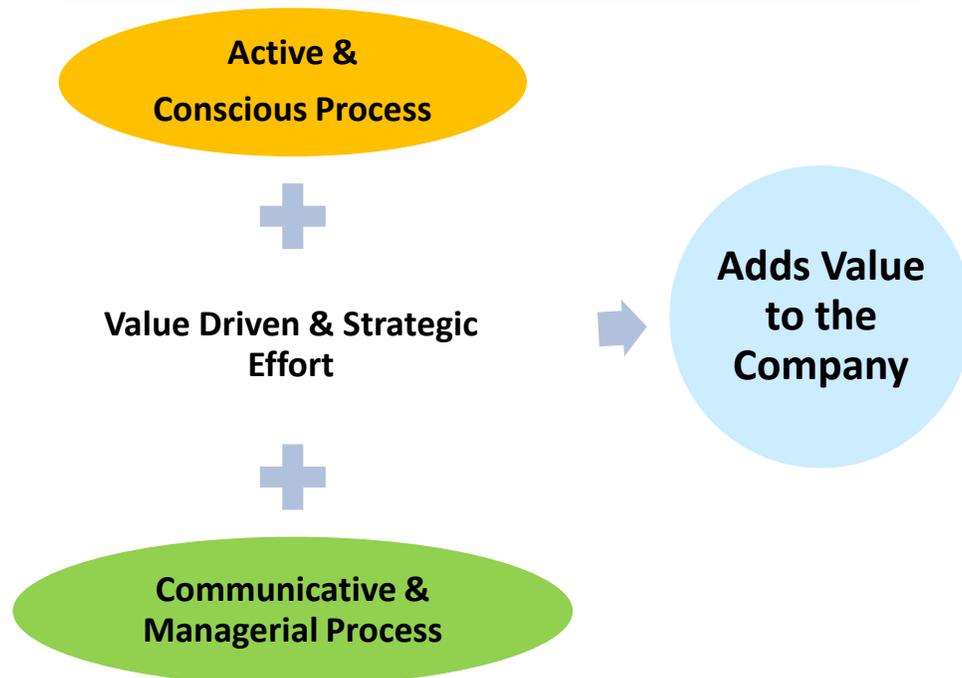
**KEY WORDS:** *Employee Potential, Diversity Management, Cost –Benefit trade-off, Social cost benefit analysis*

### **INTRODUCTION**

Workplace Diversity refers to the existence of a variety of cultural or ethnic groups within a society and is reflected in the workplace as the practices, values, traditions, or beliefs of employees based on race, age, ethnicity, religion, or gender. Economic globalization is one of the main driving forces of cultural diversity in the workplace. The modern workforce is made up of people of different genders, ages, ethnicity, religions, and nationalities. Employers now realize that workforce diversity provides both material and intangible benefits but to reap the benefits of cultural diversity in the

workplace, they must communicate their commitment to addressing the challenges of a diverse workforce. They must be seen as celebrating their employees' diversity.

*Diversity Management is about integrating ideas and practices of Diversity into the everyday managerial and learning processes of a company and its environment.* Business decisions need to be taken in an atmosphere of trust, acceptance and appreciation. The organization must internalize differences among employees so that it learns and grows because of them. *We all are on the same team with our differences not despite them.*



## UNDERSTANDING WORKFORCE DIVERSITY

### Why is Workforce Diversity important?

The best way to understand the importance of Diversity is to understand the analogy given in the story of the Giraffe & the Elephant by R Roosevelt Thomas in his book 'A House for Diversity'. The story talks about how a giraffe build a beautiful house completely suited to his own specific needs and addressing his species' requirements. One day he chances upon an elephant who he knows from past experience to be an excellent wood worker and invites him to be a part of his team and work with him in his workshop at home. The entry of the elephant into the home of the Giraffe creates a multitude of problems. The story helps to establish that if we are not able to prepare ourselves, our environment and our surroundings we will not be able to make diversity to work for us however good our intentions are!

### Why should Companies concern themselves with diversity?

There is sufficient evidence that diversity yields benefits and yet companies hesitate to embrace diversity wholeheartedly and keep questioning that why they should concern themselves with diversity. The answer to that why is that discrimination is wrong, both legally & morally but in fact there are so many reasons why diversity is good for the

organization. Diversity at the workplace can have several positive outcomes:-

- 1) It can increase company effectiveness in achieving its objectives- This is because a diverse group of people can generate more creative ideas and implement them effectively. A highly skilled, innovative and diverse workforce is important for business success. For example, labor shortages can be resolved through recruiting and retaining
- 2) It helps to lift the morale of employees. The presence of Diversity helps people of different types to integrate effortlessly since no one feels different in an environment that embraces differences as natural and welcome.
- 3) It can bring increased access to new segments of the market place. In the world of marketing, the connection that a marketer can establish with a prospective customer can be extremely useful. A company that has a diverse workforce will undoubtedly have a far greater reach to a larger audience.
- 4) It will enhance productivity. Diverse workforce would mean several different perspectives and diverse skills and talents too!
- 5) It is useful for strengthening the cultural values within the organization. If an organization has cultivated an atmosphere of



appreciation for different cultures it will create an environment that is conducive to positivity and idea sharing.

- 6) It will help in enhancing the cultural reputation of the organization. A well managed diverse workforce will improve the overall reputation and goodwill of the company.
- 7) It is useful to attract & retain highly talented people. A company that has the reputation of supporting diversity and integration is likely to attract the best people and human resources.
- 8) A diverse workplace will improve the motivation & efficiency of existing staff. A well managed diverse workforce will not only motivate employees but also improve efficiency through integration of diverse ideas.
- 9) It will increase innovation & creativity among the employees. Diversity is a breeding ground for new ideas and perspectives and leads to more creative decision making.

Thus, we can conclude from the factors mentioned above that diversity at the workplace must become a priority for organizations because a diverse workforce which integrates different perspectives, people and backgrounds helps improve corporate performance and strengthens local economies. If a company wants to be an employer who is the first choice of prospective employees and wants to attract, develop, and retain a talented and engaged global workforce then it must offer a work environment that supports diversity and practices inclusive employment policies and programmes.

### **The Questions to ask while dealing with the idea of Workplace Diversity**

Let us now turn to understanding what questions the employers must ask themselves and answer if they are to deal with workplace diversity effectively. The questions that emerge and that companies must ask themselves are:

- 1) Why is a diverse work-force needed in the organization? How does diversity fit into your company's STRATEGY?
- 2) Can diversity actually strengthen the company? Managers must analyze the existing situation by performing a SWOT (Strength, Weakness, Opportunity and Threat) Analysis and then assess if diversity will result in greater effectiveness and opportunities.

3) Is the company equipped to deal with Diversity and its accompanying issues? The integration of diverse members into the organization is bound to be accompanied by tensions. This will require an effective CHANGE MANAGEMENT strategy.

4) Bringing in diversity shall require that the organization culture change-not just small incremental changes but an overall shift in how the organization functions. The entire organization will need to change and for this it must be committed completely to the proposed CULTURE CHANGE?

### **The practices that contribute towards greater Workforce Diversity in the organization**

The following practices will help the company foster greater work force diversity and propel it to stay committed towards workforce diversity thereby leveraging employee potential :-

1. Establish a culture of safety. This is important to make employees, who come from different cultures, communities, races, religion or even gender that is not the majority, to feel safe and unthreatened.
2. Support initiatives that foster employee engagement. Engaged employees find a common ground to. This can help to remove barriers between people who belong to diverse backgrounds.
3. Lay down the basic ground rules that will govern labor relations and keep them in tune with the management philosophy that supports diversity.
4. Work towards talent attraction and retention within the larger premise of workforce diversity and thus enhance recruitment practices
5. Create a leadership Development programme that supports Diversity
6. Weave programmes like safety training, new hire training, cross training, refresher training and knowledge transfer that support diversity into the overall induction and training programs of the organization.
7. Work to promote external partnerships that support women and other minority groups.
8. Conduct inquiries into gender pay issues or other salary and remuneration issues arising out of diversity.
9. Create workplace flexibility through childcare benefit initiatives and programmes.



10. Ensure an effective employee feedback and Grievance redressal procedure to deal with individual reports of harassment. Additionally programs like the whistle blowers hotline may be established.

### **Points to consider while managing diversity at the Workplace**

In order to make diversity work for your organization the following points must be kept in mind:

- 1) Spend time in Analysis. Think about your business-its strengths, its weaknesses, as well as related issues and needs
- 2) Pay attention to Recruitment- Move away from staffing decisions based upon personal values and bias. This will help support and introduce diversity into your organization.
- 3) New Markets- Explore new and potential markets. Consumer Diversity requires staff Diversity- not only in terms of age, ethnicity, and ability but to reflect the changing motivations & lifestyle of the marketplace.
- 4) Client / Customer Needs – Put client/customer needs at the forefront of your business strategy and planning process. This way in case a diverse workforce is required to deal with the customer it will be built into the overall strategy of the organization
- 5) Develop strong Internal Communications Systems. Workforce diversity can only be effective if there is a strong communication system in place.
- 6) Image & Reputation- Use your commitment to diversity as a business tool in terms of building reputation, better publicity and public relations and creating a winning business strategy.
- 7) Evaluation- Assess and evaluate the costs and benefits of implementing Diversity policies to know if the benefits outweigh the costs.
- 8) External Support-If there are additional challenges that your particular organization faces you should seek external support to adopt diversity

### **CONCLUSION**

Diversity management thus aims to create and maintain a positive work environment where the similarities and differences of individuals are valued. Diversity in the organization may emerge from various dimensions such as age, gender, educational backgrounds etc but one of the most important aspects is organization culture. This is because organization

culture has a deep and undeniable impact on diversity openness. Human resource management practices, institutional environments and organizational contexts must therefore respond proactively to diversity-related pressures, expectations, and requirements. Organizations with diverse employees are far better suited to deal with diverse external customers in an increasingly global market. Such organizations exhibit a better understanding of the legal, political, social, economic, and cultural environment requirements. Successfully managing diversity results in committed, satisfied, high performing employees and potentially positions the organization for better financial performance. Discrimination is the most frequently encountered barrier for accepting workplace diversity, followed by prejudice and ethnocentrism. Organizations must take measures to manage diversity in order to harness and leverage the potential of employees for competitive advantage.

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# DESIGN AND IMPLEMENTATION OF WATER QUALITY CHECKING SYSTEM USING ARDUINO IN IOT

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## ABSTRACT

*Water pollution is one amongst the most important fears for the inexperienced economic process. because of the fast development and urbanization, the standard of water is obtaining degrade year by year, and it ends up in water-borne diseases and additionally effects turquoise culture. In India, sixty fifth of the drink comes from underground sources, therefore it's necessary to see the standard of the water. The planned system is presenting a style and development of low-price system for real time observance of the water quality victimization IOT, which may notice pollution remotely and take necessary actions. The system consists of many sensors are wont to measure physical and chemical parameters of the water, like temperature, PH, flow and cloudiness. Arduino IDE act as a base station and therefore the knowledge from sensing element nodes are send to that. furthermore, GSM is connected to Arduino that compares sensing element prices to threshold prices and sends a text conscious of the agent if the obtained value is on top of or below the brink value.*

**KEYWORDS:** *Arduino, IoT, Water Samples, GSM, Sensors.*

## I.INTRODUCTION

Currently beverage is extremely prized for all the humans. Here is no life while not water. people in general rely heavily on water for survival. They, as an example, don't eat food for many days, however cannot survive while not beverage. Today, 1.1 billion folks lack access to associate improved water

resource and over 3 million folks, largely kids, die annually from water-related diseases (UNICEF, 2015).[1] Internet of Things is a system of interconnected devices enabled to work and exchange data without human involvement.[2] with IoT many new areas innovations are created one of thing is Industrial Internet of Things IIOT it is with industrial



applications used in various business fields[3]. With IoT smart things are possible.[4] Building any application with IoT is a complex task because it combines many heterogeneous technologies.[5].Big network is created due to IoT [6].Blockchain technology is also used with Iot.[7] Various computing technologies are used very efficiently in IoT to provide computing capabilities.[8]Security is one of the big challenge in IIOT[9] The impact of IoT is everywhere[10].it's utterly clear that water quality has tremendous effects on human health each within the short term and within the semi-permanent. insanitary water, particularly contaminated and unboiled water containing variety of viruses and harmful germs is prejudicial to human health. Drinking contaminated water, in medical term, could cause water-related diseases as well as looseness of the bowels, microorganism infectious disease, cholera, typhoid fever and plenty of different contagious diseases. Cholera, watery malady and one amongst the Cambodia's prime killers will kill folks in days, or perhaps hours if they're not treated in a very timely manner. there have been 128 watery malady deaths between middle November in 2009 and middle Feb in2010 give thanks to not victimization clean water (Seiff & Chhorn, Feb 2010). River, lake and H2O that consists of harmful substances cause folks to own looseness of the bowels and stomach-ache. This continually happens within the area unit or within the areas wherever poor folks haven't any access to safe beverage and are oblivious of the drawbacks of unsafe water. So, it's too vital to seek out the answer for water observation & system. IoT may be an answer. In recent days, development in computing and physical science technologies has triggered net of Things technology. net of Things is delineated because the network of physical science devices communication among them by the assistance of a controller. The IoT may be an assortment of devices that employment along so as to serve human tasks in associate economical manner. It combines machine power to send knowledge concerning the environments. These devices are in sort of sensors, appliances, embedded systems, and knowledge analysis microchips. This paper presents an occasional value water observation system, that may be an answer for the water wastage and water

quality. Microcontrollers and sensors area unit used for that system. murkiness device is employed for measurement the cloudiness of water. the opposite parameters like pH scale, conduction, and Temperature of the water is calculated victimization totally different corresponding sensors. All the measured parameters area unit compared with the brink worth that defines the purity. Once the parameters area unit measured, they're sent to authority within the sort of alert messages. GSM Module sends the alert messages to mobile.

## II.LITERATURE SURVEY

A survey on existing system, Traditional methods of water quality involve the manual collection of water sample at different locations, followed by laboratory analytical techniques in order to check the water quality. Such approaches take longer time and no longer to be considered efficient. Although the current methodologies analysis the physical, chemical and biological agents, it has several drawbacks:

- a) Poor spatiotemporal coverage
- b) It is labor intensive and high cost (labor, operation; and equipment)
- c) The lack of real time water quality information to enable critical decisions for public health protection.

Therefore, there is a need for continuous online water quality monitoring.

## III PROPOSED SYSTEM

The objective of proposed system is to provide methods for Portable and Automatic Water Quality Monitoring and Notification System which saves time and to mainly reduce the human intervention. This notification will be updated to the authorized person when sensor will detect the quality of water changes. Here ARDUINO UNO is used as core controller and various sensors to monitor the water Quality. Different sensors are connected to Arduino to monitor the conditions of water. The Arduino will access the data from different sensors and then processes the data. The sensor data can be viewed on the LCD.

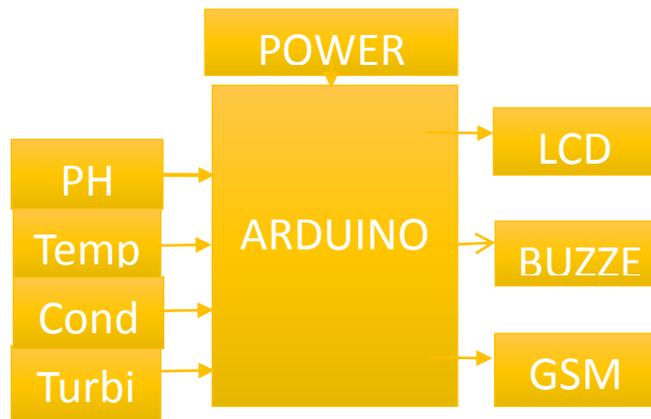




#### IV.REQUIREMENTS

SNO	SOFTWARE REQUIREMENTS	HARDWARE REQUIREMENTS
1	ARDUINO IDE	Arduino Uno
2	-	Temperature sensor
3	-	pH sensor
4	-	Turbidity sensors
5	-	Conductivity Sensor
6	-	Power supply

#### V.ARCHITECTURE&RELATED WORK



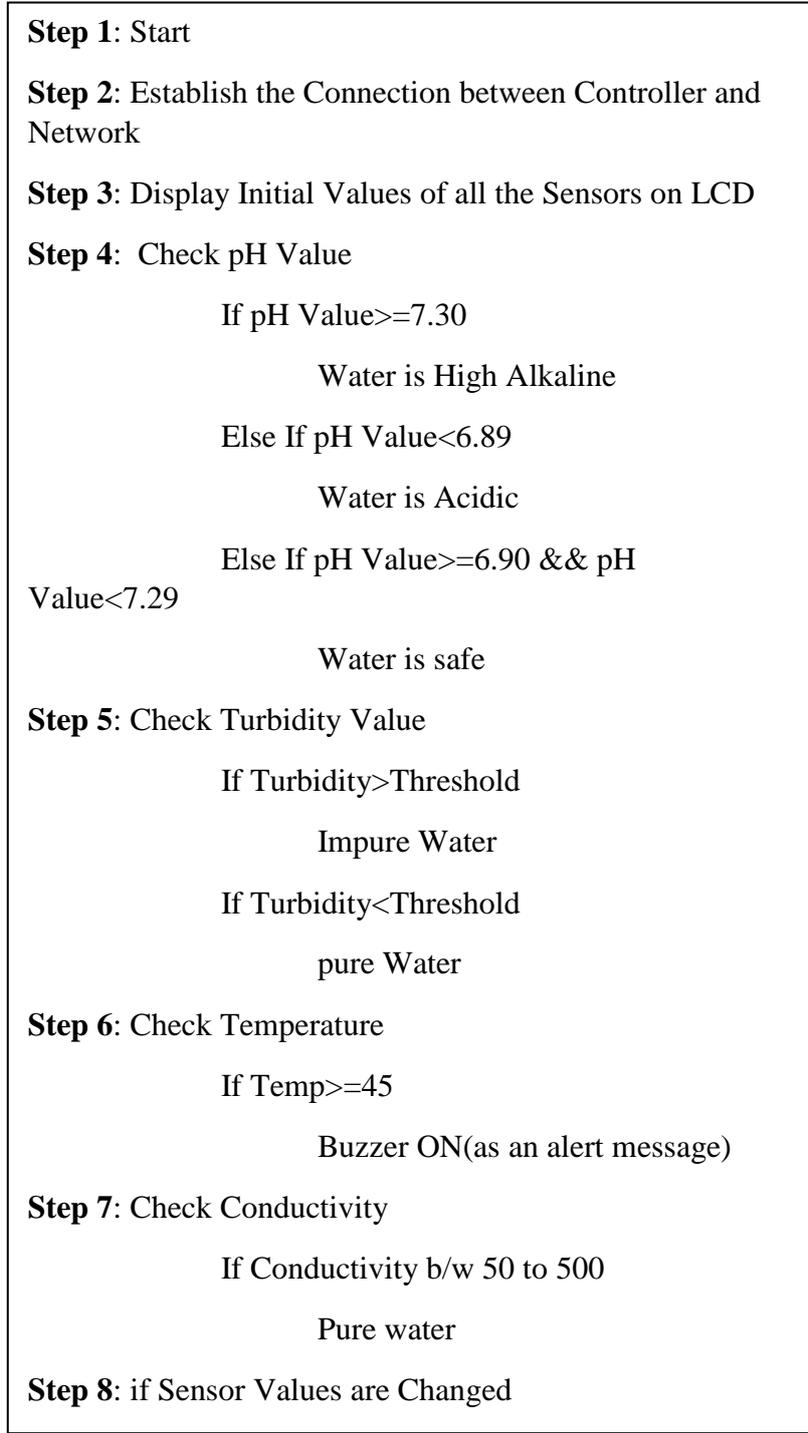
The system architecture of the proposed system is mainly controlled by microcontroller (ATmega328P).The power supply of Arduino Uno board is 9V, which is directly connected to Arduino Uno with step-down transformer. User collects the water samples. Sensors like pH, temperature, turbidity, conductivity are used to check the purity level of water. Arduino accepts and processes the data collected from the sensors , displays the purity level of water on LCD and further communication is done by the GSM module, which sends an SMS with the water quality parameters onto the smart phone/PC.

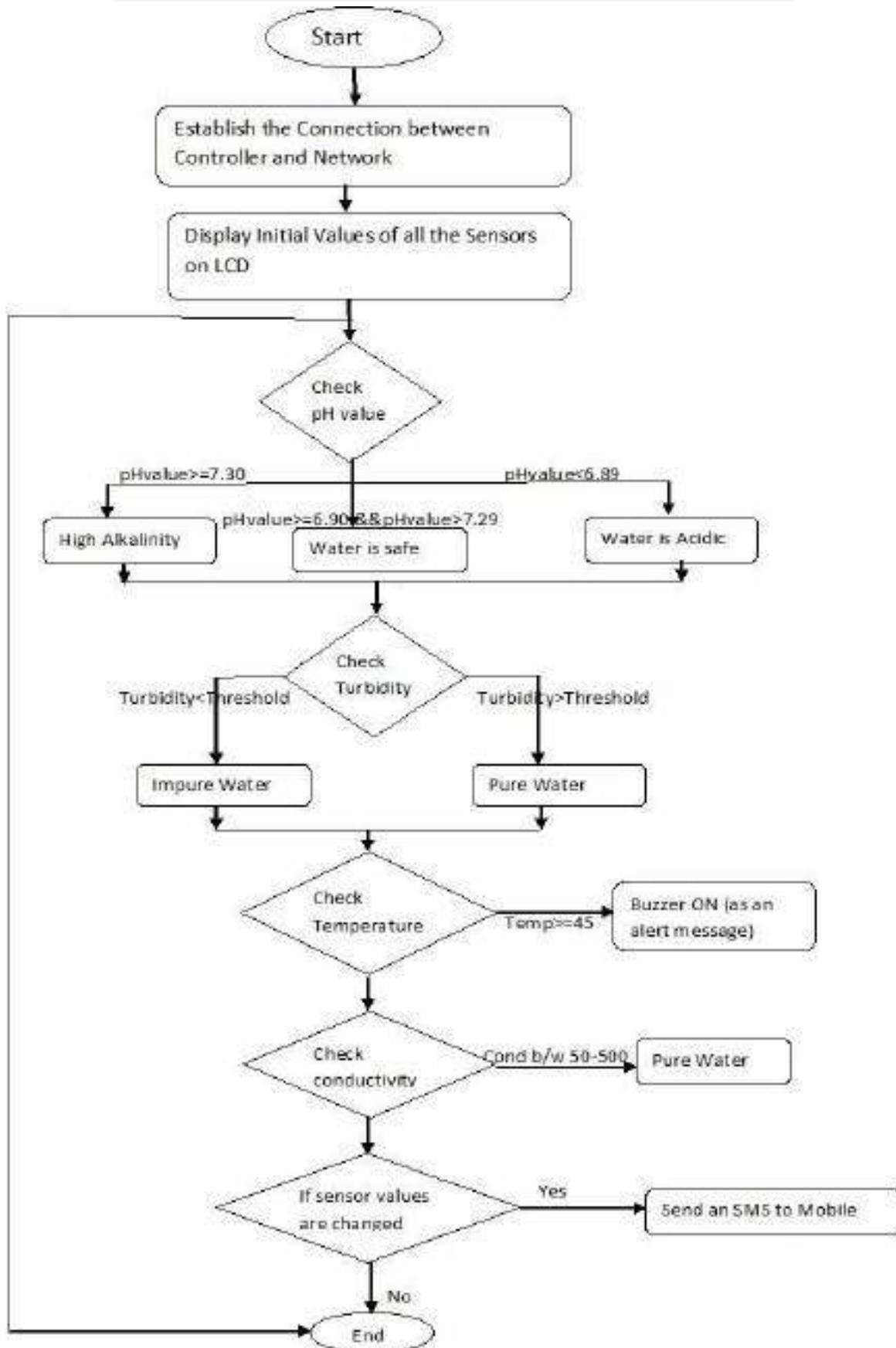
As mentioned above architecture has following the list of components

1. pH Sensor
2. Conductivity sensor
3. Turbidity Sensor
4. GSM Module
5. Arduino
6. LCD Screen
7. Buzzer
8. Power Supply



**VI.ALGORITHM &FLOW DIAGRAM:**





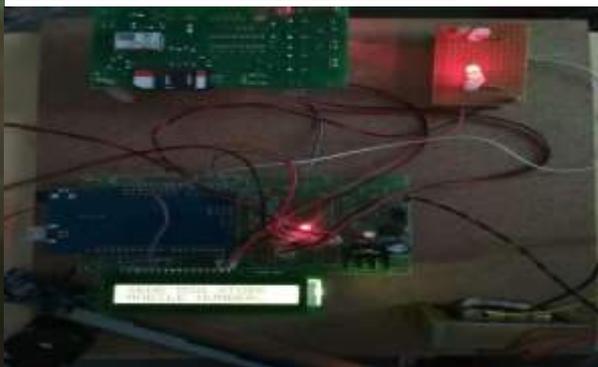
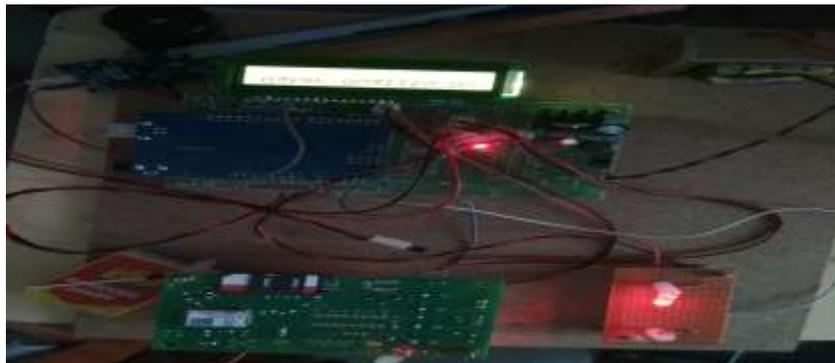


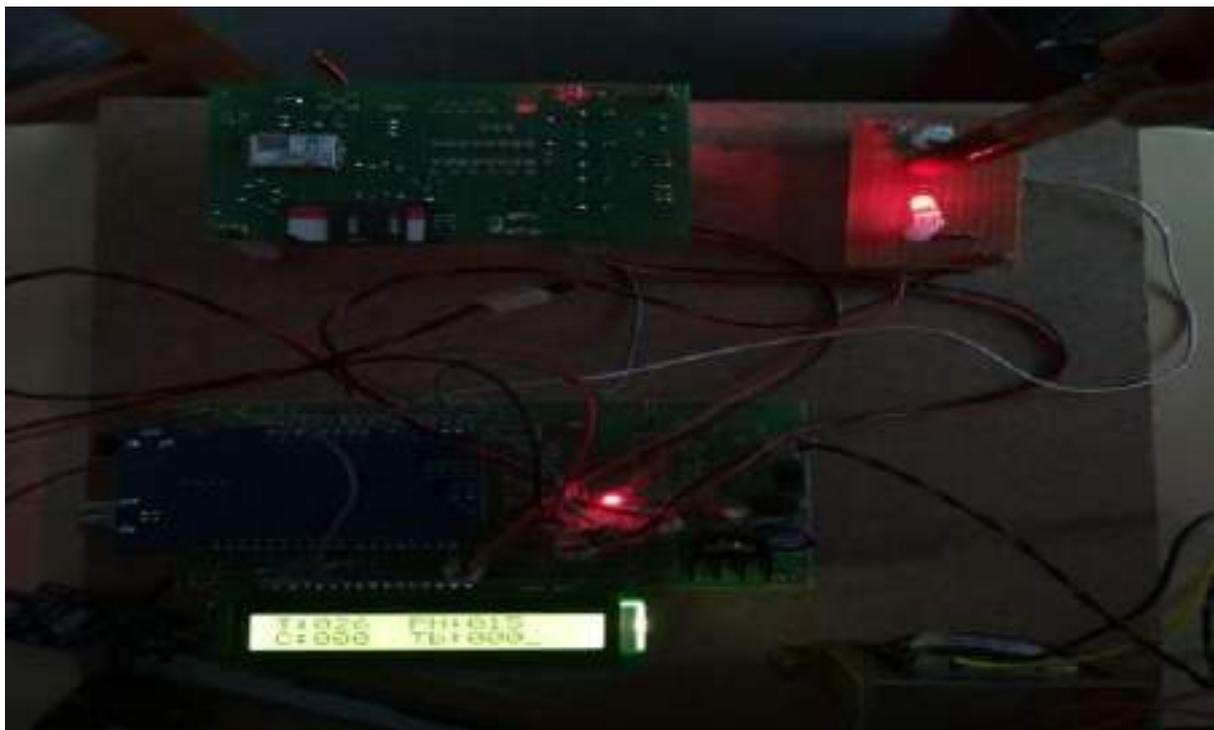
## VII.IMPLEMENTATION

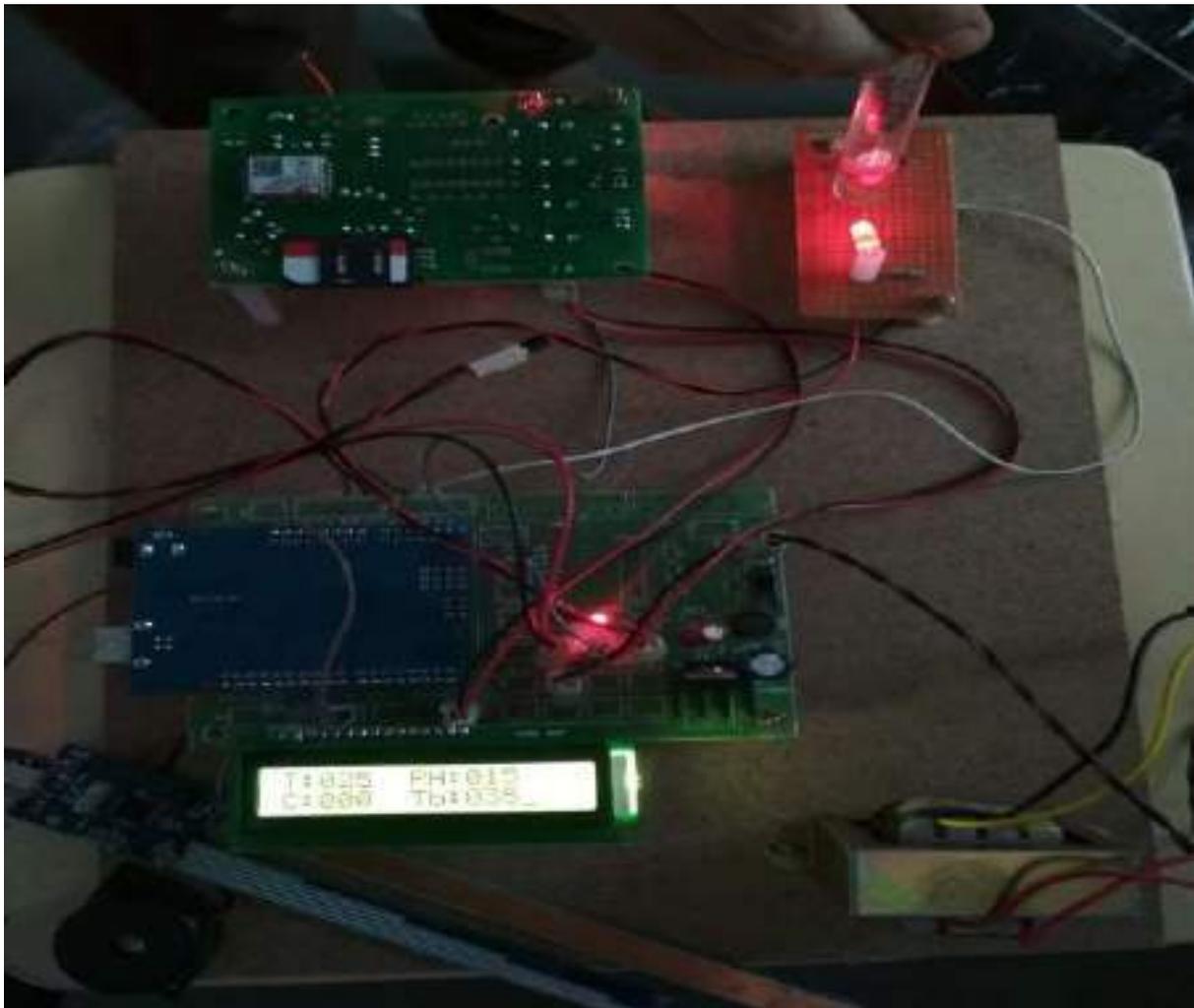
This system makes use of four sensors (pH, conductivity, turbidity, and temperature), processing module Arduino, and two data transmission modules Arduino and GSM. The four sensors capture the data in the form of analog signals. The ADC converts these signals into the digital format. These digital signals are sent to the Arduino via a GSM module. The microcontroller will process the digital information, analyse it, and further communication is done by the GSM module, which sends an SMS with the water quality parameters onto the smart phone/PC, which also displayed on the LCD of the Arduino. Arduino accepts and processes the data collected from the sensors. This is carried out with the help of coding. The code is written in C-programming and using the Arduino software to simulate the code. The entire code is dumped into the integrated circuit. Arduino UNO is a microcontroller

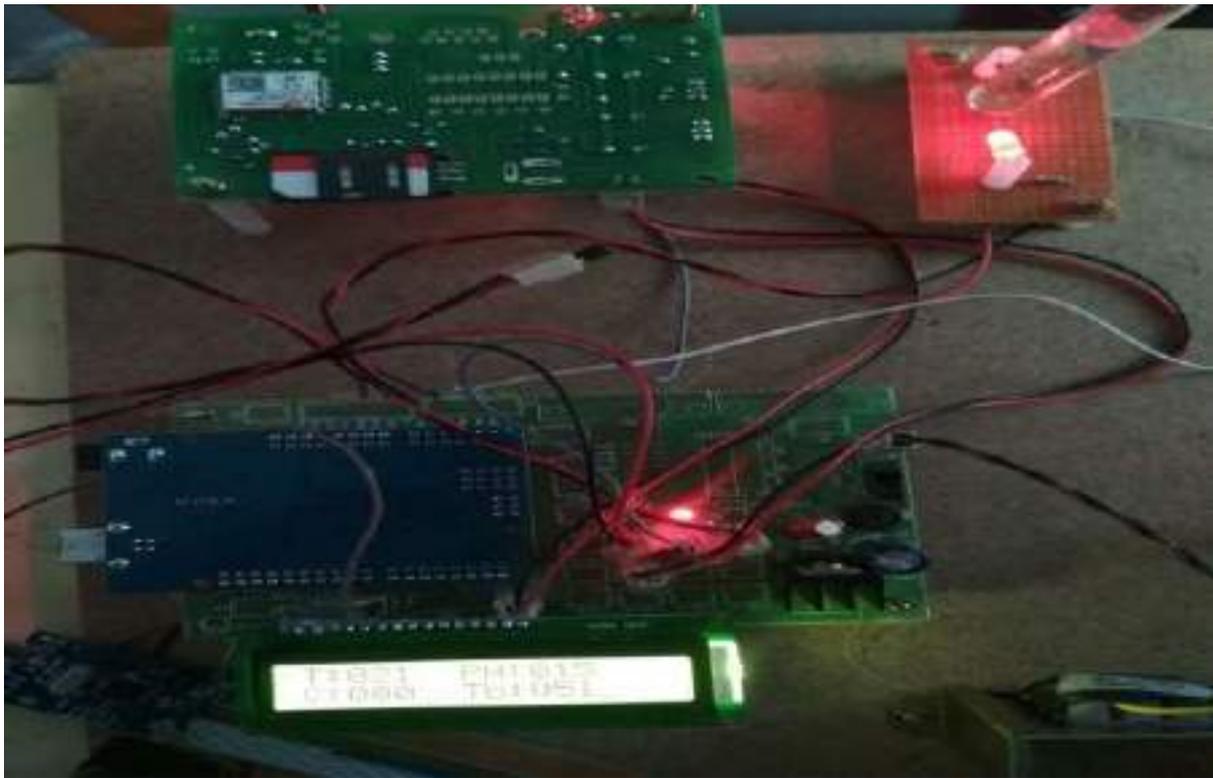
board which has 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs. The LCD is connected to 2, 3, 4,5,7,6 digital pins in an Arduino. The sensors, Temperature sensor to A2 pin, pH and conductivity to A0 pin, Turbidity to A1 pin and Buzzer is connected to analog pin 13. The pH sensor is a measure of how acidic or basic alkalinity of water? The pH scale is logarithmic and goes from 0 to 14, where the range from 0 to 6 says that the water is acidic in nature and the range from 7 to 14 says it is basic in nature. The temperature sensor is used to measure temperature of water. If the temperature exceeds 45 then the Buzzer will on as an alert message. The turbidity sensor is used to measure the cloudiness of water. The conductivity sensor is used to measure the purity of water and the conductivity ranges from 100 to 1000 the water is fresh water.

## RESULTS



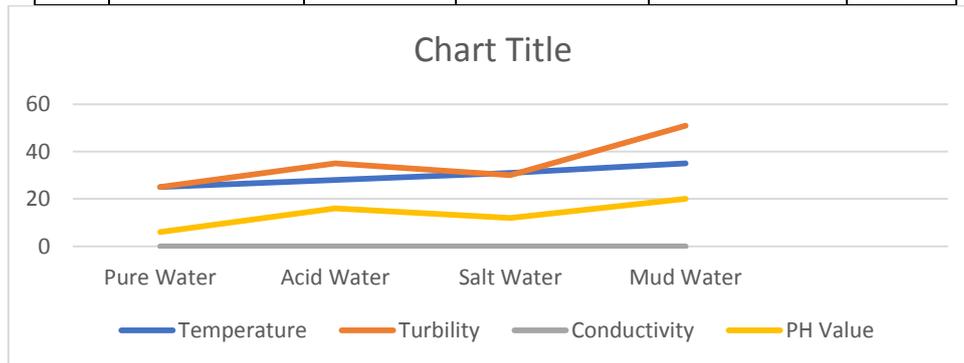








Sno	Temperature	Turbidity	Conductivity	PH Value	Water
1	25	25	00	06	Pure Water
2	028	35	00	16	Acid Water
3	031	30	00	12	Salt Water
4	035	51	00	20	Mud Water



## VIII.CONCLUSION

Monitoring of Turbidity, PH & Temperature of Water makes use of water detection sensor with unique advantage and existing GSM network. The system can monitor water quality automatically, and it is low in cost and does not require people on duty. So the water quality testing is likely to be more economical, convenient and fast. The system has good flexibility. Only by replacing the corresponding sensors and changing the relevant software programs, this system can be used to monitor other water quality parameters.

## IX.FUTURE WORK

In this paper we tested water quality with the help of arduino and few sensors in future we may do a project with Rasberry Pi.

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# THE DEVELOPMENT OF OBJECTIVE AND SUBJECTIVE PRINCIPLES OF THE CONCEPT OF BEAUTY IN HUMAN'S SPIRITUAL EXISTENCE

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## ANNOTATION

*This article is aimed at describing the role of the concept of beauty in the spiritual existence of human being, the processes of its formation, theoretical and practical issues. There are expressed external and internal aspects of beauty in human life, their importance, and the fact that the concept of beauty possesses objective and subjective features in the reflection of man's spiritual existence. In this article beauty is expressed as a form of a person's spiritual existence, and the criteria of all things and events in the world are analyzed as moral beauty which evokes pleasant impressions in the mind, enhances the mood of pleasure and joy, and gives the meaning to human life.*

**KEY WORDS:** *beauty, human being, human's spiritual existence, spirituality, esthetic taste, object, subject, sense and emotion, harmony, proportion, symmetry.*

## DISCUSSION

The presence of metaphysic, religious and theological views concerning the subjectivity of beauty in a person's culture and spirituality or, on the contrary, its objectivity has contributed to the appearance of such flows and directions in the history of philosophy in which the features of human's material or spiritual life are highly recognized. When the category of beauty is studied, it becomes obvious that 'beauty is an esthetic (*utilitarian, not practical*) category', and it implies perfection, harmonic combination of characteristics of an object, which devote esthetic joy to an observer according to foreign literature written in different languages. There are also some other views, such as "Beauty is the main category of culture" [5]. The category of beauty has been studied as the central idea in the history of esthetics from various aspects. In particular, the question of human beauty or what is beautiful has led to the formation of a person's object and subject relationship.

Humans' pursuit of naturalness, their philosophical views of the universe, their artificial intelligence, and their creation of the environment have developed a diversity of ideas about this concept.

People's esthetic attitudes toward existence is an extremely complex and multifaceted process. The esthetic feelings and experiences that occur in the social life of people are associated not only with our senses, our consciousness, but also with things and processes of

objective existence. Humans' instincts and emotions which affect their psyche play an important role in their feeling the beauty and beautiful scenery of existence.

As the concept of beauty is closer to that of category of beauty in a man's esthetic perception, the difference between them is the highest (absolute) level of beauty. The fact that in national and universal values beauty is divided into external and internal forms, that it is connected with such concepts as emotion, perception, pleasure, satisfaction, which constitute the spiritual existence of man, leads to such an existential space. Furthermore, beauty differs from fascination as a more general and multifaceted concept. In the spiritual world of a person the appearance of certain criteria, borders is connected with the notion of pairs, and their contrary versions, antonyms, express the notion itself. The category of beauty is the same. Its antonym is ugliness, deformity.

There is given such description to beauty in encyclopedic dictionary of philosophy as: "Beauty represents the features of things and events in nature and society, human activity, which can create the feelings of love, joy, pleasure, freedom in a person" [3, p. 86]. It is said in another source, "beauty is central concept (*category*), and the harmony of form and meaning of all things and processes of existence, their completeness and human attitude filled with spiritual satisfaction toward them are expressed in it" [4, p. 37-38]. A person feels the beautiful aspects of the events



taking place in social life with the senses of love, pleasure, freedom. A person seeks to know the processes taking place in the universe through his feelings and experiences.

It is in these aspirations that a person's interest in feeling beauty arises, and the process of differentiating between what is beautiful and what is ugly takes place in the perception of reality. "Beauty is the ability of a subject which is based on esthetic consciousness and activity in nature and society to perceive reality." [5, p. 57]

When the nature and aspects of an object are perceived by a person in the dimension of the units marked as an esthetic subject, it evokes the feelings of spiritual enjoyment (*spiritual purification, pleasure, joy*). The essence of beauty is displayed in all fields of existence (nature, society man, art) in different forms and characteristics.

Since in foreign literature the concept of beauty is explained in different categories, the versions of its translation have become different in the Uzbek language. In our opinion, there can be two types of beauty: objective beauty that has the principles which are in a higher position than a person's organs of sense, and the beauty that is perceived through the taste, sense and emotion, and esthetic morals of the subject. The emotional nature of beauty, its momentariness, normality and meaningfulness have led to the appearance of variety of viewpoints on this concept. "Within the framework of inner terminology of the esthetics of ancient period the concepts of fascination (*прекрасное*) and beauty (*красота*) were used as synonyms in cosmology, metaphysics, theology and practice. At that time while the notion of fascination was used as a very broad category, the notion of beauty was used as perfection and a certain part of the universe" [1, p. 82]. In the public mind beauty embodies such concepts as 'simple', 'beautiful', 'proportional'. This can be expressed in the term "beautiful". Objective beauty can give esthetic pleasure to everyone, regardless of their age, profession, beliefs, and social status. It does not put certain special requirements. It is worth mentioning that it is free from all utilitarian, mercantile forms of interest, purpose, and emotion, and is subject to a certain order. What is called subjective beauty depends only on certain concepts of human emotions. Putting signs of beauty on natural things and expressing it in concepts is what is known as subjective reality, which has a diametrically opposite character between individuals, nations, and faiths.

The ideas about beauty have formed art, fiction, lifestyle embodying human reality, events that give pleasure to a man, as well as freedom in the objective-emotional form, and a person's creative and cognitive abilities. Naturalness is reflected by the subject in those concepts where a feeling of pleasure, fear, reaction, shame, and sorrow is formed, since these feelings are already formed individually in the concept of subject.

Hence, whether an object gives meaning to beauty remains dependent on the subject's views, beliefs, and feelings. In this respect the nature of beauty is like the nature of truth. In general, it implies the unity of the subjective and the objective, though in a different sense: if truth is the conformity of knowledge to the object, then beauty is the conformity of the object to the ideal. In all studies, the perception of beauty as a general, objectively legitimate process is based on the following two main features according to its diversity of harmony complying with the interests and goals of the subject:

1. External, natural (visual, emotional and physical) components;
2. Ideal, "metaphysical" components filled with the absolute harmony of spirit and body, components based on the divine perception of beauty.

Accordingly, it becomes apparent that beauty is a means of transforming the natural state into an ideal reality based on the principles of momentariness, emotion, cognition, which arise in a man between certain prisms of objectivity and subjectivity, and thus eliminates intellectual fragmentation.

The attitudes and views expressed towards it are more common than the scientific definition of beauty given in different sources. Therefore, the center of views and theories about beauty is "What is beauty?", but in most of them we see the answer to the question "What is beautiful?". As a result, what beauty is remains unanswered. Usually beauty is understood as a set of things and events that create moods of pleasure, and an event that gives pleasure. It is a simple and superficial understanding of beauty. In fact, beauty has such a quality that, depending on the sense of attractiveness, it leads to the unification of people, the formation in them of socio-moral qualities, and the stabilization of spiritual processes.

Based on the above analysis, the beauty category can be defined as follows: *beauty is the manifestation of things in the human mind on the basis of harmony, symmetry, proportion, non-profit purpose, which is objective in terms of spirituality and subjective in terms of socio-emotional nature.*

Our analysis of the objective and subjective foundations of the idea of beauty has led to the following conclusion.

1) The level of emerging ideas about beauty in human's spiritual life allows us to understand the difference between the concept of beautiful things and the category of beauty. In views based on the classical paradigm, beauty usually refers to transcendental principles, derived from the idea of the thing itself (*apriori*), and beauty is interpreted as the embodiment and manifestation of beauty in certain things and events. In the classical paradigm, beauty is defined on the basis of the criterion of esthetics and reflects the complex process of development of a person's specific emotional attitude towards the objects of reality, and it does not deny humans' mental and rational activity.



In the views formed after the classical paradigm, the concept of beauty was interpreted as a specific feature of the subject and object relationship, and at present the requirements of esthetics have become such an esthetic concept that encompasses any form of emotional relationship as well as the concept of beauty itself. As a result of historical development, the main condition of esthetics in both art and culture is considered as not beauty, but the role of the tool for esthetic assessment of reality. Beauty and enjoyment in classical esthetics quitted solving the main problem of relaxation and joy. The scale of such assessments is increasing significantly which reflects the evolution of contemporary person in the field of esthetics. While beauty was the criterion of everything during the classical paradigm as a category representing the highest esthetics, after the classical paradigm it was associated with values when a man began to pass the criterion of everything. In other words, it formed on the basis of utilitarian (*usefulness*), cognitive (*truth*), moral (*virtue*) values;

2) The category of beauty, due to its cognitive nature, has contributed to the evolution of people from ancient times to the present, striving for innovation, leading to the emergence of different directions and flows. Thinkers have tried to identify the general features and general theoretical concepts of natural or artistic objects that give rise to the idea of beauty. In this term, philosophers, artists, all creators have done research on definition and description the “laws” and “concepts” of beauty that refer to everyone. The rules of beauty, such as harmony, proportion, measurement, symmetry, asymmetry, proportion, integrity, perfection, correspondence, order, part and a whole conformity, rhythm, unity, symphony, and so on, were created. Each creator added his or her own requirements and rules to a common layer of category;

3) The majority of philosophers believed and still consider that the sense of beauty and its perception is influenced by historical, social, national, cultural, religious and other factors of human life. At the same time, its essential core remains sufficiently stable. Beauty is one of the ontological features of man’s attitude towards reality and the universe in general. For this reason, its mystery excites and inspires people. Modern studies reveal that the nature of the human brain includes such abilities that can be considered as ontological conditions for the development of certain areas of human activity, including esthetics. In particular, with the pursuit of infinite knowledge of the world and the focus on its perfection as well as the ability to anticipate (intuition) and the ability to be surprisingly selfless a person achieves success in the field of human esthetics;

4) Accordingly, beauty is the result of a person’s attitude towards esthetic object. Its distinctive feature is that it has no utilitarian purpose and benefit. The constructive aspect of beauty is that it allows us to

present the human spiritual world in a certain semantic integrity, helps to systematize the ontological views of the individual on beauty and real-world events, and contributes greatly to the full adaptation of nature to a particular ideal. An ideal model is created so that man does not stray from pure aesthetics, so that his hedonistic, pure utilitarian mood is not deeply ingrained in the sense of beauty. Thus, beauty puts before an object the question of what is beautiful while before a subject it puts the question of what beauty is.

5) As mentioned above, beauty has social significance, because it manifests itself in all spheres of human life and stems from the interaction of nature with the world, social history, culture. There is no stage in human life that does not reflect the effects of perfection, harmony, various forms of beauty. Each period of the spiritual development of mankind is characterized by the objects created by it. They embodied historical ideas about perfection, harmony, and beauty and became a universal value. Beauty is a reflection of the freedom that a person has achieved, since in human perception the concept of beauty helps to realize its best qualities and capabilities in the creation of the ideas of freedom and independence, and at the same time aids one in striving to beautify the world. Constant devotion and the encouragement for hardworking contrivance lead to a sense of special pleasure what is known as beauty.

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# IMPACT OF ARAL SEA DRYING ON COTTON PRODUCTIVITY

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## ABSTRACT

*Incorrect use of water resources brought to the drying of Aral Sea. This brought to formation of salty dust deserts. Salty dust aerosols are delivered to adjoining irrigated territories by wind. Soil saltiness increases which negatively influences on the productivity of cotton. For softening negative influence it is recommended to use organic fertilizers in quality of mulch in account of 20-30 t/h.*

**KEYWORDS:** *drying, salinization, salty dust aerosols, cotton, yield, organic fertilizers, mulching.*

## INTRODUCTION

Situated in the middle of desert The Aral sea had a favorable impact on natural-climatic and environmental conditions of surrounding regions and was humidity regulator over a wide area of the Aral Sea region, protector of dry hot wind, coming from the Southern Desert.

In the result of extensive water use brought to a sharp reduction in river flows of Amudarya and Sirdarya into the Aral sea. The aridity of the climate increased, air humidity decreased by 10-18%, frost-free period reduced by 30-35 days.

At present 25000 km<sup>2</sup> of sea floor exposed and coastline has receded by 100-150 km. Subsequently, another powerful source of sand-salt aerosols has emerged in Central Asia, transported by air masses to adjacent territories. Dust hoisted by storms onto the soil surface reduces fertility and therefore adversely affects the productivity of cultivated crops. The main environmental problems of Karakalpakstan under the conditions of extensive economic activity were cotton monoculture. Cotton production in the country as a whole reached 80 percent in the eighties and nineties. It is an unprecedented indicator in the world, although science has shown that cotton above 50-60% causes humus loss, soil depletion, infertility and eventual land degradation.

## METHODS OF CONDUCTING THE EXPERIMENT

To study the impact of the drying of the Aral Sea on the productivity of cotton and soil fertility, field studies have been carried out on the remoteness (150-250 km) from the dry seabed of the Aral Sea. Cotton, cultivated in the Central (Khodjeli region) and northern (Kanlikul region) climatic soils of the Republic of Karakalpakstan was selected as the object of study.

The test sites are located in Khodjeli and Kanlikul regions accordingly 250 and 150 kilometers far from the dry seabed of the Aral Sea. The soil of the test plots is more typical for the conditions of the specified zones of the Republic.

C – 4727 cotton varieties were sampled, in row-spacing 60 cm, area of each plot 240 m<sup>2</sup> of which 120 m<sup>2</sup> (2.4-50 m) repeated three times, located in one tier.

The test options are as follows:

1. Cotton, normal cultivated conditions.
2. Cotton, closed field (10.2 m<sup>2</sup>).
3. Cotton, mulching with manure for 10 t/ha before the first cultivation.
4. Cotton, mulching with manure for 20 t/ha before the first cultivation.
5. Cotton, mulching with manure for 30 t/ha before the first cultivation.



## RESEARCH RESULTS AND THEIR DISCUSSION

The data obtained indicates that salty dust aerosols falling on the cotton fields, adversely affect the growth and development of cotton. Cotton cultivated under normal conditions significantly lags in growth and development from other options, where the additional measures are applied to mitigate the adverse effects of salty dust aerosols.

Effectiveness or influence of those factors during the growing season of cotton is estimated to have an impact on the yield of raw cotton. Differences between options according to cultivation condition was 2.1 – 0.9 c/ha. In option 1, where the cotton was cultivated in the usual manner, the raw cotton harvest was 24.1 c/ha. In option 2, where the cotton was cultivated in a salty dust aerosol protected area was 26.2 c/ha, there was an increase of 2.1 c/ha over option 1.

The use of organic fertilizers as mulch (options 3, 4 and 5) at 10, 20 and 30 t/ha contributed to an additional 4.2 to 9.0 c/ha compared to option 1, that is organic fertilizer largely mitigates the negative effects of salty dust aerosols and improves soil nutrition.

## CONCLUSIONS

Thus, to mitigate the adverse effect of salty dust aerosols on cotton yields and soil fertility options 4 and 5 are economically more effective, where 20 and 30 t/ha of organic fertilizer were used before the first cultivation of both the Central and Northern areas of the Republic.

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# **SPEECH / TEXT NOTE APP USING JAVA SCRIPT AND HTML**

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## **ABSTRACT**

Speech recognition is a vast research field for researchers in modern era. Earlier, the human language was processed by the computer system for speech recognition. Thus, the main objective is to develop recognition system which improves human to human communication by enabling human-machine communication by processing of text or speech. Various applications of speech recognition systems are present and these all includes various research challenges.

Speech to text or text to speech is a part of Natural Language Processing which is a subfield of Artificial Intelligence. In Speech Recognition, spoken words/sentences are translated into text by computer. It is also known as Speech to Text (STT). Speech / Text note app could be very useful in number of applications. Especially in personal assistant bot, dictation, voice command based control system, audio transcriptions, quick notes with audio support, voice based authentication, etc.

Web Speech API, It's a very powerful browser interface that allows you to record human speech and convert it into text. We will also use it to do the opposite - reading out strings in a human-like voice. Speech / Text note app can be classified into two main areas, dictation and human-computer dialogue systems.

## **Features**

- **Text input:** Users are provided with a text box where they can enter the required text in the software.
- **Speech rate:** Users can even alter the speech speed for application to read out text by choosing the appropriate rate provided by the software.

## **INTRODUCTION**

The science that is most directly related to processing of human language is natural language processing. The dealing of this science directly to the natural language makes it different from other processing related activity in the field of application: the human language. NLP and Understanding is the state of art that is quite demanding these days. The research in this field has been started 50 years ago, but because of limitations of resources that are required in processing the speech, it was not implemented then in commercial applications. In today world the computer dependency expand the field of speech processing. In various science fi movies like Star Wars, Sneakers, Star Trek, Red Dwarf, UFO, Blade runner and many more the concept of natural language processing has been used. The

science that is most directly related to processing of human language is natural language processing. The dealing of this science directly to the natural language makes it different from other processing related activity in the field of application: the human language. NLP and Understanding is the state of art that is quite demanding these days. The research in this field has been started 50 years ago, but because of limitations of resources that are required in processing the speech, it was not implemented then in commercial applications. In today world the computer dependency expand the field of speech processing. In various science fi movies like Star Wars, Sneakers, Star Trek, Red Dwarf, UFO, Blade runner and many more the concept of natural language processing has been used. any more the concept of natural language processing has been used. any more the concept of natural language





important practical applications will be created. Accurate speech recognition is not so hard problem so it should be solved in a foreseeable future. And it's not about AI because it's obvious that most of the speech recognition issues are not caused by the lack of understanding but rather a lack of good algorithms.

Noises, accents and so on are just purely technical problems which will be eventually solved. Researches often consider speech recognition in a noisy environment as a standalone problem with a practical goal to build an application that works. At the same time our knowledge about speech fundamentally improves from day to day and the goals are more and more ambitious. Recent BABEL programs aims to improve support for non-English languages for example and it's planned that we will have quite good step forward in a next few years. Some leading researchers are working on language-independent speech recognition. The accuracy on the standard test sets also improves from year to year. And voice applications are already in every smartphone.

Like computers started to play chess better than human speech recognition soon will be done better by computers too. Importantly, that will add some important knowledge about nature as a whole and human brain in particular. So speech recognition is an important step to our exploration of the nature laws.

## LITERATURE REVIEW

Anupam Choudhary et. al. (2012) described the speech recognition process using the approach of AI. The recognition method used is language mode, trigram model and acoustic model. No GUI is used, acoustic model interface with the telephony system to manage spoken dialogues by the speaker.

Alexandre Trilla (2012) worked on the approach of Automatic Speech Recognition using NLP technique. It depicts the production of sound from the text i.e. text to speech synthesis and vice versa i.e. known as automatic speech recognition.

D D Doye et. al. (2015) they worked on the approach of new non linear time alignment model rather than DTW algorithm. They worked for finding suitable time alignment algorithm for the Marathi language. They took 46 monosyllabic confusing alphabets and 46 confusing names for their work. They main feature used in this research were Mel Frequency Cepstral Coefficients (MFCC), Linear Frequency Cepstral Coefficients (LFCC) and Linear Prediction Coefficient (LPC)

Dr. Kavita R. et. al. (2014) They proposed a work on digitizing the audio into samples by using the concept of sampling. The MFCC feature is used

for extraction process. These coefficients are used for matching the Tamil database through the DTW approach. This main focus of this paper is security of extracting and matching by using the DTW and mathematical approaches.

Elyes et. al. (2014) The hybrid approach of SVM/HMM is used for Arabic ASR on triphones modeling. They used the Arabic speech recognition system that is based on triphones are 64.68 % with HMMs, 72.39 % with MLP/HMM and 74.01 % for SVM/HMM hybrid model.

## SPEECH TO TEXT

The Web Speech API is actually separated into two totally independent interfaces. We have SpeechRecognition for understanding human voice and turning it into text (Speech -> Text) and SpeechSynthesis for reading strings out loud in a computer generated voice (Text -> Speech). We'll start with the former.

The Speech Recognition API is surprisingly accurate for a free browser feature. It recognized correctly almost all of my speaking and knew which words go together to form phrases that make sense. It also allows you to dictate special characters like full stops, question marks, and new lines.

The first thing we need to do is check if the user has access to the API and show an appropriate error message. Unfortunately, the speech-to-text API is supported only in Chrome and Firefox (with a flag), so a lot of people will probably see that message.

## TEXT TO SPEECH

Speech Synthesis is actually very easy. The API is accessible through the speechSynthesis object and there are a couple of methods for playing, pausing and other audio related stuff. It also has a couple of cool options that change the pitch, rate, and even the voice of the reader.

All we will actually need for our demo is the speak() method. It expects one argument, an instance of the beautifully named SpeechSynthesisUtterance class.

## PROBLEM DEFINITION

General speech recognition systems are still largely speaker/situation dependent. Often seemingly subtle changes can affect the ability of the system to recognize commands. Differences, such as the choice of microphone or the number of people in a room, can interfere with some voice systems. It can be difficult to create or even predict the environment in which a VR experience will be run, making it difficult to train the voice system under the same circumstances in which it will need to perform.

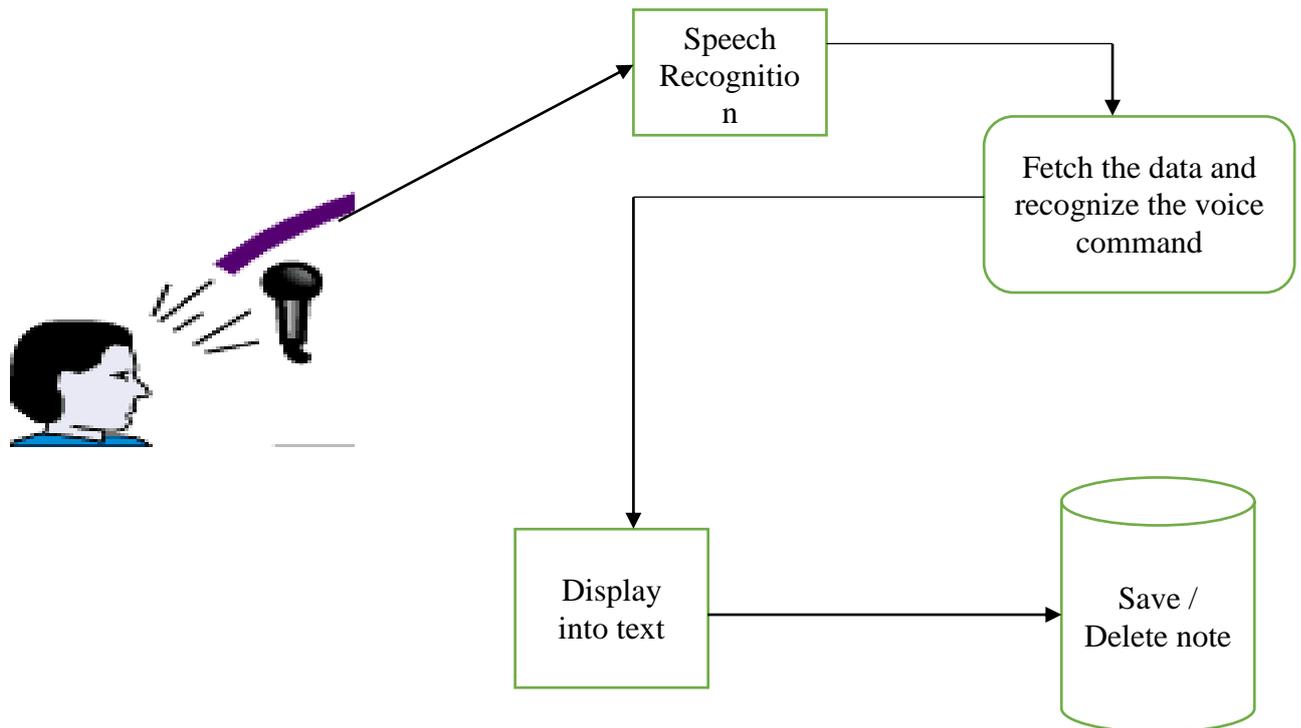
Good speaker-independent recognition is achievable, however, if some restrictions are placed



on the voice commands. Restrictions can be either a small vocabulary or a limited, well-defined grammar. The latter is often an option in applications designed

to emulate military communications, which are often “by the book.”

### ARCHITECTURE



### The App

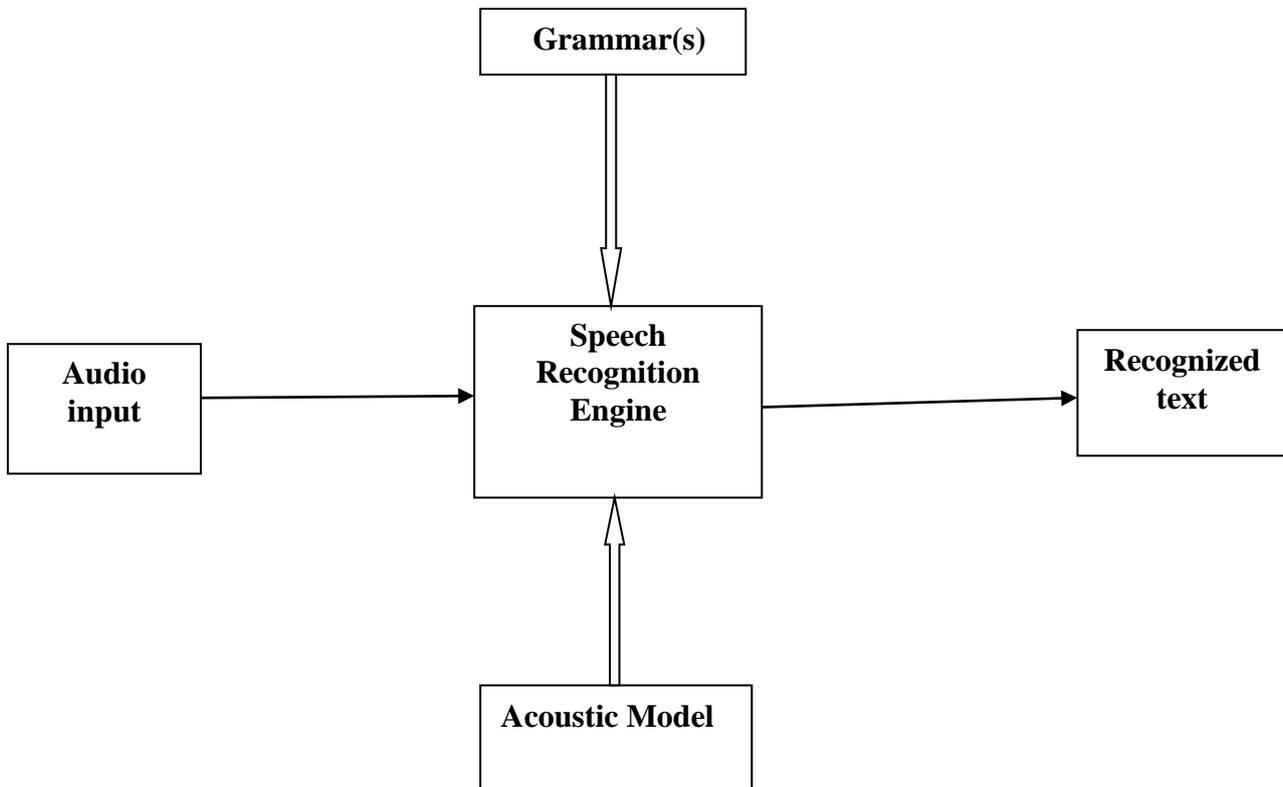
To showcase the ability of the API we are going to build a simple voice-powered note app. It does 3 things:

- Takes notes by using voice-to-text or traditional keyboard input.

- Saves notes to localStorage.
- Shows all notes and gives the option to listen to them via Speech Synthesis.



**FLOW CHART**



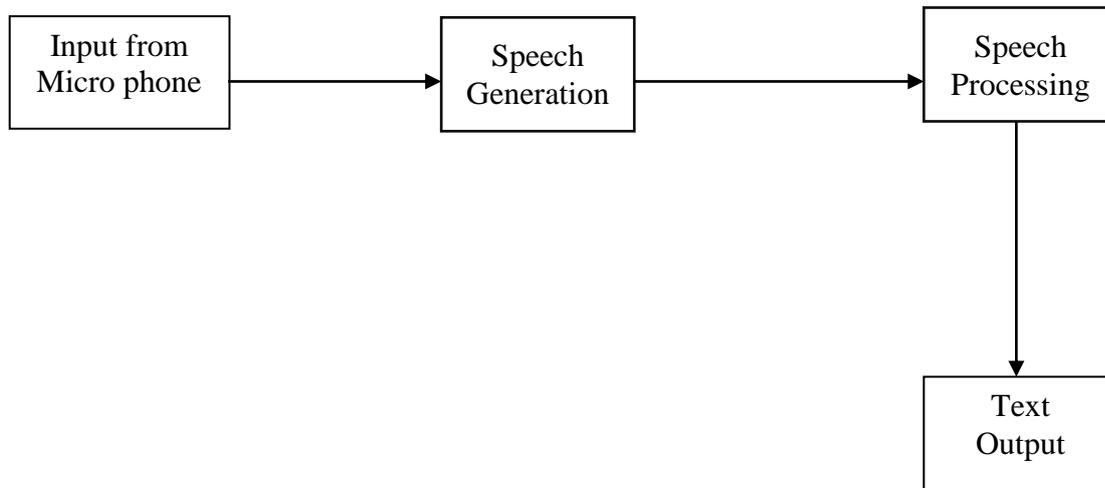
Text to speech, abbreviated as TTS, is a form of speech synthesis that converts text into spoken voice output. Text to speech systems were first developed to aid the visually impaired by offering a computer-generated spoken voice that would "read" text to the user.

Speech synthesis is the artificial production of human speech. A computer system used for this purpose is called a speech computer or speech synthesizer, and can be implemented in software or hardware products. A text-to-speech (TTS) system converts normal language text into speech; other systems render symbolic linguistic representations like phonetic transcriptions into speech.

Speech to text - Speech recognition (SR) is the inter-disciplinary sub-field of computational linguistics that develops methodologies and technologies that enables the recognition and

translation of spoken language into text by computers. It is also known as "automatic speech recognition" (ASR), "computer speech recognition", or just "speech to text" (STT). It incorporates knowledge and research in the linguistics, computer science, and electrical engineering fields.

Speech-to-text software is a type of software that effectively takes audio content and transcribes it into written words in a word processor or other display destination. This type of speech recognition software is extremely valuable to anyone who needs to generate a lot of written content without a lot of manual typing.



Speech recognition involves recording spoken words using either a microphone or telephone. The audio is then converted into a set of words stored digitally in the speech recognition devices.

Any speech recognition program is evaluated using two factors:

1. Accuracy (percentage error in converting spoken words to digital data)
2. Speed (extent to which the program can keep up with a human speaker)

Speech recognition technology has a long list of applications. Speech recognition software programs are used for general dictation, transcribing, using a computer hands-free, medical transcription, automated customer service etc.

## CONCLUSION AND FUTURE ENHANCEMENT

A good way and process for the recognition of speech is to find a best way which can minimize the error rate during recognition. This paper defined the various recognition techniques and methods used in the current era with their pros and cons. Thus our literature indicated that efforts can be made to propose a novel approach for the recognition process which will produce better results as compare to the existing methodologies. For this better results, database of the speech signals should be last so that texting can be performed on large database. Furthermore in future research can be made when people interact with complex media indicate that

speech and language processing tools and techniques will be critical in development.

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## **STUDY OF MUTANT BREAKER VARIETIES ACCORDING TO THE BASIC ECONOMIC-VALUABLE SIGNS UNDER THE CONDITIONS OF KARAKALPAKSTAN**

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### **ABSTRACT**

The mutant varieties M KK-3523 and M KK-3560 turned out to be relatively large-box varieties. These varieties exceeded the standard from +0.1 to +0.3 grams. In the non-irradiated variant, the large-box variety was KK-3547. According to frozen crop from the irradiated variant, the mutant variety M KK-3523 was a relatively high-yielding variety when it had an excess of yield against the standard by 10.3%. In non-irradiated grades KK-3536, KK-3548 and KK-3530 for frozen harvest had an excess against the standard from 5.0 to 6.8%.

**KEYWORDS:** Cotton breeding induced mutagenesis, mutant, radiation dose, mutation, variety, hybrids, cell, yield, precocity, fiber yield, fiber length.

### **INTRODUCTION**

Currently, with the help of ionizing radiation, varieties of crops with positive economically valuable traits can be developed at present: cold and frost-resistant, early ripening, with a high content of protein, gluten, nutrients, etc. In India, cotton lines highly resistant to pests were obtained by radio-selection. Mutants with short internodes and female sterility are bred in the USA. A cotton form without gossypol, that is, with a new generic trait, was obtained there, but it was badly damaged by insects. Therefore, forms were created containing gossypol in the leaves and not contained in the seeds. Such varieties are used as a valuable source of protein for the food industry.

In the selection of cotton, it is not customary to identify any specific areas, for example, selection for productivity, precocity, wilt resistance, etc. There is only one goal, the creation of varieties of an intensive type with a complex of the most important economically valuable traits.

Production places high demands on cotton varieties. Varieties should provide large harvests of raw and fiber, characterized by sufficient precocity, resistance to diseases and pests, high yield, length and technological qualities of the fiber, adaptability to machine processing of crops and harvesting. Cotton varieties must have wide adaptability to stress factors.

Along with the improvement of agricultural technology of cotton cultivation, accelerated removal



and introduction into production of early-ripening, more highly productive with a set of characteristics of varieties of agricultural crops, including cotton, is extremely important.

In addition, stable lines can be obtained by altering cellular material under the influence of induced mutagenesis.

It is planned to conduct breeding studies in the conditions of KKSRIA for the breeding of the earliest-growing, highly productive, drought tolerant, high-quality IV-type fiber varieties of cotton for introduction in the northern cotton growing zone of Uzbekistan. The creation of complex resistant varieties with high yield and fiber quality is possible with hybridization and multiple selections of mutant forms of cotton obtained on the basis of several of radiation mutagenesis.

Today, experimenters have at their disposal a vast arsenal of various factors of a physical and chemical nature, with the help of which it is possible to influence the course of morphogenesis in site-specific hybrids.

With cotton, the first results were obtained by irradiating the second generation of hybrids between variety 108-F and the wild Mexican form 06422 Ibragimov, Tyaminov, [1; 2]. New forms were obtained with many features that are interesting in practical terms.

Irradiation of hybrid plants of the first and third generations in different phases of development: the beginning of budding, the beginning of flowering and mass flowering with doses of 0.5: 1.0 and 2.0 kp contributed to a change in the nature of cleavage, acceleration of the process of formation and increased generation of new characters and properties in subsequent Ibragimov, Tyaminov [1; 2].

The above data show that the use of ionizing radiation can be considered as a method of inducing rare recombination in distant hybrids and as a method of obtaining a wide variety of mutations through chromosomal rearrangements.

A combination of induced mutagenesis with hybridization is widely used to obtain a wide range of variability of selection material.

In the course of work, Ibragimov and others [3], using the method of radiation mutagenesis, the mutant lines PM2, PM4, PM5, PM11 were derived, which are 3.8-13.4 centners/ha higher than the control of unirradiated hybrid combinations. Mutant lines are of interest for practical breeding and are successfully used in breeding when breeding new vitro-resistant, precocious varieties of cotton with good fiber quality. Varieties of mutational breeding varieties ML-11 (Karshinsky-1), ML-101 of fine-fiber cotton (Karshinsky-2) were developed.

## **METHODS OF CONDUCTING THE EXPERIMENT**

Selection experiments were carried out during 2018-2019 at the experimental base of the Karakalpakstan Scientific Research Institute of Agriculture, located in the northwestern part of the Republic of Uzbekistan. The experience was laid down according to the methodology of the Uzbek Scientific Research Institute of Cotton Breeding and Seed located in the city of Tashkent.

On the experimental site, watering irrigation was carried out annually in November-December and in some years in March.

Pre-sowing plowing was carried out by turning the reservoir to a depth of 25-30cm, followed by harrowing and shorting in 2 tracks.

Selection crops were carried out manually according to the market line of the seeder to a depth of 4-5cm, according to the scheme 60 x 25-1. In the developmental phase of 2-3 true leaves, germination of seedlings was carried out, leaving one sown manually, in 4<sup>x</sup> multiple repetition in two rows, the options were randomized.

Based on the previously created breeding materials, our breeders in the cotton breeding laboratory for 2 years laid the experience of station cotton variety testing at the experimental site of the Karakalpakstan Scientific Research Institute of Agriculture.

## **RESEARCH RESULTS AND THEIR DISCUSSION**

The studied varieties of station variety testing of cotton by the main economically valuable characteristics are shown in Table-1.

Noted: MKK - mutant varieties obtained from irradiation of cotton seeds with a dose of 3000 r/sec. KK - derived varieties without irradiated variant. S-4727 - control grade.

It should be noted that in the varieties under study for station cotton varietal tests during the growing season, most varieties comparatively deviated towards late maturity. Since in addition to some varieties KK-3532 and the mutant KK-3523, they were late ripe for +2.0 and +4.0 days. The tabular data show that by weight of the raw material of one box of the cultivar without the irradiated variant, most varieties deviated towards the small-boxed parent from -0.1 to 0.5 grams against the standard cultivar S-4727. Mutant varieties MKK-3523 and the mutant MKK-3560 turned out to be relatively large-box varieties. These varieties are stranded excess against the standard from +0.1 to +0.3 grams. Of the non-irradiated versions, the large box variety was KK-3547. According to the frozen crop from the irradiated variant, the mutant variety KK-3523 was a



relatively high-yielding variety when it had an excess of productivity against the standard by 10.3%, without irradiated varieties, this trait was preserved in varieties KK-3536, KK-3548 and KK-3530 had excess against the standard from 5.0 to 6.8%. The remaining varieties on this basis were relatively low or had a slight excess against the standard S-4727. According to the opened boxes, the majority of varieties were also relatively high-yielding varieties against the

standard S-4727. These varieties were KK-3548, KK-3535, KK-3552 and KK-3530. They had a harvest of open-boxes and exceeded the standards from 15.5% to 26.7%. In the irradiated cultivars, the MKK-3523 mutant and the MKK-3560 mutant, according to this criterion had yields from +14.0% to +22.0% higher compared to the standard variety S-4727.

**Table 1.****The main economically valuable features of the station variety testing of cotton**

№	Varieties	Vegetation period.		The mass of raw 1 boll. gr		The harvest of cotton raw, c/ha.				Fiber outlet, %		Fiber length, mm.	
		Days.	Rejection	gr.	Rejection	froz.		Gone.boll.		%	Rejection in %	Mm	Rejection in %
						c/ha	Rejection in %	c/ha	Rejection in %				
1	S-4727	110		6.3		23.2		25.4		36.1		32.3	
2	KK-3532	109	-1	6.0	-0.3	23.9	103.0	26.0	102.3	36.4	+0.3	32.7	+0.2
3	KK-3548	110	+0	6.3	+0	24.8	106.8	29.6	116.5	37.0	+0.9	33.0	+0.5
4	MKK-3560	113	+3	6.6	+0.3	20.4	87.9	25.8	101.5	37.1	+1.0	33.4	+0.9
5	KK-3535	109	-1	6.0	-0.3	23.7	102.1	29.6	116.5	36.0	-0.1	32.8	+0.3
6	KK-3536	110	+0	5.9	-0.4	24.9	105.0	29.3	114.0	36.4	+0.3	32.1	-0.4
7	KK-3537	112	+2	6.1	-0.2	19.0	81.8	24.4	96.0	36.7	+0.6	32.6	+0.1
8	KK-3552	113	+3	5.8	-0.5	24.4	105.1	32.2	126.7	36.1	+0	32.0	-0.5
9	KK-3546	113	+3	6.4	+0.1	20.3	87.8	27.3	107.4	35.8	-0.3	33.0	+0.5
10	KK-3547	114	+4	6.6	0.3	22.7	95.7	26.8	104.2	36.9	0.7	32.9	0.6
11	MKK-3523	109	-1	6.4	0.1	25.6	110.3	31.0	122.0	36.5	0.3	32.6	0.3
12	KK-3530	113	+3	6.2	-0.1	25.3	106.7	29.7	115.5	36.7	0.5	32.3	0.0
13	KK - 3531	112	+2	6.3	+0	21.7	91.5	24.7	96.0	36.4	0.2	32.3	0.2

from +0.1 to +0.3 grams against the control variety S-4727.

According to the output of the fiber in studied varieties, most were high-outlet sorts versus to the standard one. From those high-yield varieties were mutant MKK-3560. This variety had a fiber yield of 37.1% when the S-4127 standard was 36.1%. The remaining varieties were a slight excess against the standard. In terms of fiber length mainly most of the studied varieties were found to be relatively long-fiber varieties against the standard. From the irradiated cultivars, this trait ranged from 0.3 to 0.9 mm higher against the standard. Without the irradiated variant, the long-fiber varieties were KK-3535, KK-3548, KK-3546 and KK-3547. These varieties ranged length from +0.3 to +0.6 mm.

In general, according to the main economically valuable traits in the station variety of cotton, the relatively best varieties were the MKK-3523 mutant and without the irradiated KK-3548 variety.

## CONCLUSIONS

1. Mutant varieties MKK-3523 and MKK-3560 appeared in comparison with large-boll varieties against the control variety S-4727; these varieties had a reliable habit against the standard

2. Based on the productivity of the frozen crop, the MKK-3523 mutant was a relatively high-yielding variety, when it had a 10.3% higher yield against the control.

3. It should be noted that, according to the main economic valuable attribute, the mutant grade MKK-3523 and without the irradiated grade KK-3548 were found to be relatively better.

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## FRENECTOMY: A CASE REPORT

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### ABSTRACT

*High frenum attachment is a very common problem in the population and causes various problems in function and aesthetics. It is managed by procedures such as frenotomy and frenectomy. Aberrant frenum can be removed by any of the modification techniques that have been proposed, a functional and an aesthetic outcome can be achieved by a proper technique selection, based on the type of the frenal attachment.*

**KEYWORDS:** Labial frenectomy, midline diastema.

### INTRODUCTION

The presence of an aberrant frenum being one of the aetiological factors for the persistence of a midline diastema, the focus on the frenum has become essential [1]. A frenum attaches the lip and cheek to the alveolar mucosa, the gingiva and the underlying periosteum and the high frenum attachment may cause gingival recession when they are attached too close to the gingival margin.

Placek *et al* [2] have classified frenum depending on the extension of attachment of fibers,

(1) **Mucosal:** when the frenal fibers are attached up to mucogingival junction,

(2) **Gingival:** when fibers are inserted within attached gingiva,

(3) **Papillary:** when fibers are extending into interdental papilla,

(4) **Papilla penetrating:** when the frenal fibers cross the alveolar process and extend up to palatine papilla.

The maxillary labial frenum develops as a post-eruptive remnant of the ectolabial bands which connect the tubercle of the upper lip to the palatine papilla. When the central incisors erupt widely separated, no bone is deposited inferior to the frenum. A V-shaped bony cleft between the two central incisors and an abnormal frenum attachment results.

### CASE REPORT

A 14 year old male patient reported in the Department of Pedodontics & Preventive Dentistry K.D.C Meerut. On intraoral examination, high frenal attachment & midline diastema(3mm) were observed. After detailed explanation of procedure, patient was advised



frenectomy and written consent was obtained from the patient.

**Procedure: Labial Frenectomy (V-Y Plasty used in this case)**

After the area was anaesthetized with a local infiltration. The frenum was held with the haemostat and an incision was made in the form of V on the undersurface of the frenal attachment. The frenum was then relocated at an apical position and the V shaped

incision was converted into a Y, while it was sutured with 4-0 silk sutures and periodontal pack was placed as shown in figures 1-5. The patient was given instructions to avoid taking hot and spicy food for a few days and to maintain oral hygiene. Postoperative analgesics were given to the patient. After 2 weeks of follow-up, significant healing was noted and after 1 month, complete healing of the surgical area with normal frenal attachment was reported.



[Fig 1] Pre-operative



[Fig 2] Frenum excised



[Fig 3] Sutures placed

**[Fig 4] One-month postoperative picture****[Fig 5] Split labial bow**

## DISCUSSION

Aesthetic concerns have led to an increasing importance in seeking dental treatment. Aberrant frenum being one of the aetiological factors for the persistence of a midline diastema, the focus on the frenum has become essential. The high frenal attachment leads to gingival recession when they are attached too closely to the gingival margin. Archer's classical frenectomy technique is an extensive procedure which causes scarring and loss of interdental papilla<sup>[3,4]</sup>. Conservative approaches like Edward's frenectomy, frenum relocation by Z-plasty and free gingival graft<sup>[5]</sup>. A number of modifications have been developed to solve the problem caused by an abnormal labial frenum. But in most of the techniques the zone of attached gingiva and aesthetics are not considered, surgical frenectomy techniques like conventional (classical) technique<sup>[6]</sup>. Miller's technique using unilateral pedicle flap and frenectomy technique using bilateral pedicle flap and results are reported<sup>[7,8,9]</sup>. The frenectomy technique using pedicle flap gives good aesthetic results, colour match, gain in attached gingiva and no anaesthetic scar formation as healing takes place by primary intention. The Z-plasty technique was found to be ideal for a broad, thick hypertrophic frenum with

a low insertion, which was associated with an inter-incisor diastema and a short vestibule. It achieved both the removal of the fibrous band and the vertical lengthening of the vestibule<sup>[10]</sup>. Among all the approaches for frenectomy which were employed in the present case series, the electrocautery procedure offered the advantage of minimal time consumption and a bloodless field during the surgical procedure, with no requirement of sutures<sup>[11]</sup>.

## CONCLUSION

High frenum attachment is a very common problem in the population. In addition to that high frenum also hinders oral hygiene maintenance. It is managed by procedures such as frenotomy and frenectomy. While an aberrant frenum can be removed by any of the modification techniques that have been proposed, a functional and an aesthetic outcome can be achieved by a proper technique selection, based on the type of the frenal attachment. Though the approaches to the problem of not using the traditional scalpel, like electro surgery and lasers have merits, further improvements can still be attempted.

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## MARKETING METHODS SUPPORTING ADVANCES IN THE HIGHER EDUCATION SECTOR

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### ABSTRACT

*Considering the growing competitiveness in higher education, including that on MBA degrees, it is remarkable that marketing questions, such as educational institutions, have not received more attention. The purpose of this paper is to analyze the means that are used to promote academic services in the context of “Europe of knowledge” model through innovation and scientific cooperation. The significance of the study is driven via increasing value of fostering unique services in the education sector by approaches for promoting education not only with scientific practitioners, but also among the common public. The author uses concise approaches and explores the academic literature on supporting and introducing new services in the area of digital education. The results indicate the need to use the criteria of the exhibition operation to develop and enforce educational programs and other programs and to build relationships between universities and members of partner countries' business communities. The researchers discuss discrepancies in outcome process on primary audience. The article offers a blend of vital components in the primary goals of the “Europe 2020” approach and aspects of seven key initiatives that define the framework for the planned growth of the EU representative countries in the education system. A professionally made presentation, well-crafted advertising resources and sufficient effort with members of businesses and cohort academies bring more customers to participate in the program. Stimulating new services via such marketing methods is essentially subjective and implicitly associated with the nature of their market setting.*

**KEYWORDS:** *innovative product, innovation, marketing tools, project, customer, university, education.*

### INTRODUCTION

The complicated political and economic situation in the modern world stimulates national organizations to create and implement innovations in marketing activities. In the article the problem of innovative educational product movement to the end user is marked. It is difficult to combine the practical brand of educational services with the needs of the market, because its principles do not differ from the marketing on any market of goods or services, but must be adapted to the specificity and uniqueness of education. Training is a new search area for marketing aimed at identifying and ranking needs. On the one hand, education plays a key role in the formation of society as a whole, since it is the foundation of future development. On the other hand, his crisis is obvious. There is a problem of adaptation of modern education not only to requirements of scientific and technical progress, but also to possibilities of introduction of its innovative forms in many national high schools. The technologies to promote innovative educational products are invaluable techniques that the country's leading

universities should possess. The creation of such technologies is the first task at the stage of innovative development of our country.

In their research the authors made an attempt to reflect the fact that at present in Uzbekistan there is a lack of organized purposeful activity within the framework of the state innovation POLICY, so it is difficult to introduce and promote an innovation product in most universities. The main problem, which the higher educational establishments, which export educational services on the territory of separate states, face, is to bring the information to the end consumer on the international sales markets. On the one hand, aggravation of international competition in the sphere of education gives more and more urgency to the use of modern promotion technologies, on the other hand, globalization processes blur the distinctions between countries and unify international marketing activity irrespective of the business sphere.

There are various instruments to promote innovative educational product on the international scale. The most effective ways of promotion,



traditionally used by almost all subjects of the market, regardless of the sphere of activity, are exhibition activities and internet promotion. Education, science and innovation are conceptually linked and represent the following a "triad of knowledge" whose elements are in close contact with each other. The successful implementation of educational programs should be accompanied by the development of a marketing plan based on the use of possible marketing tools. The article deals with the implementation of the educational strategy "Europe of knowledge" from the point of view of an innovative product for the growing market.

### LITERATURE REVIEW

It is advisable to consider scientific approaches of the authors to the two categories mentioned in the title of the article - promotion tools and innovations. Promotion tools are a marketing category reflecting the content of integrated marketing communications. Phillip Kotler is the founder of the development of marketing as a theory. He regards promotion as a marketing complex. The marketing complex is a system of providing information consisting of such elements as the product, the way it is distributed, the price of the product. These components, together with marketing communications, make up a marketing mix.

Promotion is the delivery of information about a product or service to the consumer. In order to promote a service or product more successfully, organizations should attract as many customers as possible by making original requests, placing product information that convinces consumers of the need for that product. It is not enough just to attract customers, it is necessary to constantly support their interest in their activities. This is why communication is a key point in marketing. Marketing communication is the process of transmitting data about its products to the target audience and establishing feedback.

Innovation (from lat. *innovatis* "update, novelty, change") - improvement and improvement of the existing, the introduction of a new one. Other sources point to a broader understanding: "process of using innovation". Innovation is a product based on a fundamentally new solution. As a rule, innovation opens new opportunities for the consumer. At present, innovative products include not only ultra-fast computers, iPhone, GPS navigator, nanotechnology-based drugs, new products biotechnology, but also an educational product that contributes to the creation of the above technologies and the development of the "educational triad" in general.

In N. N. Molchanov's opinion, there is a wide list of criteria classifications within innovation activities. The first criterion relates to the area in which innovation takes place and according to this criterion.

The following types of innovation are distinguished by classification: technological, organizational (using a fundamentally new management method) or technical (related to the production of a new product). The second criterion can be seen as a way of implementing an innovative process that includes are systematic, planned, natural, spontaneous or accidental

innovations. The third group consists of innovations characterizing latitude and depth of innovative activities (mass, large, radical, fundamental, strategic, deep, small).

E. A. Leonenko believes that the initial stage of innovative activities is the goal and idea that form the main strategic aspects of the problem, determine the methods of implementation and means. Their commonality directly forms the innovative activity. However, in itself, formation of a new one, its mechanisms cannot replace innovative activities, so the implementation part, which includes management and control, is considered. They themselves are also envisaged and formed on the basis of the purpose, ideas. When the feedback mechanism is used, a full complex is organized innovation activities and as the main, targeted weekend implementation - process of use a new one.

To overcome the crisis and reboot the economy the leaders of the EU member states in 2010 developed a new strategy "Europe 2020" is a strategy for rapid, sustainable and inclusive growth. These elements relate to various dimensions that the EU sees as key to its development strategy. Rapid growth means that innovation and knowledge must be the main drivers of development; sustainable - refers to a growth model that is more resource-efficient and respectful of nature; inclusive - refers to the social dimension of growth, reducing the number of people living in poverty and reducing the number of people living in social inequality.

From the point of view of N. V. Ve Seloff and M. S. Kruter, the promotion of innovative products is fundamentally different from advertising already known.

The main difference lies in the content of the message sent to the target audience. As a rule, such advertising should contain detailed information about the essence of the product, its properties, visualization of the process of its use;

an indication of significant benefits and advantages for the consumer;

advertising should be built on creativity and aimed at active and mobile of people, as well as containing original and unusual ideas. What is important is the combination of mass advertising through media and BTL advertising, such as attracting to the initial sales of consultants localized.



Priority directions of innovative activity promotion educational organizations should be coordinated with the priorities of state, federal, regional, scientific-technical and innovative

of politics. However, Babanova believes that educational institutions are often not ready or have difficulties in establishing contacts with business partners in the process of implementing a new educational product. Not having a certain experience, many educational institutions feel the need for consulting assistance in support; in knowledge, general guidelines for the innovation strategy: in which area(s) to act, how to achieve the desired results, which innovations will have the greatest impact, and what solutions and steps are needed to ensure their existence.

## MATERIALS AND METHODS

In the process of scientific research, we used descriptive assessment method when "scanning" the existing situation on the market of educational services on the basis of secondary research. Implementation results in Uzbekistan, educational projects and European experience in general have undoubtedly contributed to positive trends in the development dynamics of some local universities. The analysis of the sources used by the universities showed that the majority of national universities were not capable of such innovations. We have identified a causal link between the problems and difficulties in using the proposed educational projects in higher education system.

First of all, let us note the level of motivation and awareness of the proposed educational programme implementers. In the course of work on this study, a master class was held on drawing up applications for a contest as part of the implementation of an educational project. When conducting this event noted an increased interest from the audience to the details of the project, many questions were asked. However, in the course of the work. the audience was found to be poorly informed about the algorithm of the project as a whole and questioned about the possibility of funding from management and their successful participation.

## RESEARCH RESULTS

Promoting innovation in the field education has its own specificity, which is manifested at different stages of the product life cycle. There are several stages in the life cycle of a product or service:

1. Development and implementation. In the field of educational service given the stage is very important because it has a prolonged effect. Its high efficiency will ensure future growth of an innovative educational product. This is where it happens. customer

introduction and the initial demand is formed.

2. Stage of growth. At this stage, the main marketing strategy of the company is to penetrate deep into the market and create a preference for the service. To achieve a competitive advantage, it is necessary to expand the list of services, more actively implement related services (maintenance of the service), periodically upgrade the service, reduce the price.
3. The maturity stage is characterized by the saturation of the market with a product; the rate of sales is falling, profit is falling; the firm defends its share in the market, reduces prices, there is usually a reorientation of advertising from product promotion to stimulating consumption. Specifics of the education sector at this stage, it is manifested in the fact that when saturation occurs, the sale of services is mainly due to the fact that new universities are identified that need this service or at the expense of appeals. In this situation, services are selected, the volume of demand for which can be tried to manage by offering related services, additional educational programs, etc. Otherwise, measures to stimulate sales don't make much sense.
4. The decline stage is characterized by a fall in sales - a reduction in the number of competitors, marketing costs, lower profits, prices. At this stage, marketing activities are usually curtailed. For educational service this stage comes when there is an alternative way of introducing an educational program - more efficient and cheaper. However, for some educational services, the decline stage may not come at all.

Promotion of innovative educational product is distinguished by the following aspects.

1. Presence / absence of creative elements of innovation. Innovative source activity creative, its formation and subsequent activities are probabilistic character.
2. The danger of an end in innovation activity. Advertising innovative activity leads to the construction of systems of innovation as a goal rather than a desire to implement them to meet specific challenges and needs.
3. Material side. An undoubted criterion of modern reality is the real possibility of material achievements as a result of innovative activity.

A concrete result identifies the need to address organizational issues of supporting innovators. Such issues should be addressed by both local and federal authorities, up to and including state budget standards.



An important stage in promoting innovation in education is the process of positioning, including within the exhibition activities. This makes it possible to highlight the benefits of the product by studying and analyzing the target segment; to determine the relevance of the innovative product, as well as ways to the positioning of an educational organization on the educational market of services.

Organization of all activities on development, introduction and promotion should be based on a number of principles: coordination and completeness of cycle management on development, introduction and promotion; selection and implementation of the most priority areas; stages of development, introduction and promotion of IE; consistency; openness; strategic partnership and integration; comprehensive provision of necessary resource flows, etc.

In the framework of the exhibition activity the platform serves as the initial stage, based on the priorities of its organizers, allowing each Member State to define for itself the types of activities to achieve of the goals of the "Europe 2020" strategy. For example, to make it more efficient and faster the achievement of these priorities The European Commission identified 7 specific areas presented by as flagship initiatives:

- 1) "Innovation Union aims" to establish conditions and provide affordable funding for research and innovation, ensuring that innovative ideas can be transformed into products and services that generate growth and employment.
- 2) "Youth on the move" - an area designed to enhance the productivity of education systems and to promote the inclusion of youth in the ore market.
- 3) "A Digital Agenda for Europe" is focused on optimizing high-speed internet connections and the benefits of the digital market in the home and the workplace.
- 4) "Resource efficient Europe". It is designed to help decouple economic development from resource use, sustain shifts towards a lower carbon economy, develop renewable energy sources, modernise the transport sector and promote productivity of energy.
- 5) "An industrial policy for the era of globalization" implies strengthening the business environment, especially small and medium enterprises and promotes the development of a strong and sustainable industrial base that is capable of competing in the global marketplace.
- 6) (6) "Agenda for new skills and jobs" is designed to modernize labour markets and enable people, through the

development of their own skills, to expand their work life cycle and better meet market requirements, including through labour mobility.

- 7) "European Platform against Poverty" is designed to guarantee social and territorial integrity.

For each of these initiatives it is advisable to develop a promotion program, which includes a set of measures not only to explain the content, possible participants, but also the expected benefits of the program implementation.

In order to ensure the effectiveness of their implementation, the structure the EU, as well as EU Member States, should monitor progress through regular monitoring of progress, meetings and negotiations held during the exhibition activities and informal events.

If the "Euro 2020" strategy, the Education and Learning Concept (ET2020) and the European Higher Education Modernization Plan demonstrate the political and strategic framework of the EU's education policy, the Erasmus+ programme is one of the main instruments to achieve the following of the objectives set out in those documents.

The Erasmus+ programme as a tool to promote an innovative product, the Euro 2020 strategy, has been implemented since 2014 in parallel with the multiyear development plan that the EU is using to achieve its goals in the field of education up to the year 2020.

2020.3 "Erasmus+" is an umbrella programme that brings together all previous EU education programmes ("Erasmus", "Erasmus Mundus"), "Tempus" and others.) It's structured into three key areas:

1. Mobility - groups all types of programs that distinguish this direction as the main component. Mobility is implemented at all levels of education (from school to adult).
2. Cooperation - brings together all subprogrammes aimed at strengthening cooperation between structures higher education and other organizations (business, research centres, NGOs, etc.), as well as between different regions of the world. One of the important features of the programme "Erasmus+ is that its directions are available to almost every country in the world. This is an important aspect that points to a significant evolution of EU higher education programmes: from the European (regional) dimension, which characterized EU education programmes in the early 1990s, they are moving increasingly towards a global dimension.
3. Supporting education policy reforms. This direction aims to stimulate policy debate on



education in Europe (in particular, regarding the Bologna Process) and promoting the aspiration to the European Higher Education Area.

This programme could be more successful if it were accepted by national higher education institutions. However, the difficulty of its implementation lies both in its parameters and in the complexity of its adaptation to the Uzbekistan educational system. Lack of available information, motivation and a single "denominator".

The educational systems of Europe and Uzbekistan are accompanied by the unwillingness of the majority of higher education institutions to penetrate into the essence of the program and even more so to implement it. Promotion activities in this area should contribute to the establishment of feedback and strengthen the following personal relationships between the participants.

All Erasmus+ subprogrammes have a number of horizontal priorities (innovation, entrepreneurship skills, information and communication technologies and open educational resources, multilingualism, equality and inclusion), which are set out in the programme and should stimulate cooperation between universities and the business community through strategic partnerships. This is transnational projects that bring together various cooperating organizations in order to implement innovative practices leading to high-quality education, training and professional development, institutional modernization and social innovation. Cooperation with business structures is also highlighted in Knowledge Alliance projects aimed at stimulating the development of entrepreneurial, innovative and innovative competencies in disciplines and ensuring innovation in higher education through a more interactive learning environment and enhanced knowledge through exchange between the business sector and the field of higher education.

Uzbekistan has access to this under the "Erasmus+" program, but with some reservations: national universities cannot act as project coordinators and cannot participate in the national projects. In this case, no promotional activities will contribute to the communication effect of their implementation.

Most higher education institutions in Uzbekistan (especially in the regions) are not able to implement the described programs. This is due not only to poor awareness and lack of understanding of the need to introduce this innovation, but also to the lack of interrelation of science with the business community. However, implementation of the Tempus program has made a significant contribution to the modernization of higher education in Uzbekistan through the development of unified curricula.

"Tempus has influenced teaching methods and provided opportunities to improve English language skills and computer technology.

The establishment of information technology centres and international departments, as well as the improvement of library management systems, are some of Tempus' most significant achievements. Consequently, this program has become an important tool to motivate administrative staff, and has also had a significant impact on implementation quality assurance systems. The considered educational programs have a clearly defined implementation structure connected with the instruments of promotion in the international context. The target audience in this aspect is polar. On the one hand, the universities, which accept the conditions for the implementation of educational programs "Tempus", "Erasmus+", etc., and on the other hand, the business community, wishing to participate in projects implemented through the strategy "Euro 2020" and funded by the EU.

Information dissemination to the end consumer is carried out at international, national, regional educational exhibitions. International exhibition activities are especially relevant for higher education institutions that host new educational standards, as well as for HEIs promoting their educational services abroad, especially when it comes to educational programs designed for of foreign consumers. In any case, the effectiveness is determined by the possibilities of the exhibition:

- To carry out direct communication with potential partners interested in obtaining information about any race.
- To implement an algorithm of promotional activities to promote educational programs and motivate the end consumer;
- To scan the prevailing needs and current trends in the global and regional educational markets;
- To conduct research and study strategies for the implementation of new educational programs competitive higher education institutions in comparison with their own capabilities and identify possible options for positioning and further promotion of the educational program.

Participation in the exhibition is associated with clearly defined goals and objectives and should be confirmed by the results of market research and economic efficiency at the exhibition.on the basis of pre-show preparation.

Exhibition preparation includes the development of a stand concept, the choice of space and configuration of the exhibition stand; development of an advertising campaign for the duration of the exhibition-delegation of authority, definition work techniques.and work technology.



The location of competitors at the exhibition must be taken into account. Location in relation to competitors has its own peculiarities, which are that the exposure in one the block with the nearest competitors on the basis of uniformity of programs, complexity of realization of an educational program, type of educational institution etc. allows to count on that visitors of this part of an exhibition will represent a target group interested in a particular product. On the other hand, the visitor's attention can be dispersed by a large number of similar offers, so it is advisable to use a corner stand to cross attract consumers. The location of the stand is appropriate separately from competitors, which allows the university's programs to be distinguished from other exhibitors in close proximity, but in this case the target group may be concentrated in the location of of the main proposal. In any location relative to competitors, the main recommendation remains to avoid the choice of a dead-end location with no through passage.

A key component before the exhibition and stand is the development of promotional and information handouts. The effectiveness of these materials is largely dependent on them. of the stand's work, as handouts distributed at the exhibition remain with potential consumers of educational services and have a time-prolonged effect that can influence the decision to adopt an educational program.

The set of advertising and information materials for work at the exhibition may differ depending on the type of the exhibition itself and the region where it is held for the European and American educational markets, the main educational products advertised are the following

at exhibitions, are Masters programs of double diploma; short-term programs (semester programs, summer schools, etc.); programs of learning language; internships.

Thus, all the information contained in the promotional materials (especially in multi-page advertising materials), as well as all the information contained in the promotional materials (especially in multi-page advertising materials, booklets) should be systematized and structured in accordance with the goals, objectives and position of the university at the international educational level of the market. The content should be detailed and reflect participation in a programme aimed at building capacity in higher education. Webinars to inform future participants in the programme as part of the Bologna Concession and the creation of electronic pages are supportive elements that influence the desire to scientists, students and representatives do business to participate in education projects.

## DISCUSSION AND CONCLUSIONS

All educational projects ("Erasmus", "Erasmus+") are part of the Lisbon Strategy, "Tempus and others) contribute to capacity building in higher education and aim to modernize higher education systems in partner countries from other regions of the world. Therefore, the participants of the exhibition activities are higher education institutions that act as project coordinators and participate in national projects together with others partner countries and business communities.

Participating in international educational exhibitions in Europe, universities to attract business communities and end users should present a set of advertising and information materials: image or information-image booklet about the university (with general information about the university, its history, structure (faculties, departments), areas of training, scientific activities, student life, etc.); a directory with a list of proposed educational services (with a section on

types of programs, description and main parameters of programs, cost of education) and description of ways to implement priority educational programs for the university; separate brochures on educational programs of education (with detailed information on each program individually or by types of programs, such as double diploma programs); university business cards or university representative (usually a member of the department of recruiting foreign nationals and working with representatives of business communities); multimedia presentations and videos about the university, electronic versions of advertising and information materials recorded on CD or flash card.

The success of the company's participation in exhibition events largely depends on the art of exhibition design expositions, properly prepared advertising and information materials and effective accompanying promotional activities. Qualitatively conducted exhibition campaign and further work with existing contacts after the educational exhibition can significantly affect the future success of the university in promoting educational programs and recruiting foreign applicants.

As a result of the research of possibilities of realization of innovative programs in the sphere of education bottlenecks affecting the efficiency of the educational system as a whole have been identified. Imperfection of motivation mechanisms at the level of individual higher education institutions, lack of strong relations with representatives of business communities, low level of awareness of the faculty about the prospects of a number of educational institutions

Unfortunately, the whole system of education in Uzbekistan is deprived of a solid foundation. The problem of bringing information to the staff and



management of higher education institutions can be solved by means of marketing promotion tools. One of them is exhibition activity which is aimed at acquaintance of the consumer with innovative service and establishment of firm relationships with different universities and business partners.

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# MODELING THE SUPPLY OF LABOR IN THE RURAL LABOR MARKET

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## ABSTRACT

*The article proposes econometric models that can be effectively used to determine the future parameters of labor supply in the rural labor market. Along with the demo-social models of labor supply, forms of self-employment in various sectors of the economy are also taken into account.*

**KEYWORDS:** *economic theory, labor market, labor supply, econometrics, self-employment.*

## INTRODUCTION

One of the most important issues in economic theory is to balance the demand for labor in the labor market with the help of wages. The theoretical foundations of economic relations in the labor market, its balance and competition are elaborated in the works of J.M Keynes, M. Friedman and others, whose views later became Keynesian, monetarist and institutionalized economy [7,16,17].

## MATERIALS AND THEIR DISCUSSIONS

Mathematical modeling of labor supply in the rural labor market in the context of global economic development requires extensive use of economic-mathematical methods and models used in the analysis of economic systems. The scientific works of a number of scientists of the Commonwealth of Independent States are devoted to the study of the formation and development of the labor market in a separate area, including Abdurahmanova K.H, Darmanyany A.P, Sarych A.P, Sarych. Gorelova G.V, Kachalkina A.V, Korovkin A.G, Tuktamysheva L.M and others may be included. [2,3,4,9,11,12, 14].

An analysis of the work devoted to the study of the mathematical modeling of the rural labor market suggests that these studies pay more attention to determining their prospects on the basis of retrospective statistics. Scientists of our country Kholmuminov Sh.R., Arabov N.U, Tashpulatov A. on the study of econometric models of forecasting the rural labor market. In scientific research, it has been overlooked that the labor market, like other markets, is regulated by prices, and that the concept of consumer demand and aggregate demand is the main criterion for regulating supply and demand for labor [1,13,15].

The set of econometric models developed and proposed during the research complements and enriches the content of the models in the above-mentioned scientific works.

It is advisable to econometrically study the demo-social sources of the rural population before developing future models of labor supply. Demographic modeling is based on the method of age change of the population, in which the able-bodied population is stratified according to the same age group and skill level. A number of scientific works of our country's scientists are devoted to the development of economic-mathematical models of demo-social sources of labor supply. These studies take into account changes in the amount of labor supply in the forecast of labor market indicators in accordance with the estimate of the workforce, as well as changes and approaches in the training of the new generation in the Republic of Uzbekistan in 2017-2019. Therefore, we believe that it is necessary to develop econometric models that reflect the current conditions and directions of employment, appropriate to the segments of the rural labor market at the regional level.



The following models can be used to predict the quantitative parameters of labor supply in the rural labor market:

- a) Model of labor supply by gender of the population:

$$S_{\alpha cm j}(t) = S_{\alpha_1 j}(t) + S_{\alpha_2 j}(t) \tag{1}$$

Here,  $S_{\alpha_1 j}(t)$  and  $S_{\alpha_2 j}(t)$  – in  $t$ -year the number of workers in the professions offered by men and women;

- b) Model of labor supply by age groups:

$$S_j(t) = \sum_{b_1=16}^{17} S_{b_1 j}(t) + \sum_{b_2=18}^{59} S_{b_2 j}(t) + \sum_{b_3=60}^{70} S_{b_3 j}(t) \tag{2}$$

Here,  $S_j(t)$  - age group labor force in  $t$ -year, thousand people;

$S_{b_1 j}(t)$  – the number of able-bodied but underage teenagers, a thousand;

$S_{b_2 j}(t)$  – the number of able-bodied people of working age, a thousand;

$S_{b_3 j}(t)$  – the number of retired people who want to work, a thousand people.

- c) Model of labor supply by qualification

$$S_{m.j}(t) = \sum_{\gamma=1}^7 S_{\gamma j}(t) \tag{3}$$

Here,  $S_{\gamma j}$  – Number of job offers by level of education (unfinished secondary, secondary, secondary special, vocational, bachelor, master, adjunct), thousand people;

- d) Model of labor supply by professional training

$$S_{kac\bar{o}j}(t) = S_{\kappa_1 j}(t) + S_{\kappa_2 j}(t) + S_{\kappa_3 j}(t) \tag{4}$$

Here:  $\kappa_1, \kappa_2, \kappa_3$  -appropriately trained workers, employees and unskilled workers

- e) Model of labor supply in the rural labor market, which is in need of social protection and is not competitive:

$$S_{sp.j}(t) = S_{\lambda_1 j}(t) + S_{\lambda_2 j}(t) + S_{\lambda_3 j}(t) + S_{\lambda_4 j}(t) + S_{\lambda_5 j}(t) + S_{\lambda_6 j}(t) \tag{5}$$

Here,  $S_{\lambda_1 j}(t)$  - young people under the age of 30, a thousand people;

$S_{\lambda_2 j}(t)$  - the number of retired people who want to work, a thousand people;

$S_{\lambda_3 j}(t)$  - the number of able-bodied disabled people, a thousand people;

$S_{\lambda_4 j}(t)$  - mothers of many children, thousands of people;

$S_{\lambda_5 j}(t)$  -the number of those released from penitentiary institutions, one thousand;

$S_{\lambda_6 j}(t)$  - the number of others who are not competitive in the rural labor market, thousands.

- f) Model of labor supply by sectors of the labor force:

$$S_{c.j}(t) = S_{c_1 j}(t) + S_{c_2 j}(t) + S_{c_3 j}(t) + S_{c_4 j}(t) \tag{6}$$

Here,  $S_{c_1 j}(t)$  -the number of labor supply in the agricultural sector in  $t$ -year, thousand people;

$S_{c_2 j}(t)$  – the number of people who want to work in the processing sector of the economy, thousand people;



$S_{c_3j}(t)$  – the number of employees in service enterprises in t-year, thousand people;

$S_{c_4j}(t)$  – the number of workers in the areas related to the self-employment sectors in t year, thousand.

## CONCLUSION

The use of the above-mentioned models in determining the prospects for the supply of labor serves to determine the number of employees in the rural labor market.

The use of the above-mentioned models in determining the prospects for the supply of labor will serve to determine the near-term number of employees in the rural labor market.

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# CREATING STYLE SHEET BY USING SPEECH RECOGNITION

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## ABSTRACT

Today's rich Web applications use a mix of Java Script and Asynchronous communication with the application server. This mechanism is also known as Ajax: Asynchronous JavaScript and XML. The intent of Ajax is to exchange small pieces of data between the browser and the application server, and in doing so, use partial page refresh instead of reloading the entire Web page. AJAX (Asynchronous JavaScript and XML.) is a powerful web development model for browser-based Web applications. This project is designed and developed keeping that factor into mind, and a little effort is made to achieve this aim. Our project is capable to recognize the speech and convert the input audio into text & style sheet it also enables a user to perform operations "save, open, exit" a file by providing voice input.

## 1. INTRODUCTION

### 1.1 Introduction

Today's rich Web applications use a mix of Java Script and Asynchronous communication with the application server. This mechanism is also known as Ajax: Asynchronous JavaScript and XML. The intent of Ajax is to exchange small pieces of data between the browser and the application server, and in doing so, use partial page refresh instead of reloading the entire Web page. This project is designed and developed keeping that factor into mind, and a little effort is made to achieve this aim.

Our project is capable to recognize the speech and convert the input audio into text & style sheet it also enables a user to perform operations "save, open, exit" a file by providing voice input.

Internet browsers are common applications any computer user likes to work with irrespective of his computer knowledge. There are various third party tools available in the market that can attach to a browser application to change the actual display of a webpage in accordance to the user requirement.

### 1.2 Speech Recognition

Speech Recognition (or Sometimes referred to as Automatic Speech Recognition) is the process by which a computer identifies spoken words. Basically, it means talking to a computer & having it correctly understand what you are saying.

### 1.3 Style Sheet

A Style Sheet is a collection of style rules that tells a browser how the various styles are to be applied to the HTML tags to Present the document. Rules can be applied to all the basic HTML elements, for example the <p> tag, or you can define you own variation and apply them where you wish. Style sheets can be external or internal to your web site. A Style sheet is a text file that is stored on any webpages or style sheet can also be included as part of your web page .

There are three types of style sheets:

- **Embedded:** the style rules are included within the HTML at the top of the web page –in the head
- **INLINE :** the style rules appear throughout the HTML of the web page – i.e in the body .
- **Linked:** The style rules are stored in a separate file external to all the web pages.

## 2. REVIEW OF LITERATURE

### 2.1 Speech Recognition Process

In humans the speech oracoustic signals are received by the ears & then transmitted to the brain for understanding & extracting the meaning out of the speech & then to react it appropriately. Speech recognition enabled computer or device too, work

under the same principle. Any speech recognition system involves following five major steps

➤ **Signal processing:**

The sound is received through the microphone in the form of analog electrical signals. These signals consist of the voice of the user & the noise from the surroundings. The noise is then removed & the signals are converted into digital signal.

➤ **Semantic Interpretation**

Here it checks if the language allows a particular syllable to appear after another. After that, there will be grammar check.

## 2.2 Types of speech recognition systems

Speech recognition system can be separated in several different classes by describing what types of utterances they have the ability to recognize. These classes are based on the fact that one of the difficulties of SR is the ability to determine when a speaker starts and finishes an utterance. Most packages can fit into more than one class, depending on which mode they're using.

➤ **Isolated word :**

Isolated word recognizers usually require each utterance to have quiet on both sides of the sample window. It doesn't mean that it accepts single words, but does require a single utterance at a time.

➤ **Connected word:**

Connect word systems are similar to isolated words, but allow separate utterances to be run-together with a minimal pause between them.

➤ **Voice verification/identification:**

Some ASR system have the ability to identify specific users by characteristics of their voices. If the speaker claims to be a certain identity and the voice is used to verify this claim, this is called verification or authentication. There are two types of voice verification/identification system, which are as follows

• **Text-Dependent:**

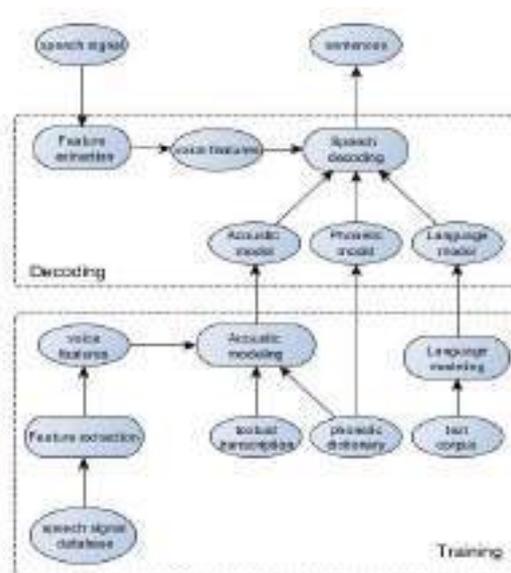
If the text must be the same for enrolment and verification this called text-dependent recognition. In a text-dependent system, prompts can either be common across all speakers (e.g: a common pass phrase) or unique.

• **Text-Independent:**

Text-independent systems are most often used for speaker identification as they require very little if any cooperation by the speaker. In this case the text during enrolment and test is different. In fact, the enrolment may happen without the user's knowledge, as in the case for many forensic applications.

## 3. ARCHITECTURAL DESIGN

Speech recognition is a difficult task, and is one of most important branches in digital signal processing. Figure presents the general architecture of an automatic speech recognition system, which emphasizes the two main steps of the architecture, namely the training and decoding tasks.



### 3.1 Architecture

Fig General architecture of a recognition also shows that the recognition does not model speech directly. Here, the feature extraction block is employed to extract specific features, which are further used in the acoustic model creation. The block is also used in recognition or decoding process for speech representation.

## 4. METHODOLOGY

A connected digits speech recognition system is a limited vocabulary recognizer. This means the system will only recognize and transcribe in style sheet.

Speaker dependent system should be better at decoding speech uttered by the specific user for which it was trained. However, this demands a new system to be constructed and trained individually for each speaker, a time-consuming and non-scalable task. Speech development toolkit is hidden Markov model toolkit

### 4.1 speech recording

A speech database comprising recorded audio files is required to build an acoustic model for the speech recognition system. An online speech recorder application, developed by speed research group, is used to record the audio files.



#### 4.2 creating a language model

Current system trained with a large vocabulary for speech recognition use a statistical language model. These language models are built based on large text corpora specific for recognition task. Estimating the probability of occurrence for words and sequences of words for that task. The language models are then used in the process of decoding to select the most likely sequence of words proposed by the acoustic model.

#### 4.3 Decoding

The three basic components of a speech recognition system are available for use in the decoding process. As a result the system can decode using the evaluation data and then compare the textual transcription of decoding process with the reference transcription.

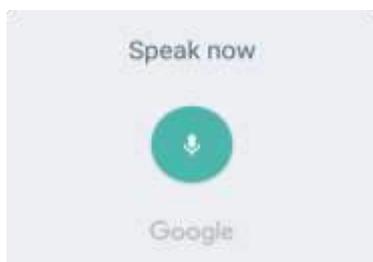
### 5. RESOURCE AND TOOLS

#### 5.1 Speech Recognition Software

There are ample of speech recognition software available in the market. These software's are available for various kinds of platforms including smart phones, PCs, Tablets etc & are designed for different operating systems as well

- **Julius**
  - ✓ Open source & freeware speech recognition engine
  - ✓ Developed by –Nagoya institute of technology
  - ✓ Developed in C language
  - ✓ Operating systems – unix, windows
  - ✓ High- performance two-pass large vocabulary continuous speech recognition decoder software for speech-related researchers and developers.

- **Google Now**



**Figure 5.1.1 Google Now Interface**

- ✓ An intelligent personal assistant software
- ✓ Developed by- Google
- ✓ Operating System - android & later
- ✓ Language available in –English
- ✓ Google now is implemented as an aspect of the google search application. It recognizes repeated actions that a user

performs on the device and to display more relevant information to user in the form of cards.

- **SIRI**



**Figure 5.1.2 SIRI**

- ✓ An intelligent personal assistant and knowledge navigator software
- ✓ Developed by apple inc.
- ✓ Operating system –ios 5 & later
- ✓ Platform –iphone, ipad touch, ipad and later
- ✓ Languages available in – English, French, german, japanese etc..
- ✓ The application uses a natural language user interface to answer questions, make recommendations, and perform actions by delegating requests to a set of web services.

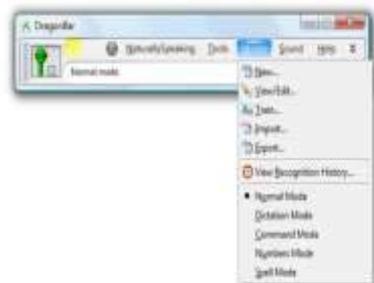
- **S Voice**



**Figure 5.1.3 S Voice**

- ✓ An intelligent personal assistant and knowledge navigator software
- ✓ Developed by samsung
- ✓ Operating system - Android 4.0 & 4.1
- ✓ Platform- Samsung
- ✓ Languages available in – English, French, german, japanese etc..
- ✓ The application uses a natural language user interface to answer questions, make recommendations, and perform actions by delegating requests to a set of web services

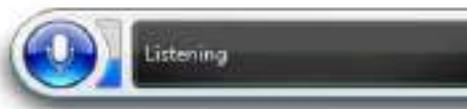
➤ **Dragon naturally speaking**



**Figure 5.1.4 Dragon Naturally Speaking Interface**

- ✓ A speech recognition software package
- ✓ Developed by – Nuance communications
- ✓ Operating system – Windows
- ✓ The software has three primary areas of functionality: dictation, text-to-speech and command input

➤ **Windows speech recognition**



**Figure 5.1.5 Windows Speech Recognition Interface**

- ✓ A speech recognition application
- ✓ Developed by –microsoft
- ✓ Operating system – windows vista, windows 7 and windows 8
- ✓ Languages available in – English
- ✓ Allows the user to control the computer by giving specific voice commands.

## 5.2 Advantages & disadvantages

### Advantages

- ✓ Increases productivity
- ✓ Able to write the text both through keyboard and voice input.
- ✓ Can help with menial computer tasks, such as browsing and scrolling
- ✓ Voice recognition of different notepad commands such as open save and clear
- ✓ Lower operational cost
- ✓ Open different windows softwares based on voice input
- ✓ Provide significant help for people with disabilities.
- ✓ Requires less consumption of time in writing text

### Disadvantages

- ✓ Difficult to build a perfect system
- ✓ Involves more than just words (non verbal communication stutters )
- ✓ Every human being has differences such as their voice , mouth and speaking style
- ✓ Filtering background noise is a task that can even be difficult for humans to accomplish.

## 6. IMPLEMENTATION &RESULTS

The advancement of technology has led to the growth of many voice-activated products and applications. It will only become more widespread in the next several years

Speech-recognition system implementation in the studied orthopaedic division started with one physician,

## 7. FUTURE SCOPE

➤ **Achieving efficient speaker independent word recognition**

All the SR systems well be speaker independent and will produce the same kind out output for a particular command irrespective of user.

➤ **Ability to distinguish nuances of speech and meanings of words**

SR systems would be able to distinguish between nuances phrases & meaningful commands, & would be able to process the proper command out of the nuances phrases correctly.

➤ **Stand-alone speech recognition systems**

Presently there is no SR stand-alone systems available, all the SR systems been developed are based on one or the other pre-existing hardware and software platforms, but in near future stand alone speech recognition systems might be available in the market.

➤ **Wearable speech recognition system**

SR systems will be embedded in wearable devices or things such as wrist watch, necklace, bracelet etc. there will be no need of carrying bulky devices and the technology can be used on the go.

## 8. CONCLUSION

Speech recognition will revolutionize the way people conduct business over the web and will, ultimately, differentiate world-class e-businesses. VoiceXML ties speech recognition and telephony together and provides the technology with which businesses can develop and deploy



voice-enabled web solutions Today these solutions can greatly expand the accessibility of web-based self-service transactions to customers who would otherwise not have access, and, at the same time, leverage a business' existing web investments.

Speech recognition and voiceXML clearly represent the next wave of the web. In near future people will be using their home and business computers by speech not by keyboard or mouse. Home automation will be completely based on speech recognition. Speech recognition will revolutionize the way people interacted with smart devices & will ultimately differentiate the upcoming technologies. Almost all the smart devices coming today in the market are capable of recognizing speech. Many areas can benefit from this technology. Speech recognition can be used for intuitive operation of computer-based systems in daily life.

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## **SOME PEDAGOGICAL AND PSYCHOLOGICAL ASPECTS OF PREPARING FUTURE FOREIGN LANGUAGE TEACHERS FOR PROFESSIONAL ACTIVITIES**

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### **ABSTRACT**

*This article explains the current state of preparing future foreign language teachers for professional work, the normative documents that encourage the teaching and learning of foreign languages in the Republic of Uzbekistan, the role of pedagogical and psychological knowledge in the professional activities of future foreign language teachers.*

**KEY WORDS:** *professional work, professional formation, pedagogical skills.*

### **DISCUSSION**

As you know, in recent years in our country special attention is paid to the teaching of foreign languages to young people, training of highly qualified specialists who meet the modern requirements for various spheres of society. Because the knowledge of foreign languages opens doors to the world, it gives a chance to be informed about the events in foreign countries, achievements in the field of science and technology as well as notifying our great creative works and the positive results which are being achieved in our country to the globe.

In this regard the first President of the Republic of Uzbekistan I.A. Karimov said: "We are not only educating students with broad knowledge and professional skills, but also actively communicating with peers abroad, to keep abreast of all the current events, innovations and changes in the world. We attach great importance to learning foreign languages, which is a prerequisite for gaining immense intellectual wealth in the world."

Indeed, according to the Decree of the President of the Republic of Uzbekistan on December 10, 2012 "On measures to further improvements in the system of learning foreign languages" the State Educational Standards for Continuing Education have been developed and approved which aimed at radically upgrading the

system of teaching foreign languages using modern pedagogical and information-communication technologies, radical improvement of the system of training of specialists who are fluent in these languages and providing them with opportunities for world civilization and wide use of world information resources, development of international cooperation and dialogue. As a consequence, according to this Education Standard from 2013-2014 academic year teaching foreign languages in schools from the first grade started.

Students of higher educational institutions, who specialize in foreign language teaching, are required to use advanced pedagogical technologies, interactive, innovative methods and means of communication in the course of teaching. New methods and requirements are being developed in the Republic in accordance with the European Framework Recommendations (CEFR) for assessing the knowledge and skills of future foreign language teachers. These situations increase the need for specialists who knows foreign languages and can teach them to others. As the great French writer and philosopher Michel de Monten put it: "Teaching someone requires more knowledge than you need to teach yourself".

Although in recent years there has been a study of philosophical and psychologist scholars on



the initial axiological, methodological, methodical and factual merits of the category of 'professional formation', it remains at the level of vague, intuitive-emotional interpretation in pedagogical science. The professional formation of prospective specialists can be described as follows:

- Professional formation — is one of the most important aspects of personality development that reflects the individual's needs and interests related only to his or her choice of occupation (the general development represents the whole set of needs, the system of its relations with the living, the environment, and the self).

- Professional formation — is a clear and conscious decision-making process that depends on the choice of a particular type of work or profession, and is directly related to the purposeful work with students.

- “Professional formation” refers to appearance, reflection of values and a system of images in the pedagogical realm that help a teacher take the right course in a changing educational environment.

Thus, the professional formation of a future professional can be viewed as the interdependence of individual components of individual-oriented processes that develop the individual's need for pedagogical activity, nurture a responsible and creative approach to it, and promote social values.

The British scientist M. Rosenberg has developed the following nine approaches of professional activities and the professional requirements to them:

- to know the needs and requirements of students;
- ability to evaluate the effectiveness of activities;
- ability to develop curricula;
- professionalism;
- be a consultant;
- be able to communicate;
- ability to conduct research;
- continuous improvement of professional skills;
- achievement of cultural development.

It is evident from these requirements that pedagogical and psychological knowledge is essential and important for the subject, regardless of the subject matter of which the teacher works. It is known that pedagogy, psychology, methodology and pedagogical skills are interrelated and closely connected disciplines. In order to be successful, every teacher needs to have teaching skills. A teacher's professional skill is to achieve maximum

results with minimum effort. Only a talented person with pedagogical abilities can have pedagogical skills. Ability arises and develops in the course of action. In order to make effective teaching, a teacher (especially an English teacher) must have the following types of abilities.

- The ability to know is the ability to apply mathematics, physics, biology, literature, and other relevant fields of science. A teacher with this ability knows science more and more, not just at the size of the course, but always follows the discoveries in his field.

- Ability to be able to explain the material in a way that is clear to readers and to stimulate students to think independently. The teacher should be able to change the teaching materials when needed, to make difficult things easy to convey to the students. The psychology of the students should be taken into account. A gifted teacher takes into account the students' level of knowledge and maturity, imagining what they already know and what they don't know.

- Observational ability is the ability of the teacher to enter the inner world of the student, a pedagogical observation related to a very good understanding of the student's personality and his temporal mental state. Such teacher can quickly distinguish subtle changes in the student's psyche.

- Communication ability to express one's thoughts and feelings clearly, both in speech and in gestures. This is very important for the teaching profession. The teacher's speech is always focused on students. Even when a teacher explains a new lesson, analyzes or criticizes a student's response, his speech is always characterized by his inner strength, his confidence, his interest in what he is saying. The expression of his opinion will be clear and straightforward to the students.

- Organizational ability — first of all, involves the organization of the students in groups, the consolidation, the motivation to solve important tasks, and secondly, the right organization of their work. Organizing your own business involves being able to plan and control your work correctly. Experienced teachers have the ability to properly allocate time to their own sense of timing and the ability to set the deadlines.

- The ability to build a reputation — is to directly influence the students' emotional and willpower and build on this. Not only is this a prestige, but also a teacher's subject matter that is fun, kind, polite and so on. This ability relates to a whole set of teacher personal qualities, including their will, resilience and so on, as well as their ability to trust their readers to feel responsible for their education and upbringing.



- Ability to communicate correctly means being able to approach children, to have a very effective pedagogical relationship with them, and to have pedagogical control.

- The ability to foresee the future - to see the consequences of their actions, to be able to foresee what kind of person the student will be, and to foresee the kind of qualities that a student will need to develop.

- Emphasis on the ability to focus — the development of the teacher's ability to focus, size, power, visibility, and mobilization.

Proper organization of pedagogical work is not only economically important, it also plays an important role in improving the quality of education. Proper and efficient organization of activities will be useful both for the person and for the people working with him.

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## **INFORMATION AND COMMUNICATION TERMS BASED ON TRANSTERMINATION**

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### **ANNOTATION**

*This article deals with linguistic changes in terms of ICT and their initial classroom teaching.*

**KEYWORDS:** *transtermination, information-technology, its meaning, portable meaning, metaphor, functionality.*

### **DISCUSSION**

The development of the language of this period was greatly influenced by the formation of the national state system, the formation of a market economy, direct contact with the peoples of the world, the creation of an environment of free communication in the cultural and spiritual spheres of society. Since the lexicon within the language levels is inextricably linked with the level of development of social life, these changes are primarily reflected in the vocabulary of the language. Therefore, "by studying the vocabulary of a language, it is possible to get a clear idea of the way of life, long past, present life and even the level of development of the people who speak this language"<sup>1</sup>.

Thousands of new words and concepts that appeared in our language during independence belong to different spheres of society. Of course, in the first years of independence, the main focus was on economic reform, and initially there was a separate terminology in the lexical structure of the Uzbek language, which expresses economic concepts. Today, as a result of the rapid development of the world of information and communication, the Uzbek language, along with many other languages of the world, is enriched with terms and concepts that describe the concepts in this area.

In linguistics, especially terminological research, it is emphasized that terms are formed

mainly on the basis of two different internal and external sources. The first is to create a term on the basis of a lexeme in the language, and the second is to learn a word from another language. There are three types of term formation on the basis of internal source - affixation, semantic and syntactic. The formation of the term in the semantic method has also been studied in the world and in Uzbek linguistics as a phenomenon of transterminization<sup>2</sup>.

The structure of information technology terms also includes terms derived from other languages and semantically formed terms. Transtermination is the activation of common lexemes into terms related to the field of information and communication.

"One of the words that has acquired a new meaning in the lexicon of the independence period is the program," admits the linguist Y.Odilov and reveals changes in the spiritual structure of this lexeme by comparing data from two- and five-volume annotated dictionaries<sup>3</sup>. This emphasizes that in recent years the lexeme has once again gained meaning as an information-communication term, in addition to expanding the scope of existing meanings in the language as an objective effect of nonlinear factors. Apparently, transtermination also took place here.



**Program** *A sequence of instructions (commands or classifications and operators) that a program gives an algorithm to a computer<sup>4</sup>.*

As a result of the development of the meaning of the words button and basket in the modern Uzbek language, their meaning has increased. They have evolved from a single word to a multi-meaning word. As a result, the common lexeme has become a field term.

**Button 1** *Clothing, sheath, etc. a circle-shaped handle, usually nailed to the edge of.*

**2** *Connecting button<sup>5</sup>.*

*The button is – a circular or rectangular connector placed in a certain order on the surface of devices such as a computer, telephone remote control, and each of them<sup>6</sup>.*

It should be noted that the button here is based on a metaphorical semantic shift, implying a formal similarity between these objects, and this example also formed a transtermin.

**Basket** *Willow, mulberry, willow twigs, wheat stalks, wire, plastic, etc. household utensils, utensils made from woven<sup>7</sup>.*

**Recycle Bin** *is - a directory used to temporarily store deleted data<sup>8</sup>.*

In *the basket* lexeme, too, a new meaning arose on the basis of the formal similarity of objects, i.e., a metaphor-based name shift. Also, lexemes belonging to the general lexicon of the Uzbek language, such as page, window, nest, also have a certain terminological meaning when taken as a term related to information technology.

The following four meanings are given in the annotated dictionary of the mirror lexeme.

**Window 1** *Typically a flat glass used to mount windows, doorways.*

**2** *cm. The window.*

**3** *A special glass with a glazed back, which reflects what is in front of it, which is usually seen by one; reflection*

**4** *portable An object that reflects or illuminates an event; reflection<sup>9</sup>*

The word window has acquired the following new meaning as a term.

**A window** *is a rectangular portion of the display screen that displays a program guide or document, a portion of the screen that works as if the program or user is working with a particular screen<sup>10</sup>.*

The terminological meaning of this lexeme is derived from its second window meaning. These two object forms are similar and are based on metaphorical meaning shifts.

The explanatory dictionary also mentions four meanings of *the nest* lexeme.

**Nest 1** *A place, home, where wild animals, birds, and insects are adapted to live and reproduce.*

**2** *q.x. Throw the seeds, the opening, the place for planting.*

**3** *A place, place where evil people settle or meet, gather.*

**4** *portable intrigue, panic, grief, etc. a place, a place where many exist or appear<sup>11</sup>.*

The meaning of the term cell is explained in the field dictionary.

**Cell In Table Guides** *- a rectangular cell designed to enter a data element (text, numeric value, formula)<sup>12</sup>.*

It is clear from the comments that in both cases, living within lexemes is common in terms of location. In this example, too, the terminological meaning was formed on the basis of the main meaning and a new meaning was formed on the basis of the function.

There was also a need for lexemes used in the national languages of a number of developed countries to express the concepts of new information technologies of the independence period. As a result, a number of new lexemes have emerged, such as *gadget, profile, provider, account, domain, online, set, virtual.*

As can be seen from the above examples, the Uzbek equivalent of most of the terms in the field of information and communication has been created. But in most cases, in the process of communication, we see that they are used in the form of a *basket (basket), window (window), page (page).*

In order to strengthen the expressive potential of our language, to increase the respect of language owners for it, it is necessary to teach the meaning of such popular, widely used field terms from primary school. Indeed, in today's age of information and technology, electronic devices such as computers, laptops, tablets, smartphones, and related concepts are well understood and applied by even preschoolers in their speech.

So, updating the scope and content of works aimed at expanding students' vocabulary and speaking skills is a guarantee that they will keep pace with the times.

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# DEVELOPMENT OF THE USAGE OF WATER-SAVING TECHNOLOGIES IN AGRICULTURE OF UZBEKISTAN

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## ABSTRACT

*The article discusses the current state of water-saving technologies in agriculture in the Republic of Uzbekistan, the measures taken, their economic efficiency and the strategy for further development of these measures.*

**KEYWORDS:** *agriculture, water resources, drip irrigation technology, efficiency, cotton growing, incentives, promising strategies.*

## DISCUSSION

It is known that the problem of water shortage is compounded throughout the world every year. According to the UN global climate change itself will exacerbate water shortage by 20 percent, will worsen the lives of 2 to 5 billion people in 45 countries, and in the current process of development by 2040 with an increase of the world population to nine billion, clean water resources will cover only 70 percent of human needs.

According to the statistics, the global consumption of water has increased by 7 percent over the last hundred years, which means that the amount of water that can be allocated to each person has decreased by 60 percent. In the next 25 years, the reserves of water probably will double again.

The economy of the Republic of Uzbekistan, located in the Sands of Central Asia, also suffers from water problems. Most of the agricultural lands of the country are based on irrigated agriculture, while Uzbekistan consumes a significant portion of the water of the Amudarya, the Syrdarya and the Zarafshan, which have transboundary significance.

Until 1990, 64 billion cubic meters of water were used for different purposes in Uzbekistan, but in 2008 this figure dropped to 51 billion. Until 1985, 22,4 thousand cubic meters of water were used for

irrigating 1 ha, but by 2019, this number was reduced to 5-10 thousand cubic meters due to the use of modern resource-saving technologies.

Today about 20 percent of the water used in Uzbekistan formed in the country, and the remaining 80 percent is taken from transboundary rivers – the Amudarya and the Syrdarya. On average the country uses 44 to 48 billion cubic meters of water per year, and the main part of the water resources or more than 85 percent is used for agricultural irrigation.

Agriculture consumes 46 billion cubic meters of water by 3.2 million hectares. 60 percent of this water goes to crops, because 23 percent of the 180000 km of irrigation networks covered with concrete, which has not been updated for 30-35 years.

Besides, 98 percent of arable land is irrigated in the old-fashioned way, and the crops are not planted properly. As the result of the abovementioned and other objective reasons the water supply in the country is 68 percent, more than 11000 villages in the regions are not provided with clean water, 38 percent of the water supply networks are in poor condition. As a result, today Uzbekistan has economical irrigation technology at 328000 hectares of irrigated land or only 7 percent of the total cultivated area. Only this year there has been introduced a new water-saving irrigation system on the 25000 hectares



of cotton fields. Efforts were made to rehabilitate 1.1 million hectares of decommissioned land.

According to the World Institute for water resources, by 2040 Uzbekistan can be among the 33 countries with the worst water shortage.

The President of the Republic of Uzbekistan has set the task to bring the reform to a new level by planning not only today but in future. On February 7, 2017 in order to achieve this target the President of the Republic of Uzbekistan passed the decree No. PF 4947 "On the strategy of further development of the Republic of Uzbekistan", which envisages the annual increase of water use efficiency and its monitoring. There was stressed the need to adopt water-saving technologies on the area of thousand hectares. It is known that systematic and quality introduction of drip irrigation technology will reduce the amount of water used for traditional irrigation, by 40-50 percent, the complexity and consumption of resources by 30 percent, increase the yield of 15-20 quintals. Besides it will prevent from soil erosion, salinity and rising of groundwater level.

To further expand mechanisms for encouraging the implementation of water-saving irrigation technology in agriculture and increasing water use efficiency and productivity of agricultural land, 25 Oct 2019, the President of the Republic of Uzbekistan adopted Resolution № PQ-4499 "On measures to expand mechanisms to encourage the introduction of water-saving technologies in agriculture".

As the result of the taken measures, and also of mechanisms of economic support introduced by state, in 2019 water-saving irrigation techniques were implemented on 33.2 thousand hectares of land, or land which uses similar technologies 44 percent of the area.

However, the fact that the total area of water-saving irrigation technologies is only 75000 hectares or 1.7 percent of the total area of irrigated land stresses the need of strengthening measures to increase the use of water-saving technologies in agriculture and efficiency in water use.

Following this decision, the Ministry of water resources of the Republic of Uzbekistan jointly with the Ministry of Agriculture, the Council of farmers, dekhkan farms and landowners of Uzbekistan, Council of Ministers of the Republic of Karakalpakstan and regional khokimiyats will work on 43825 hectares in 2020 including:

- in the cotton fields – 24859 hectares;
- in the field of fruit crops – 11498 hectares;
- in the vineyards – 4987 hectares;
- in other arable lands – 2481 hectares to ensure the effective implementation of the approved

forecast for the introduction of water-saving irrigation techniques.

According to the analysis of the land, where the technology of drip irrigation was introduced in the agriculture of the country during 2013-2018, drip irrigation technology was only used on 43017 hectares of land for the last 6 years.

The analysis shows that this technology was implemented with a very low rate in 2013-2016, or in 2013 at 2362 hectares in 2014, 4898 hectares in 2016 5906 hectares, and in 2017 there was a sharp acceleration of this technology. In 2017, there was used 9030 hectares, and in 2018 – 15153 hectares.

The Analysis of these changes by region shows that in the Republic of Karakalpakstan, Khorezm and Syrdarya regions the technology has been introduced in less than 1 percent of irrigated land (due to the relatively high salinity and other reasons), in Bukhara and Jizzakh regions in 2.5 and 5.2 percent in other regions in 10 or more percent.

Today the market of production and introduction of water-saving technologies and services consists of more than 100 domestic and foreign enterprises and organizations, and due to incomplete formation of the infrastructure of this market, the competition between market participants is not good enough. As a result the cost of water-saving technologies is much higher than the level of financial capacity of households that use it.

In our opinion, the basic principle and criterion for determining the development of production of water-saving technologies should be the choice of effective and efficient system and the method of receipt (savings) additional 1000 cubic meters of water for irrigation.

Today water resources for irrigation are re-used and supplemented for irrigation of crops using various systems, methods, and techniques. These systems and methods include desalination of saltwater; repair of irrigation system; redistribution of water resources in the territories; wastewater treatment; regulation and improvement of reservoir management; introduction of water-saving technologies, etc.

According to the experts, the use of additional water resources for irrigation with the introduction of water-saving technologies is the most cost-efficient, on average 1 to 5 dollars per 1000 cubic meters of irrigation water.

As economic incentives and organizational and regulatory support of the production of water-saving technologies, the government proposes the following:

- state introduction of order delivery of raw materials (polyethylene granules) to the manufacturers, who supply components for water-



saving irrigation technologies with low (declared) prices and cheap polyethylene granules for all types of raw materials, not just for one type;

- value added exemption from tax for manufacturers of components for water-saving irrigation techniques;

- the inclusion of priority to local producers in the selection of production orders in tender procedures for the introduction of the order giving;

- giving priority to tenders, if the composition of local raw materials and components to product manufacturers is 2/3 or more;

- as an exception, introducing the order of priority to the enterprises, open for this purpose, in tenders for land allocation for the creation of enterprises producing water-saving technologies, for the development and production support in the regions;

- until January 1, 2025, exemption from customs duties on the import of components and raw materials required by local producers for production of water-saving technologies;

- Credit for the introduction of water-saving technologies to cover the costs associated with the implementation of water-saving technologies.

In conclusion, it should be noted that the state is actively taking measures to widely introduce water-saving technologies in agriculture, thereby contributing to reducing the shortage of water resources.

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# **ECONOMIC MATHEMATICAL MODELING OF THE REGIONAL SYSTEM OF PROFESSIONAL EDUCATION IN THE REPUBLIC OF UZBEKISTAN**

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## **ABSTRACT**

*The centripetal tendency is caused by objective requirement of preservation of uniform educational space that assumes the coordination of the maintenance of training by introduction of the State educational standards, workings out of the list of the cores, the general for all country of the trades prepared in professional educational institutions, definitions of terms of training and the status of educational institutions. Necessity for uniformity of documents characterizing an educational level, the general technique of licensing and accreditation of establishments - all these and variety of other questions not only substantial from here follows, but also the methodical plan demand the centralized decision.*

*The paper analyzes the problem of developing a model of the regional system of vocational education on the example of the Jizzakh region of the Republic of Uzbekistan. A mathematical model of the regional system of vocational education is given.*

**KEYWORDS:** *model, vocational education, mathematical modeling, regional educational systems, continuous pedagogical education.*

## **INTRODUCTION**

For years of independence the national education system and training became one of state policy pricing questions in republic. The president of the Republic of Uzbekistan Shavkat Mirziyoyev in December, 29<sup>th</sup> indicate the reform in the school education, on January, 25<sup>th</sup> 2018 said about measures on the further perfection of system of an average special and systems of vocational training

on the basis of perfection of system of higher education on a condition and July 25<sup>th</sup> 2018 year stately of innovative development of Republic Uzbekistan.

**Materials and Methods.** The President of Republic Uzbekistan S. M. Mirziyoyev on February, 7<sup>th</sup>, 2017 said about movement on stately of the further development of the Republic of Uzbekistan. The decree №4947 from the decision



“about the international competitiveness of the country and innovative theoretical the size as the key factor in definition of progress of human reason- the main objective of strategy of development” Head oliy Marklis said on December, 22<sup>nd</sup>, 2017 “our great descendants of Muhammad ibn Musa al-Khwarizmi, Ibn Sina” allies unfortunately, is net enough attention to a problem of formation of the presented. The vital value, in connection with 26<sup>th</sup> anniversary of acceptance of the constitution of Uzbekistan works on December, 7<sup>th</sup>, 2018 from achievement, words “Standards of preparation of teachers and training methods in sphere of national education the basis of the advanced foreign”

Representations about full identity public and personal interests in reception of formation have not given expected results. In this connection the role of the centralized management methods and education system, including professional, has considerably changed aside their restrictions. Powers of regional educational systems, and also independence of educational institutions simultaneously increase. The problem of working out of model of regional system of vocational training in new economic conditions becomes more and more actual in connection with condition of economy and education systems as a whole [2,]. In formation practice in modern conditions, two basic tendencies are looked through: centripetal and centrifugal. They make an original skeleton of a uniform state policy in the sphere of education, which is major, the state the forming factor. The centrifugal tendency is connected with comprehension of impossibility and inexpediency in Republic Uzbekistan to operate educational sphere with delegation of power in all spheres of public life in regions. As an actual scientific problem scientific search and practical realization is necessary for new, adequate modern conditions of model of regional system of vocational training. It is a question not of creation of the new centralized scheme of management, and about delegation of power on the bottom levels: municipal, local and on level of educational institutions. For working out of scientific and pedagogical bases of an educational policy at all its levels, the estimation of real requirements of economy in formation of regional system of vocational training in modern conditions has basic methodological value. Orientation to dynamics of a labor market can give to vocational training system self-regulated character, ability to adapt to changing industrial and economic relations. The Scientific and pedagogical

approach to formation of regional model of vocational training assumes the analysis of the maintenance of vocational training and its conformity to character of work, an estimation of pedagogical techniques and technologies of vocational training, and also pedagogical shots. In decentralization of management carried out in the Republic of Uzbekistan, all is more sharply felt requirement of development of the well-founded scientific and pedagogical approaches, allowing to define optimum methods of planning, placing or a reshaping of existing professional educational institutions in region taking into account such factors, as presence of potential consumers of educational services, popularity of trades, level of a demand of shots. The lack of scientific and methodical workings out, standard materials on these and other questions brakes reform of system of initial vocational training in regions and in the big degree causes difficulties, which they test in a transition period. Absence of the scientifically- proved model of regional system of vocational training and methods of its interaction with a labor market is at the bottom of that the structure of trades on which preparation in professional educational institutions frequently is conducted is carried out in the proportions which have developed in region without real requirement for shots now. Research spent to Jizzakh area has shown that till now in area preparation of mechanics, repairmen, and toolmakers is made in every fourth college. Simultaneously with it is revealed that from 450 unemployed having vocational training and registered at labor exchange, every tenth has these trades. The educational policy local municipal in the regions is under construction without introduction in practice of managing of new market relations, without thorough preparation of scientific and legal base that was at the bottom of an actual mismatch of inquiries of a professional training from economic and educational spheres of a society. Vocational training establishments, their heads and pedagogical shots remained without reference points and accurate recommendations, have appeared compelled independently, often empirically, a trial and error method to adapt to current inquiries of a formed labor market and ways of calculations of its perspective requirements. At the comprehensible decision of perfection of continuous formation, the basic direction is use of methods of the mathematical modeling including of programs in the several directions. Among them and actual the developed networks of modern professional colleges and the



academic lychees are especially important, their comprehensible placing in regions would promote training of children on practical examples of the modern developed countries. Definition of ways of the comprehensible decision of this points in question by means of mathematical methods shows that it is necessary to consider regional specificity of educational institutions both their indicators and capacities of possible building [3].

Continuous educational institutions, which aspires to zero. Comprehensible indicators of expenses in building, satisfying these requirements, are provided more than expenses. At building of regional educational institutions the big role use on a level with the state and local budget and foreign investments and patronage of private businessmen plays productivity of the accepted program of the country realized in regions, and calculated on many years. It is expedient to organize reduction of expenses by qualitative and timely building of regional continuous educational institutions, consistently and particularly to realize accepted of «the National program on a professional training», the Law of «About formation» of the Republic of Uzbekistan of the program of perfection of continuous educational institutions. The conducted research allows answering the basic questions connected with realization of requirements of the law on formation on delegation of power from state structures to regional and formation of regional model of vocational training as a part of the general educational system of region. It is necessary to define and adapt to the socioeconomic factors influencing formation of regional model of vocational training. A major factor is the labor market, which causes requirements to the list of trades, the maintenance of vocational training and engineering-pedagogical shots working in this sphere. Taking into account the developed scientific and pedagogical bases, we execute designing of regional model of vocational training in modern conditions. Economic, demographic, cultural features of Jizzakh area are thus generalized, systematized and considered, in particular it is offered mathematical model of regional system of vocational training; the technology of realization of regional model of vocational training is offered, the most effective ways of use of new forms, means and training methods are approved. The basic results of the conducted research give the grounds to assert that the vocational training system increasingly is affected demographic and socio-economic factors on the development. In the field of a professional

training of all skill levels especially appreciable, there is a labor market influence. Haw “About education” the programs of per section of continuous educational establishments.

Execution of the Decree of the President of Republic Uzbekistan №PF-5198 on September, 30<sup>th</sup>, 2017 “About measures on radical perfection of a control system by preschool education”, the further expansion of the stat and not state branches, creation of conditions for a healthy competition between them, partner relations, with introduction of new forms of preschool education in Uzbekistan, by means of which intellectual, physical, directed on education.

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## **SOME RECOMMENDATIONS ON COMPILING THESAURUS DICTIONARIES**

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### **ABSTRACT**

*The article evaluates thesaurus dictionaries and their versions in Uzbek. Recommendations have been developed as to what should be done to compile such dictionaries. Theoretical opinions on the preparation of the article-questionnaire and concrete examples were given.*

**KEYWORDS.** *descriptor, ideography, lexicology, lexicography, dictionary, article-questionnaire, system-structural direction, thesaurus dictionary*

### **INTRODUCTION**

In today's globalization process, the demand for dictionaries in the study of foreign languages, the correct and consistent organization of the exchange of information is growing day by day. Linguists around the world are constantly researching the word and its features. In addition to its social value, lexicological research aimed at revealing its psychological, mental, territorial, emotionally-expressive, stylistic features are on the agenda. It is known that lexicological research begins with lexicography. [7; 4] Good dictionaries will never be forgotten, they will last forever. [2; 15] Achievements in lexicology enrich lexicography and serve to improve it.

Today, the intellect of mankind has reached an unimaginable level. The development of science and technology has dramatically changed the vocabulary of languages in the world, Uzbek as well. Ten years ago, it was unthinkable to use lexical items in Uzbek, such as file, domain, imo, charter flight, plastic card, electronic signature, coronavirus. Today, they occupy a place in the active layer of our language. As a result, it is important to collect all the lexical units in the lexical continent or in a particular area of social life and to interpret them within the paradigms (semantic fields) to which they belong. Thus, there was a vital need for a new type of ideographic (thesaurus) dictionaries.

### **MAIN PART**

The word thesaurus is derived from the Greek word *trezauras* treasure, which is used to refer to a dictionary that fully reflects the lexical structure

of a language. [8; 103] The ideographic (thesaurus) dictionary shows that the lexicon is visible as a level.

According to YN Karaulov, such dictionaries express the lexical structure of the language in a concise and clear way, give a vivid idea of the semantic branching of lexical units and the formation of certain concepts. [3; 148-166]

In the research of VV Morkovkin, one of the Russian scientists who made a significant contribution to the theoretical and practical issues of the creation of ideographic (thesaurus) dictionaries, such dictionaries are interpreted as an instrument of information retrieval. [5;] IV Arnold, on the other hand, considered the thesaurus as a collection of knowledge. [1; 28]

Dictionaries like these are rare in Uzbek. In M. Sabirov's "Russian-Uzbek dictionary of mathematical sciences" we encounter elements of ideographic (thesaurus) dictionary. When interpreting lexical units in mathematics, the scientist tried to cite all the lexemes related to it under a single term (key word). For example, there are 61 terms under the word vector, 19 under the word mathematics, and 113 under the word equation.

The Russian-Uzbek thematic dictionary "Thematic dictionary related to the Uzbek language" created by AN Tikhonov, NT Khatamov, SA Emelyanova and M.Yu. Tikhonova is a thematic dictionary of the Uzbek language. It classifies 4,860 lexical units and 400 phrases under 3 major cycles and 16 major topics.

The work done is a drop from the ocean. Today, lexicography is rising to a new level of quality. The range of dictionaries created in



philological aspects is expanding, and dictionaries cover all spheres of social life. Scientific and technical lexicography is also emerging in the Uzbek language. Classifiers, rubrics, tariffs, reference books and dictionaries in various fields of agriculture, industry and public education require the rapid creation of thesaurus dictionaries in the Uzbek language. The maximum involvement of computer technology in all spheres of social life, the automation of the production process urges us to accelerate this work. Here's what to do to create an ideographic (thesaurus) dictionary. It is natural that the question arises.

To do this, it is desirable to follow the following recommendations:

1. To determine the urgency of the thesaurus to create a machine language of the field under study, as well as to control it automatically. The reason is that in the future such an ideographic (thesaurus) dictionary should be used not only by linguists, but also by representatives of the field to which it belongs.

2. Special attention should be paid to the volume of lexical units included in the dictionary. It is important to cover as much information as possible.

3. It is necessary to take into account the presence or absence of other dictionaries on the field in which the thesaurus is created.

4. It is required to search ways of automatic processing of the text, to mark the performed operations. [6; 10,11]

Compiling an ideographic dictionary of the Uzbek language is a complex and time-consuming task. Given that so far no work has been done in this area in the Uzbek language, it is possible to organize the work on the basis of a clear plan in several stages. We would like to single out two types of the ideographic (thesaurus) dictionary to be created.

1. Ideographic dictionary of the Uzbek language. The dictionary contains hundreds and thousands of words used in the Uzbek language and is distinguished by its huge volume and variety of information.

2. Interdisciplinary thesaurus dictionaries. Such dictionaries are created in certain areas, and in them all the lexical units used in this area are explained in an ideographic plan.

Also, in the future, thematic, ideological, analogous, associative dictionaries of the Uzbek language based on various experiences, questionnaires, special programs can be created. Ideographic dictionaries, in any form, differ from other dictionaries in the following respects.

1. Alphabetical order is strictly followed in any dictionary. They do not pay special attention to the spiritual relationship between words. The

alphabetical order for ideographic dictionaries is not strict. In them, due to the systemic nature of the language, the relationship between lexemes comes to the fore. It explains the words that are combined under a specific topic (keyword).

2. For dictionaries, a lexeme or term (term) is taken as the main unit, which, depending on the nature of the dictionary, they are interpreted or described. The basic unit of ideographic (thesaurus) dictionaries is a descriptor, not a token or a term.

From the paradigmatic line of words, the term descriptor is used to refer to a combination of words or words selected for information-search activities in order to reveal their systematic nature. [4; 121] The descriptor is, in a sense, a key word.

3. The systematic nature of the language is not taken into account in dictionaries. Ideographic (thesaurus) dictionaries are primarily based on systematicity. The relationship between descriptors (key words) in the system and other lexical units is determined.

4. In ideological (thesaurus) dictionaries, serious attention is paid to the automatic processing of lexemes, their coding, the development of special programs, and the creation of inter-machine language. In dictionaries, however, this is not considered.

5. Special dictionary articles are created for ideographic (thesaurus) dictionaries. They have more questionnaires and cover all the descriptive relationships of the descriptors. In other dictionaries, such a case is not observed.

Based on the above, such conclusions can be drawn. Creating an ideographic (thesaurus) dictionary of the Uzbek language requires a great deal of knowledge and effort from the researcher. Therefore, the work can begin with the creation of thesaurus dictionaries in certain areas. All textbooks, manuals, dictionaries, reference books created in this field will be collected. Then the frequency of their use will be determined. Lexical units used at least three or four times are considered suitable for research, on the basis of which a dictionary is formed. According to experts, descriptors can be mainly nouns, sometimes adjectives or verbs. The most important step in a thesaurus dictionary is to compile a dictionary article. In compiling the dictionary article, technical processing, automatic processing, of linguistic terms and their coding is given a wide space.

For example, to create a thesaurus dictionary, you can use the following questionnaire schemes:

1. keyword (descriptor): *yovvoyi gultojixo'roz*; 2. macro field: *fitonim (o'simlik)*; 3. micro field: *ko'kat*; 4. semantic cluster: *markaziy urug'poyalilar*; 5. lexical-semantic group:



*gultojixo'roz*; 6. semantic nest (paradigmatic row): *semizo't, otquloq, ituzum, chinnigul, sho'ra, gulbeor, momaqaymoq, ravoch, shovul ect*; 7. synonym: *eshak sho'ra* (Andijon), *machin* (Farg'ona), *machitak* (Uchqo'rg'on); 8. antonym: -; 9. hyperonym (gender): *gul*; 10. hyponym (kind): *gultojixo'roz*; 11. holonym (whole): *gul*; 12. meronym: *ildiz, poya, barg, shox, gul, urug', to'pgul*; 13. graduonym (degree) -: 14. level: *leksik*; 15. level unit: *leksema*; 16. science: *botanika*; 17. syntagmatic relation (valency): *o'smoq, unib chiqmoq, gullamoq, qizil, to'q qizil, yulmoq, o'rmoq, ekmoq*; 18. association (non-traditional function): *dekerativlik, yem-hashak, hid, rang*; 19. scientific term: *amaranthaceac*.

Analysis of the lexeme "oq". 1. keyword: *oq*; 2. semantic nest: *oqish, oqishtir, oq, oppoq*; 3. lexical-semantic group: *oq, sut rang, qordek, bo'z rang, oqarmoq, oqlamoq*; 4. semantic cluster: *oq, qora, qizil, sariq, pushti, ko'k, zangori*; 5. micro field: *rang-tus*; 6. macro field: *belgi (sifat)*; 7. synonym: *sut rang, qordek*; 8. antonym; *qora*; 9. hyperonym: *rang*; 10. hyponym: *oq*; 11. holonym: *belgi*; 12. meronym: *oqish, oqimtir*; 13. Graduonym: *oqish(oqimtir)-oq-oppoq-juda oq*; 14. Function: *rang berish*; 15. level; *leksik sath*; 16. word group: *sifat, asliy sifat*; 17. simple *sodda, tub*; 18. Morphological change: varies (*oqim, oqing, oqi, oqimiz, oqingiz, oqi, oq, oqning, oqni, oqqa, oqda, oqdan*); 19. syntagmatic relation: *oq ko'ylak, oq paxta, oq rang*; 20. association: *chiroy, rang, did, ko'rinish, tilak, istak*; 21. phrase: *oq yo'l, oq tilak*.

Analysis of the lexeme „*ishlamoq*“ 1. keyword: *ishlamoq*; 2. semantic nest: *mehnat qilmoq, ter to'kmoq*; 3. lexical-semantic group: *boshqarmoq, haydamoq, qurmoq, yasamoq, yaratmoq*; 4. semantic cluster: *zavod, korxonona, ishchi, dehqon, dala, dastgoh*; 5. micro field: *mehnat, ish*; 6. macro field: *ish-harakat*; 7. synonym: *mehnat qilmoq, ter to'kmoq*; 8. antonym: *bekor yotmoq, dangasalik qilmoq*; 9. hyperonym: *mehnat qilish (faoliyat ko'rsatish)*; 10. hyponym: *ishlamoq*; 11. holonym: *harakat*; 12. meronym: *qimirlab qo'ymoq*; 13. graduonym: *timirskilanmoq-ishlamoq-ter to'kmoq*; 14. functiononym: *yaratish, vujudga keltirish*; 15. level: *leksik sath*; 16. word group: *fe'l*; 17. Morphological change: *o'timli-o'timsiz, bo'lishli-bo'lishsiz shaklga ega bo'ladi, zamon, mayl, nisbat qo'shimchalarini oladi (ishladi-ishlatdi; ishladi-ishlamadi; ishladi-ishlayapti-ishlamoqchi; ishlay-ishla(gin)-ishlasin, ishlaylik-ishlangiz-ishlasin(lar); ishladi-ishlandi-ishlashdi-ishlattir) etc*; 18. structure: *sodda, yasama(ish+la)*; 19. syntactic connection: *zavodda ishlamoq, dalada ishlamoq, qattiq ishlamoq*; 20. association: *ishchi, dehqon, xizmatchi, korxonona, tez, sekin, dala, zavod*; 21. phrase: *ishlasang-tishlaysan, ishlamasang kishnaysan*.

## CONCLUSION

Such a system-structural analysis can be applied to all the fields of concept. Under every word, lexeme, the invaluable property of the people is flowing. The Creator Himself has systematized all the words. We linguists are busy finding the key to this system. The creation of thesaurus dictionaries may be one of the key points in this regard. In general, thesaurus dictionaries are the fruit of the future. It provides with ample opportunities to identify, evaluate and bring to the attention of the public "hidden wonders" in certain layers of the language.

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## SOME CONSIDERATIONS ON FIRMONYMS

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### ABSTRACT

*The article deals with onomastics and onomastic volume, one of the oldest and richest layers of the Uzbek lexical layer. There are comments on the sections of onomastics. In Uzbek onomastics, the processes that take place today are critically evaluated.*

**KEYWORDS:** *onomastics, onomastic scale, astonyms, catoikonyms, agoronyms, godonyms, dromonyms, phyrmonyms, firm names, state language*

### INTRODUCTION

Today, as in all spheres, the process of radical reforms is underway in the field of linguistics. The wind of renewal that entered Uzbek linguistics in the early 1990s completely changed its views. In particular, the systematic approach to the language allows to reveal some of its peculiarities. According to Ferdinand de Saussure, one of the founders of systems-structural theory, language is a treasure accumulated through the verbal actions of people belonging to a particular social community. It is a system of signs. At the same time, the language has a certain structure. The systematic nature of the language makes it possible to conduct comprehensive research on its components and their interactions. The system has the relation of wholeness, parts and parts to the whole, the relation of the whole to the parts. It all comes down to studying these relationships. [1;39]

### MAIN PART

The language is divided into innumerable parts, and each part goes into a larger part. One of them is onomastics.

The processes taking place in the Uzbek language today cannot be equated with the previous ones. The linguistic landscape of our language is very delicate, multifaceted and multifaceted. , their popular term refers to the appearance of a complex and at the same time very complex language, consisting of a mixture of foreign language elements [3;23-30]. It is natural that the study of such a multifaceted process gives us new information about the synchronous state of the Uzbek language [4;]. However, this area is not specifically studied in Uzbek. All of these names are related to the

onomastics as a branch of linguistics. The Explanatory Dictionary of the Uzbek Language defines the word onomastics in the following way: **ONOMASTICS** [Greek. onomastike - the art of naming] 1 The branch of linguistics that studies various famous names, the history of their origin and change. 2. A set of all the proper horses available in a particular language [5; 129-130].

It can be seen that the lexicon of onomastics in the Uzbek language is carefully explained. This issue has been extensively studied in English, Russian, Ukrainian, Belarusian and other languages, and under the term onomastic scale, it combines astonium, agoronym, chrononym, godonim, oikodonim, eklesionim, ergonomonim, firmnonyms, emporenonyms, and trapezonyms.

E. Begmatov and Ya. Avlokulovs, while conducting a special research on Uzbek onomastics. have shown 47 micro fields of onomastics in Uzbek [6;55-60]. Subsequent studies have confirmed the presence of more than 100 micro fields. We want to focus our attention on some of them.

The astonym is one of the largest forms of urban names, meaning the Greek name ἄστὺ ὄνομα. Astonyms are still being studied under the name of toponyms. However, in recent years, the systematic approach to language has opened up the possibility of revealing to the fullest extent the relationship between language units. In this sense, it is useful to study the names of cities (astonyms) separately. For example, Andijan oblast, Asaka, Poytug, Shahrikhon, Khonobod, Kuyganyor, Kunji, Butakora, Jalabek; In Namangan region, Pungon, Pop, Chodak, Gurumsaroy, Naryn, Mingbulak, Uychi; In Fergana region, Baghdad, Kuva, Sukh, Kokand, Margilan, Rishtan, Poloson; In Bukhara region there are such



astyonyms as Romitan, Kagan, Gazli, Vobkent, Korovulbozor, Shofirkan, as well as cities such as Kulijabbor, Beshtuva, Sosonchuk, Kirtai, Ghonchi Chandir, Talisafed, Jaihunabad. It is clear that the study of each of these names, not only historically, socio-economically, but also linguistically, gives us a lot of new information about the undiscovered aspects of the history. For example, Ghonchi Chandir is an astyonym. The derivation model of the name is clear: Gon + chi Chandir. In the Uzbek dictionary, the word ghan is interpreted as "leaves and rubbish left by worms on a silkworm feeder" [7;320]. The word ghan also means to gather. Chandir 1 A solid piece of meat. 2 It means katma, pisik, tar [8;406]. It is understood that this agionym appeared as an ethnonym of mature, resinous people and became an astyonym by the method of metonymy..

A large part of the current changes in the names are observed in the names of enterprises, organizations, institutions, firms and shops. It is clear that the name is a sacred thing. Things and events in the world differ by their names. Among them are the names of trade organizations - firms. It is well known that the development of languages plays an important role in the radical changes that take place in social life. In particular, as a result of the changes that took place in Uzbekistan in the early 1990s, thousands of new names and terms have entered our language, and this process is continuing to this until nowadays. A significant part of them are firms, ie firms, concerns, companies, joint stock companies, incorporated enterprises, trusts, holdings, economic associations. union), leasing enterprises, and so on. Let's consider the name of the holding company. It is described in the Uzbek Explanatory Dictionary as follows:

**HOLDING** [engl. holding) 1 Acquiring and owning shares in other firms in order to control and manage them.

2. Holding company. A parent company is a company whose main activity is to control and manage the activities of other enterprises through the acquisition of shares [9;406].

Examples include Uzbekozikovkatholding, Uzvinosanoatholding, Uzpakhtasano-atholding, and Uzmevasavzavotuzumsanoatholding, which include hundreds of company names. For example, Uzbekozikovkatholding, MASK, Namangan Sharbati, Agromir Burhara, East Agro-International, Marvel Juice Co., Turon agro fresh, Afrosiyobmeva, Vulkan plus, "Ildiz Parkent agro", "Big natural production", "Green World", "Rash-milk", "Elite canning", "SulSherJahon", "Musaffo iqlim trans servis", "Master delicacies", "Khorezm Holod", "El-erk nur", "Rossi SA", "Makas kandolat", "Pakhtachi Rodnik yog", "Uychi pokiza", "Mehnat oil", "Mehnat Pivo", "Mehnat malt", "ChP" "Bakht

"and others. Consist mostly of combined names. Linguistic study of these companies will provide with sufficient information about the political, economic, spiritual, educational, cultural life of our country, the current living standards and worldview of our people.

It should be noted that the foreign method of naming the majority of companies is a ready-made template. The main focus is not on the language of terms, but on the reputation of the trade organization, trade relations, advertising of goods. As a result, English, Russian, and Uzbek mixed names, contrary to the rules of the Uzbek language, far from the colloquial language and artificial in form names, come into being that do not meet the rules and laws of the Uzbek language.

First of all, firms such as AFROSIYOB-MEVA, SULSHERJAHON, EL-ERK NUR, ILDIZ PARKENT AGRO, and UYCHI POKIZA are made up of Uzbek words but they are far from the nation and people. There is an artificial, one-sided approach to their creation.

Secondly, "AGROMIR BURHARA", "VULKAN PLUS", "ELIT KONSERVA", "MASTER DELIKATESOV", "KHOREZM HOLOD", "PAXTACHI RODNIK YOG", "MEHNAT PIVO" and so on. Such names are far from being Uzbek. Subjective spirit dominates in these names, too.

Thirdly, the use of English names such as "EAST AGRO-INTERNATIONAL", "MARVEL JUICE CO", "BIG NATURAL PRODUCTION", "GREEN WORLD" in relation to enterprises in our country does not meet the requirements of the state language. These names have no significance for the Uzbek language.

Fourth, "TURON AGRO FRESH", "MAKAS KANDOLAT", "MEHNAT OIL", "MEHNAT MALT", "RASH-MILK", "ROSSI S.A.", "MUSAFFO IQLIM TRANS SERVIS" and others. The use of Uzbek-English word structure in this way is also against the rules of the Uzbek language.

Such approaches to naming a company lead to the impoverishment of the mother tongue and misunderstanding of its vocabulary. And this is not permissible at all. However, these are just company names. Behind them are the products, trademarks, processes, personal names of these companies. If they are treated in the same way, what will be the future of our language ?!

In addition to firmonyms, there are pragmatonyms (brand names), alkononyms (names of alcoholic products), mechanonyms (names of technical products), perfumes (names of perfumery products), chokonyms (names of chocolate products).



## CONCLUSION

In general, Uzbek onomastics is one of the richest and most productive layers of our language. One of them is the names given to companies and shops. Studying them provides ample opportunities not only for language, but also for us to have valuable information about the history of the Uzbek people, the worldview of our compatriots, their political, economic, cultural and everyday life. In particular, today, at a time when the world's languages are in danger of extinction, it is important to return to onomastic names, to name new organizations, firms, shops, etc., based on historical experience and past. Because the best names never fade from the pages of history. They move from time to time, from language to language, as the immortal hymn of human intellect and thought.

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## PHILOSOPHICAL INTERPRETATION OF SOCIO-POLITICAL ISSUES IN SADEDDIN TAFTAZANI'S "SHARH AL-AQEED"

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### ABSTRACT

*The article outlines some of the social circumstances emphasized in Sadeddin Taftazani's "Sharh al-Aqeed" on the basis of some "narrative" and real evidence. In particular, with the help of comparative analysis it investigates the business relations between the employers and their workers established in the historical and present time contexts.*

**KEYWORDS:** "Ishboshi" (head of the state), "narrative" and real evidence, obedience, "kalam" science, historical context, social reality, social conflict, objective social criterion, social layer, stability of social life.

### DISCUSSION

The study of philosophies and views conveyed by the scientists and thinkers in the context of the global socio-historical period, scientific and theoretical research as well as analysis of their philosophical and educational knowledge figures prominently in revealing the socio-spiritual image of society and humanity.

As a consequence of increasing attention to the issues of enlightenment and spirituality in our country, it serves as an effective mechanism for studying and rational use of the scientific heritage of our great ancestors, especially in resolving crucial problems occurring in the life of the state and society.

It is common knowledge that with a sense of correctness and full obligation every citizen must follow the standard procedures established by the state. This issue has been shaped from the context of the historical period, and obedience to a fair head of

the state, conformity of his orders have been acknowledged in the tendencies of Eastern statehood. The saying "The king's word is law" has been an objective criterion that has not lost its significance over time.

The conceptual philosophies of the great thinker Sadeddin Taftazani, who in his time substantiated the above-mentioned aspects of the development of society in the combination of high rational thinking and pure Islamic beliefs, are still important in today's context.

First of all, it is worth to mention that Sadeddin Taftazani's "Sharh al-aqeed an-Nasafi" was published as a commentary book on Abu Hafs al-Nasafi's "Aqeedah" which is one of the most popular books on *kalam* (Islamic creed) in the Islamic world. The following statements are given in the chapter under the heading "No rebellion against the Sultan" written by Abu Hafs Nasafi.



## [الإمام لا ينعزل بالفسق]

ولا ينعزل الإمام بالفسق، أي الخروج عن طاعة الله تعالى، والجور أي الظلم على عباد الله تعالى؛ لأنه قد ظهر الفسق، وانتشر الجور من الأئمة والأمراء بعد الخلفاء الراشدين، والسلف كانوا ينقادون لهم، ويقيمون الجمع والأعياد بإذنتهم، ولا يرون الخروج عليهم؛ ولأن العصمة ليست بشرط الإمامة ابتداءً، فبقاءً أولى.

### Meaning:

“According to the scholars of Sunni and Hanafi denominations of Islam, there shouldn't be any opposition to the rulers of the country, and even if they show signs of wickedness and oppression over the people, the public should continue to follow their leaders and perform the act of worship Allah (Salah) standing behind their rulers in the public Mohammedan and the Eid prayers. The *salikh* (doing good deeds) scholars of that period preceded the same opinion. Only the Khawarij, the earliest Islamic sect, opposed the idea because of the belief that a Muslim who commits a sin in their eyes becomes a *kafir* – disbeliever or concealer” (*kafir* is the word first applied to Meccans who refused submission to Islam) [1; 367-368].

In the above, it can be seen that the words inherited by the well-known scholar Nasafi are expressed with great mastery in a scientific style. Jurisprudential issues are presented in a short and

وعن زياد العدوي التابعي، قال: كنت مع أبي بكر

تحت منبر ابن عامر، وهو يخطب، وعليه ثياب رقاق، قلت: انظروا إلى أميرنا يلبس ثياب الفساق، فقال

أبو بكر: اسكت، سمعت رسول الله ﷺ يقول: "من أهان سلطان الله في الأرض أهانه الله" (رواه الترمذي،

وحسنه) [النيراس: ٣٢٣]

### Meaning:

“Ziyad al-Adawiy, one of the successors and followers of the Prophet Muhammad (Tabein), said: Together with Ibn Bakr we were visiting Ibn Omairah. He was wearing his shabby clothes and preaching to the people. At that time I said, “Look at our Amir, he is dressed as the wicked”. He said, “Be silent”. Then he claimed: The Messenger of Allah, may Allah bless him and grant him peace, said: “Whoever humiliates the Sultan of Allah on earth, Allah will humiliate him”. [2; 367] (narrated by al-Termezi/Tirmidhi).

If we make a comparative analysis of the above-mentioned views of the thinkers, we can notice that the scholar Nasafi has dual task in this issue: first, he states the issue of fiqh, and second, he shows

concise manner which makes them more comprehensible to all and free from formality and literalism. Moreover, it does not present any real or “narrative” evidence (based on folk's words). This allows the reader to memorize any doctrinal issue more quickly that has the force of normative law. All the *fiqh* (jurisprudential) beliefs presented in the work were stated in the above-mentioned structure.

In the book, after the completion of Abu Hafs al-Nasafi's opinion on a particular doctrinal issue, Taftazani presents his commentary on the same matter after a drawn line. The reason for the drawing of one-line (mostly red, black, and gray) frames was to separate Taftazani's commentary from Nasafi's main text.

Taftazani's comments under the heading “No rebellion against the Sultan” begins with the following words: The *salikh* people of the past obeyed this creed, both mentally and physically, and even gave a “narrative” evidence of this:

the rebuttal attitude of the Khawarij sect living at that time and place to this ideological issue.

We have tried to validate the mentioned philosophies on the dialectical theme “No rebellion against the Sultan” on the basis of “narrative” evidence.

We would like to start with the first “narrative” evidence - verse 59 of Surah an-Nisa of Al-Qur'an al-Kareem which states: “Oh you faithful, obey God and obey the Prophet and religious leaders (Divine Lights) and if there is a difference amongst you (this excludes God – Prophet and Imams) you appeal to God, the Prophet and Imams, if you have faith in God and eternity, this shall be the best solution. [3] In a hadith narrated from 'Amr ibn' As, the Prophet (peace and blessings of Allah be upon



him) said: Whoever gives a sincere hand to the leader and pledges allegiance, let him obey as much as he can [4; 119].

This means that every citizen must first obey the Creator, then obey the Prophet (peace and blessings of Allah be upon him), and then obey the leaders in the commitment of his/her rights and obligations, in administering justice among the people in dispute, and in other matters.

If we analyze this moral norm from a gnesological (knowing theory) point of view, we can sort out the following three types of social states that every citizen living in a particular society should submit to the rules.

1. Obedience to the Creator.
2. Obedience to the Prophet.
3. Obedience to the "Ishboshi" (employer).

The terminological analysis of the above-given concepts states that the first obedience in the "narrative" evidence forms a sense of conscience in the intelligent citizen who realizes his/her "I" or "self" and awakes to the fact that this feeling is the only One (Creator) who is able to satisfy his/her material and spiritual needs throughout life. In such a case, the process of obedience to the Creator gives man a greater sense of hope and confidence in the future than a sense of obligation. Obedience to the Creator is achieved by following His divine book, the Al-Qur'an al-Kareem. To the purpose, the word Islam literally means "obedience". It is particularly to be noted that if a particular issue is not mentioned in the Qur'an, then people should address the Sunnah of the Prophet (peace and blessings of Allah be upon him).

When we think of the second form of obedience cited in the "narrative" evidence and contemplate it from the point of view of the historical period, we realize that living by the Sunnah of Muhammad (peace and blessings of Allah be upon him) is the basic principle of attaining perfection. The status of the perfect human being is the end result we must achieve, that is, the main source of civil society.

The philosophical observation of the word "obedience" in both cases is that obedience to the Creator of creation, the obedience of *ummah* (collective community of Islamic people) to the prophet has never had a negative effect on society in the context of the historical period. On the contrary, the commandments of conscience, honesty, purity, mutual respect, and kindness to one another were the main elements of obedience in both cases and key factors in achieving people's positive mood in the social environment and leading to progress in all the fields of the state and society.

If we analyse the word "ishboshi" (state leader) with its modern interpretation, we can study it in connection with the correct formation of altruistic

notions that arise between the leader (employer) and the employee in each sphere of society. The book emphasizes that honesty and justice, morality and piety, and not betraying the rights of others, the ability to listen to people's grievances etc. should be the main features of any head of the state.

In works that propagate humanistic philosophies, it is emphasized that if there occurs any dispute or disagreement on any issue in the course of the work of each leader, it was considered the highest example of justice when the state leaders referred to the Qur'an and the rulings of the Prophet (peace and blessings of Allah be upon him). If this rule is not observed, if the problem is allowed to be solved on people's own, certainly, the discipline will be violated there, and different conflicts will arise due to the people's different mental abilities and levels of thinking. The strong will begin to try to lead the weak, and those who are able to find solutions will dominate over the helpless. This, without any doubt, will lead to chaos, willful act in society and the collapse of the state.

As a result of such negative situations, first of all, Islamic philosophy and theology teach people to be always on the lookout for the various kinds of problems that arise in society. Second, Islamic philosophy allowed people to find the right solution to various problems that arose in any time and place. Thirdly, if there was a need for a solution to an issue that did not exist in either the Qur'an or the Sunnah, the solution to this issue was left directly to the state leaders.

In the eyes of many, "Ishboshi" means a leader or a head of state in a certain sense. In this case, a one-sided approach to the issue leads to a logical error. Islamic scholars defined the state leaders in the Qur'an as follows: According to the Islamic law, being at the head of something means *ijtihad*, that is, the gathering and decision-making of scholars who have reached the level of finding an answer to a particular theological question. In this sense, it should be mentioned that the head of any structure (sphere, department etc.) is also called the head whose judgment doesn't subject to further decision.

The general conclusion from the "narrative" and real evidence is that one of the urgent tasks before the researchers and philosophers is to study the scientific and philosophical heritage of Taftazani, to apply it widely to the process of democratic reforms in our country and to direct the acquired knowledge to the perfection of mankind. The great heritage of the genius thinker Taftazani's philosophical views, way of thinking and the Islamic sciences has great significance in the historical foundations of the civil society which we are trying to build.



In the research, we made a comparative analysis of the philosophical ideas given in Taftazani's works with the views of modern scholars, who demonstrated the role and importance of the country's leader in the development of the state and society on the basis of vivid evidence.

“Historical figures played a pivotal role in the most difficult periods of history. The long-term fate of the nations will depend on the decisions of the head of the state. There have been many cases in history when the wise policy and determination of the head of the state brought the country out of deep crisis and raised it to the level of the most developed countries in the world. World experience shows that the effectiveness of such a policy is comparable to the strength of the army and its inexhaustible wealth. When the leader of state pursues a prudent policy, it is possible to add wealth to the country's wealth, strengthen its defense capabilities, and turn it into a prestigious and developed state”[5; 23].

Profound analyses show that in Taftazani's “Sharh al-Aqeed”, the chapter “No rebellion against the Sultan” can serve as a valuable theoretical source in the formation and development of universal values such as tolerance, cooperation in the spirit of mutual respect for the heads of the state helping them to approach to the duties with fair as well as to resolve certain issues in the society, and as a result, provide peace and tolerance among members of the society.

It is worth noting that the pragmatic policy of President Shavkat Mirziyoev in the interests of the people and the state deserves special recognition. On the base of conceptual principle “the people should not servethe government agencies, on the contrary, the government agencies should serve the people” [6] the country introduced a new system of accountability to the people and this has been a practical example of the quote of the scholar Taftazani on the qualities of “real leaders”. Moreover, it shows that Taftazani's literary works for centuries have not lost their enlightenment value in the field of rational thinking.

Sadeddin Taftazani's “Sharh al-Aqeed” states that the only theme given in his work provides the establishment of positive relations between people, as well as between the lower and upper strata of society as a whole, which is one of the key factors in ensuring the development of the state and society.

On the basis of the philosophies put forward in the book, we can claim that the ideas of the harmonious development of social strata, the factors of social stability and the need to coordinate the interests of the subjects of the social stratum are still actual and valuable.

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## CURRENT ISSUES OF INFORMATION ETHICS

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### RESUME

*This article discusses the concept of information ethics, which is becoming increasingly relevant in today's modern societies. It also analyzes the importance of information ethics in the impact of modern information technologies on society and the specifics of research in this area.*

**KEYWORDS:** *Information ethics, infosphere, "Information Society", ethical norms of information exchange*

### DISCUSSION

We live in a society that is radically different than our ancestors. This new worldview is radically changing the way people perceive the world. Concepts such as "information", "information technology" cover all spheres of social life. We do not deny the positive side of this process, of course. However, in the process of shaping the global information environment, the problem of moral norms and values moving away from their essence and the alienation of people from them is becoming increasingly relevant today. In this regard, the analysis of the impact of information and communication problems on man and his morality has become a need of practical philosophy in today's world.

History has shown that moral concepts are a social phenomenon that evolves and changes as society changes. Also, in today's information societies, with the increasing use of information technology and products, traditional ethical views in human activities have entered a new phase. Now, the traditional ethical principles that existed before began to require a new approach in solving the modern moral problems that have arisen today. In this sense, the field of ethics that governs and regulates the behavior of those who operate in the information space, that is, information producers and consumers, has been called Information Ethics. The ethical issues arising from these changes are recognized as the object of study of information ethics.

It should be noted that the unprecedented development of information technology and the

growing level of coverage of each area is leading to the emergence of new concepts. When we talk about the infosphere, which is one of such new concepts, we must first pay attention to its lexical meaning. It is a new term that combines the words information and sphere. We know from existing theories that there are many spheres that cover humanity. For example: Biosphere (life crust), Atmosphere (air crust), Lithosphere (Earth's crust) and Hydrosphere (water crust). In the same way, the Infosphere means the information shell that has become an integral part of existence today. For the first time, the term infosphere was used by R.Z Sheppard in his book "Time Magazine." [1] By Luchiano Floridi, the term was used to describe the entire information environment, their properties, interactions, processes, and interactions, organized by all information subjects (including information agents) based on the biosphere. [2]

In fact, the question of what is "right" and what is "wrong", which is the basis of morality, has been worrying people for centuries. Almost everyone in their life is trying to determine the "right" way. The issue has been the subject of endless debate, controversy and controversy, and to date no solution has been found that can satisfy everyone equally. Recently, an "Information Society" based on unprecedented advances in information and communication technologies has emerged. In addition to the debates that have taken place over the centuries, a new direction has emerged. The unprecedented shift in all spheres of human life, the mass spread of modern means of communication and



technology, among other issues, personal it has also given rise to important ethical questions about life, freedom of speech, the right to create and use information, and not just information related to issues of ethical use of information for professionals, but also required the development of ethical norms and methods among information consumers.

In today's fast-paced world, information is invaluable in the decision-making process of our daily lives, as well as in the growth and development of society. Even without reliable and timely information, we imagine that we will face great difficulty in making decisions and planning our activities. We no longer have to worry about the lack or lack of information, on the contrary, we face confusion in understanding and comprehending it due to too much information. And it must be acknowledged that it is becoming increasingly difficult for each of us to use the information that is being disseminated wisely. In this process, it can be said that information ethics helps us to solve problems of effective use of information.

Information ethics is used today by some scholars as a synonym for computer ethics, Internet ethics, or virtual ethics. In this case, the research topic of Internet ethics is mainly evaluated as the ethical aspects of the relationship between man and the virtual world. This approach is also one-sided, because ethics is a field that studies the relationship between man and man, so information ethics is also concerned with the study of interpersonal relationships, and the difference is that it is a garden of people engaged in information activities. ethically analyzes the integrity.

The most pressing new type of ethical issues we face at every step and require attention today is the use and development of information technology, which plays an important role in all areas today. Decades ago, it was unthinkable that information technology would radically change a person's worldview and lifestyle, which in turn would lead to a number of ethical problems. As a result, the principles of moral demand that once existed in societies have begun to require a new approach in modern society. Because, given the growing influence of information technology on human life in recent years, such influence is not limited to the scientific, political, military, industrial spheres, but has now become an important factor in the dynamics of social development of all mankind. In other words, digital technologies have become not only a simple means of carrying out human behavior, but also an integral part of its relationship to the environment. As a result, the development and widespread dissemination of information technology in this way has also accelerated the pace of development of

information societies. And, of course, the continuous development of information technology, which is the basis of such a new society, has also had a significant impact on human moral relations, and this influence is reflected in the most general sense:

1. The impact of information technology on interpersonal relationships. It is well known that in today's society, the popularity of instant messaging and the unprecedented expansion of the use of social networks have significantly reduced the number of direct interactions between people. Instead, the process of indirect communication between them is evolving. And, unfortunately, this type of relationship is very fast and often devoid of human qualities, making it difficult to evaluate and control the behavior of the parties in terms of existing traditional ethical norms.

2. The origin of the conflict between information production and information exchange. With the advent of more new technologies, the reproduction and distribution of information materials by copying, scanning, or other methods performed on information has become much easier and cheaper. But there is another side to the issue, that this ease of information reproduction has often led to a certain conflict between consumers who want to use the information as cheaply as possible and those who have intellectual property rights. And the fact that these contradictions cannot be resolved through traditional moral norms has created some difficulties.

Given that information ethics is a broad field, its research object is also interpreted in two ways. Experts say it deals with a narrow range of ethical issues related to the Internet. Broadly speaking, this concept aims to ethically reconsider all the phenomena that cover the problems of the digital world.

It should be noted that a number of effective studies have been conducted in the field of information ethics, and as a result, a number of definitions have been given to this concept. In particular:

Chuang, C., and Chen, J "Information ethics deals with the ethical behavior of information consumers based on responsibility and accountability." [3]

Mostak Gausul Hoq also "studies ethical issues related to the creation, processing, storage, management and use of information." [4]

Shipunov Oleg Konstantinovich "information ethics" means a system of ethical norms of information exchange (social communication) in society. [5]

As Kalugo (2012) points out, information ethics is an area that affects all of a person's



activities, such as how a person works with information-related information and how it is shaped and redistributed. Thus, information ethics provides a framework for addressing ethical issues related to the confidentiality, collection, processing, and dissemination of information. [6]

Bynum (1999) emphasizes that information ethics is an important area of attention in today's modern philosophy because "The world is changing as an exponent under the influence of the most powerful and most flexible technologies ever conceived. The main direction of information ethics should be the integration of information technology and human values. Only then will information technology develop and protect human values instead of harming them." [7]

Throughout his research, Babik has focused on information ethics in all of man's information-related activities, i.e., our information-related relationships, how we work with information, or how we create, process, and manipulate it in a new way. [8]

Adam explains (1999) that information ethics is a matter of respect for information, including the creation, processing, transmission, and use of information. He said ethical issues related to issues such as information confidentiality, behavior in the infosphere, creation, collection, registration, distribution, processing of information, and especially ownership and copyright should be addressed. provides an important basis for rib exit. It follows that information ethics operates in the following contexts: privacy, intellectual property, access, censorship, security, and intellectual freedom. [9]

We consider it appropriate to define this concept as follows. Information ethics is a practical philosophy that involves the study of human adherence to moral values in the process of any information activity, such as creating, transmitting, receiving, storing, using, copying information in a global information environment that covers the entire planet.

Today, information ethics is not only a complex field, but also relevant in technology-based societies. In this context, a systematic study and analysis of this category, we believe, will serve to increase its practical effectiveness.

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## NATIONAL PRIDE-AS A SOCIO-PHILOSOPHICAL CATEGORY

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### ABSTRACT

*This article focuses on the concept of national pride, national dignity, and its role and importance in national revival as a socio-philosophical category.*

**KEYWORDS:** *national pride, national mentality, national value, cultural heritage, historical monument.*

### DISCUSSION

The main task at this stage is to further harmonize our national values with universal values, to inculcate the ideas of national independence in the minds of our people, and to prevent the falsification of our history and the foundations of our sacred religion, as well as their abuse for political purposes. It is also necessary to create appropriate conditions for respect, preservation and development of national traditions, customs and ceremonies of all peoples living in Uzbekistan, because national values reflect the essence of the pride of more than 130 nationalities and ethnic groups living in our country. For this reason, the scientific study of the social nature of the rise of Uzbek national pride to the level of common national pride, the development of a theory of gradual, systematic change, reform, without exposing the society to a revolutionary way, is a priority in philosophy. Therefore, this problem has become the special research subject of many of our scientists. In general, there have been published the results of a number of scientific studies dedicated to the national pride of the Uzbek people since independence. While emphasizing the undoubted great importance and value of the research published at the present time, it should be noted that they have a common character, the problem of national pride is not considered in them as a separate object of philosophical analysis. The complexity of the study of this problem can be explained, first of all, by the multifaceted and complex nature of the national pride and the national mentality. Active and targeted research of this problem, in our opinion, is related to the analysis of the following issues: mentality,

mindset; national mentality, Uzbek mentality; national mentality and spirituality; the mentality of education in the system of values and goals on the basis of the national program of training; community mentality; knowledge, cognition, radical change, national model of personnel training, mental creative functions; mental and philosophical-educational support of the interaction of spiritual integrations of Uzbek societies, features of religious tolerance in the Uzbek mentality, new thinking and more. However, despite this, many issues remain unresolved to date. Mentality is the quintessence (foundation) of culture, which reflects the deep foundations of human perception, imagination, understanding of the world and morality. The same mentality determines the specific habits, behaviors, attitudes of people to different aspects of society. Indeed, the question of the social nature of people's national pride cannot be fully resolved by scientists in a single field of science: it requires a complex, systematic philosophical observation, reflection, analysis. The social nature of national pride must first be studied theoretically. When considering national pride as a socio-philosophical category, it is necessary to identify the causes, bases and sources of the mechanism of its real formation. The methodological basis of such an approach to the issue of national pride is the principle of comprehensive and systematic study. Determining the social nature of national pride makes it possible to learn the philosophical aspects of the category of 'pride'. In general, the concept of 'pride' is very multifaceted. Many social sciences (ethics, aesthetics, psychology, linguistics, etc.) study it deeply and comprehensively. But the philosophical solution to this problem largely



depends on the results of ethical, aesthetic, psychological and other research. From the above considerations, it is clear that not only the laws of formation of "national pride of the individual", but also the social content and essence of the concept of "pride" itself is not fully disclosed. It can be said that only the "philosophical concept" [1] of the national question can form the methodological basis for studying the formation and development of national pride. The words of the first president of Uzbekistan I. Karimov, in an interview with historians and journalists, about the national pride of the Uzbek people are noteworthy. He said: "Every nation has its own pride. And no one has the right to discriminate against him ..." And added: "The role of each people, nation and people in the historical space and time is measured by their great contribution to world science and culture, as well as the size and scope of the cultural and enlightenment heritage left to future generations." After all, the legacy of the Uzbek people from their ancestors to their descendants is so great that it cannot be calculated by any criteria. This invaluable great heritage, which has come down to us from the depths of history, testifies to the fact that, **firstly**, Uzbeks, as a potential people, as a nation, have an eternal place in the historical space and time, and **secondly**, it serves as a factor adding an inner spiritual force for free and prosperous life, independence and development. The name of this powerful factor is national pride, which is the perception of historical heritage. Speaking about national pride and its role in the spiritual life of society, the first President of Uzbekistan I.A. Karimov said: "... among political, military and economic factors, there is another very important criterion, whose name is sense of national pride, national dignity. It is such a great power that, in history, relying on this power, many nations have survived the most difficult trials and tribulations and managed to build a free and prosperous life that inspires others. In the meaning of national pride, we understand this feeling not only as a basis for overcoming today's problems and difficulties, to achieve noble goals, but also a life-giving force to enhance the name and prestige of our country in the international arena, without tarnishing its honor; and today we must recognize this task as our most important and necessary duty." [2] The relevance of the topic is determined by the following factors:

**First**, scientists are conducting research on the importance of dignity and national pride in the formation of a perfect man, strengthening independence, ensuring a free and prosperous life of citizens. However, on the basis of an in-depth philosophical analysis of the changes taking place in the social and spiritual life of the Uzbek people due

to independence, the role of national pride and dignity in the life of individuals, its practical significance in shaping the perfect man remains relevant. Thus, the process of national awakening in the life of our country requires the discovery of historical and epistemological roots of the concepts of national pride, national dignity, giving philosophical definition to them, as well as stating the role of both concepts in the system of social philosophical knowledge.

**Secondly**, the process of formation of the Uzbek people as a civilized nation, free from the chains of centuries-old slavery and dependence, makes it urgent to study the national pride of each person in relation to his mentality. This makes the study of the functional features of an individual's national pride in relation to the nation's historically formed mentality an object of philosophical analysis. It is obvious that no serious philosophical research has been carried out by scientists in the study of above stated issue.

**Third**, the new positive changes taking place in the spiritual life of society require that they be constantly analyzed in a system of causal connections. Philosophers are conducting in-depth research on this issue. The factor of causal connections also makes it urgent to study the degree of deterministic connection of the spiritual life of society with the national pride of the individual, national pride in certain historical periods, especially in the process of spiritual renewal.

**Fourth**, the issue of philosophical analysis of the factors that create national pride, national dignity, does not exist until its conclusion. In particular, the study of the role of the process of restoration of historical memory, especially the historical heritage left by distant and close ancestors in the personalization of national pride is today one of the most important scientific and philosophical issues, and society's spiritual life, material and spiritual culture, nation and individual, the problems of a person and his identity in general and national relations are extensively analyzed. Also, the dissertations defended by D.Azimova, J.Jabborov, G.Najimov, A.Yunusov, N.Rakhimboeva, K.Mirazimov, P.Kulmatov reflect the views on the formation and development of national pride of the Uzbek people.<sup>1</sup> N.Juraev, A.Ibrokhimov, I.Yuldashev, N.Khakimov, T.Kurbanov and others in their articles on the subject approached the concept of national pride as a national feeling. In-depth scientific analysis of the spiritual and ideological aspects of the radical reforms taking place in the life of our country due to independence, various aspects



of the process of national identity is done by A.Achildiev, E.Bobomurodov, S.Atamurotov. I.Khudoyberdiev, U.Khojamurodov, Z.Ismailova, J.Mamashukurov, Z.Markaev, O.Muminov, Sh.Togaev, T.Tuychieva and others.

**Fifth**, how the process of formation of national pride of the Uzbek nation in the conditions of independence affects the national pride of other nationalities, in particular, the dialectic of nationalism and inter-ethnicity in awakening national pride, is not sufficiently scientifically and practically studied. Therefore, the factor of multiethnicity in Uzbekistan requires an in-depth analysis of national pride and national dignity through the criteria of national and international, universal dialectic, and the development of mechanisms for its practical application. Thus, the true educator of the nation is history itself. Historical monuments, on the other hand, evoke historical memory of the deeds and heroism of our great ancestors, form a new civic consciousness, and remain a source of moral education and imitation. In the history of Central Asia, there have been a number of famous historical figures who embodied political and moral courage, religious worldview and encyclopedic knowledge. Imam Bukhari, Musa Khorezmi, Imam Moturidi, At-Termizi, Bahovuddin Naqshband, Hoja Ahmad Yassavi, Beruni, Ibn Sino, Amir Temur, Ulugbek, Babur and other great ancestors have made a great contribution to the development of our national culture; and have become the pride of our people. It is known to the whole world today that the development of human civilization cannot be imagined without them. So, as long as humanity accepts the events in the history of our country, it becomes a matter of pride. But people's honest assessment of the facts of social life, historical monuments, and their personal attitude to them is formed on the basis of personal and social interests. In order for national pride to rise to the level of the nation, it is necessary to constantly carry out ideological education. As the first president of Uzbekistan I. A. Karimov noted, "Uzbekistan's path to independence and development is based on four main principles. These basics are:

- Commitment to universal values;
- strengthening and developing the spiritual heritage of our people;
- Free expression of one's potential;
- patriotism ».[3]

We conclude that the content and essence of the problem of national pride can be revealed on the basis of the above. Indeed, knowing and mastering the content and essence of spiritual heritage, historical monuments serves to form national pride, understanding of national identity, development and

strengthening of national identity, as well as, to clearly define the place of the nation in global development.

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## THE UNIQUE TREASURE OF SAMARKAND

*"The best paper in the world is produced in Samarkand, and water for the paper mill comes from Konigil."  
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### ABSTRACT

*The article discusses endangered forms of applied art. There is information about the paper and its origin. There are references to the origin of paper in Central Asia. The ideas of Zarif Mukhtorov, the restored author of the Samakrand newspaper, are presented. There is information on the current activities and development of KONIGIL-MEROS. The importance of this article is revealed to visual artists.*

**KEYWORDS:** *paper production, KONIGIL-MEROS, Samarkand paper, Chinese paper, paper manufacturing techniques.*

### DISCUSSION

It is impossible to imagine our lives today without paper. Paper is used for all material and spiritual things consumed. When and where did this paper appear? The paper we use has evolved over the centuries. We all know that in the beginning, people used rocks, tree bark, animal skins or silk and silk fabrics for writing.

In ancient Egypt, papyrus was used. Papyrus is a "high-grade" reed, and ancient Egypt had a paper-making technique as early as the third millennium BC. Archaeologists have found that manuscripts found in 19th-century Egypt were written on papyrus. According to the ancient Roman encyclopedic scientist Pliny, Egyptian papyri were created on the basis of special techniques. The core of the papyrus is separated by special needles, the width of a finger or palm is cross-shaped, placed on a damp surface and covered with a stone. When the items dried in the sun, they were glued to the length

and treated with an ivory tool. It is covered with a thin layer of glue. Orange papyrus was obtained from ripe reeds and light yellow papyrus from varietal reeds. [1]

In Central Asia, specifically in China, paper was made from bamboo in the 2nd century. Paper was also made in Korea and Japan in the 6th and 8th centuries. In the 11th and 12th centuries, parchment paper quickly replaced bamboo in Europe. Parchment is paper made from the raw hides of an animal. [2]

751 years. Summer. Chinese invaders are invading the borders of Central Asia. More precisely, the enemy will attack near Jambul (now Kyrgyzstan) near Taraz. Abu Muslim, who was the governor of Samarkand at that time, sent relief forces and Abu Muslim's warriors returned to Samarkand with victory and twenty thousand captives. Among the captives were talented craftsmen who were engaged in the art of making paper in their homeland. The captives told about the technique of making paper in



exchange for the survival of their lives. In the VIII century, paper was produced in Samarkand. This paper was popular in the East and the West.

However, some historical finds suggest that paper production in Samarkand existed before the Arab conquest of Central Asia. Evidence of this can be found in the documents of the Samarkand Ikhshid (Khans) found on Mount Mogtepa. The Arab scholar Ibn al-Nadim (X) in his work "Fahrest ul-Ulum" did not mention it anywhere until the Arabs arrived in Samarkand in 706. [Mirhamid Sobirov. Maziidan sado / journal 1 / 20202.16 page 3]

The Spanish ambassador to Samarkand, Louis Gonzalez De Claviho, said it was a dream for French artists to try Samagrand paper once. The great thinker Zahiriddin Muhammad Babur says in his book "Boburnoma": "The best paper is in Samarkand, water comes to the mill to make paper from Konigil. Konigil is located in the Black Water, this stream is also called Rahmat." [3]

Historian Maqdis says that in the 10th century Khorezm was incomparable with its bow, Shosh with its utensils, and Samarkand with its soft paper.

Thus, the production of paper in Samarkand was launched. In the ninth century, this craft became one of the most important aspects of urban crafts. In the Eastern world, Samarkand paper is as widely used as Egyptian paper. A clear example of this is the fact that in the IX century many ancient Arabic-Persian manuscripts were written on Samarkand paper. Various varieties of Samarkand paper became famous not only in Asia, but also in Egypt and Europe in the VIII-IX centuries.

According to archaeologist V.V. Vyatkin, who lived in the early twentieth century and excavated the historical monuments of Uzbekistan, "Samarkand is famous for its unique paper, which supplies a large amount of paper to various countries around the world." [4] reefs.

In the 15th and 16th centuries, paper production reached its peak in Movarounnahr and Khorasan. The famous calligrapher Alisher Navoi, a contemporary of Sultan Ali Mashhadi, in his pamphlet Serat as Sutur (Writing Law) written in 1541, praised Samarkand paper and said: "No matter how hard you try, there is nothing better than Chinese paper. But Samarkand paper is priceless. If you are a smart person, don't give up on it, the writing on it will be fluent and beautiful, but it must be white and clean. Whether it's simple or "Sultan", try to get the best.

[Mirhamid Sobirov. Maziidan sado / journal 1 / 20202.16 page]

From the above information, we see that Samarkand paper has always been recognized as a unique product.

But if we look at the political process, we see that Central Asia has been a battleground. At such times, the activity of the paper industry sometimes flourishes, sometimes declines. By the end of the 19th century, due to the occupation of the Central Asian khanates by Tsarist Russia, paper began to be imported from Russia.

In 1995, the UNESCO International Conference on the Preservation of Historical Monuments in Kagan, Bukhara Province, focused on the development of the disappearing ancient arts and crafts. Zarif Mukhtorov from Samarkand, one of the artisans from different cities and regions, took part in the event with a project to re-establish the disappearance of Samarkand paper.

After many years of research from the library and ancient manuscript sources, Zarif Mukhtorov began to restore this type of applied art in his apartment. After the experiments conducted in 1995-2002, Zarif Mukhtorov mastered the secrets of creating Samarkand paper. established the KONIGIL-MEROS paper craft center. When foreign experts studied the structure of the paper under a microscope, they noted that the ancient Samarkand paper was completely restored.

The production of Samarkand paper is based on unique techniques and hard work. This paper is made from the bark of a variety of mulberry called "Blax mulberry", which is widely used in Central Asia.

Mulberry twigs are first soaked in water for a few days and then the bark is peeled off. The yolks are separated and boiled in a pot for 5-6 hours. It is then ground in a wooden oven for 7-8 hours until it becomes a fine fiber. They are then placed in a large bowl, mixed in Siab water, and passed through a rectangular strainer. The remaining mass on the filter is poured into a plane and pressed on the board for 8 hours. After drying, several such masses are stacked on top of each other and sanded over the marble with a shell or agate (a mineral stone belonging to the quartz group). There is no waste generated during this process. This is due to the fact that waste is used to make cardboard, fabrics and various types of paper. That is why the Samarkand lamb is a completely wasteless technology. [5]

In ancient times, the product was "Sultan paper" of high quality, while Samarkand silk paper was not inferior in quality, it was slightly yellow. The Mir Ibrahim variety has white spots on the surface of the paper, and the Nimkanop variety has a cinnamon



color mixed with mulberry bark and silk remnants. At present, the paper is made of natural colors (squeezed juice of tulips, tulips, pomegranate flowers and mixed with walnuts), dark blue and brown papers.

About 15 students of Zarif Mukhtorov and women of the mahalla are employed at the Konigil-Meros enterprise. Their activities have expanded today. The company produces colorful masks, national dolls (papé-mashé style), national costumes, women's bags, souvenirs. This place is always crowded with foreign and local guests.

What is the demand for this paper in today's age of technology, which is the result of so much hard work? This is especially true in times of paper shortage. Paper is cheaper now. Why and who needs this paper?

Because Samarkand paper is so durable, it can be stored for hundreds of years. This paper is necessary for the restoration of historical manuscripts, archival documents of the world and our country, and most importantly for calligraphers, painters and miniature artists. As mentioned above, the blue and brown, cinnamon and novvot colors of this paper help the works of miniature artists to appear more complete and natural, the work of art does not lose its quality. One of the main things is that the natural color does not dazzle the worker. When eaten by various insects and creatures, it dies indigestion. Storing food from low-grade varieties of this paper will help maintain their quality.

These technologies and products, which have reached us for thousands of years, will serve our generations for hundreds of years to come.

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## SOCIAL AND MORAL VALUES IN INTELLECTUAL SUFISM OF AVICENNA

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### ABSTRACT

*The problems he posed became the basis for all subsequent teachings of intellectual Sufism. It has been established that the philosophical teachings of Ibn Sina in the context of Sufism are irrational, which follows from their consideration of man as an animal, consisting of spiritual (soul) and material (body) substances, recognition of the interdependence of soul and body in a person, the interdependence and simultaneity of their occurrence. In sathya, he analyzes the contribution of Ibn Sina to the development of Muslim culture, the philosophical principles of this culture. The author reveals the achievement of Avicenna's philosophical views in the context of Sufism.*

**KEYWORDS:** *intellectual Sufism, soul, irrational, Sufi-Gnostic-arif, Love (Muhabbat of Muslim culture,)*

### DISCUSSION

The most important inducement of Ibn Sina's creation was his awareness of the degree and nature of the impact of science on man and society, his understanding of the ability of knowledge to elevate a human's soul, magnify him from weakness to strength, his ability to act as a means of eradicating human vices. The thinker's faith in the high destiny of man, the power of his mind, in his ability to rationally organize the life of people - all, stimulated his activity. Like his conviction in the possibility of healing the moral and spiritual climate of society, the conviction that everyone has the power to stand up for morality, to help humanity in spiritual exaltation.

Comprehending philosophical concepts in the context of Sufism, which is completely subordinated to the tasks of moral education, the development of the spiritual image of a person, where the idea of a harmoniously developed personality combining physical perfection with a rich spiritual world and a noble moral character of a person.

The main philosophical work of Ibn Sina "The Book of Healing" is an encyclopedia, the peak of scientific and philosophical thought of the era, a systematic presentation of the main worldview problems, a generalization of the achievements of its predecessors. His pantheistic doctrine identifying the

world and God, affirming the principle of the independence of reason from faith, was the realization of a social need; the needs of developing natural science in a solid philosophical basis not contradicting the spiritual attitudes of the society in which religion dominates. The need of society for a universally valid theoretical justification of the principles of social life and morality.

Thus, the merit to the world science of Ibn Sina is not only in the restoration of the ancient philosophical tradition, but also in the development of all progressive elements of the ancient philosophical heritage. According to contemporaries, in his work "Disputes and Reflections," which has not reached our days, he systematized, presented, and analyzed 28,000 scientific and philosophical problems. He gave a classification of sciences; He did a great job of systematizing the achievements of almost all the sciences of the era, gave the correct solution to many problems, put forward many ingenious guesses (similar to the suggestion about the viral nature of many diseases) that were confirmed only during the further progressive development of scientific knowledge.

It should be noted that there are many ways to form the necessary spiritual atmosphere in society, but all of them, to one or another degree, involves the study and promotion of the heritage and life path of



great thinkers. Comprehension and formation of those incentives that brought them to the leading positions in world science and culture. Prominent among these people is Abu Ali ibn Sina. The socio-economic, political and cultural situation of the era had a decisive influence on the formation of incentives of his activity. [1-87] His formation as a thinker took place in the conditions of the collapse of the Arab caliphate, in the largest state, among the states of the former caliphate, the Samanid state, whose powerful state apparatus, relying on the local aristocracy and clergy, provided a successful solution to internal and external problems. The stability of the functioning of the state, the conditions of peace and harmony in the country have a positive impact on social and economic processes; on the growth of the productive forces of society, the development of crafts, agriculture and trade. And due to the deepening social division of labor, the emergence of new social groups inherent in feudal society, in turn, caused ideological fermentation in society, the growth of socio-political activity of the population; the emergence of new ideological trends, the nomination of a number of prominent figures who made a decisive contribution to the development of world science and culture. And the close connection of the clergy of that time with the state apparatus, with the ruling elite of society - led to increased opposition to the secular and religious worldview, the consolidation of those social forces that welcomed the growing influence of secular, scientific worldview, opposing Muslim theology - "kalam", which embarked on the path of justification of exploitation, social injustice, social anarchy of the people.

In any science, he mastered not only all the achievements of his predecessors but also made a significant contribution to their development, enriched them with personal observations and thoughts; systematized them, corrected errors, eliminated gaps and ambiguities, eliminated everything unreliable, reduced and made it publicly available. The work of Ibn Sina was the completion of the process of mastering the ancient scientific and philosophical heritage, and the beginning of a new stage of classification, systematization of the generalization of all theoretical knowledge and practical experience. Goichon noted the ideological and mystical ideas of Avicenna, which gave rise to the development of scholastics in Europe. [2-302]

His consideration of the world as natural, causally determined, helped to establish the principle of concreteness of the approach to the phenomena of reality, to confirm the requirement to look for natural causes in everything, to consider phenomena as the result of a whole complex of reasons. Knowledge, he

believed, should be based on evidence, the critical work of thought, on the desire of the mind to understand and explain everything rationally, by natural causes. As a tool, means of acquiring new knowledge on the basis of existing knowledge, he developed formal-logical and practical, experimental methods of scientific knowledge aimed at knowing how to obtain practical results, to use knowledge in practice, for the benefit of people. Even Ibn Sina's interest in the problems of philosophy was primarily due to his goals, his desire to establish fair relations in society, to block the channels of the formation of negative human qualities. The same goal is manifested in its implacability to ignorance, routine and stagnation.

Ibn Sina provided the success of the development of Muslim culture with his creativity, he developed the ideological and theoretical foundations, philosophical principles of this culture, he set the direction of its development for many years. His achievement and his problems were the basis for all subsequent teachings of intellectual Sufism.

It has been established that the philosophical teachings of Ibn Sina in the context of Sufism are irrational, which follows from their consideration of a person as an animal, consisting of spiritual (soul) and material (body) substances, recognition of the interdependence of the soul and body in a person, the interdependence and simultaneity of their occurrence. At the same time, he recognized the primacy of the spiritual principle, i.e. souls, considered it the engine of the body, the active principle in man, in the form of the transcendence of its origin, which determines its immortality, and in this sense - the immortality of man himself; It is shown that in the anthropological views of Ibn Sina there is also traced the Sufi explanation of the genesis of the human soul, that it is a product of the outflow from the active mind and that it is the final link in the chain, which includes the plant and animal souls. It should be noted that the mind plays an important role in Sufism and the spiritual tradition as a whole, and the Sufi "path of knowledge" is a necessary complement to the Sufi "path of love". The problem of studying medieval Islamic understanding of nature and mind is more substantial. This circumstance took place during the formation of medieval Islamic philosophy. The Sufi views of Ibn Sina have an intellectual character. Love (Muhabbat), for example, in him serves as a symbol of natural forces and a manifestation of a deity in the manifestation of a necessary being in the empirical world. The appeal of Ibn Sina to Sufi symbolism is caused by the fact that the Sufi-Gnostic arif approached his philosophical ideals both in the worldview and in the moral sense. Therefore, in the



Treatise on the Birds, Ibn Sina calls the Sufis "brothers in truth". In the worldview, he was close to the pantheistic aspirations of the Sufis. In this treatise, as well as in the "Instructions and Instructions", the Gnostics of the arif are directed toward the knowledge of the Truth as such.

The exposition of the Sufi views of Ibn Sina in "Instructions and Instructions" we find two paradigms for the relationship between nature and reason. One paradigm passed to Ibn Sina from Plato through Aristotle. And the other is inspired by the motives of Sufi beliefs, which ultimately lead to pantheistic ideas.

Given the dominance of religious fanaticism [3-151] and dogmatism, Ibn Sina not only preserves the heritage of Islamic culture, but also develops it based on the example of its Sufi views. The Sufi views of the thinker on new historical and cultural grounds were intellectual in nature. The merit of Ibn Sina is that he does not just develop intellectual Sufism, he brings it into a single system of interdependence of soul and body. It should be noted that L. Gardet in his studies studied the religious views of Avicenna and compared his ideas about the soul with the views of ancient philosophers on this problem. [4-151]

The philosophical teachings of Ibn Sina cannot be comprehended, without understanding his attitude to the religion of Islam, he maintained his commitment to Islam throughout his life. He clearly represented the role and place of Islam in the life of Eastern society, its importance for maintaining its stability and sustainability, for the moral improvement of people and society. It should not be overlooked that Ibn Sina wrote all his works for a wide range of educated people, in the context of the widespread Shiite-Ismaili tradition of creating multifaceted works designed for different levels of intellectual preparation of readers, to exclude accusations of unbelief, heresy. This explains how the divergence of assessments and interpretations of the philosophical heritage of the thinker; and the relative completeness and safety of his works that have survived to this day. [5-51].

A characteristic feature of the creative heritage of Ibn Sina is the duration of its influence on the development of world science, the growth of this influence with the development of scientific knowledge of the world.

The teachings of Ibn Sina at the present stage of development of society are extremely important for revealing the humanistic essence of the teachings of this thinker. Here, a profound analysis of Ibn Sina, who advocated a good, fair, humane attitude to a person, is revealed. A comprehensive analysis of the teachings of Ibn Sina about a person is

necessary to determine the place of his teaching in the history of the development of ideas about a person, his essence and essential forces in general. With the help of such an analysis of his altruistic teachings, their significance in the system of modern philosophy is determined.

Ibn Sina received a home education. Access to the rich library of that time, the library of the Samanids in Bukhara, had a great influence on his spiritual development, on the formation of impetus for his activity. By the age of 15, his main scientific interest, the problems of medicine, had been determined. Interest, on the wave of which he quickly mastered the medical theory of that time, and successfully began medical practice. What manifested the characteristic characteristic of him as a scientist is his constant desire to put scientific knowledge into practice. And also such a feature as perseverance in achieving the goal, great faith in their capabilities. In his biography, he mentions that he read Aristotle's metaphysics 40 times and could not understand it, but did not stop his attempts until he completely understood it.

He lived in the era of change. At a time when the economic and political crisis in the Samanid state, the intensification of the struggle for power, feudal strife, separatism of territories, the betrayal of the aristocracy and the clergy, took advantage of the Karakhanid conquerors. What forced him to leave his homeland and move to the city of Gurganj, where for seven years he conducted extensive medical practice; he was engaged in scientific research, talked with prominent thinkers and figures of his time, such as Masih, Ibn Iraq, Beruni.

The very beginning of his life and scientific career shows us that the leading incentives for his activity were social and spiritual stimulus, that neither power nor wealth attracted him. Throughout his life, he conducted intense scientific work, at the same time engaged in rational and irrational knowledge. On the example of his life, he demonstrated that significant for him was the wide propaganda of scientific knowledge among the people, serving people, that knowledge should be put at the service of the people, at the service of his material prosperity and spiritual development. This life attitude of the thinker determined the enormous influence that he exerted on the subsequent development of science and social thought, both in the east and in the west. And the title which he was awarded by contemporaries "Sheikh ar-raisi" (the head of scientists) reflected his high authority in the scientific world; his successes in all the sciences of his time, to the development of which he made a significant contribution; the fact that his



systematization and generalization of medical science in the "Canon of Medical Science" for 600 years made this book a reference book of doctors around the world. Therefore, public awareness of the fact that the stimuli of human life are not innate, but are formed in society, and are caused by both the specific socio-economic, political and spiritual situation in society, and its history. Already this alone compels one to reliably store in his historical memory, as role models, the outstanding manifestations of the will and determination of great ancestors. Any human opportunity, ability, or property was once first demonstrated by specific people who not only embodied it in reality, but also managed to transfer it to others. Such people can rightfully be called "teachers of humanity", it depends on them in many ways, what kind of humanity will be, in what direction it will develop. And their contribution is noticeable even against the background of the current successes of mankind, and therefore the interest of society in such people will never fade, and their names will forever remain in the memory of mankind.

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# **SOCIO-PHILOSOPHICAL AND SCIENTIFIC THOUGHT IN THE SPIRITUAL LEGACY OF BERUNI**

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## **ABSTRACT**

*The article explores the conceptual provisions of Beruni on the origin and development of human society serve as an explanation of many social and personal values, among which justice occupies a special place. As you can see, one of the factors, as well as one of the reasons for the emergence of human society, was the opportunity to follow the principle of justice in the relationships between people, various social strata and groups.*

**KEYWORDS:** *Culture, justice, absolute goodness, spirituality, equality*

## **DISCUSSION**

Socio-philosophical and scientific thought of the early Eastern Renaissance (IX-XII centuries). Consider the Eastern Renaissance in Central (Middle) Asia by stages of their formation, development and decline.

The early Eastern Renaissance (IX – XII centuries) is a bright page in the history of scientific, cultural and philosophical life not only of the peoples of Central Asia, but also of the entire Near and Middle East.

By this period, the cultural life of Transoxiana had undergone great changes. During this period, Bukhara, Samarkand, Merv, Urgench, and Ferghana became centers of culture. The strengthening of centralized governance under the Samanids helped to stop the country from being plundered and ravaged by neighboring rulers and nomads, and the developing caravan trade facilitated cultural exchange with many European and Eastern countries.

Science was greatly developed during this period. It developed in close cooperation with the middle East. Many Central Asian scientists went to study in Baghdad and other major scientific centers. For example, al-Khwarizmi wrote a great scientific work while working at the Caliph Mamun Observatory in Baghdad.

Central Asian scientists have made a significant contribution not only to the middle East, but also to world science. There was a special type of educational institution – madrasah, so characteristic later for the entire Muslim East.

The study of the natural science and philosophical traditions of ancient Greece occupies a

huge place in the development of the spiritual life of the peoples of the medieval East. Greek science and philosophy emerged in a slave-owning society, and its rich traditions were widely drawn and used to meet the needs of a developing feudal society in the middle East.

Of all the schools of philosophy in Ancient Greece, the most powerful and noticeable influence on the medieval thought of the East was the legacy of Aristotle. The translation and commentary of his works, as well as the works of other ancient Greek scholars, became an important feature of the scientific and philosophical activity of the early medieval society in Central Asia during this period.

Thus, during the early middle ages, on the basis of the synthesis of cultures of many peoples in Central Asia, a rich Arabic-language scientific and philosophical thought was formed, in the creation of which representatives of various countries actively participated: Khorezmi, Ferghani, Farabi, Marwazi, Ibn Sina, Biruni, Mukaffa, Rawandi, Nazami, Zakariya ar-Razi, Kindi, Jahid, Ibn Rushd, Ibn Baja, Ibn Tufail, etc. They were encyclopedic scientists of their time. They were the creators of the best works of medieval culture and science.

Beruni's conceptual statements about the origin and development of human society explain many social and personal values, among which justice occupies a special place. According to Beruni, " (man), due to the multitude of his needs and the smallness of abstinence, with no means of defense and an abundance of enemies, is inevitably forced to unite with his relatives in society. For the purpose of



mutual support and performance by each of the works that would provide both him and others"[1-83]. As you can see, one of the factors, as well as one of the reasons for the emergence of human society, was the ability to follow the principle of justice in relations between people, different social strata and groups.

However, from the very beginning of the social process, the question arose about the mechanism for implementing justice in its various manifestations. Beruni understands that abstract justice cannot be realized, because its nature and essence are formed depending on those processes in society that are necessary, such as commodity-money relations. "So agreed (people) on prices and equivalents, which include fusible metals, precious stones and the like, whose presence is rare, existence is long and the view is pleasant. They intended these (values) to be distributed fairly" [1-83]. Beruni further concludes: "And this, by my life, is the natural form of trade, which is the true order of life in the rendering of mutual services among civilized people" [2-13].

And only because gold was called "as it were absolute good" that it contains the means to achieve a good goal. According to Beruni, "wealth, after it is extracted, has no other purpose than to be minted in the form of gold dinars or silver dirhams and to be (among people) in circulation for settlements and for payment of obligations" [2-83]. In modern terms, they should be used for good, development of production, etc.

However, Beruni notes with regret that the negative qualities of money cause negative consequences in the life of society and the individual. He's writing: "And the passion for accumulating and multiplying their (wealth) increased, and their honor and brilliant position increased. But this was the result of a (definite) establishment, not of nature, (accomplished) by a conditional agreement between people, and not on the basis of natural law" "[2-13]. Wealth, including money, is also accumulated "through plunder, power, mortgaging, and land ownership" [2-13]. This, in turn, causes people to have various spiritual vices that prevent them from implementing the principle of justice effectively enough.

The problem of managing society is of particular importance for establishing justice in society. According to Beruni, "... the essence of management and leadership is to deprive oneself of peace for the sake of the peace of the governed while restoring the rights of victims (of violence) from the oppressors"[2-31], and ultimately "in establishing justice between the high and the low and equality between the strong and the weak..."[2-12].

A great scientist often thinks about the problem of conceptual interpretation of justice. In particular, Beruni's comparative approach to the concepts of justice and truth is very significant, which allows us to understand the nature of justice itself more deeply. "Just as justice by its nature commands approval, its essence endears it to love, and attracts it with its inherent beauty, so it is with truth" [3-58]. Beruni comes to a deep conclusion that helps to clarify his understanding of not only justice, but also injustice. "A liar deviates from the path of justice and prefers to incline to violence, perjury, breach of loyalty, taking someone else's property by fraud, theft, and other vices that cause damage to the world and the human race" [3-58].

Beruni provides for a number of measures that are designed to ensure the establishment of justice in society. Among them, such as science and religion are of particular importance, each of which does this in its own special way and ways. In particular, Beruni characterizes them as follows: "After all, religion obliges to justice, equality, suppression of injustice desirable for oneself, as well as to help the oppressed" [2-25]. Science also plays a huge role in this process, for "... only through (science) is it possible to attract good and avoid evil in both worldly and faith! If it were not for (science), there would be no certainty that what is perceived will not turn out to be evil, and what is avoided will not turn out to be good" [1-82].

Many aspects of his life and scientific heritage, including the humanitarian direction of the scientist, are reflected in the collective monograph "Abu-R-Rayhan al-Beruni" [4-82].

The contribution of the authors of this monograph, as well as another historian of science G. p. Matvievskaia in the research and publication of the works of Aburaykhan Beruni is invaluable. In their research, they paid attention, first of all, to the scientific heritage of the scientist in the field of exact and natural Sciences. Thus, Beruni's comprehensive, conceptual-interpretative, multi-aspect approach to the problem of justice can effectively contribute to its theoretical and methodological development, as well as to its successful implementation in the context of building civil society and deepening reform processes.

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# **SOCIOLOGICAL CULTURE - AS A MECHANISM TO INCREASE THE EFFECTIVENESS OF SOCIOLOGICAL RESEARCH**

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## **ABSTRACT**

*The article provides an analysis of sociological culture. The necessary conditions and foundations of the development of sociological culture among the population are analyzed. The article emphasizes the importance of sociology in shaping the chain of events in human life*

**KEYWORDS:** *culture, sociological culture, sociological imagination, society, social community, human consciousness, chain of events, sociological research, socio-economic processes.*

## **DISCUSSION**

Nowadays, we are witnessing large-scale reforms aimed at democratization of all spheres of state and society building, introduction of innovative technologies in the development of sectors, creation of necessary conditions and opportunities for human development, improvement of welfare.

In this situation, the issue of forming a new and modern research practice of conducting sociological surveys on the qualitative change of the situation in a particular field and the continuation of the tasks of its development on the basis of advanced foreign and domestic theoretical and methodological tools is of particular importance. In order to effectively implement the tasks set out in the Action Strategy for the five priority areas of development of the Republic of Uzbekistan for 2017-2021, the Decree of the President of Uzbekistan "On measures to state support of sociological research" was adopted [1.3]. This decree indicates to the great attention paid to the organization of sociological research, in general, today the President of the Republic of Uzbekistan pays great attention to the field of sociology.

Sociological research helps to improve the well-being of human life. Every segment of the population is studied through research. The goal of sociological research is the human factor, which means that activities that serve the human factor need to be constantly improved.

Hence, the formation of sociological culture among the population also plays an important role in

the effectiveness of sociological research. That is, the population must correctly understand that they will participate in the survey as a respondent. It is important to be able to evaluate the problems of society with their own views, not to provide superficial information. The main factor in this is the formation of a sociological culture among the population.

In order to study the social, political, economic and other problems of the country, the opinion of the population is heard in all regions of the country. Sometimes the population, i.e. the respondent participating in the survey, does not understand why they are participating in this survey. They often have superficial answers, such as not being able to express their thoughts openly through home fantasies, such as being afraid of answering questions incorrectly.

In the Decree of President Sh. Mirziyoyev dated February 22, 2019 "On measures to support the conduct of sociological research" "to study the level of legal culture and to determine the main directions of their development"[1.3]. Of course, the study of the main directions of the formation of the worldview of citizens and the formation of their sociological culture in their development is an important factor for this task.

That is, each citizen evaluates the events taking place around him, in the life of society in general, on the basis of his own worldview. The broadly formed worldview in citizens, on the other hand, helps to make a deeper, broader, more accurate assessment of the situation around them and to direct the situation to serve the human factor.



Well how is the definition of sociological culture. At the same time, scientific dictionaries and many sociological literatures contain the concept of sociological imagination, which is interpreted by Ch. Mills, that is, people understand themselves, people can control their behavior through their intellect, consciousness [2.444.]. Sociological culture is that in order to achieve the goal of life, a person has to think not only of his own interests, but also of the interests of other people around him. That is, the existence of our own goals also emerges on the basis of the interactions of the people around us. When we pursue a goal in our youth, when we grow up and live in a different environment, of course, those goals change, and sometimes the goals we set in our youth may seem a little ridiculous to us.

Spiritual, social changes in our lives continue to be linked like a chain based on the social environment and being, the behavior of people in existence, their relationships.

In the American writer Ray Bradbury's science fiction story "A Sound of Thunder" [3.221-235.] a trip to the Mesozoic era for a large sum of money is organized for a hunting trip for hunted dinosaurs that perish in minutes. In the next hunt, a hunter named Ekels, who enjoys extreme hunts, is frightened to see a trinnosaur, which, as always, does not end without complications. When all the hunters return to their time, they feel that there is no trace of the former environment, that a dictator has taken the place of the liberal-presidential administration, and that even a different orthographic language has emerged in the conversation. The reason for this is that Ekels falls from the antigravity corridor one second during the hunt, at which point the butterfly is overwhelmed by his shoes. This is why the insignificant change in the chain of connections in the Mesozoic era has had an impact on the whole of evolution. In his story, Ray Bradbury shows that every action in our lives and who we become as a result of it is interconnected by the nature, the environment, the group of people, the sequence of events, all in this chain connection being a different event, place or environment in general justifies a much larger change.

In Durkheim's "Suicide" (4.399.), he studies statistics on the state of suicide on the basis of a secondary method in sociology and argues that suicide is a social rather than a psychological factor. We can see a similar idea in Ray Bradbury's story.

That is, throughout life a person acquires this or that status, tries to occupy it, strives to take his place in society, the position of humanity, existence. In Durkheim's work, the reason for such social factors is that a person feels useless in the society in which he lives, that is, under the influence of the social factor, the collective consciousness. Durkheim bases his

suicide on geographical factors, climatic causes, environment, and social relations.

So, in both analyzes, the chain of relationships, dependence, in one, the whole chain of events has been distorted, and in the other analysis, the relationship from birth to suicide, the location, the chain of relationships, the loneliness of loneliness. By studying the interdependence of these very chains through sociology, it seeks to add a ring to the continuation of the chain that gives a positive result to the human factor. In creating this chain of chains, the human community, consciousness, plays a major role. In order to form a social environment, a chain of events of social connection for a positive purpose, people themselves must participate, that is, the sociological culture formed in each person serves as a basis in the modern real, transparent era.

In sociology, every opinion is valued, every opinion of a person is valuable, because the opinion is formed on the basis of different experiences, knowledge, social relations, relationships, views on marriage.

We know from foreign experience that all families have knowledge of sociological research, that is, they will definitely gladly participate in the questionnaire when an interviewer visits a family for a survey on a community topic. And just as they wait for a questionnaire on the subject, they express their opinions in a precious power. This is the manifestation of this sociological culture. Every day the sociological data is informed through the media, and the citizens of the country are pleased that they have contributed to this result with their opinion. This leads to the formation of a political culture in the population.

So, if sociological culture is widely formed among the masses, it is safe to say that the formation of political culture among the population helps to analyze the political process of society. The formation of a political culture among the population, especially if the population can properly assess the political process, would have prevented the possibility of large-scale conflicts in the country. In turn, we come to the conclusion that political culture cannot be complete without sociological culture.

So, it is worth mentioning another important thing, that in order to improve the sociological culture of the population today, we need to teach through school subjects. The child acquires much of the knowledge base through elementary school programs.

In the 1980s and 1990s, labor classes in school curricula in earlier years were held once a week. Through these labor classes, boys learned to make tables and chairs out of wooden planks, birds to make wooden houses, to make things for a household with their own hands, and girls were taught to sew, button



buttons, and cook. The girls would invite the boys in the class to cook in the labor class, cook a variety of sweets, and tell all the class members about the values of hospitality, hospitality, unwritten rules, and at the same time demonstrate at the experimental level. This experience would be needed throughout a person's life. Similarly, if we explain to students the basic concepts of sociology from school, the place of sociology in society, then future children will first have a worthy place in any conflict, difficulties in social life, family relations, social relations in general, and the development of sociological culture. would have been the basis for its proper formation.

It is natural to have objections to the above, that is, whether we make desks and chairs in our house, we do not have to spend time cooking at home in a hurry in the age of fast food, in the era of modern 3D printers, there are cafes, restaurants it can be said. The above idea is just a simple example, but nevertheless, the work done on the basis of this collective, the ability to do something with human hands, gives a positive effect on the human spirit, thereby increasing the self-confidence of the human race. Because we can learn to use 3D printers, order food in a hurry and bring it home, or go to a cafe on our way home from work and feed our stomachs. But it should not be forgotten that the human race develops only in relations with each other, if man lives without relationships, without groups, without connections with each other, there is no purpose to life, and humanity reaches the end of self-destruction.

Society is constantly evolving and new conflicts, new conditions, new problems are emerging. The role of sociology is to constantly study society, to analyze new problems and find solutions. This means that as society develops, the role of sociology in society will increase.

In addition, the role of sociology in the school curriculum is growing today.

From school, a student can understand society, invent and implement his own project to analyze the problems in society, to accurately assess the changes in society in the next generation, to find their place in society. The main thing is to have a different, careful approach to the world around us, to the environment, and at the same time the feelings of patriotism are formed correctly. This will serve as a basis for preventing the next world wars or cyber strikes that are likely to happen in the world.

If a student has concepts such as society, sociology, society, society problems from school age, we think that this student will be able to find the right solution to any problem of life.

The school curriculum should have an idea of society and the social environment from the 4th grade of primary school, knowledge of the founders of sociology, as well as information about our sociologists

who laid the foundation for the development of sociology in Uzbekistan today. In general, it is safe to say that today all spheres have developed in Uzbekistan. Students of Uzbekistan should be proud to read about our scientists, who contribute to the development of various fields, and learn more about them.

We should be proud of our scientists who laid the foundation of sociology today and continue to contribute to the development of sociology. At the same time, students should be informed about their lives and scientific creations.

For example, we have scientists who have contributed to today's Uzbek sociology. B.Ota-Mirzaev, R.A.Ubaydullaeva, M.Bekmurodov, M.H.Ganieva, A.Kholbekov, A.Umarov, N.S.Aliqoriev (R.A.Ubaydullaeva Republican Center for Public Opinion Research "Public Opinion" Director, Professor, OB Ota-Mirzaev Deputy Director of the Republican Center for Public Opinion Research "Public Opinion". Professor, M. Bekmurodov Head of the Department of "Management Sociology and Psychology" of the Academy of Public Administration under the President of the Republic of Uzbekistan, Professor, M.Kh. Ganieva National University of Uzbekistan, Department of Social Work Prof. A.Kholbekov, Professor, A.Umarov, Head of the National Library named after Alisher Navoi, now Professor of the Department of Sociology, National University of Uzbekistan, ANAliqoriev, Professor of the Department of Sociology Professor, founder of the School of Sociology, we need to inculcate our academic scholars in students through the science of sociology from the time of school today.

Children should be able to analyze various changes in society in the field of sociology and create their own project through the school curriculum when they go to the upper grades. Then a sociological culture is gradually formed in schoolchildren from an early age. The formation of a sociological culture in the country, first of all, increases the level of public administration's service to the human factor.

It is no secret that due to the outbreak of COVID-19 caronavirus infection in December 2019 in the village of Hubai, Wuhan, China, a COVID-19 caronavirus pandemic was declared in Europe, other countries and later in Uzbekistan from March 11, 2020. At a time of rapid development today, this quarantine condition has been perceived differently in humans. Many began to appreciate working hours, and more and more began to feel that the need to communicate with people was growing. People always have goals in their interactions with people. In order to study the quarantine situation of the population, we conducted a telephone survey on the social mood of the population during quarantine on the topic "COVID-19, stay at home" by randomly selecting respondents from



different regions of Uzbekistan to study the interaction of people during the quarantine period. Respondents from all regions of Uzbekistan took part in the survey. [6.]

-Please tell me, how do you assess your current condition, that is, how does it feel to be at home in quarantine? 70%, I feel like I'm sitting in a cage

13%, I can't help but communicate with people, I can't fit in

8%, I think I was just complaining about the amount of work when I was working, I don't complain anymore

10%, I think I'm going to be crazy at home

18%, I don't like sitting like that. I've always been around people

8%, I feel the need for communication to inspire me even if I'm not in a crowded place

11%, I have a lot of work left, I want to go out as soon as possible, quarantine as soon as possible

12%, quarantine is a time to talk to our children, but we also need to communicate with other people

8%, Our children are tired of us too, if the quarantine was over sooner

3%, I live alone. I'm used to loneliness. But all the same, when a person sees each other and communicates, it makes sense for a person to do something

It is clear from the responses of the respondents that even a person who has learned to live alone in his own name still argues that human communication is important. When people start communicating with each other, they start to feel like they have a purpose in life, a desire for something.

- How do you spend your day during quarantine? The respondents answered the question as follows

31%, I study with my children, the rest of the time I watch news on TV and the Internet, entertaining programs, go to the store in the meantime

21%, I do my homework and the rest of the time is virtual communication, watching movies, talking on the phone, going to the store in between

15%, Cooking, socializing with children, watching entertaining movies and shows, shopping

32%, In addition to doing all the housework, I talk in telegram groups to communicate at least a little bit, I call my relatives, people at work

10%, I don't communicate with anyone, I don't do anything.

We can see in this question that the final answer was not determined by the respondents. That is, there is no human being who does no work during his lifetime. There is a human race, which communicates in any way, engages in some activity. But still, in this activity, people's relationships with each other are important.

-Please, how would you react to living a virtual life, a virtual life, without communicating with people? to the question asked, the respondents gave these answers.

13%, Virtual life, communication is an abstract thing for me

31%, Virtual life can be for a certain period of time (entertainment videos, news, virtual communication)

17%, Virtual communication is necessary, but the desired work, in terms of receiving news

8%, Virtual life, something that does not communicate, man is born to communicate more lively

Respondents answered this question as follows, a maximum of 39% of respondents said "Virtual life, nothing to communicate, a person is born to communicate more lively", 31%, Virtual life can be within a certain time frame (entertainment videos, news, virtual communication) , 17%, Virtual communication is necessary, but the desired work, in terms of receiving news, 13%, Virtual life, communication is an abstract thing for me.

Of course, in the current era of electronic development, virtuality is needed, but within certain limits. It is clear from the responses of our respondents that no matter how much people are virtualized, the thirst for real relationships between people will remain. The human race is constantly evolving through communication with one another. It is through these dialogues that new ideas and goals emerge for people to live.

When we asked the respondents the next question, we received the following answers from them.

- Please tell me, what would you do in the first place after the end of quarantine in the country?

• 97%, I go to work right away, I miss my colleagues or meet my friends, relatives (parents, close relatives, close friends), i.e. I communicate real with people

• 1%, I will sit as I am now and then

• 2%, hard to answer

From the responses of the respondents, we are again convinced that it is difficult for people to stand without communicating with people. Ninety-seven percent of our respondents said they would like to see their colleagues, some close relatives, and some friends after quarantine. It is clear from these responses that during the quarantine period, people missed communication with each other, i.e. face-to-face communication.

So we can conclude that humanity cannot stand without interacting with each other. It is sociology that studies the interactions of people in a society, the groups that emerge during these interactions. Sociology is the science of people, the role of people in society, what they do to find their identity



in society, what roles they play. Since sociology is designed to study the behaviors of people throughout life, it is expedient to form a sociological culture in people from an early age.

By shaping a sociological culture, we can help people find answers to their traditional questions of why they should not harm society and why they should contribute to the development of society.

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# THE SCIENCE OF TAJWID AND RECITATION IN MAWARANNAHR

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## ANNOTATION

*This article is an attempt to illuminate how science of tajwid and recitation developed in Mawarannahr and scholars who worked on it and as well as their works are briefly elucidated. This article can serve as important source because author made all his inferences relying on primary sources.*

**KEYWORDS:** “Shtibi”, recitation, tajwid, source, “Koran”, manuscript, seven recitations, recitation-room.

## Аннотация

Эта статья посвящается развитию науки таджвид и декламации в Мавераннахре, а также ученым, которые работали над ней. Также их работам, кратко освещается. Эта статья может служить важным источником, потому что автор сделал все свои выводы, опираясь на первоисточники.

**Ключевые слова:** «Штиби», чтение, таджвид, источник, «Коран», рукопись, семь чтений, комната чтения.

## DISCUSSION

As soon as Islam was introduced into Central Asia it soon took root in the great cities of the region and then more gradually spread out to the remoter areas. Along with the spread of Islam, sciences connected with it started to develop. Initial science based on holy Koran was tajwid and recitation which means a set of rules for the correct pronunciation of the letters with all their qualities and applying the various traditional methods of recitation. We can say that the point at which this science embarked on the development was VIII-IX centuries. It is noteworthy to mention that a lot of researches have been done on the science of recitation and tajwid in Arabic, African countries and Spain. [1, 184] However, we have only few researches how this process went on the territory of Central Asia. We should admit that the development of science of tajwid and recitation is contingent upon support and attitude of rulers of a country to this science. Put it another way the more support the folk get, the more Koran reciters and hafizes are on increase.

The emergence of centralized states, economic boost, reconstruction of caravan routes, expansion of trade, development of craftsmanship

and agriculture was knock on effect on development of cultural and spiritual life in Mawarannahr. Along with this, scholars' movement to the central cities of Mawarannahr and Khurasan gave a rise to this process. This scenario is relevant to Temurid period. During the Temurid reign hundreds of works on science of tajwid and recitation were written which are of great importance and value so far. We consider that to do researches on them is actual and consequential these days.

It is important to note that there were masters of recitation and tajwid among the teachers of the most distinguished scholar of Hadith Imam Mohammed Al-Bukhari. One of them is Ubaid Allah ibn MUSAAL-ABASI. He was considered as the apprentice of Imam al-KISOI and KHAMZA AZ-ZAYOT and he learned thoroughly the knowledge of recitation and tajwid from him.[2, 189-190]

The next scholar of recitation who gained popularity among people was contemporary of Imam Bukhari - ABULQASIM KHAYSAM AL-BUKHARI (240/854).

The next prominent scholar of his time and who made a great contribution to the science of recitation and tajwid was Abu Nasr ibn Muhammad as-SAMARKANDI AL-HADDODI. He wrote a book entitled “al Gunya fil-qiroat”. He would use this book as the



teaching source. This peripatetic scholar had many students from different parts of the continent and he used this valuable book to teach them. He left precious information about this book, including all his teachers, their teaching methods. He says in his book: "I am proud of leaving the names of all my teachers in this book. I did it because of following reasons: firstly, I wanted to bless and pray for the teachers. Secondly, I wish my students would follow their ways. Lastly, I let them know that I learned from different scholars. By this action I hoped my student got how getting knowledge from different teachers was beneficial. I mentioned that you wouldn't feel the beauty of recitation unless you picked it up by observing various masters". [3, 97-98].

The following scholar whose nickname "Sadr al-qurro" was Muhammad ibn Muhammad ibn Umar ash-Shihobi al-Gunbazi as Samarkandi (died. 620/1223). He was popular among people as the person who knew popular and rarely met recitations. This information was mentioned by his several students. [3, 384].

Another master of recitation was Abulhasan Ali ibn al-Muqaddsi who was known as "Ibn al-Bukhari" among folk (died. 690/1291). He conducted lessons on recitation and tajwid in madrassah and the main source he used was "Kitab al-Iyjoz". Unfortunately, little information was handed down to us.

The next scholar who was popular with the title "Eastern reciter" was Abdulhomid al-Bukhari az-Zandi (died.700/1300). As he was proficient at seven styles of recitations (qira'at) and knew rare styles of qira'at, many people in Central Asia were eager to learn the secrets and beauty of qira'at from him. Therefore, he had a lot of students from different parts of continent.

In the history of Central Asia XIV century is defined as the blossom of culture and science. At that time the great Temur ruled over the continent. While Temur and his successors ruled the region, science flourished. Islamic sciences are not exception to this either because Temur had a great passion and reverence to Islam. For this reason, Temur and Temurids' princes supported any research on Islamic sciences. One of the branches of Islamic science which thrived was the science of recitation and tajwid. Reciters of Koran were well-respected and those who were masters of recitation and tajwid gained recognition soon among the rulers and folk. The event with great Temur and Khoja Abdulkadir al-Marogi (died. 838/1435) who was a prominent musician and in the meantime reciter and khafiz of that time proves above mentioned statement. He was the author of many books. For instance, "Kanz ulalkhon", "Jome ulalkhon", "Maqosid al-alkhon", "Sharhaladvor". Great poet and writer Alisher Navoi

elucidated this event in his book "Majolis un-nafois". According to him one of Amir Temur's sons, Miranshah, who ruled in Tabriz got drunk. He disrupted justice a lot and began to do unworthy things. This statement reached Samarkand to Amir Temur. The Emir was informed that three of Miranshah's pointers had misled him and allowed him to drink. The Emir ordered them to go to Tabriz as soon as possible and cut off head all three of them. The criminals involved in this terrible punishment were Hodja Abdulkadir, Mawlana Muhammad Qahi and Usta Kutb Noi. The executioner cut the heads of two of them. But the third one escaped. He showed himself as a dotty and walked with the eremite. When Amir Temur made his way to Iraq, it was found that Khoja Abdulkadir was here. He was ordered to be seized. Despite her devotion, Khoja was seized and brought to the Emir. Amir was sitting on the throne. Khoja's main virtue was the recitation of the Qur'an with great pleasure before the death order was issued. When Khoja was captured and brought to the emir, he knelt down and began to read the Qur'an aloud. He was reading with a very pleasant voice. After that, Amir's anger changed with grace. Amir Temur read the following verse to the people of virtue and perfection around him:

Abdol zi biym chang mus'haf zad.

(Eremite shielded the Qur'an from fear.)

Amir Temur accepted the excuse of Khoja Abdulkadir and forgave him. He was pleased with him and made him a guest of honor. [4, 411]

Another scholar who lived in the period of Temurid is Abdulloh as-Saba. He was from Khwarasm and good at seven styles of recitation. The word "As-Saba" means 7 recitations. He was the student of eminent scholar in the world of recitation Abu Ishoq Ibrohim al-Jabari (640-731/1242-1332). Here it is noteworthy to mention another scholar's name from Khwarasm-Ali ibn Muhammad al-Khwarazmi (died.759/1358) who gained qira'ats of ten different recognized schools. Therefore, he was honored with the title "Precious scholar at ten styles of qira'at". Interestingly, we met information in the book "Tabaqot al-muffasirin about another scholar on recitation and tajwid who had the same name as the scholar mentioned above. This". Ali ibn Muhammad al-Khwarazmi (died. 571/1175) wrote a book entitled "Tafsir al-Khwarazmi". Surprisingly, during our research we came across another scholar with the same name who was popular with the title "the pride of sheikhs". Ali ibn al-Khwarazmi (died.560/1165) was the student of Makhmud az-Zamakhshari" who wrote a book about grammar Arabic language. Besides he was the author of tafsir of the Koran. [5, 430-431] There was not any research about above mentioned three scholars with the same name. Perhaps, aforesaid information might be about one and the same scholar but with the different



information.

During our research we found out information about a mutakallim with name Abu Bakr Ahmad ibn Umar as-Samarkandi. He was skilled at recitation and art of Koran calligraphy. According to some sources he died in 813 according Hijri calendar (1410 according to Gregorian calendar). This date comes out from word "bayoz" (بياض) according to abjad alphabetic numeral system. [3, 40]

Academician D. Yusupova in her research gives information about several scholars who lived in Temurid period. For instance: Mavlono Mu'iniddin Farohiy (died. 907/1500), Amir Ihtiyoriddin Hasan Turbati (died.927/1521), Jamoliddin Atoulloh (died. 905/15000), Amir Said Asliddin Abdulloh Husayni (died. 883/1478), Hafiz Giyos (died.872/1468), Shamsiddin Muhammad ibn Sharafiddin Usmon (died. 901/1495), Shaikhulislom Saifuddin Ahmad Taftaoni (died. 916/1511), Kamoliddin Husayn Vaiz Koshifi (823/910), Shamsiddin Muhammad Tabadgoni (891/1486). They were scholars who worked on such Islamic sciences as hadith, tafsir, fiqh, tasawwuuf, recitation. [6, 110-119]

In the period of Timurid dynasty the city Samarkand is noted for being an Islamic center for scholarly study. Different scientists from different parts of the world gathered here. An outstanding scholar on recitation in Islamic world Shamsiddin Jazari paid a visit to Samarkand and his compilation about tajwid rules - Al-Manzumah al-Jazariyyah was written here.

Another master of recitation by name Abdulkhayr Muhammad al-Jazari (751-833/1350-1430) came to Mawarannahr by official request of Amir Temur and led scientific research in Kesh, Samarkand, Nasaf on Islamic sciences. Later he again visited Samarkand when Mirza Ulugbek ruled over the empire. He spent the last days of her life in Shiraz working as kazi (a civil judge).

He left rich scientific heritage to next generation. He is the author of more than ten books. His book written in poetic verse "al-Muqaddima al-Jazariya" had been used as the main teaching source on recitation and tajwid in Mawarannahr madrassahs. Aside from this, his books dedicated to recitation "an-Nashr", "Toyibbat an-Nashr", and "ad-durrat al-muziya" have been used as the main manual in Islamic world of qira'at. What is more, his books "Goyat an-nihoya", and "Nihoyat ad-diroyat" which were about the life and works of scholars on recitation are still popular in Islamic world. Furthermore, his book "al-Hisn al-hasin" devoted to dua (supplication) and zikr (ritual prayer or litany practiced by Muslim mystics (Sūfīs) for the purpose of glorifying God and achieving spiritual perfection) had been in use in the cities of Turkistan till XX century. The copy of manuscripts of his books have been preserved in the Abu Rayhan al-Biruni Institute

of Oriental Studies of the Academy of Sciences of the Republic of Uzbekistan and Research Centre.

The great Uzbek poet Alisher Navai was also good at recitation tajwid. In the chapter of his book "Majolis un-naffois" which devoted Sharafiddin Ali Yazdi he remembers an event when he was 6-year-old boy: "in 1449, my parents drove through the city of Taft, where the famous historian Timur Sharafaddin Ali Yazdi lived at that time. The caravanserai where the travelers stopped was located near the khanaki of Sharafaddin. I was playing with other children, accidentally ran into the courtyard of the khanaki and saw a venerable old man there. The scientist called out to him I sensibly and judiciously answered all the historian's questions. He praised me and asked if I was already going to school. I proudly replied that I was already studying the Qur'an and managed to learn till Tabarak sura<sup>1</sup>. Timur Sharafaddin Ali approved my wit and courage and blessed me". [4, 310] From this story it can be derived that first educational book for children of that time was Koran and six-year-old Alisher Navai learnt by heart Koran to some extent and was able to recite it even in early age of his life.

Due to a lot of sources we know that Alisher Navoi opened up ample opportunities to promote education, science and art by supporting students financially and morally. From the story elucidated in his book "Hamsat ul-mutahayyirin" we can know that how he paid great attention to men of science and students with the desire of getting knowledge. According to this story Khodja Dekhdor had seen in his dream how Abdurakhmon Jomiy urged him to learn by heart holy Koran. After several days Khoja Dekhdor told Alisher Navai his dream. With the recommendation and impetus of him Khoja Dekhdor memorized Koran completely and grew as good hafiz. The following lines also prove what we said above:

Faqir so'iy va bois boldumkim, ul Quron oqib, yod tutti va hob hafizi mjavvid boldi"

( Due to me he learned and memorized Koran and as a result became a good reciter).

After a little while Khoja Dekhdor paid a visit to Abdurakhmon Jomi. Unfortunately, Jomi was at the brink of death. Alas, there was nobody around him who was able to read Koran. He immediately started to read Koran and during his reading Jomi went to final rest. Alisher Navai describing this story he said that Jomi's push him into reading Koran paid off after 30 years. [7, 76]

Alisher Navai's contribution to Koranic sciences was enormous. For instance, according to suggestion of Alisher Navai and under his patronage

<sup>1</sup> This is chapter 67 of the Noble Quran. It is called Surah Al-Mulk



two books on tafsir of Koran—"Javohir at-tafsir" and Mavohibi Aliya" were written.[ 8, 29 ]

It is important to note that in Medieval centuries buildings called "Dor al-Huffoz" were built in almost all cities of Mowarannahr. They served as school for students who wished to learn Koran and lead scientific researches. [9, 470<sup>6</sup>-472<sup>a</sup>] From XX century they began to be called "Qira'athona" and used as madrassah. [10, 54]. The school of this type prepared hafizes. Initially, the word hafiz started to be used from VIII-XV centuries. The word hafiz was used to note a person who learnt by heart more than 1000 hadiths. [ 11, 89] This term was also used to mean a man who memorized Koran and was able to read it in seven styles of Koran. From XVI-XVII centuries onward this word began to be used massively to mean a person who knew a lot of songs and poems.

Notable hafizes (who memorized Koran) of that time was Hafiz Ali Jomi (XV) who was the teacher of Alisher Navai. In his book "Majolis an-nafois" he said: "Hafiz Ali Jomi had a lot of students and I was also one of them. I was proud of being his student and having opportunity to learn from him. [4, 31]. In this book it is also mentioned that Hafiz Jaloliddin Makhmud, Hafiz Yari, Hafiz Muhammad Sultonshoh, Hafiz Sharbati were famous scholars on recitation who lived at that time.

It is worth noting another scholar's name of that time who was adept at recitation - Shamsiddin Muhammad as-Sherozi (725-790/1325-1388). The scholar was able to read Koran by heart and to top off it all he knew 14 styles of reading Koran (10 mutawatir and 4 shaz). [ 12, 257] Therefore, he was known among folk by name Khodja Kafiz Sherozi. As being scholar he gave a comment to Makhmud az-Zamakhshari's tafsir (467-538/1075-1144) entitled "al-Kashshof". He was considered as the student of Azudiddin al—Iyji (died.765/1355) whose books had been used as the main manual in Medieval centuries in madrasshs of Mowarannahr.

The scholar who was known "Hafiz Kohaki" also made a substantial contribution to the developments of recitation and tajwid of Koran. He was the author of more than ten books. One of his books is "ar-Risola fi fan at-tafsir". As its name tells us that it was devoted to the practical aspects of tafsir and kalam. His real name was Sulton Muhammad Hafiz Toshkandi. He lived in Tashkent during the period of Shaybanid. Hafiz Kohaki built madrassah in the yard of his house (in the street Sagban in Tashkent) and worked there as a teacher. [13, 203]. He knew 14 styles of Koran therefore, people used to add the word "hafiz" to his name to show respect.

The land of Mowarannahr was the place which brought up thousands of Islamic scholars and hafizes to the Muslim world. The main reason for this are followings:

- first and foremost, people of that country had a great affection and reverence to holy Koran. For this reason people held a high regard for scholars and those who memorized Koran completely;

- secondly, thirst and lust for gaining knowledge was very high;

- lastly, rulers, wealthy and powerful people supported financially wise men and hafizes. By the patronage of them they toiled in peace for years without concern for their daily sustenance.

One representatives of such kind of rulers is Muhammad Rashidhon. It is known from history that he ruled the state (1534-1560) which was known "Qashgar Khanate" located in Eastern Turkistan. According to Mutrubi Samarkandi's book (964-1039/1556-1629) "Tazkirat ash-shuoro" Abdurashidhon spent most of his time on reading Koran in mosque. [14, 55] In this book the author also mentions about the benefits of reading Koran:

Dardli dillarga davodir Quran,

Majruh jonlarga shifodir Quron.

Istaganing izla sen Qurondan,

Imlar ganjiga ma'vodir Quron.[14, 57]

Koran is a treatment for people with heavy heart

Koran is a cure for wounded hearts

Koran is a source of knowledge

So holy Koran- a solution to every problem of the world

From above mentioned it can be derived that Muhammad Rashidhon appreciated Koran. Apart from having great respect to Koran he was the patron of science especially Koranic sciences. That's why, there were a lot of scholars on recitation and qāris at that time (is a person who recites the Quran with the proper rules of recitation (tajwid). In medieval centuries in Mowarannahr many of rulers were good at Koranic sciences therefore they paid a great attention to the development of them and even raised them to the level of public policy. For instance, due to book "al-Mufrada al-mufida" (927/1521) which was written by Hafizi Kalon one of rulers of Shaybanid khanate Ubaydullahon had a thorough knowledge of tafsir, hadith, fikh, sarf-nahw (Arabic Grammar):

Nazhiroat nazari u kas nest,

Odamero hamin hunar bas nest.

"Shotibiy" ro chunon kunad taqrir,

Ki shavad shod ruzi Shayx Zarir.

Mufradotash Chunon Shuda Mazbut,

Ki, naoyad ba-yodash az mabsut.

Lahni Dovudiyash ravon Baxshad

Dar tani murda kuvvati jon Baxshad [15, 3<sup>6</sup>]....

Meaning: "No one can surpass him in recitation of Koran. He analyzed Shotibi so adeptly



that it was certain that the soul of deceased Sheykh Zarir<sup>2</sup> was content. He memorized simple rules of recitation but never forgot the complex ones. As Dawud he had an extremely beautiful melodies voice in recitation. Whenever he read Koran, any soul could find solace”.

The next person who was master of recitation was Hafizi Kalon Samarkandi. According to “Muzakkiri ahbob” he was one of the respected qaris of his time. Moreover, he was a person who gained complete trust of Shaybani Khan and many hafizes learned from him. [16, 159]. He got a nickname “sohibi waqf hafiz” because he was good at waqf affairs in Koran and his book “Muzakkiri ahbob” was also dedicated to that topic.

The next notable qari of Medieval centuries was Hafiz Merosi (died. 934/1528) who was special imam of Ubaydullakhan. He was one of rare khatibs who was able to read in seven qira’at styles. [16, 110].

Another scholar of recitation who lived during the reign of Ubaydullakhan was Hafiz Mir Akhmad khatib al-Bukhari. He taught students on Shatibiyah. It was said that he was the scholar who was acutely aware of Mālikī madhab principles.[16, 162]. Here it is noteworthy saying that Ubaydullakhan also was hafiz who completely memorized Koran. He learned recitation of holy Koran from Mavlono Yormukhammad qari. [17, 233] Khasankhoja Nisori in his book “Muzakkiri ahbob” says followings about Ubaydullakhan and his interest to Koran: “Among qaris of that time Yormukhammad was the best one therefore, Ubaydullakhan paid great attention to recitation of Koran and never read it without tajwid”. [16, 24]

The scholar by name Yormukhammad was from Samarkand that’s why you can meet his name with his home town name affixed to his personal name. Yormukhammad Samarkandi was the author of the book entitled “Qavoid al-Quran” which was devoted to recitation and tajwid. Imam Osim and his narrators’ qira’at styles and rules illuminated in this book. Its manuscript has been preserving in the Abu Raykhan Beruni Institute of the Oriental Studies of the Academy of Sciences of Uzbekistan. Even Mavlono Ali al-Qari (died. 1014/1606) used this book while writing comment to book “al-Muqaddimat al-Jazari”. “Qavoid al-Quran” was popular in XVI-XIX centuries. The author dedicated it to Ubaydullakhan. Apart from this book another book of this author entitled “Kitab al-Mufrada” was also devoted to khan mentioned above. In introduction part of this book Ubaydullakhan was

described. Some lines of the introduction part are given below:

دايرةً پادشاهی و مرکز مدار شهتشیاهی، قطب فلك خلافت، (در) برج شرف کرامت، بدر آسمان سعادت و شهریارى، آفتاب سماء رفعت کامکاری، والى لواء الولاية فى الأفاق، مالك سرير الخلافة بالآثر و الإستحقاق، ناشر رايات العدل و الإحسان، باسط أجنحة الأمن و الأمان، كاشف أسرار الحقائق، عارف أسرار الدقائق، رافع رأية العلم الى الغاية القصوى، مظهر كلمة الله العليا، المؤيد من السماء بالتأيين و التمكين، المظفر على الأعداء بالفتح المبين و النصر المتين، المستنصر من النصير المستعان أبو الغازى عبيد الله بهادر خان خلد الله تعالى ملكه و سلطانه و أفاض على العالمين بره و إحسانه.

According to this Abdulgozi Ubaydullox bahodirhon is characterized as patron of science, defender of his nation, Allah’s caliph on the earth, symbol of justice and benevolence, defender of God’s words. [18, 4<sup>a.6</sup>.]

Subhankulikhan- a representative of Ashtarhanids dynasty (reign periods-1681-1702) was interested in science of recitation and always supported scholars financially and morally. Consequently, during his reign Islamic sciences developed. For instance, scholar on Quranic recitation Mukhammad Baki ibn Mavlono Tursun Mukhammad ibn Mulla Bobojon ibn Mavlono Miron al Bukhari as-Soktari commented the ode of Shatibi in Persian language. This work is called “Kashf Hirz al-amonī” and written in 1064/1654 year. It was dedicated to Subhankulikhan and it was written when Mukhammad Baki al- Bukhari taught Subhankulikhan “Shatibi”. From aforesaid it can be concluded that Mukhammad Baki al- Bukhari was a teacher of Subhankulikhan.

The comment of the ode “Shatibi” by Mukhammad Baki al- Bukhari was published in Tashkent in 1914 with the comments of Mavlono Ali al-Qari and Muhammad Sho’la (623-656/1226-1258)<sup>3</sup>.

Mukhammad Baki al- Bukhari mentions the names of three scholars on recitation from Mowarranahr who lived prior to him and their works in the introduction part of his book. [ 19, 3]. They are Yormukhammad as-Samarkandi (“Qavoid al-Quran”), Hafiz Badriddin qari Bukhari (Durrat alfarid”), Hafiz Dostmukhammad ibn Yodgor al Vaziri (“Majma al-ajoyib). The latter work was about seven styles of reading Koran and “shaaz” and “ashara” qira’ats. Above mentioned three books have been preserving in the Abu Raykhan Beruni Institute of the Oriental Studies of the Academy of Sciences of Uzbekistan.

This book was written due to Mulla Shoh Mukhammad ibn Mulla Olim Termizi’s request who

<sup>2</sup> Author by Sheykh Zarir means Imam ash-Shatibi, he was blind therefore he used the word “Zarir” which means visual impairment.

<sup>3</sup> It was published in 1914 under the name “Shatibi” by Porsev publishing house. It contains 3 comments. The number of pages: 419+81



was close friend of Mukhammad Baki al- Bukhari. However, to our perspective this book is result of patronage of khans and their curiosity to science of recitation and tajwid.

The publication of “Shatibiya” and three comments in tandem was special event for men of science in Central Asia. About 200 copies of this book were presented to specialists and students in Saudi Arabia. For this reason, it gained popularity not only in madrassahs in Turkistan but also among the students and teachers in Makkah and Madinah. One of enlighteners of that time and in the meantime Muslim modernist reformer, writer, calligrapher, author of several books Sidqi Hondaliqi (1884-1934) wrote epilogue to this book. In it he mentioned that 200 copies of the book were bestowed as a gift.

Another scholar on recitation of XVI-XVII century Hafiz Ma'sumhoja ibn Mukhammad Sodiq al-Keshi al-Ishqi. He knew completely seven styles of reading and preferred to use Imam Nafe qiraat in namaz time. His students and admirers always were entranced by his impressive command of qira'at. [16, 195]

During XVIII-XIX centuries there were written a lot of books on recitation and tajwid in Central Asia, especially in cities Samarkand, Bukhara, Tashkent Kokand. However, those books haven't been learnt thoroughly so far. Doing research on them, comparing with those written by representatives of other countries are the tasks that awaiting their fulfilment.

To recapitulate it can be said that Islamic scholars from Mowarranahr made genuine contribution to the Islamic science in particular, to science of recitation and tajwid. Herein the role of rulers is great because they always supported financially wise men and hafizes. The main reason for this was that they had a great affection and reverence to holy Koran. Furthermore, thirst and lust for gaining knowledge was very high in Mowarranahr. Subsequently all of these factors contributed to the development of science of recitation and tajwid in Mowarranahr.

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## THE ANALYSIS OF RESEARCHES ON KORAN AND THEIR DEVELOPMENT IN UZBEKISTAN

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### ABSTRACT

The present article elucidates the science of Koran, the history of researches on “Tafsir” and their current development in foreign and Uzbek languages. As well as this article brings to light the data about the scientific directions and branches of the above mentioned researches. The author suggests the scientific directions of the researches that are necessary to be done in Uzbek language. According to him a lot of researches on science of Koran have been done in Uzbek language. However, when they are compared with those in Arabic it is revealed that great a deal of work should be done by the Uzbek scientists and in the article he focuses his attention on them.

**KEY WORDS:** Science of Koran, science of “tafsir”, the basis of “tafsir,” interpretation, “mufassir.”

### DISCUSSION

In recent years, there has been noticed an increase in the number of studies on the theoretical and practical study of the Holy Quran. The Quranic sciences-علوم القرآن, known as the “Quranic Studies,” have not only been formed as a separate discipline, but it also has also been expanded in a number of fields. We should mention that a lot of researches have been done on this discipline and as well as new sciences have emerged on the basis of it. In the Middle Ages it was acknowledged as the science of Quran deeply admitted by the narrators and tellers.

In the Middle Ages it was acknowledged as the Quranic science, the narrators, the narrators, and the narrators, because they were descended, ominous, and peculiar. .

The scientific miracles of the Qur'an (القران في جازالعلمي'إل), medicine, astronomy, translation, and other fields are also developing in the Qur'an. For sure, it is hard to say with certainty about Coverage of the Quranic Areas at this time. Every year, the expansion of science and technology extension have given a rise to new research in the field of Quranic studies. In addition, the following four types of sciences should be considered when referring to the Qur'anic sciences:

- Sciences pertaining to information in the Quran;
- Recitation and issues related to it

- The science of interpretation;

- Traditionally the formation of sciences, which have been formed as the traditional sciences, which are relevant to only the studies of Quran. The studies about Quran demonstrate the knowledge about scriptures. Scholars such as Imam al-Zarkashi wrote the books under the title the Quranic sciences [4, p. 107-108].-

Scholars like Imam az-Zarkashi have written the Qur'anic sciences - that is, that title of books written by him.

The article mainly aims at exploring the fundamental sciences; To put it another way, it provides an information about the conventional sciences, so it does not focus on abovementioned intensively developing new fields of Quran.

Another part of the problem is that “tafsir,” which provides such explanations as “comment”, which is one of the basic tools in understanding the meaning of the “Quran.” Though “tafsirs” are a part of the Quranic knowledge, they cannot fully express their essence without commentary.

For example, the concept of “nasikh” and “mansukh” is related to the abrogation of the preceding verse in the next verse and cannot be understood without commentary.

The science of Makki and culture, or the cause of Nuzul, also depend on its content and interpretation.—The other Quranic sciences have also



such kind of correlation. (4, p. 110-111]. From this it can be said that although the knowledge of the “Quran” is vast, it is hardly possible to imagine them apart from the interpretation.

The sciences of “Quran” are well elucidated in the books of the Quranic studies. However, their number and scope are interpreted differently. The Quranic studies, interpretation of Quran, and “tafsir” related disciplines are analyzed traditionally in the researches in Arabic and Western languages, whereas we suggests to learn them by dividing into 5 sections in terms of their scope and essence. While Arabic and Western studies have traditionally analyzed Quranic, interpretative, and related fields, they are here divided into 5 sections, in terms of their scope and substance.

. In our view, we can reveal the essence of the topic in depth by compacting and generalizing themes. In our view, the essence of the essence can be more broadened by compacting and summarizing themes.

Thus they are followings:

1) Science of the Quran. It is a broader concept than science of tafsir, it also deals with exegesis to some extent. The science “Quran” is directly related to the lore of the Quran. Some scholars have also used the name "Basics of Tafsir" in relation to the knowledge of the “Quran”, and have thus, accepted the knowledge of the principles of interpretation as an important part of the knowledge of the Quran.

It is noteworthy to note that a number of books, which have been written on this subject because of the vast scope of the studies about “Quran”. The researches in Arabic outnumber those in other languages. -There are many studies in Arabic,.

Among the first books written in Arabic were “al-Havi fi -Ulumil Quran” by Muhammad ibn Khalaf ibn al-Marzban (dated by 309/921) and "The Wonderful Quran" ("The Wonders of Quran Science") which was written by a scholar of the linguistic field -Muhammad ibn Qasim ibn al-Anbari who was originally from Bagdad]. After the release of the latter book, the phrase sciences of “Quran” began to be used. The Egyptian linguist Ali Ibn Ibrahim al-Khufi (dated b. 430/1039) along with interpreting the verses in “al-Burhan fi Ulumil Quran” states that there exist –various sciences related to the “Quran.” Later such books as "Fununul Afnon fi ajib al-ulum al-Quran" (The various sciences about the wonders of the “Quran”) by Ibn al-Jawzi's and "Al-Murshidul vajiz fima yataallaq bilan Qur'onil aziz" (The Short Guide to the Holy Quran) by Abu Sham (dated by 665/1267) brought into light science of Quran in detail. The excellent

source in this regard is the work of Jalaluddin as-Suyuti (doctrine. 911/1505) by Al-Itqan Fi Ulumil of Quran. It includes all the successes of the books of Muhammad ibn Bakhodir az-Zarkashi, (doctrine. 794/1393), there are given the books of “Al-Burhan fi Ulumil,” as well as in the books of “Jalaluddin al-Balquni.” (doctrine. 824/1421) and Muhuddin al-Kofiji. [7]

In this context, one might also wonder what the accomplishments of such scholars as al-“Zarkashi” and “Al-Balqini” were in the field of interpretation. It is worth noting that there is a great deal of variation in the interpretation of the words التفسير “tafsir” and التويل “tawil” (allegoric interpretation). It is precisely the definition given by al-Zarkashi to be more comprehensive. Tafsir is understanding of the Quran which transmitted to mankind through the prophet Muhammad with the knowledge of lexicon, grammar, morphology, eloquence (*balāghat* and *faṣāḥat*-, principles of fikh (Islamic Law), recitation, nuzul (circumstances of the revelation of a Quranic verse), nasikh' and '*mansukh*' (A text or ruling which has been abrogated is called *mansukh*; a text or ruling which abrogates is known as the *nasikh*) and explaining the words and meaning of the Quran.(5, page13).

True, this definition is broad, but the description of “Al-Zarqani” is relatively straightforward: "Tafsir is a science that the studies the Qur'an, with which a person realizes the purpose of Allah's Word". 3]. In this sense, the science of interpretation is a broad knowledge, and it is not right to limit it to certain definitions or concepts.

“For example, I also define this science as accurate comprehension the content of Quran”.- From XX century onwards the number of researches in Quranic studies significantly increased. For instance, the progress of the studies of “Quran” are specifically investigated by Muhammad Abdulazim, Az-Zarkani (doctrine. 1367/1948) “Manahil al-'Urfan fi 'Ulum al-Qur'an” (sources of learning Quran) and by Muhammad ibn Abdullah "An-Nabaul Azim" (Great News), and also by Subhan Salih, “Mabahis fi Ulumil Quran” by Manna al-Qattan, "At-Tashil liulumit Tanzil" by Muhammad ibn Ahmad al-Garnoti, “Mafotih Tadabburil Qur'an” (Revealing the Qur'an) Khalid Abdulkarim al-Lahim, “Dirasot Fi Ulumil” by Fahd al-Rumi. Furthermore, Al-Imam Al-Shatabi Institute for Quranic Studies has published a study entitled "Dalilul Kitab Al-press Fid Dirosotit Qur'an" [10]. Since that time, it was deeply investigated a great deal of knowledge in the field of the Quranic studies. It was done a research about separate studies, which also have been made in this regard. including:



- Hibatullah al-Muqri's An-Nasih Wal Mansukh" related to the field of narration-science of eloquence and, also -Abu Ja'far al-Nuhhos' "an-Nasih Wal "Mansukh fil Quronil karim" [11];

- Abu Zakariyya al-Nawawi's "al-Tibyan fi adab hamalat al-Quran, related to the science of recitation, and Abu Bakr Muhammad al-Ajri's "Ihtilofu hamalat al-Quran," (Discrepancy among reciters of Quran) Muhammad Umar ibn Salam Bozmu's "Al qiroat va asaruho Fit Tafsir Wal Ahkom" (Recitations and their impact on tafsirs), Abu Al-Khair Muhammad al-Jawzi's "ar-Rawzatun nadiya sharx matn fit tawjeed" Ibn al-Jazari's "Ṭayyibat al-nashr fī al-qirā'āt al-'ashr" (publication about ten types of recitation."

- Abu Ubayda al-Qasim al-Hirawi's "Fasoilul Quran" on the virtues of Surahs and verses, Munira Muhammad Nasir al-Dusoury's "Asmou Suaril Qur'an and Alaihiluha" [12];

- Al-Baqei's works entitled "Masoidun Nazar Lil Ishrof Ala Maqosidus Suvar" about purposes of Surahs and the Relationship between Surahs and Verses, and "Nazmud durar fi tanosibil oyati vas suvar" (Pearls that strung with adequacy of surahs and ayahs) [13];

- the scriptures written by Abul Hasan al-Wahidi on the science of the revelation of verses, such as the "Quran" Asb-ul-Nuzulil [14].

It is worth noting that despite the fact that such books have been written extensively, all of them are devoted to the knowledge of the Quran. Therefore, it is possible to observe the essence of the themes and issues covered in them. However, there are differences in methods, depending on the time period and the researcher's approach.

The Arabic is not the only language in the field of investigation of the "Quran." We can also meet literature on the "Quranic" studies in other languages, such as English, French, Russian and Uzbek. Most of them, however, are translations of Arabic studies or scholarly works based on these studies.

In the Western world, interest in the "Quran" began to appear in the Middle Ages. Ioan Damaskin (d. 749), Nikita Byzantium (IX), Dionysia Bar Salibi (doctrine. 1170), Maimonides (doctrine. 1204) were among the first to interpret the "Quran." Later, the Latin translation of Quran also came into play. However, the serious researches began to take shape in the 19th century and these attempts paid off in the 20th century. A lot of books by Richard Bella (d.—1952), John Edward Wonsbrough (dated by 2002), and William Montgomery Watt (dated by 2006) came to life. A Significant contribution in this field of science were made by Friedrich Schwall (d. 1919), Theodore Northold (dated by 1930), Otto

Pretzill (dated by, 1941) and Arthur Jeffery (dated by. 1959). Julius Velhausen (dated by. 1918), Ignats Goldtsier (dated by 1921), Hartwig Hirschfeld (dated by 1934), Leon Kaetani (dated by 1935), Joseph Schacht (d. 1969), and John Barton. But we can notice ~~are~~ skeptical aspects in the views of John Bartold.—[15]. This is because the hadiths have been invented by Muhammad for the next two centuries, suggesting that other religions and doctrines have been influenced by Islam.

However, it should be noted that in the Western world, there were a number of scholars, who objectively approached towards Islam. In particular, the French orientalist, Imil Dermangam Muhammad was far from being the author of the Quran itself. For instance, Emile Dermangham said that Quran could not be written or made up by Muhammad ,because he had been waiting for the verses to be revealed for a long period of time. According to Shibs, the orientalist: "Some scholars say that the "Quran" is the word of Muhammad. This is clearly a mistake. It is the Word of "God" and it was revealed by God to [or it was transmitted through] his Messenger. Having been illiterate Mohammed could not say such wise words that might lead him from darkness to light and -guide to rightful path to truth. At times, you might be surprised when a European man confesses about these truths. Do not be misled, I have studied the "Quran" and found in it the supreme truths, clearer ideas, and the eloquence which nowhere exists." [16, p. 18-19].

An enormous work on the studies of "Quran" can be found in the Encyclopedia of the "Quran," published in Leiden in the years of 2001-2006. It contains about 1000 articles on this topic. K. Brockkelman [21], F. Muller [22], C. Ryo [23], C.A. Stori [24], J. Wansbrough [25], R.Martin [26], S. Adams [27] , M. Sister [28], A. Rappin [29], F. Denny [30] and other scholars focused on the study of the Quran in their works. From Russian scientists A.E. Krymsky (died 1942), academician. IU Krakkovsky [31] (died in 1951), M. Piatrovskiy [32], E. Rezvan [33], AT Tagirzhanov [34], F.I Abdullaeva [35], K. Koshtalyova, D.Frolov [37] and T. Ibrahim [38] put their effort on the translations of "Quran."

It is worth noting that prolific works have been done in this field of science by Uzbek scholars. For example, "Quran Science" by Sheikh Muhammad Sodiq Muhammad Yusuf, Ph.D A. Abdullaev's manual on the studies of Quran, "Quranic Studies" by a group of scientists. [39] Ph.D., Assoc.professor Abidov chose another method compared to the traditional books on the "Quran" science. His monography is devoted to the



spiritual and historical significance of the subjects of Quran", so it is possible to include it in the series of publications related to Quranic studies. Here we can deduce that a system of the Quran-based sciences is being formed in Uzbekistan today.

Further research will focus on replenishing existing databases, developing new techniques, and penetrating networks. There are also a number of books in Uzbek today regarding the virtues and prayers of the Nuzul, Surahs and verses of the Qur'an [41, p. 304]. However, the lack of in-depth scientific research indicates that there is still a need for further research in areas such as reading, narcissus, and "mansukh," as well as instruments.

2) The basics of interpretation. Scholars have a number of controversial views on the similarity of this knowledge with the Quran and interpretive sciences. However, many researchers claim that it is a science that is separate from Quran and even the science of interpretation. For this reason, some books have been written in this regard. For example, there were written created the following works of the mentioned below writers: such as Khalid Abdurahman Ak "Usulut Tafsir va Qawaiduhu" (Principles of tafsir and its rules), Fahd ibn Abdurahman al-Rumi "Buxus fi usulit tafsir va manohijih" by Musaud ibn Sulaymon,, At-Tayyar "Fusul fi Usit Tafsir", Toha Obidin Hamad "at-Tahrir fi Usit Tafsir" -Hindi "at-Takmil Fi Method of Translation," Abdus Salam coherent Majidiy 'at-Tanwir Fi methods of interpretation", Muhiddin Baltojjiy and "Dirosot Fit Usulih of interpretation" (" interpreted and learn the basics of his works like"), [42].

Indeed, there are many studies on the interpretive science and the fundamentals of interpretation, and the manner and style of writings are often the same. For example, there are similarities in the subject matter, such as the greatness of the science of "tafsir," the terminology, the views of Islamic scholars, the similarities and differences of interpretations and the development of interpretive science, and the transnational and intellectual interpretations. Of course, this process may be specific to the Arab researchers. However, in recent years, some research methods have shown some differences and changes. In particular, Toha Obidin, a lecturer at Umm al-Qura University in Mecca, talks about the phonology and terminology of "Tafsir" in the book "At-Tahrir Fi Usit Tafsir" [43], but divides the terms also with regard to the studies of Quran, the order of the Quran and the science of interpretation. It is noteworthy to say that such a distinction is not observed in all studies, and in the choice of terminology, it interprets both traditional interpretations and interpretations of words, such as

tasteful and expletive, and reveals their differences and similarities [43, p. 85-125].

The following chapters focus on the development of traditional interpretive science, the types of "tafsir," and the Prophet's interpretations, but focuses on the appearance, types and peculiarities of the Prophet's interpretations that are not likely to be encountered in other studies. . In the commentary of the Companions and "Tabieen," the same can be observed for the classification of species, and types. It is also noteworthy to say that this book contains interpretations of interpreters' controversies and how to distinguish them, with directions such as the interpretive, analytical, sociological, comparative, thematic, social, scientific, interrelation of interpretations with realities. .

All of this suggests that, firstly, it is possible to see the uniformity and repetition of themes in Arab-Muslim commentary. This in turn indicates the complementarity and improvement of research.

Second, due to the fact that these scholars are the Muslim scholars, their books contain the interpretive science and high regard for commentators and self-restraint. It is true that there are the mistakes, which are made by Muhammad ibn Ali in interpreting a hadith, narration or quotation [44], the reasons for errors [45, p. 1164], who conducted a number of scientific studies, such as the Israelis, highlighting the shortcomings. However, they still maintain a good standard of conduct.

Third, there have been recent changes in the methods of research in the field of interpretive science, the deepening of the analysis, and the broader distribution of topics. This is also an indication of the extent to which interpretive studies are improving.

In the studies of modern Arabic scholars, it is common to quote the medieval scholars such as Ibn Taymiya (dated by, 728/1327). This can be seen in the studies of Muhammad ibn Ali al-Matari, Hasan ibn Muhammad Shabola, and Taha Obidin [44]. They mainly consist of thoughts on the phases of interpretation and the methods of interpretation. In particular, whether the Prophet conveyed all the meanings of the Quran or was it necessary to clarify the meaning [44, p. 25], where the verses are interpreted as other verses. Refer to Ibn Taymiya, "Introduction to Tafsir Tafsir" (Introduction to the "Tafsir" Science) [46, p. 9-10], and later scholars refer to it. However, it is important to note that the interpretive research is a scientific book, with little or no deviation, and not everyone can read and understand such books.

Today, an international conference of researchers for the Holy Quran and its sciences is being held in Fas, Morocco. We have several



scientific collections of such conferences in which specialists from different parts of the Islamic world regularly participate in the scientific work [47, p. 1318].

Turkish scholars have developed a number of fundamental studies on the basics of interpretation and the science of interpretation in the 20th century. These include Omar Nasuhi Bilme's History of the Great "Tafsir" (History of the Great Interpretation, Ankara, 1960), Ismail Jarrah's son's Tafsir Method (Ankara, 1991) and Muhsin Demirci's Tefsir Style (Istanbul, 2003). These scientific works include the systematic analysis and a mixture of Western and Eastern views.

3) The science of interpretation. A number of studies have been carried out in this regard, including one of the most comprehensive works by Muhammad "Hussein al-Zahabi's At-tafsir Wal Mufasssirin." This is the reason why many researchers turn to him. Also, Hafmat Bashir Yasin at-Tafsiri Sahih, Khalid Uthman al-Sabt's Qawoodut Tafsir Janir and Dirasat, and Muhyiddin al-Kofiji's at-Taysir Fi Rabbit Ilham Tafsir. "The Tanzanul ayat alal waqi "indal Mufasssirin" by Abdulaziz Abdurahman az-Zomir, "The Revelations of the "Quran" to the Prophets." cord). It is important to note that all of these studies have a wide variety of methods along with the proximity of themes. In the Uzbek language, the Associate Professor R.Abidov published in the book "the "Quran" studies and the interpretive sciences" [49]. True, this work is based on the Arabic sources but is one of the first books, which is written in Uzbek.

Nowadays, students of Islamic Studies (Quran) education, which have been prepared on the Introduction to "Tafsir." It provides an overview of the science of interpretation and its fundamentals. However, in the context of the development of interpretive science, these are only books that give basic information. Therefore, more research is needed here.

Books of tafsir have been divided into intellectual and transitional forms since ancient times. Combining them together has also attracted the attention of researchers, and has been quoted by Muhammad ibn Ali al-Shawkani as "The Gift of the Almighty, which combines the narration and narration of the Tafsir." prepared scientific work.

As a result of the development of intellectual interpretations, it has written dozens of commentary books on various topics such as doctrine, jurisprudence, linguistics, and history. An important issue for researchers has been the study of commentary on these topics. These studies include Zayed Omar Abdullah's at-tafsir al-Ma'alithil al-salam (Theoretical and Practical Commentary) and

Salah Abdulfattah al-Khalidi's Theory and Practice of At-Tafsirul. Theoretical Interpretation of the Qur'an by Ziyad Khalil al-Daghamin "At-Tafsirul Thematic and Manhajuhu" by Zahir ibn Iwaz al-Almai "Dirasot fit tafsiril Theorem of the Qur'an." study of thematic interpretation " ), Such as Ahmad ibn Muhammad al-Umri's "Dirasot fit tafsiril thematic lil intentionally reciting the Qur'an" (such as the study of thematic interpretations of the narrations of the Qur'an), such as Mustafa Muslim's "Prophetic interpretation".

It is important to note that in our modern age, intellectual interpretations are being written more often than translators. Due to their variety and orientation, further research in this area is required not only in Arabic but also in Uzbek.

Scholars have commented on the difference between interpretation and interpretation since medieval times. A book by Salah Abdulfattah al-Khalidi, at-Tafsir vat ta'wil elephant, is also written in this regard.

Studies in the field of Tafsirism have evolved so much that books have now been written, not in the general sense, but in the development of interpretative science at a particular time. For example, the famous Fahd ibn Abdur-Rahman ibn Sulayman al-Rumi's "Ittijahotut tafsir elephant qurunir robi 'ashara"; The corrections of the early three centuries in interpretations: practical, political analysis ", such as Abdulqadir Muhammad Salih's "at-tafsir wal mufasssirin elephant century hadith "

As a result of his scientific research in the field of comparative interpretation, Mustafa Ibrahim al-Mishani's work, "At-Tafsirul muqarin diriratan methiliyya" ("Exploring the Origin of Comparative Studies") [52]. In addition, the book Ikhtilaful mufasssirin explains the differences between some books of commentary. At the same time, researchers have focused on explaining which interpretations are superior and acceptable in the eyes of commentators, and have published books such as "Qawidut translate indal mufasssirin dirasatan theoretically" (53). Comparative Critical Studies is one of the most evolving areas. It is possible to clarify many issues in the comparison. Therefore, it is time to do research in this area. The study of about a dozen translations in one Uzbek language is considered as a separate scientific work. At the same time, special attention should be paid to the comparison of Arabic interpretations. After all, the International Islamic Academy of Uzbekistan is a subject of comparative study of interpretations of the Qur'an, with a master's degree in "Quranic studies", with a focus on comparisons.

By the twentieth century, studies on the scientific activities of a particular commentator were also prepared. They mainly explain the contribution



of a commentator to the field of interpretation. These include Muhammad Bakr Ismail's "Ibn Jarir al-Tabari and the Minhajuhu Fit Tafsir," by Ahmad Mohammed al-Sharqani, "The Role of Shawkani in Tafsir Science Relationships", by Bahreddin Setir's "Ebu'l-Berekâ" Nasafî and Medârik Tafsîr "(Interpretation of Abul Barakot an-Nasafi and Madaric), Ph.D., Assoc. A.Abdullaev "The role of Abu Lays Samarkand in the interpretation of Movarounnahr", Ph.D. H.Lutfullaev, Ph.D., Assoc. Mahsudov's "Abul Barakot al-Nasafi and his work" Madarik at-Tanzil and True At-Tawil ". Researchers are still looking at the manuscripts available and preparing their facsimile editions. This is supported by Ph.D. One example is the publication of the Turkish translation of the Jacob Tarki commentary by I.Usmanov and G.Saidova. It is true that there is some research in the Uzbek language to study the legacy of certain interpreters. However, it must be acknowledged that they are far behind research in other Muslim countries. So much has to be done in this regard, too.

With the development of modern science and technology, interpretation has developed, and it has blended with modern science. In this context, studies have also been conducted that reflect the advances in modern science. These include Suleiman ibn Salih al-Qarawawi's book "At-Tafsirul Scientific Contemporary and the Most Beautiful and the Most Beautiful." Books in the series "Miracles of the Qur'an" have even been published in Uzbek. But in today's fast-paced science, there are probably hundreds of such studies. In this regard, there is still much to be done in this area.

4) Interpretation terms. Mohammed Abdur-Rahman ash-Shawi's 'Mujamul Mustalahot ulumil Qur'an', by 'Abul Hasan Ali al-Jurjani' at-Ta'ifat, by At-Tayyib al-Buhali's 'Mafhumus salam al-Qura wa hadith Sharif', such as the Dirosot Mustalahiya (The Explorations of the Unseen) by Idris Mawliidi, The Idea of the Unseen in the Qur'an and Hadith. Therefore, it is necessary to do research in the Uzbek language on the Qur'an.

5) Another area of study in the field of interpretation is the study of the life and work of commentators. This area is known as the stratum mufassirinom, and many studies have been done in this regard. The earliest such works were written in general, not separated from scholars in other fields. Examples of compact classification are Imam al-Bayzawi's "Mukhtasar min tabaqatil mufassirin." Later, in the 10th century Hijri (16th century CE), a separate book of Tabaqat was devoted to commentators. For example, the book Tabaqat al-Mufassirin by Jaloluddin al-Suyuti contains

biographies and academic heritage of 136 commentators.

Shamsuddin al-Dawudi, a disciple of al-Suyuti, also included in his book Tabaqatul mufassirin, supplementing the information quoted by As-Suyuti. Muhammad ibn Ali ibn Ahmad Shamsuddin al-Dawudi al-Maliki (d. 945/1538) was one of the leaders of the science of Hadith of his time, the author of the perfect work in the Tabaqat series. He quotes alphabetical commentators from the tenth century onwards in his work. A manuscript copy of Ad-Dawudi's own handwriting is available in the Turkish Asad Efendi Library, which has 193 pages. The work begins with the name of 'Umar' [56, p. 8].

Not only did the authors of Tabaqat report the life and scientific heritage of the commentators, they also divided them into different communities. One such scholar, Manno al-Katton, divided the interpreters into nine teams. Ahmad ibn Muhammad al-Adnawi, in his "Tabaqat al-Mufassirin," has been to a number of groups, from the Companions to the 100th year of the Hijri.

As-SuyutiMufassers were assigned to the following four communities [57, p. 8-9]:

- Interpreters of the Companions, the Taabi and the Tabi'in;

- The commentators of the hadiths. The commentators of the two communities mentioned above are also mentioned in the books on jurisprudence;

- The rest of the commentators of the Ahl as-Sunna wa'l-community. They used such interpretations as interpretations, kalam, nahw, glossary in their interpretations. Today, this group of commentators is very popular

- Mu'tazilah, Shi'a, and so on.

Those in the first and second teams are called "translators", those in the third team are "translators," and those in the fourth team are "heretics." The scholars of the Hanafi madhhab, considered in this article, are third-party commentators.

In his time, Ahmad al-Adnawi also wrote the book Tabaqatul mufassirin, which in our book contains information about 638 commentators in a more compact way. According to the author, the book is a source of historical, stratified, tarojim and manoque works. In particular, the book Nafahatul uns by Abdurahman Jami was used. However, these are compact data. In addition, Muhammad Mahmud Hur's book At-Tafsir wa Rijoluhu: Manhajun Teaching lil Maohidil Qur'an (58) explores commentators who are commentators.

So far, Adil Nuwayhiz has done a great deal of research in this area and has tried to thoroughly



study the commentators from the Companions to the twentieth century. From this point of view, this is one of the most complete books in the category of caste we know. When interpreting books, it was found that there were more than two thousand two hundred. They include all of the Qur'an, some of which are written or commented on, or commentary on, existing interpretations.

It is noteworthy that there are also books on the controversial views among the commentators, among them Saud ibn Abdullah al-Fanison's book "The Differential Instruments."

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## THE ROLE OF BAKHSHI EPIC ART IN THE SPIRITUAL EDUCATION OF YOUNG PEOPLE

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### DISCUSSION

Our scientists estimate that the period of formation of our musical heritage is 4,000 years. For many years, our musical heritage has been formed in two directions, developed in common with each other and formed a musical heritage with its own attractive qualities. Therefore, our rich musical heritage of the Uzbek people, including the musical traditions of the Surkhan ethno-folklore in the direction of the epic, still serves our people as a product of oral creativity. In the process of spiritual growth of our nation, it is the great responsibility of every master and watchmaker to carry out such works as the restoration of our national values, their application in the upbringing of the younger generation. The art of baxshi is a complex psychological-physiological process and is the most active form of moral education of young people. Therefore, in baxshi live human perfection and the spirit of the nation. The peculiarities of the ethno-folklore of the Uzbek people are an important factor in the development and formation of the nation. The fact that ethno-folklore masterpieces have been passed down from our ancestors is also reflected in musical instruments and epics. Uzbek folk ethno-folklore has a thousand-year history. Especially in the nomadic and

semi-nomadic and settled cattle-breeding tribes living in the territory of "Qarliqlar" the art of epic poetry has a great reputation and created great epics.

Surkhan Bakhchis and epic art are Sherabad, Beshkutan and Boysun schools of epic poetry, and Surkhan baxhs have performed Alpomish, Kuntugmish, Gorogly, Avazkhan and many other national epics in the "inner voice" style. The style of the Surkhan school of epic poetry is also reflected in the works of Bakhshi "Delay" in Dehkanabad, Kamashi, Kokbulak and the Republic of Tajikistan, and in these epics vividly expresses the ideas of patriotism, humanity, friendship, courage and social ideas of the people. That is why in 2001, Boysun district, the cradle of Surkhandarya's traditional national values, was recognized by UNESCO as a "Pearl of Folk Oral and Creative Monuments."

There are also distinctive instruments of the Surkhandarya oasis, such as chanqovuz, sibizga and other national instruments, which are as follows: Chanqovuz appeared in the first century BC. Such musical instruments are Dalvarzintepa. Found in archeological excavations such as Old Termez, Kampirtepa and Ayrptom.





Sibizga is a musical instrument of the people of Surkhandarya oasis. This instrument is made of

ordinary reeds and expresses people's feelings, dreams and desires in unique melodies.



article was written for this purpose, and a number of tasks were introduced to the students to further develop the dynamics of the art of baxshi, to develop their skills of baxshi, to bring them up with a delicate taste and to bring them up to the level of high shinavan.

In conclusion, the comprehensive physical and spiritual formation of a healthy generation through the inculcation of our national values and ethno-musical foundations in the minds of our youth is of great importance today.

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## **DEVELOPMENT OF FINE ARTS IN UZBEKISTAN** **(The concept of composition in the fine arts)**

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### **DISCUSSION**

Independence gave our country not only political freedom, but also the freedom to live as a nation, the freedom to think independently. Due to this, we had the opportunity to study the field of art, its history from the point of view of secularism and humanity.

On the basis of the words of the President of the Republic of Uzbekistan Sh.M.Mirziyoev: "**We consider it our priority to improve the activities of all links of the education system in accordance with modern requirements**" [1] the idea of creating a unified system of education, a deeper emphasis on radically improving the effectiveness of education and preparing young people for independent living.

The role of art, especially fine arts, is of great importance for the further development of education in our country. Fine art plays an important role in enriching people's imaginations and shaping their aesthetic tastes.

Before we study the fine arts, we must first look at the history of its development. And then, of course, we have to study the types and genres of fine arts diligently. The development of the history of fine arts dates back to prehistoric times. The murals in the caves, the stone and bone figurines, and the ornate aesthetic ornaments on the stone slabs and fragments of deer antlers still exist long before the conscious creation of human art.

Among the types and genres of fine arts, especially the genre of manjara is distinguished by its uniqueness and unique attractive colors. An artist who works in the genre of landscape must first be able to make the right choice when creating a composition. Composition is very important in the visual arts.

As the President said, "The development of our national spirituality today is inconceivable without examples of fine arts. The fact that Uzbek artists have been creating and achieving new successes in recent years, and that many young talents are entering this field, testifies to its development and prospects. Similar positive changes can be observed

in the field of monumental art. As you know, monumental art means, first of all, complexes of monumental statues and monuments of great influence." [2]

We deeply feel that art must meet aesthetic needs and serve the public aesthetically. It helps to understand that a person is not only an artist when he creates, directly when he creates works of art, but also when he perceives works of art. That is why today it is necessary to teach us to understand and analyze our material and spiritual wealth, works of art.

One of the important features of art, including composition in the visual arts, is that it is present in all types and genres of the fine arts. It serves to develop a person's spiritual thinking.

That is why today we have everything from education to the press, television, the Internet and other media, theater, cinema, literature, music, painting and sculpture, in short, to the human heart and mind. We must further strengthen our activities in all spheres of direct influence on the basis of the spiritual needs of the people, the requirements of the times, and raise them to a new level.

Speaking about this, it should be noted that the representatives of this field, ie teachers and coaches, writers and journalists, film and theater people, musicians and artists, in general, our intellectuals are moving to a market economy, which is a new reality for our people. who has a deep sense of his spiritual duty to society in the age of teeth, is working diligently without sacrificing his talent and mastery. [3]

In the fine arts, the concept of composition is one of the most ancient trends. Composition as a subject appeared after pencil and painting, and now the composition course is included in the curriculum of higher education professions.

In the art and graphics faculties of pedagogical universities, the science of composition teaches students how to accurately describe the rules of composition, while developing their creative abilities.



In fine art, composition is created by visual means such as pencil, shadow, light, color, air, and line perspective.

The composition course is of great importance in the figurative thinking of students in their independent creative and pedagogical activities. Composition consists of conversations, lectures and practical exercises. The composition is thoroughly studied by students in the course of practical exercises and conversations, the basic laws, rules, methods and tools.

Composition is an integral part of the study of special disciplines such as sculpture, architecture, graphics, pencil, painting, art history.

Therefore, the rules of composition should be thoroughly mastered by future professionals in order to impart perfect knowledge to the next generation.

The laws and rules of composition in the fine arts have been formed since the time of the primitive development of mankind. While primitive people observed life with the mind, the sense of composition is very empty. We can see this in the chaotic, separate images of the human body and animals. In education, educational technology in the subject of "Painting composition" is developed based on the rules of application of new technologies in higher education. In the fine arts, the disciplines of pencil, painting and composition are taught.

"Composition" is present in all genres of fine and applied arts and is the main basis of the work.

The word composition comes from the Latin "Kompositio" - to compare pieces of objects and put them together in a certain order, to describe the creation according to the idea, to compose.

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The composition course is of great importance in the figurative thinking of students in their independent creative and pedagogical activities. Composition consists of conversations, lectures and practical exercises. The composition is thoroughly studied by students in the course of practical exercises and conversations, the basic laws, rules, methods and tools. Composition is an integral part of the study of special disciplines such as sculpture, architecture, graphics, pencil, painting, art history.

In pencil and painting, the artist directly addresses the basics of composition, without knowing its rules, he does not understand the essence of composition, pencil, painting.

The composition of ancient oriental art is very different from that of primitive times. In the ancient East, the theme of composition was depicted in a strictly defined order on the plains, subject to the ritual laws of slavery.

The first new methods of composition began to appear in ancient Egyptian art. This is the result of the conscious development of social life in society. In the image, the relationship of line, size, color and hue has reached a high level.

Artists of the ancient world began to understand the concepts of symmetry and rhythm in the structure of plants, leaves and flowers created by nature, the sequence of the seasons, and began to apply them in their creative work, composition. Therefore, the ancient Greeks made effective use of rhythm and symmetry in relief, frontal compositions. Until the Renaissance, no theoretical textbook on composition was created. So, during the years of independence, Uzbekistan has shown a special creative research in all areas of fine arts, expanding the range of historical, cultural and moral values, the principles of renewal - the effective work of artists on new artistic interpretations.

Today, all the conditions are created for young people to study and show their talents and abilities. In the work of young artists, the conditions are given to them in such a way that art schools and universities meet modern requirements. It is the duty of every child of this country to make a worthy contribution to the development of our country, using the opportunities effectively and meaningfully, thankfully for the conditions created for us.

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## COMMENTS ON THE FORMATION OF SURKHANDARYA INSTRUMENTAL ART

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### ABSTRACT

*This article analyzes the information provided in the scientific and historical pamphlets on the Uzbek national musical instruments and comments on the formation of the art of instrumental performance in the southern region of the country and its current place.*

**KEYWORDS:** *Instrumental performance, Ayritom, Dalvrzintepa, Kholchayon, Chagoniyon, dombra, changqovuz, daf, sibizga, nay, reed nay, ceramic nay, gajir nay, mavrigi, duchava.*

### DISCUSSION

The national musical instruments, which are an invaluable asset of the Uzbek people, have a special place in the Uzbek national musical culture due to their uniqueness, attractiveness of patterns, variety of sound and unparalleled performance capabilities. Musical instruments have long played an important role in the spiritual life of the Uzbek people and are closely linked with everyday life. They still have a role to play in shaping people's worldviews. In particular, the art of instrumental performance has been formed by our ancestors as a unique aesthetic tool for centuries and has aroused great interest not only in the science of music, but also in modern music. Exploring all its features and aspects will help to enrich the practice of instrumental performance.

It is known from history that Uzbek folk instruments have developed over the centuries in a colorful, unique way, forming instruments suitable for all branches of music.

The great poets of the past have repeatedly used words in their works to mention the names of musical instruments. In particular, the great thinker and poet Alisher Navoi, who has reached the level of enlightenment with his work, emphasizes the most delicate and classical branches of musicology.

Historical manuscripts, literary works, and musical treatises contain the names of all the musical instruments that appeared in the practice of the peoples of Central Asia. Musical pamphlets contain information about the instruments (shape, structure, strings, preparation criteria, trees used for the instruments, etc.).

Among them are stringed instruments: borbad, ud, rud, kabuz, gijjak, navha, nuzha, kanun, chang, rubob, tanbur, dutor; from the words damli: ruhafzo, shammoma, organun, sibizga, nayi anbon, chagona, bulamon, surnay, nay, koshnay, karnay; from percussion instruments: daf, doyra, drum, safoil, etc. with different levels of information.

Abu Nasr Farobi, Abdurahman Jami, Amuli, Darvesh Ali Changi, Abdurauf Fitrat, Viktor



Belyayev in their treatises pay great attention to the words of instruments, their role in practice, some philosophical features and to some extent their classification. illuminated.

Musical instruments have generally been used in a variety of performing practices. First of all, it should be noted that the simplest instruments were created and widely used in everyday life. Such instruments exist in the musical world of every nation and are still in use today. Among the instruments that are preserved and used in the practice of Uzbek folklore are the changqovuz and sibizga. These instruments are also easy to make and play.

The science of instrumental science is called "organology" and provides a scientific basis for the formation, application and development of musical words. Along with a number of Eastern and Western scholars, Uzbek musicologists have conducted worthy research in the development of this science.

The history of Surkhandarya dates back to ancient times. This land is recognized by archaeologists as a sacred place where primitive man lived. Finds from the Middle Paleolithic period between 100,000 and 40,000 BC in the foothills of the Boysuntag Range, as well as the presence of fossilized traces of dinosaurs crawling 60 million years ago, indicate the importance of the region in world cultural life.

Ancient instruments were discovered through historical monuments and later described in history, literature, and musical treatises. The earliest depictions of musical instruments are found in caves, rock carvings, palaces, and terracotta sculptures.

It has been found in Central Asia and Uzbekistan in the excavations of such ancient sites as Afrosiyob (Samarkand), Ayritom, Kholchayon, Dalvarzintepa (Surkhandarya), Varakhsha (Bukhara), Zartepa, Sheep Castle (Old Urgench), Panjikent sketches and sculptures are among them. Ancient paintings depict the harp, oud, flute, and percussion. The need for musical instruments can be seen in these pictures. This is because the photos show not only soloists or the instrument itself, but also historical ensemble found in the Ayritom excavations in Surkhandarya, an ensemble typical of the ancient Sughd culture, that is, a group of musicians performing in groups.

The art of instrumental music plays an important role in the rich musical culture of the Uzbek people. The monuments of fine arts testify to the fact that musical instruments have existed since ancient times and are widespread among the people, as well as their somewhat improved.

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# MUSICIANS FROM SURKHANDARYA AND THEIR GREAT CONTRIBUTION TO THE DEVELOPMENT OF MUSICAL PERFORMANCE

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## DISCUSSION

Independence gave our country not only political freedom, but also the freedom to live as a nation, the freedom to think independently. Due to this, we had the opportunity to study the field of art, its history from the point of view of secularism and humanity.

On the basis of the words of the President of the Republic of Uzbekistan Sh.M.Mirziyoev: "**We consider it our primary task to improve the activities of all links of the education system in accordance with modern requirements**" [1]. the idea of creating a unified system of education, a deeper emphasis on radically improving the effectiveness of education and preparing young people for independent living. Therefore, in the process of educating and educating young people, of course, the art of music has a special role. for art invites man to goodness, and it is worth noting that in order to study art in depth, we must begin with the study of history.

Surkhandarya region has a rich historical heritage. It includes genres of musical performance, such as duchava and mavrigi, which have emerged in the art of instrumental performance over the centuries.

In the field of musical performance, such musical instruments as the dombra, changqovuz, daf, sibizga, nay, kamysh nay, sopol nay, gajir nay and surnay are traditionally used among the local population. In the 20th century, the dutar, rubab, tar, afghan rubobi, gijjak, accordion, clarinet, violin and harmonica became popular among artists.

It is advisable to start the study of musical instrument performance in Surkhandarya region by studying the traditions of musical instrument performance in each district. Based on the data collected in this way, it is possible to get an overview of the performance of musical instruments in Surkhandarya region. It is necessary to organize scientific expeditions to study the performance of musical instruments in the districts. During the expedition, a comparative analysis of the data obtained on the performance of musical instruments in the regions. Information about the performers, the melodies they play, when they learned them, and so on. The results can be used to map the future performance of musical instruments in the Surkhandarya oasis. At the beginning of this work it is necessary to start from Termez, the center of Surkhandarya.

Of course, it is difficult to imagine the rich spiritual world of the Uzbek people without the art of instrumental performance. Surkhandarya instrumental art also contributes to this spiritual richness.

The fact that the 5,000-year-old bone flute found in the ruins of Afrosiyab is still used in the same way in Boysun district is a great news for experts in the field. Thus, the contribution of the great scholars of musical instruments of Uzbekistan and the history of performance in them to the development of music, medieval music performance, performance on musical instruments in the XIX-XX centuries, their reconstruction, improvement, 'he made a great contribution to the development of his performance. Famous musicians from Surkhandarya,



who made a great contribution to the development of musical performance, are described in this article.

Kholov ChoPONqul Eshankulovich was born in 1964 in Uzun district. In 1982 he entered the Tajik Institute of Arts. In 1987 he was hired by the Tajik Radio and Television. Collaborated with many teachers. For example: Barno Isokova, Nurio Aminov, Ahmad Bobokulov, Nison Shoulov, Shohista Mullomanova and others.

Mirzayeva Muhayyo Zayniyevna was born in 1966 in the city of Termez. In 1981 he entered the music school. After graduating in 1985, he entered the Tashkent State Conservatory. In 1998 he entered the Termez State Pedagogical Institute. In 1999 he completed his postgraduate studies and in 2002 became a candidate of pedagogical sciences, defending his dissertation on "Music science in the development of our pedagogical thought in Central Asia and the tradition of studying musical words in it." In 2001 he worked at the Tashkent State Institute of Culture. He is currently pursuing research in Germany.

Zarif Alimov was born in 1940 in the village of Karabakh, Sherabad district. While still in school, he became interested in art and formed amateur clubs. He first learned the secrets of rubab from Bori Bakiyev and then Mirzayev.

Azam Kadyrov was born in 1950 in the city of Termez. After graduating in 1966, he began working in the Denau district. In 1973, he began teaching rubab at the Glier Music School in Termez, where he taught rubab to young musicians until his retirement age.

Kurban Choriyev, Aminov Fayzullo Bobokhojajevich, Abduhalil Egamov.

Normurad Bakarov was born in 1956 in Termez district. He entered the Tashkent State Conservatory in 1975 and was taught by Vasilev FN, Ergashev and AN Kholmukhamedov. From 1985 to 1991 he was the head of the department of folk instruments, from 1999 to 2004 he was a teacher at the Department of Music of Termez State University, senior lecturer, acting associate professor. In 2004 he continued his work at the Termez College of Arts, where he worked as the head of the department of traditional performance, folk instruments and traditional performance.

Klara Mardayeva was born in 1952 in the city of Termez, Surkhandarya region. He was the first to open an "Afghan rubabi" class in Surkhandarya region. Besides, Kurban Choriyev, Aminov Fayzullo Bobokhojajevich and Abduhalil Egamov have made significant contributions in this area. In short, just as musical instruments do not require translation, they do not recognize national or national boundaries. That is why most of the musical instruments that we

recognize as Uzbek national instruments are found in other nations and regions in the same or slightly different form. The art of Surkhan instrumental performance should be recognized as an integral part of the commonality of melodies in instrumental performance.

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## MUSICAL SCIENCE OF ABDURAHMAN JAMI

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### DISCUSSION

Abdurahman Nuriddin Abdurahman Jami was born on November 7, 1414 in the city of Jam of Khorasan (1414-1492). His father Nizamiddin Ahmad was a great priest - Sheikh-ul-Islam. During Jami's infancy, the family moved to Herat, where Abdurahman Jami began to study very early. He soon learned to read and write with variety and enthusiasm. After high school, he began to study at the Dilkash Madrasa in Herat under the tutelage of the great literary scholar Mawlana Jonayd. In particular, Jami reads with great enthusiasm the books "Mukhtasar al-maonn" and "Mutawwal" by the famous Central Asian philologist Sa'daddin Mas'ud Taftazani (1322-1389). Jami Taftozani's student Jojarmi and the famous teacher Aloiddin Ali Samarkandi takes Not content with his education in Herat, he came to Samarkand to improve his knowledge, studied at the Ulugbek madrasah, and attended classes of Rumi and famous scholars.

He became a murid of Sheikh Sadaddin Kashgari (died 1456), a follower of Bahauddin Naqshband, and studied mysticism.

He deals with the theoretical issues of Sufism, the works of Sufi philosophers such as Sheikh Muhyiddin ibn al-Arabi (1165-1240), rejects secularism and pessimism, and fights the ascetics ruthlessly.

One of his students, Abdul Ghafur Lori, said, "Master Jami used to spend his time doing more useful things, and the rest of his time was devoted to the service of educating the people," says Kitab Jami's close friend, an integral part of reading, and and creativity was his constant occupation.

Jami creates a number of artistic, scientific and religious-mystical works, is a mentor to many scientific and artistic-literary minds of Herat and other cities, and an arbiter of scientific and literary debates. His reputation is growing day by day. The Timurid rulers, Hussein Boykaro, as well as the governors of the surrounding lands and provinces, honored Jami and rewarded him with gifts. He spends most of his income on landscaping, science, art and literature.

For example, he built two madrassas and a

khanqah in the Alley near Herat, built a mosque in Jam, bought land and donated it to the mosque. "If they see someone in need," Abdulgafur Lori writes, "they will help him immediately. If they had anything extra, they would give it to the poor." Jami himself lived a very simple and humble life. (His humble life and virtues are narrated in the works of his contemporaries.)

In the fall of 1472, Jami set out for Mecca. Along with performing Hajj, he hoped to visit the countries of the East, meet the scholars and poets of those places, and see his absent friends. The trip lasts a year and 5 months.

After returning from the trip, Jami will continue his creative work, create new works, make many students, and his fame will grow.

The great poet and thinker of the fraternal Tajik people Nuriddin Abdurahmon Jami died on November 8, 1492. His death was a great loss for science, art and literature. The whole of Herat mourned. Many people from near and far have come to offer condolences. Jami's only son, Yusuf, was still 15 years old. Alisher Navoi, a student, friend and colleague of Jami, was a child to both mourners and mourners. Thousands attended the funeral. The history of mourning and mourning of poets is over.

Jami is a very prolific scholar and writer. During his creative activity, which lasted about 50 years, he created many works of art, philosophy, science and religion-mysticism. There are many manuscripts and editions of these works belonging to different periods. Some of his autographs have also survived. Some of them are kept at the Institute of Oriental Studies of the Academy of Sciences of Uzbekistan. Other rare manuscripts of Jami's works date back to the 16th century. The most important of these is Kulliyoti Jami, which was copied in the early 16th century and kept at the Institute of Oriental Studies in Tashkent, and includes 37 works. His works have been published several times in Central Asia, Iran, India and elsewhere.

Jami's place in the history of 15th-century culture is especially marked by his works of art. Jami is a great poet and writer. He created works in almost all genres of 15th century literature, continued and



developed the traditions of the great word artists before him, and added immortal monuments to the treasury of world literature with his high artistic works.

Abdurahman Jami was engaged in music, among other sciences. The theory of intervals has been studied extensively in the East in the past. But there is a big difference between the old modern concepts. For example, in theory, if  $\frac{3}{4}$  is understood as the ratio of the exact denominator to three, and three fractions to four, it is taken as the (agreed) approximate accepted sound relation. Accordingly, a sound marked by the exact numbers of each status was developed by earlier musicologists. However, it must be acknowledged that mathematically expressed *bodhisattvas* are not always absolute units. This idea is clearly stated in Abdurahman Jami's *Risale-i Musiqi*. Similarly, if there are slight differences in this division, the discussion, criticism, and objections are inappropriate from an anecdotal point of view.

The theory of intervals has been extensively studied by Oriental musicologists in the past. But there is a big difference between the language of old musicology and modern concepts. In the works of Farabi and Ibn Sina, the *bodhisattvas* were expressed in terms of numbers and ratios, but now they are used in the form of units denoted by words. For example, in theory, *zul arba* means a certain amount of denominator (ratio of four to three, three fractions is four), but in practice it is taken as an approximate sound ratio. Accordingly, earlier musicologists have developed a sound table of each status marked with exact numbers. However, it must be acknowledged that mathematically expressed *bodhisattvas* are not always absolute units. This idea is clearly stated in Abdurahman Jami's "Musical treatise". However, the final criterion in this science of identifying seventeen *nagma* denominations is listening.

In A. Jami's preface to the "Musical Booklet" it was acknowledged that the *ghazal* in the spirit of praise corresponds exactly to the verses that sounded like an irrational "big song" before the *Sarakhbors*.

### Basic concepts

1. A.Jami - Well-known scientist and musician.
2. Mawlana Junayd is the teacher of Jami.
3. "Kulliyoti Jami" - contains 37 works of Jami

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## THE SECT OF MYSTICISM IN THE INTERPRETATION OF ALISHER NAVOI

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### ABSTRACT

*The supplied article presents data on the definition of mysticism, the idea of mysticism, and a philosophical and ideological analysis of the ghazal by Alisher Navoi on mysticism. Through the analysis of the ghazals by Navoi the fact that a person (a mystic) of mysticism mustn't have conflict in his soul, he must have good morals, and live his life without hypocrisy and greed, and be polite, and mustn't have no place for other love in his heart other than the love for God is highlighted.*

**KEYWORDS:** *mysticism, mystic, conflict (duality), good morals, austerity, piety, worship, hypocrisy, divine love, perfection, unity, diversity, unity of existence.*

### INTRODUCTION

In the commentary of each couplet of the Ghazal, the characteristics of the mystics, the aspiration of the mystic towards perfection are revealed on the basis of a religious-mystical outlook, attaining the enlightenment and wisdom of Allah by embodying the attributes of Allah. In philosophical and ideological analysis, the meaning and essence of mystical terms and phrases and poetic lines are

### DISCUSSION

Sufism – the path of purity, the doctrine of purity. It is a doctrine deeply rooted in Oriental poetry. Pure divine love, the concepts of God and truth, pure human qualities, perfection, vanity, love and human concepts, purity, the joy of love for the absolute God symbolizing justice and truth are the basis of mystical ideas. While mystical ideas had a profound effect on the people of creation, and attracted the creative people in “a rebellious spirit whose heart is troubled by the sorrows of humanity,” the mystical literature and a wonderful Sufi poetry full of emotion emerged. Hundreds of Sufi poets such as Robiya Adawiya, Mansur Hallaj, Abdullah Ansari, Abu Said Abulkhair, Pahlavon Mahmud, Umar Khayyam, Farididdin Attar, Jalaliddin Rumi, Abdurahman Jami,

explained on the basis of verses of the Qur'an, hadiths and the connections with them. By the sect of mysticism, Navoi meant that a person who has attained the stages of perfection of the sect and combines himself the qualities of good morals, selfless piety, kindness, purity, impartiality, and can unite his body with the body of God. It is concluded that it is based on the doctrine of "unity of existence".

Alisher Navoi, Bedil and Mashrab expressed the ideas of mysticism through their poems.

Without a thorough knowledge of the mysticism deeply rooted in the history of Eastern thought, it is difficult to accurately and truthfully illuminate the outlook and literary heritage of these poets and thinkers in all their complexity and philosophical depth. From the 11th century onwards, all the influential poets and writers, thinkers and scholars of the East were nourished by mysticism and inspired by its ideas of humanity and patriotism. With this in mind, the famous scholar E.E. Bertels stated at the beginning of the century: "Without the study of mystical literature, it is impossible to get an idea of the cultural life of the medieval Muslim East



... without knowledge of this literature it is far too difficult to understand the East itself." (Bertels E.E. Sufism and Sufi literature. - M.: Nauka. 1965. p. 54.)

There are given various definitions of mysticism. In particular, Junaid Baghdadi says "Sufism is that Allah kills the "you" in you and resurrects you in His sight."

Abul Hafs al-Haddad says "Sufism is of completely pure and moral manners". Usmon Turar. History of Sufism. Page 17.

In the thirteenth and fourteenth centuries, mysticism reached its peak, both in theoretical and scientific terms, and in terms of practical mobility. The heyday of mystical literature also coincided with this period. In the works of many poets, secularism and divinity appear together. In the works by Fariduddin Attar, Anvari, Umar Khayyam, Saadi Sherazi, Jalaliddin Rumi, Nasir Bukhari, Hafiz Sherozi, Kamal Khojandi, Jami and Navoi, the beauty of the world is interpreted as a reflection or shadow of divine beauty.

The ideas of mysticism also play a leading role in Navoi's work. Navoi's works and heritage are such a great treasure, from which one can find many different ideas and opinions related to the solution of human problems.

There is a ghazal dedicated to the interpretation of mysticism in the devan "Favoyidulkibar" by Alisher Navoi. The poem begins with the following verses:

**Бировгамусаллам<sup>1</sup> тариқи<sup>2</sup> тасаввуф,  
Кизотидамавжудэмастуртахаллуф<sup>3</sup>.**

Meaning:

***Whoever likes the path of mysticism  
there should be no conflict in his soul  
(heart).***

According to the verse, whoever follows the path of mysticism, his generation should not do any contradictory actions and mustn't have contradictions or deviations from that path. This can also be understood as the fact that such a person is worthy of the path of mysticism and can enter it if there is no disagreement in the human nature (heart) about realizing Allah. When mysticism is expressed in a simpler language, it can be said that a person gives (Allah's) heart a place for Allah. According to our religious doctrine, the devil is the cause of discords of humans. It is said that when the devil tempts him, one asks Allah for refuge by remembering and mentioning His name. Indeed, the

Qur'an states, "Surely, there is no kingdom – dominance for those who believe and obey their Creator alone" (Nahl, 99). Trusting in Allah and obeying Him ensures that the devil cannot rule the soul and that there is no conflict in humans. So, it is clear from the verse that mysticism is to keep Allah in the heart that is the owner of souls, and to give a place to Allah in one's heart. This opens the way to human perfection. If a person continues on the path and the light of love for God falls on his heart, he will reach Allah in his presence. This is the path of mysticism.

**Тасаввуфризоаҳлидиняхшиахлоқ,  
Эруристилоҳоти<sup>4</sup> зебу<sup>5</sup> такаллуф<sup>6</sup>.**

Meaning:

***Sufism is the good morality of those  
who put their trust in Allah,  
it is called a beautiful action.***

Just as the Prophet Muhammad (peace and blessings of Allah be upon him) was told, "Surely you are above the Great Character" (Qalam, 4), so the mystics aspired to such a "Great Character" and "good morals". The Messenger of Allah, may Allah bless him and grant him peace, said, "I was sent as a prophet to perfect great behaviours." (Surah al-Qalam, in the explanation of the 4<sup>th</sup> verse).

Mystics are the people of generosity, contentment, religion, travel and gestures. These are the ones who fight all the imperfections in human behavior and all the evils.

In the humans, Lust and Rahman are always in conflict. In man, good morals are a process that arises as a result of overcoming the lusts of one's instincts. Fighting this way is not an easy task, of course. If a person wants to get rid of the trap of lust in his existence and attain the satisfaction of Allah, he must submit himself to Allah in this way. Without this, man cannot overcome conflict in his existence and cannot achieve unity. He cannot leave a place for Allah in his heart, and as a result he cannot attain the satisfaction. Satisfaction means, no matter what happens, being satisfied with Allah and submitting himself to Allah, obeying Allah. Satisfaction is the removal of filth from soul, obedience to the judgment until the death, and the entry into the satisfaction of Allah, abandoning the pleasure of lust. Lohiji said "Satisfaction is the fact that a person goes out of his consent and enters into the consent of his beloved without making any objection to the divine destiny". He also says that a person in this position never has anger, excitement, offence or resentment from anything. The people of satisfaction are those who

<sup>1</sup>Мусаллам – surrendered, obeyed.

<sup>2</sup>Тарик – way, advice.

<sup>3</sup>Тахаллуф – doing something wrong, deviation.

<sup>4</sup>Истилоҳот – terms.

<sup>5</sup>Зеб – decoration, beauty.

<sup>6</sup>Такаллуф – superficialness.



follow the confession, knowing that everything that happens to them is only by the will of Allah. As the people of satisfaction struggle in this way and strive to reform themselves, they are able to overcome the conflicts of their own kind, and they gradually acquire "good morals" through these actions. This is to stand in mysticism.

**Тасаввуфэмасзүхду<sup>1</sup>тақвию<sup>2</sup>тоат<sup>3</sup>,  
Киандариё<sup>4</sup>йўлтопарбетаваққуф<sup>5</sup>.**

Meaning:

*Sufism is not just about worship, godliness. If so, it would be hypocritical to ask for something in return for worshipping. Sufism is free from hypocrisy and greed.*

Austerity – one of the main principles in the early days of Sufism was asceticism, which means "abandonment, leaving by neglecting it, lack of interest and paying no attention". In mysticism, on the other hand, it means not paying attention to anything other than Allah, that is, to disregarding the pleasure. The transient, deceptive, and insignificant worthlessness of the world in the afterlife is expressed through certain verses and hadiths, and the life of asceticism is recommended ... "It has been made beautiful for people to pay attention to their desires, such as women, children, endless gold, silver, riches, (expensive) horses, livestock, and crops. However, the life of these things is the (temporary) things of the world. In the sight of Allah, there is a beautiful place to return to – Paradise" (Ali Imran, 14), and other verses remind us not to intend to have the world things too much, the real idea is to achieve the afterlife. Muhammad a.s. in some hadiths praised austerity: "Be so ascetic in this world that Allah shall love you ...". It seems that the original idea of asceticism and austerity is to attain the life of the Hereafter through piety and prayer, and to attain the love of Allah. So, why doesn't Navoi equate mysticism with this?! In other words, he emphasizes that "mysticism is not austere piety and worship". According to Navoi, there is nothing greater than gaining the Hereafter and earning the love of Allah. So, what is mysticism for Navoi?!

**Зоҳид, сенга ҳуру менга жанона керак,  
Жаннат сенга бўлсин, менга майхона кер  
Майхона аро соқию паймона керак,  
Паймона неча бўлса тўла ёна керак.**

<sup>1</sup>Зухд – godliness.

<sup>2</sup>Тақво – тақвий – 1) austerity; 2) godliness.

<sup>3</sup>Тоат – obedience.

<sup>4</sup>Риё – greed, hypocrisy.

<sup>5</sup>Бетаваққуф – unstoppable.

Meaning:

*O worshiper, may the angels be for you, Allah is sufficient for me,*

*I have given you Paradise, and I need a place where those who love Allah can gather.*

*There is a need for a guide who shares the joys of the love of Allah and a heart full of love,*

*The more love in his heart, the more he must burn.*

[4] Alisher Navoi. Works. Volume XIII. Tashkent. "Fan", 1966.

In this rubai, Hazrat Navoi addresses the ascetic, giving him freedom and paradise, and considers himself worthy of "janona" and "mayxona". In this case, the terms "janona" (sweetheart), "mayxona" (groggery), "soqiy" (wine sharer) are mystical terms, meaning "janona" – Allah, "mayxona" – a place where people of love gather, and "soqiy" – a master who shares love". He emphasizes that he burns with all his body and soul, no matter how many steps he takes in the path of love for Allah. This is the motto and message of the people of love – the lovers of Allah. They do not consider that the worship for Allah which states the hope of Paradise or the fear of the torment of Hell is not the goal of the people of True Love. Furthermore, the goal of the people of love – the lovers of Allah, is not to achieve what the Creator has created, but to reach the Creator himself. They have such a love for the Creator in their souls that this love is the basis for them to go beyond their own existence and seek only Allah without asking for anything in return. There is no dimension or limit to such love. This is able to destroy any measure and order of a mystic, and burn his existence, and turn it to ashes. Such a hand of love turns off the light coming from the mind to the abode of the mind. If the hand of love blows fiercely and quickly, it will shatter the balance of the mind.

The following verses of Hazrat Navoi in the epic "Hayrat ul-abror" are a proof of this:

**Ишқ елин еткурубон тунду тез,  
Ақл алочугин этиб рез-рез.**

**Ҳам учуриб зүҳду вараъ хирманин,  
Ҳам совуруб сабру сукун масканин.**

Meaning:

*As the wind of Love for Allah grows stronger and faster, the balance of the mind is disturbed.*

*This wind blows away obedience and piety and destroy any patience and peace.*

It is natural to remember a story about Robiya Adviya: It is said that one day Robiya was



walking down the street with a fire in one hand and water in the other. "What's the matter, what do you want to do with it?" Asked the people around him. "I will set fire to heaven with fire, so that people will not walk in the hope of entering paradise, and I will extinguish the fire of hell with water, so that people will be saved from this fear and suffering forever," replied Robiya. [1,67] Abdulla Sher. Ethics. T. 2003 y. Page 67. With this she mentions that one should perform worship for Allah with sincere love, thanking Him for His unconditional gratitude and for life given by Him. Rabia explains that the truth of eternity is the essence of the Divine Enlightenment of Love.

The famous Sufi woman Rabia Adwiya (714-801) cried out to Allah in her supplications: "O my God! if I obey in the desire of your paradise, get me deprived of your paradise, if I pray in fear of your hell, burn me in the fire of hell – I agree with this a thousand times! But if I spend nights awake for Your beauty, I beg you, do not deprive me of your beauty" She begged like this.

It is clear from the verse of the Ghazal that mysticism is a path without hypocrisy, in which greed must never be allowed.

The continuation of the verses has the same meaning:

**Эрурмаҳз<sup>1</sup>тақвийвалкинриёсиз,  
Убудияти<sup>2</sup>сарфуайниталаттуф<sup>3</sup>.**

Meaning:

*Sufism is pure piety, free from hypocrisy and greed.*

*It is to serve Allah with sincere love.*

The doctrine of mysticism is that there is no place in the human soul for anything other than for Allah and praying for Him, and that one should refrain from anything that hinders the path of falsehood and walk through the path of Truth and in return should not wish anything from Allah.

Navoi emphasizes that man should be kind, loving and gentle in his treatment of Allah's creations, even when he is hurt by others and that the relationship is built on the basis of selflessness and kindness and that he should strive to embody and maintain high kindness. And love for Allah raises the Sufi to such a position.

In the work "Nasayim ul-Muhabbat" Navoi emphasizes three features that characterize a true mystic. The first is not to be offended when narrow-minded wrongdoers offend. The second is not to hurt anyone, even when it is permissible to hurt them. Third, and most importantly, not unreasonably

discriminate against people of other religions or sects. [Ibrahim Haqqul. Sufism and poetry. –T. : Literature and Art Publishing House, 1991. Page 4]

It is said in the Qur'an: "Do you not know that Allah has made for you whatever is in the skies and whatever is on the earth, and has perfected for you both outward and inward favors?" (Surah al-Luqman, the 20<sup>th</sup> verse).

In harmony with the verses by Navoi, it is understood from the verses in the Qur'an that it is a gift given by Allah to the people to serve the things of the sky and earth. At the same time, that He has perfected outward and inward blessings for human beings, that those who know this have a mutually gratifying and objective relationship with things in the sky and on the earth, and that this is the manifestation of outward and inward perfection in human beings.

Indeed, mysticism is a pure and perfect doctrine.

**Не элқавлу<sup>4</sup>феълигаандинтаадди<sup>5</sup>,  
Не ҳақамрунаҳйи<sup>6</sup>гаандинтасарруф<sup>7</sup>.**

Meaning:

*Sufis do not aggress against the words and deeds of the people,*

*They are free to obey the command of Allah and not to do what He forbids.*

As long as a person is endowed with high kindness and good morals, a person who strives for perfection in achieving it must know that acting against the words and deeds of others is violence and oppression, and he must refrain from such acts. Navoi emphasizes that mystics strive to remain in the ranks of good morals and to do good deeds. The Qur'an states: "Verily, Allāh has calls to justice, and to do beautiful actions, and to do goodness to relations, and has forbidden immorality, evil and violent things" (Nahl, 90). The mystics strictly adhered to these commands and to refrain from what was forbidden.

**Ўзнийўлабеихтиёранглабонким,  
Не қолибтараддуд<sup>8</sup>анга, не таассуф.**

Meaning:

*A Sufi who has achieved the position of deeply feeling the will of Allah in his heart with his love for Allah now thinks that he is so involuntary (free) that there is no hesitation, no doubt, no regret in his heart.*

<sup>4</sup>Қавл - word, sentence.

<sup>5</sup>Таадди – 1) rivalry; 2) violence.

<sup>6</sup>Наҳй – forbiddance, prevention.

<sup>7</sup>Тасарруф – occupation, obtainment.

<sup>8</sup>Тараддуд – hesitation, doubt.

<sup>1</sup>Маҳз – pure, fresh

<sup>2</sup>Убудият – obidience.

<sup>3</sup>Талаттуф – kindness.



A person who has attained the rank of deeply feeling the will of Allah in his heart with his love for Allah now realizes that he is so unwilling that there is no hesitation or doubt, or sorrow in his heart. This is the status of obedience. A person who has attained the status of obedience understands the enlightenment of Allah. Indeed, "enlightenment is a science that precedes thought and leaves no trace of doubt." (Sufism-1. P. 36). Obedience is all good and bad events, knowing that things are from God, relying on Allah. Obedience is the faith of one who believes in divine grace. This is a high-level faith that comes from the perfection of enlightenment. Relying on God in all situations and actions, considering oneself an instrument of activity, entrusting everything to God, and deeply believing that everything other than God is also from God. (Sufism, 1, p. 27) The Sufis had a deep understanding of the meaning of the verse in the Qur'an, "He is the First, the Last, the Outward, the Inward ..." (Hadid, 3). Those who understood the enlightenment of Allah felt that he was eternal, that all creation was from him, and that he would appear in everything he created. On the surface, they have observed that their existence is from Allah, and that in their hearts, only Allah is reflected.

The last verse of the ghazal expresses the main idea of mysticism. This unity of existence is the disappearance of the human body in the body of Allah.

**ҚилибҲақвужудидамаҳе<sup>1</sup>ўзвужудин,  
Навоий, мунибилтариқитасавуф.**

Meaning:

*Navoi, consider the destruction of one's own being in the being of Allah as the way of Sufism.*

According to the people of unity, all creation is one, and it is the being of God. There is no being other than the being of God. As the mystic destroys his being in the being of God, he attains unity – he ceases to see himself, he considers his being, not only his own being, but also all beings (beings) as the being of God (unity). Only then will he "die" in God's being and attain perfection in the presence of God – will be resurrected, realizing God with His attributes. Navoi describes this as a mystical way of mysticism. On the contrary, as long as the mystic sees himself (a body separate from the body of God) in the body, the conflict (plurality) of the creature is preserved. As long as he sees conflict – he is not from the people of unity. He cannot destroy himself in the body of God, and he cannot reach the goal – perfection.

The views about mysticism and mystics, which Navoi acknowledges, state that the whole

universe and presence came into being from a single foundation in terms of the essence of creation, and that human existence is part of this foundation. Mystics consider it appropriate that they should treat others like themselves in their relations to being and man, and that they can attain perfection only if they have good morals, a pure heart, a tasteless life, and good deeds.

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<sup>1</sup>Маҳб – 1)to get rid of 2) vanishing.



## **THE ROLE OF THE TIME NOTE OF WORK CREATION IN THE CONTENT EXPRESSION**

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### **ANNOTATION**

*The article discusses the elements of the frame, which are an integral part of the composition of the lyrical work, in particular, the influence of "the time note of the work creation" on the expression of its content. The central part of the article is that a literary work is a social phenomenon.*

### **INTRODUCTION**

The fact that any radical change that happened in society is reflected in the literature is revealed in the example of the time note of the work creation. Works written between 1980 and 1986 were selected for analysis. At that time, Uzbekistan was part of the USSR, and the mood in the society to secede from it and achieve independence was growing. This social phenomenon has risen to the level of a work problem and is covered on a variety of selected topics. Although a historical theme was chosen in these poems, it was shown that the problem dated back to the time the work was created. The fact that the problem dates back to the time the work was created can only be understood by looking at the years. The author refers to the time when a concrete work was written by the example of poems by M. Kenjabek, M. Abdulkhokim and E. Shukur and he implies that work can be understood differently ignoring it and points out that the time note written on this basis is an important element that directs the reader to a correct understanding of the content of the work. While reading the work, the reader should pay attention to the time note of the work creation and be aware of the social life and important events of the time in which it was created. This allows the reader to correctly understand the work and the subject matter that the creator mentioned. Moreover, it is concluded that the

time note of the work creation is described as an integral part of the external composition (architectonics), and it is incorrect to omit this element in some publications.

### **DISCUSSION**

When it comes to the textual structure of a lyrical work, its "external composition", the concepts of the "adjacent text" and the "main text" are differentiated. The term "frame elements" is also used as an alternative to the term, as the accompanying text is generally considered to contain elements that limit the main text. Units such as title, epigraph, dedication, genre, place and time note of work creation are understood as adjacent text or frame elements [2.14]. It is widely common to start reading without considering that the before mentioned things are important, and turning a blind eye to them, for example, to start reading directly from the main part of the work. However, the more important the main text is to fully understand the content of the work, the more valuable the elements of the frame are. It should be noted that we are far from the idea that "nothing can be understood from a work read without taking into account the elements of the frame". What we mean is that the content which is intended by the creator in the process of creating a work and the relevance of the content which is recreated during the reading depends



in many ways on whether the elements of the framework are taken into account. We will try to prove our point on the example of one of these elements – the time note of the work.

In the epigraph of Mirzo Kenjabek's work named "Alpomish's Return to Boysun-Kungrad" [6.20], when the phrases "Alpomish, coming out of captivity... He's coming towards Boysun-Kungrad" is analyzed from the point of view of the time, this can be understood that "owing to the colonial regime, our epic poems, which are examples of the folklore, have long been in captivity, but now they have returned to us because of independence". Moreover, since the epic poem is named after the protagonist, the title seems to support the idea that "the epic poem is about to return to the country." In the first stanza of the poem, the lyrical protagonist's glance at the "Familiar Mountains" and "Silver Snowy Mountains", at the same time bringing back their memories of the times of their own, expresses his gratitude for the present times. In conclusion, in the poem it can be understood that the gratitude of the lyrical hero for Alpomish's return to the country and the feelings of his gratitude for the current perfection of his country, and his contentment about the descendants who brought the country to the present day are reflected. In the history of our people, there have been various forms of dependence. The urge to "slaves" in the verse "You are spreading the word of your time, slaves" [6.20] is understood by the lyrical protagonist as referring to his compatriots who have not seen the light, but the word "slaves" seems to melt a little. It is understood that the address "slaves" in the verse "You are enjoying your time that has come, slaves" might be said by the lyrical protagonist as referring to a people – his compatriots who has never seen light and goodness, but the word "slaves" seems a bit strange.

Now let us try to reinterpret the work, taking into account the time note, coming back to the time in which the work was created. This work was written in 1986-1987. The creator chooses the appropriate theme (the theme of the work) to achieve his artistic goal (problem of the work). The theme of the work appears in various forms. As the problem concerns the same period in which the work was created, the subject can be chosen from the past, present, or future. It is not so difficult to understand a work as the subject is common to the time the work was created or to all times. But if the subject is about the past, then the system of images in the work is condensed. To connect the described history and the problem of the work, the reader is required to have experience and the ability to read a

literary work. Let's look at how the epic "Alpomish" is connected with the situation in our society in the second half of the 80s. At the same time, in our country, in terms of the theme chosen by the creator, it was the period when Ultontoz ruled. It was a time when the oppression of the enemy was at its height, and injustices were unbearable, taking use of the fact that the brave man owning the country was in the Kalmoks' land (the name of a tribe). At that moment, the people relied on their hero and were ready to follow him and fight the enemy. In short, Boysun that was ruled by Ultontoz, described in the epic, and Uzbekistan in the 1980s were in the same situation.

The author's opinion about the starting point of the historical process, such as the achievement of independence, is given in the epigraph of the work. "Alpomish, coming out of captivity... He's coming towards Boysun-Kungrad; (In the folklore there is a motive to believe that in the days of oppression, of course, a hero will come and put an end to them all) ... he is coming looking at the mountains, the gardens, the herds, the camels, and asking, "Whose are these?". He is coming stroking the head of a man who replies "these are Alpomish's" and beating him up whoever replies "these are Ulton's"... It is far from the truth that independence is a long-awaited blessing. Unfortunately, there were such people who were children of this very country and representatives of the same nation, they benefited from our remaining under colonial oppression (it wouldn't be surprising that we had become colonized because of those people). The lyrical protagonist knows that the primary task should be to determine who is on the side of Alpomish and who is on the side of Ultontoz. That is why this issue is included in the epigraph of the work.

Details about the mood of the struggle for independence, the conditions of its emergence, how it began are all reflected in the initial verses of the work:

**Nazar soldim tanish tog'lar ko'rindi,  
Tog' boshida kumush qog'lar ko'rindi,  
Ko'zlarimga so'lu sog'lar bir zamon  
O'zirniki bo'lgan chog'lar ko'rindi.**  
[6.20]

Meaning:

*I looked around and saw mountains familiar to me.*

*I saw silver-like snowy pieces of ground on top of the mountain.*

*Through this, I remembered that once upon a time, all sides were mine.*



The mountains are, above all, a symbol of glory. The puddles and the waters on their heads (snowy mountain peaks) are the signs of perfection, full life and height. In the initial verses, the lyrical hero greatly appreciates the homeland he knows. The more he realized that this great country had once belonged to him, the more he realized that it was now owned by others. It is safe to say that this mood of the lyrical hero

belongs to the conscious population stratum, who were well-informed about their past, living with the troubles of the people in the years of creation of the work. Those who do not belong to this stratum can be called "the crowd saying "hooray-hooray" like a herd driven after them looked back with a sigh of relief after nearly seventy years of running." In general, the people that understood who this country had belonged to and for whom it was serving had the following legitimate question:

**Hey jo‘ralar, tanish tog‘lar kimniki?  
Hey to‘ralar, kumush bog‘lar kimniki?  
[6.20]**

Meaning:

*O my friends, whose are these mountains now?*

*Whom does the silver-like snowy pieces of ground on top of the mountain now belong to?*

The people who realized themselves in the search for answers to these questions have reached today. It is clear that the above-mentioned the address "slaves" was applied not to our people, but to the colonialists when taking into account the time note of the work creation. At this point, from the verse saying "You are enjoying your time that has come, slaves" is understood the bitter irony of "You were nobody, and you ruled over my people "You were nobody, and you ruled over my people just because of your luck."

It can also be said that the reader has the right to understand both of the contents described above while reading. However, this rule cannot be applied to the poem in question. Because the time note, which is an integral part of it, is a clear indication of how to understand it.

At the end of the work, the author quotes the followings: "...This is a very old epic that is numerous... I repeated one that once happened on my own ... let others say the rest." It is impossible to explain the significance of such a historical event in a single poem. As the poet points out, there are many

works created under the influence of this process. If folklore is chosen for the above theme, one can see pure historical reality and an address to the protagonist in another poem.

**Unutmayman yot tuprog‘ida  
Xorazmning ko‘zyosh, xunlarin  
Men sog‘indim juda sog‘indim  
Jayhunimning o‘z toshqinlarin. [7.34]**  
Meaning:

(Jalaliddin says) *I was persecuted in another country,*

*I will never forget that the Khorezm people demanded revenge with tears in their eyes .*

*Standing here, I missed the Jaihun River's fast noisy flowing in my homeland.*

Although the work at first glance evokes the memory of the difficult days caused by the mistakes of the past, the work acquires a new meaning, taking into account the period in which it was created. Matnazar Abdulhakim's work "Jaloliddin", written in 1986, describes the missing (longing) of the lyrical hero. The most valuable part of the topic is the phrase "their own floods". It is possible to understand from the missing (longing) that the floods are his own and he cannot own them at the moment. Because a person always misses what he first tasted. This work, at the time of its creation, refers to the political situation in our country.

**Ishonaman ertami-kechmi  
Daf bo‘ladi yurtidan mo‘g‘ullar.**

Meaning:

*I believe that sooner or later the invading Mongols will disappear from my country.*

As the work was written through the language of Jalaliddin, we all know that his enemy was the Mongols. Relying on the fact that literature is a literal generalization, the colonial Mongols created the image of the colonial Soviet Union for our country at the end of the last century. Their imminent departure from the country is also a symbol of hope for brighter days. In the work of another creator, this hope becomes confidence. In his work, he

expresses the theme and the problem in unity. Eshqobil Shukur, who looked at these days with great confidence, even managed to ask the people "Joy-money (something such as money, etc. given for a



surprising event as a tip)". Man asks for joy-money for his long-awaited dream. Why the lyrical protagonist asks for joy-money is determined by the time note of the work creation.

Er kabi quyoshdan aylanay,  
Tunlari moylarga belanur.  
Bir ajib to'ylarga shaylanay,  
Yuragim shodlikka uylanur. [8.84]

Meaning:

*I will be with light as the earth goes  
round the sun.*

*The moon appeared in my dark nights.*

*I am preparing for the light.*

*My heart marries joy and makes  
weddings.*

Considering the literally predictive nature of a literary work, it can be said that at that time many artists began to imagine the future around the concept of independence through their works. Concerning this feature of literature, Aristotle in his "Poetics" wrote so: "...Life lies based on poetry; the poet reflects the events that have taken place, are happening and can happen"[2.8].

The sun is a symbol of light. It is also true that the earth constantly goes round the sun. But at this point there is a reference to the phrase "let me go round" inherited from the people's grandmothers. It is possible to understand the meaning of "let me go round (continuously like the earth) in the bright days." This content indicates how much the brighter days have been expected by the lyrical protagonist. Hope for bright days is a constant experience. It is clear from the second verse that the work is about the period we are talking about. "Night" is an expression of darkness, oppression. But the nights with "moons" are much more different and more promising than dark nights. Though the nights come with the moon, it is still night, it is not a daytime. But the third verse witnesses how hopeful the creator is about the morning. A wedding is a joy, a meeting achieved after a long longing and gathering of close or not close people because of happiness. Marriage, on the other hand, is a symbol of eternal companionship with his/her beloved (with long-awaited bright days). Getting ready for weddings, feeling the breath of independence was the mood which was typical of around 1984, when that very work was created. Although the efforts to achieve independence have been observed in various forms before (the Jadids), in the 80s and 90s of the last century they

chose their clear path. Although independence had not yet been officially achieved, its winds began to blow noticeably. This process was so intense that it was impossible not to become one of the primary subjects of literature.

Shirin-shakar kunlar kelmoqda,  
Suyganlarim suyunchi bering. [8.84]

Meaning:

*The sweet-sugar days are coming,  
My dears, give me joy-money.*

At the end of the work, the goal is openly stated. At this point it becomes completely clear why "joy-money" is being asked. To predict that today's "sweet-sugar" days will come, the poet analyzed the

period in which he was creating and came to this conclusion.

Any change that has appeared in society does not happen by itself. As long as the changes take place between units of time, of course, it has a tendency to happen on its own. Literature reflects life, and therefore any significant change that takes place in society is reflected in the literary work. Because both the creator and the reader are components of this society. They both express their reaction to these changes and are hopeful about it. Therefore, during the reading, keeping in mind the conditions of the period, which is known from the time note of the work creation, is an important factor in understanding the essence of its content.

## CONCLUSION

To sum up, any historical process leaves its mark on the literature. After all, as a leader in the community, the creator understands these changes more deeply and accurately than anyone else, and reflects them in his works

and expresses his attitude to them. Accordingly, in order to understand the work, the reader must feel the problems troubling the creator, and must be aware of the time in which the work was created, and consider all its important aspects while reading.



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## **SOCIO-SPIRITUAL AND ETHICAL ASPECTS OF CIVIL POSITION FORMATION AT YOUNG PEOPLE**

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### **ANNOTATION**

*The feature of the reforms pointed at modernizing the country and building a strong civil society in the Republic of Uzbekistan is reflected in improving the lifestyle of the population, raising the level of political and legal culture and the formation of a clear civic position.*

**KEY WORDS:** *Civic position, civic culture, civic duty, civic responsibility, youth, youth policy, a perfect man, a harmoniously developed generation.*

### **DISCUSSION**

Citizens of Uzbekistan are equal rights and equal responsibilities, regardless of nationality, race, sex, profession, social origin under the law as citizens. Therefore, to solve the existing problems, as one of the urgent tasks, is to educate citizens so that they know their civil rights and protect themselves, as well as a deep understanding of their duties. As this process is a source of spiritual maturity for citizens, it also plays an important role in further increasing their responsibility in this regard. That is why the construction of a democratic society in Uzbekistan is based on the concept of transition from a strong state to a strong civil society. It is clear that a person is given freedom in each article of the law in a certain direction. However, it is important that such an order, direction, or opportunity were not introduced to reveal the freedom of a single citizen. Perhaps this legal norm has an equal basis for all. However, all members of society must create their freedoms equally on the basis of this principle.<sup>1</sup>

Also, the democratic state and civil society that we are building must be strong today. First, this requires educating citizens, especially young people, to be well educated, thoughtful, and aware of the traditions and spiritual values of their past, patriotic, truthful and selfless. Educating a perfect human

personality is the most complex and difficult process. It is essential to carry out this process by absorbing national values in their minds. This means that today's young generation will have a deeper understanding of the essence of independence if they know their history, culture, national values, language, religion and customs perfectly. It is clear that civil society can be developed based on these national values.

It consists that cultural and spiritual views, moral values, traditions, religious and spiritual feelings instilled in a person from an early age. In this connection, he or she feels the unity in his family, relatives, neighborhood, nation, country, as in integral part of it. As a result, a sense of national pride and patriotism is formed in his or her mind and heart. In this process, a true civic position is formed in the individual. The sense of citizenship is formed based on "cultural processes passed down from generation to generation, changing the rare blessings of historical heritage, ensuring the integral connection of moral values with the past and the future."<sup>2</sup>

One of the main criteria of civil society is that citizens have a high level of consciousness and culture. From this point of view, in civil society there is a great need and attention to those who are active,

<sup>1</sup> Musaev F. Legal basis of freedom// "Tafakkur" magazine. – Tashkent. - №2. p 84.

<sup>2</sup> B. L. Gubman. Sense of history. Studies on modern western concepts. – M, 1991. – p 15



enterprising, enthusiastic, living only with creativity, creative spirit and mood. Such a high intellectual potential is inextricably linked with the degree to which freedom of thought is formed. The real economic conveniences and opportunities created by society for man, his or her legal rights, and the established moral and spiritual environment must be reconciled with the pursuit of free, progressive and lofty ideals in his or her thinking. According to our scientists, the approach of citizens to social reality has a high rate and based on a new, independent and freethinking. At the same time, from the point of view of psychologists and sociologists, the development of the emerging civil society in many respectively requires the correction of individual consciousness, character and worldview.

At present, civil society needs for and responsibility for a similar system of public administration – democracy and has set itself the task of further shaping, the high spiritual potential of each citizen, the way of philosophical thinking in our country. Indeed, before solving the problems faced by humanity, it is necessary to weigh everything on the scales of reason, to anticipate the possible consequences of the practical steps, which, it takes. Education plays an invaluable role in raising civic culture. The main goal we set today is to pay more attention to educating the conscious, freethinking, modern-minded people, committed to national and universal values, and to accept these issues as the main task of educational reform. The new model of education, created and implemented based on the Law "About Education" and the National Training Program, is shaping its new educational process to achieve this goal. After completing nine years of secondary education, our children have the opportunity to continue their education in two types of three-year schools - academic lyceums and vocational colleges, depending on their will and aspirations, and those who graduate have the same rights to enter higher education. We must not forget that enlightenment is in the blood of our people, our nation. From ancient times, the concept of "enlightened person" has a much broader meaning. According to the traditional Eastern view, enlightenment means not only knowledge and skills, but also deep spirituality and good morals. When our people say that they are educated and mature people, they think of like such people. That is why the whole essence of our national model of training is connected with our national history and life. Thus, Uzbekistan has created a national model of training that is directly unique, based on our unique, great history and traditions, and, at the same time, can meet the requirements of modern times. This means the nationality of our program and model.

In our country, the foundations of civil society are being formed and one of the most important tasks, increase the activity of our youth, develop in their sense of duty and responsibility for the nation. That is why today, there are classes and training courses aimed at improving the intellectual potential of young people at all stages of the education system. The implementation of these efforts, the strengthening of skills to apply their knowledge in practice, as well as the support of young people with active citizenship in this area will bring results in the future. After all, the purpose of modern education is to create an opportunity for everyone and to acquire new necessary knowledge for their work and apply it in society. Therefore, educational and training work should be aimed at raising the level of intellectual consciousness and culture of the individual in the realization of the most important principles that meet the interests of man, society and the state. Especially, it is important to raise and improve the consciousness, culture, sense of belonging and responsibility of citizens at the current level of demand in the construction of civil society. Of course, this important issue is characterized by its urgency in the activities of young people.

Tasks such as formation of democratic principles, increase of social and political activity of citizens, implementation of individual freedom, liberalization of political processes, and improvement of the multiparty system based on democratic norms, increase of activity of public and non-governmental organizations in the life of society include universal values. If we recognize civil society as an opportunity to express a high civic culture, we understand that the spiritual maturity of citizens is a factor in a full understanding of democratic principles in such a society. Because the understanding of the person is directly characterized by the degree to, which each citizen understands his or her level of culture and committed to it at the highest level of value in civil society.

The development of civil society has a number of criteria and the formation of a sense of responsibility in every person. Responsibility is the ability of a person to understand what he or she will do for himself or herself, while fully imagining the product of each action. A person who feels responsible can always plan his work carefully, anticipate its consequences and be able to mobilize all his strength and potential to achieve the desired result. Personal responsibility should be distinguished from civic responsibility. The first implies a personal interest that comes from an individual's daily activities, and the second implies the interests of society. First, a person who feels a sense of civic



responsibility thinks about the development of the community in which he works or the educational institution where he studies, his neighborhood and country. If the only goal for the citizens of independent Uzbekistan is to serve the development of the Motherland, everyone should know that the meaning of civic responsibility lies in the implementation of these ideas.

Civic responsibility means that every conscious citizen living in Uzbekistan, regardless of nationality, enjoys the rights guaranteed by the Constitution of the Republic, as well as a sense of civic responsibility. This means that every citizen must abide by and respect the Constitution of the country, all the laws adopted by the Oliy Majlis, the decisions of the Cabinet of Ministers, and feel responsible for their implementation.

Consequently, while the state gives rights and guarantees to its citizens, it also imposes responsibilities on it.<sup>3</sup> It should be borne in mind that the process of democratic development of social development depends in many respects on the individual's self-awareness, the degree to which he or she is able to respect his or her dignity, the ability to serve society and the norm of action. All this means that the people form the street where they live, set the maintenance of the stability of the whole country, conscious realization of the high responsibility for security in their activities. The demand is also equal in individuals with the same status. This aspect itself is one of the proofs of civic responsibility<sup>4</sup>. There is a certain commonality between civic responsibility and national responsibility. There is no secret that every adult conscious member of a nation has a responsibility for that nation to which it belongs. In order to develop nation quantitatively, economically, culturally, morally, spiritually, and not to lag behind other nations on earth, it is first necessary for those who belong to this nation to feel a sense of responsibility. It is an important aspect of the sense of national responsibility not to forget the common interest of this nation in every action, every step in the family and society. The level of political consciousness and spiritual maturity of the people on the path to the development of a particular nation is the second important aspect that signifies national

responsibility. It should be noted that national responsibility is the responsibility of all nations and peoples living in our country.

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## WHITE COLLAR CRIMES IN INDIA

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### ABSTRACT

*Corporate criminality has become a worldwide phenomenon with the progress of commerce and technology like any additional country; India is equally in the grasp of corporate criminality. Corporate crime, in India is thriving every day in new forms. The problem of corporate crime is very grave in India. Business communities of the country of large and small merchants are basically dishonest in most. Nowhere in the world businessmen get well-off as quickly as they do in India. Hoarding, profiteering and black marketing of indispensable commodities by traders has become a unending problem for the government. The Sathanam committee report in its conclusion gave a vivid portrait of white collar crimes committed lay persons of name such as business man, industrialists, contractors and supplies as also the dishonest public officials.*

**KEYWORDS:** *Corporate Crime, White collar crime, crimes in India*

### INTRODUCTION

Corporate criminality has become a worldwide phenomenon with the progress of commerce and technology like any additional country; India is equally in the grasp of corporate criminality. Corporate crime, in India is thriving every day in new forms. The problem of corporate crime is very grave in India. Business communities of the country of large and small merchants are basically dishonest in most. Nowhere in the world businessmen get well-off as quickly as they do in India. Hoarding, profiteering and black marketing of indispensable commodities by traders has become a unending problem for the government. The Sathanam committee report in its conclusion gave a vivid portrait of white collar crimes committed lay persons of name such as business man, industrialists, contractors and supplies as also the dishonest public officials.

### OBJECTIVES

1. To study the different white collar crimes in India
2. To study the difference between white collar crimes and other crimes in India.

### SCOPE OF CORPORATE CRIME

Corporate Crimes - they are spreading like a rapid fire in every sphere of society. Corporate crime

committed by persons who having prestigious statues in society. This crime also called power crime. Because in present society person having power reach person have their high connection in society. The corporation considered as the vehicle for the crime.

### NATURE OF CORPORATE CRIME

Corporate crime reveal that corporate law breaking cover a very wide range of misconduct, much of it serious; among these violation are accounting unprofessional conduct, including false statements of corporate assets and profit; occupational safety and health hazardous; unfair labor practice; the manufacturing and sale of hazardous product; false and misleading advertisements; environmental violation of air and air pollution and illegal dumping of hazardous mater; illegal domestic political contribution and bribing of foreign official for corporate benefit.

Nature of Corporate crime overlap with

1. White collar crime
2. Organize crime
3. State corporate crime.

### 1. White collar crime

Necessity is not always the purpose behind commission of a crime. This thought evolved with the



criminologist and sociologist Edwin H. Sutherland in the year 1939, which popularized the term white collar crimes by defining such a crime as one committed by a person of respectability and high societal status in the course of his occupation. Sutherland also included crimes committed by corporation and other authorized entities within his description. Sutherland's learning of white collar crime was prompted by the vision that criminology had incorrectly focused on social and economic determinants of crime. Such as family background and level of wealth Sutherland was of a view that crime is committed at every stage of society and by persons of widely differing socio economic backgrounds. Here we have only discussed about white collar crime. It is true to the common information that there is certain occupation which offers lucrative opportunities for criminal acts and immoral practices which is very often overlooked by the general group of the society. There have been crooks and persons who are not following ethics in business and various other professions, who tend to become dishonest because of no reason apart from thirst of gaining more and more for them. These deviants have slightest regards for ethical and ethical human values. Therefore they carry on their illegal activities with impunity without the fear of loss of admiration and stature. These crimes are of the nature of "White collar crimes" Which is the essential outcome of the development of the competent economy of the twenty first century. Talking about the prevalence of white collar crimes in India they are spreading like a hasty fire in every sphere of society.

### **1.1 Chronological Background of the Emergence of White Collar Crimes**

The first documented case of white collar crime law was registered in 15<sup>th</sup> century in England. There has been a case popularly known as the Carrier's case of 1473, where the agent was entrusted to transfer wool and he attempted to steal some of it for him. Therefore, the Star Chamber and Exchequer chamber of the English Court of law adopted the braking bulk doctrine as it constituted the crime of larceny means the crime of theft. However, the growth of industrial capitalism in the eighteenth century ushered a new account of crime and criminality. The base of industrial capitalism is based on compulsion and robbery. Before discussing the topic it is necessary to understand the meaning of capitalism. The Process of emergence of these conditioned was termed by Karl Marx as primitive accumulation while in the word of Adam Smith, it was previous accumulation. Therefore the Dutch Marxist, William Bonger contended that criminal outlook develops among the working class under capitalism due

to conditions of misery and at the same time the criminal approach develops among the bourgeoisie from the avarice fostered when capitalism strive. It succeeded in United States of America in 1890, when congress passed the Sherman Antitrust act which took the initiative to make the monopolistic illegal. Other industrialized countries like Great Britain had a history of penalties involving white collar crime by that same time, but it was not as far-reaching as the Sherman Act. Some nations implemented a smattering of these laws, Known as competition or antitrust law, but did not have a strong binding power for a long time. But more anti white collar crime sentiment rose in the late 19th century and early 20<sup>th</sup> century in the United States as result of group of Journalists Known as muckrakers exposed gave rise to public resentment and thereby called for in some reform. By 1914, Congress attempted to solidify and strengthen the sentiment laid down by the Sherman Act, which was used against labor Unions, with the Clayton Antitrust Act. This Act was much stricter and went much further than Sherman Act in making meticulous monopolistic practices illegal.

### **1.2 Historical Background**

The concept of white collar crime is usually associated with E.H. Sutherland whose incisive work in this area focused the notice of criminologists on its demoralizing outcome on the total crime picture. Sutherland pointed out that besides the traditional crimes such as assault, robbery, dacoits, murder, rape, kidnapping and other act involving violence, there are definite anti social activities which are the person of persons of upper starts carry on in course of their occupation or business these activities for long time were accepted as a part of usual business tactics necessary for a shrewd professional man for his success in professional or business. Thus any grievance against such tactics often went unheeded and without punishment. It must, however be stated that Sutherland was preceded by other writers who focused concentration on the dangers to society from upper socio-economic group who exploited the established economic system to the detriment of common massed. In this research researcher underlined the growing incidence of crime as an organized business and its evil effect on society. In 1934, Morris drew concentration to the necessity of revolutionizing in emphasis regarding crime. He asserted that anti-social activities of persons of high status dedicated in course of their profession must be brought within the category of crime and should be made punished by. Finally E.H. Sutherland through his pioneering job emphasized that these upper



world crimes which are dedicated by the person of upper socioeconomic group in course of their occupation violating the trust, should be termed “White collar crime” so as to be distinguished from traditional crime which he called, “Blue collar crime”. Thus, he pragmatised that if a broker shoots his wife’s lover, that is not a white collar crime, but if he infringes the law and is convicted in connection with his business, he is a white collar criminal. Sutherland farther pointed out that white collar crimes vary from the crimes committed by criminal syndicates. This distinction could be based on the extent of presumed respectability. Thus, if a person who belongs to a highly regarded class of society and possesses some degree of good reputation, sells shoddy commodities, he is committing a white collar crime, But if a group of persons unknown to their victims sells the same type of shoddy goods that would not be a white collar crime. Sutherland examined the depredations of about seventy large corporations caught up in white collar crimes and observed that the charges against them included contracts, combinations or conspiracies in restraint of trade, misrepresentation in advertising, infringements against copyrights, financial fraud and violation of trust, breach of war regulation and others miscellaneous offences. But people knew very little about the trickery of these big business criminals and even if they knew they were indifferent towards the problem because of the fact that “The legal battles involved there in are dragged out for years in the courts, with the consequence that the charges are forgotten long before they are settled.”

### **1.3 Meaning and Definition of White collar crime**

No doubt it is also crime against society but it is dissimilar than ordinary crimes. It is different in the sense that victim is not any character in White collar crime as society is victim there some of the criminologist and penologist given following definitions of white collar crime:

According to Edlehere, “An illegal act or series of illegal acts committed by non physical kinds of means and by concealment or guilt, to obtain money or property or to obtain business advantage”.

According to Sutherland “Crime committed by persons of respectability and high social status in course of their occupation”.

According to Federal Buro of Investigation, “Those illegal acts which are characterized by deceit concealment or violation of trust and which are not dependent upon the application or threat of physical force or violations”.

According to Paul Tappan “White collar crime is a special type of solitary professional criminality. It involves real violation of criminal law systematically or repeated by business, professional and clerical workers in addition to their occupation”.

According to Sir Walter Reckless “White collar crime represents the offence of businessmen who are in position to determine the policies and activities of business”.

The concept of “White collar crime” found its place in criminology for the first time in 1941 when Sutherland observed. He defined white collar crime as a “Crime committed by persons of respectability and high social status in course of their occupation.” A white collar criminal belong to upper socio economic class who violate the criminal law while conducting his professional qualities. Thus misrepresentation through fraudulent advertisements, infringement of patents, copyrights and trademarks etc., are frequently resorted to by manufactures, industrialists and other persons of repute in course of their occupation with a view to earning huge profits. Other picture of white collar criminality include book of fabricated balance sheets and profit and loss account of business, passing of goods, concealment of defect in the commodity for sale etc. Sutherland farther pointed out that a white collar crime is more hazardous to society than ordinary crimes because the financial loss from burglaries, robberies larcenies etc. The most dismissal aspect of white collar crimes is that there is no effective programme for the enforcement of criminal law against them and the influential persons involved in these crimes are able to oppose enforcement of law against them. These white collar crimes by their very character are such that the injury or damage caused as a result of them is so widely diffused in the large body of society that their significance in regard to individual victim is almost negligible. It is probably for this reason that late these crimes did not attract much attention as they do not carry with them and loss of social status of the offender even if he is caught detected. There is yet another cause for white collar criminals escaping trial in case of misrepresentation concealment or fraud etc. The court usually place reliance on the principal of caveat emptor, which signifies that the purchaser must enter in to a deal with open eyes and guard himself against ordinary dishonesty of the vendor. As a result of this attitude of the court there was enormous increase in white collar crime during the period of depression in 1930’s in United States. Perhaps it is for this reason that American President Roosevelt in 1933 insisted on removal of the doctrine of caveat emptor from adjudication of cases involving white collar



crime. Sir Walter Reckless, an eminent criminologist of U.S.A suggests that white collar crime represents the offences of businessmen who are in the position to determine the policies and activities of business. Some authorities propose that white collar crimes are committed by persons of status not for want but for insatiability. Referring to this selection of the upper world of crime, Barnes and Teaters quoted Lord Acton who observed authority tends to corrupt and absolute power tends to corrupt absolutely. Wherever citizens of a fussy community become apathetic to the working of their government, corruption and alliance between public servants and criminal world are common phenomenon resulting in to breach of trust, deception and other malpractices.

It must be emphatically stated that white collar criminality thrives because of public lack of concern to it. The reason for this public insensibility is that firstly such criminals operate within the strict letter of the law and make the most of the credibility of their victims and secondly the legal battles involved are dragged out years in the courts, with the consequence the gravity of the offence is completely lost in the unconsciousness. That apart, the bang of white collar crimes is so much diffused in the community that the individual victims are only slightly affected by it, and therefore they conveniently forget all about it. There is yet one more point to background of white collar crime. At times, the member of community themselves add to the commission of various white collar crimes willingly or unwillingly. For instance illegal fulfillment to public servant to get the work done quickly, black marketing in time of scarcity, evasive price violation, rent ceiling violation etc.... are some of the common examples where victims of the crime are themselves to be blamed for participation in white collar criminality. In fact such crimes cannot be committed unless there is demand for illegal favor from consumers and they are actively involved in the deal.

E. H. Sutherland has presented a brief and general description of white-collar criminality on framework of argument regarding theories of criminal behavior. That argument, exposed of the description, may be stated in the following propositions:

1. **White-collar criminality is real criminality, being in all cases in violation of the criminal law.**
2. **White-collar criminality differs from lower-class criminality principally in an implementation of the criminal law, which segregates white-collar criminals administratively from other criminals.**

3. **The theories of the criminologists that crime is due to poverty or to psychopathic and sociopathic conditions statistically associated with poverty are invalid because, first, they are derived from samples which are grossly biased with respect to socioeconomic status; second, they do not apply to the white-collar criminals; and third, they do not even explain the criminality of the lower class, since the factors are not related to a general process characteristic of all criminality.**
4. **A theory of criminal behavior which will explain both white-collar criminality and lower-class criminality is needed.**
5. **A hypothesis of this nature is suggested in terms of differential association and social disorganization.**

#### **1.4 WHITE COLLAR CRIME IN INDIA**

White collar criminality has become a worldwide phenomenon with the advance of commerce and technology. Like any other country, India is uniformly in the grip of white collar criminality. The reason for the massive increase in white collar crime in recent decades is to be found in the fast developing economy and industrial growth of this developing country. The Sathanam Committee Report in its finding gave a vivid picture of white collar crimes Committed by persons of respectability such as businessmen industrialists, contractors and suppliers as also the corrupt public officials highlighting the magnitude of white collar crime in India. The commission on avoidance of Corruption in its report observed:

“The advance of technological and scientific development is contributing to the emergence of mass society with a large rank of file and small controlling elite, encouraging the growth of monopolies, the rise of a managerial class and intricate institutional mechanisms. Strict adherence to high standard of ethical behavior is necessary for the event and honest functioning of the new social, political and economic processes. The inability of all sections of society to appreciate this need in full result in the emergence growth of white collar and economic crime, render enforcement of the laws , themselves not sufficiently deterrent , more difficult. Tax evasion and avoidance, share pushing, malpractices in the share market and administration of the companies, monopolistic control, usury , Under invoicing or over invoicing, hoarding, profiteering, substandard performance of contracts of



constructions and supply, evasion of economic laws, bribery and corruption, election offences and malpractices are some examples of

White collar crime”.

The Commission broadly classified white collar and socio-economic crimes in to eight categories and suggested insertion of a new chapter on white collar crimes in the Indian penal code. The matter was referred by the Government to the Law Commission of India for consideration, The Law Commission, however disagreed with proposal and observed that “Such offence are better left to dealt with by special and self contained enactments which supplement the basic criminal law”. The Report of the Vivin Bose Commission of Inquiry in to the affairs of Dalmia Jain group of companies in 1963 highlights how these big industries indulge in white collar crimes such as fraud. The CBI probe against win chanddha and Hindujas in the famous Bofors scandal and FERA enquiries against Delhi firm Jyotsna Holding Pvt.Ltd. involving 6.5 crore illegal commission for contract of pipes with ONGC in 1988 are glaring illustration on the point. The ever biggest Multi thousand crore security scam by Harshad Mehta during 1991-92 involving persons holding high position in certain banks including certain prestigious and leading bank, the State Bank of India further evince the massive corruption, fraud and mismanagement in Indian Banks and the nevus between the brokers and brokers of Underworld gangs. The stock market shares scam in March 2001, master minded by Ketan Parekh, India’s biggest share broker is yet another illustration of manipulations in stock market, falsification of accounts tempering with records for personal gain and tax. The CBI probe against win chanddha and Hindujas in the famous Bofors scandal and FERA enquiries against Delhi firm Jyotsna Holding Pvt.Ltd. involving 6.5 core illegal commissions for contract of pipes with ONGC in 1988 are glaring illustration on the point. The ever biggest Multi thousand crore security scam by Harshad Mehta during 1991-92 involving persons holding high position in certain banks including certain prestigious and leading bank, the State Bank of India further demonstrate the massive corruption, fraud and mismanagement in Indian Banks and the nexus between the brokers and brokers of Underworld gangs. The stock market shares scam in March 2001, master minded by Ketan Parekh. India’s biggest share broker is yet another illustration of manipulations in stock market evasion etc....Similar observation was made by Mr. Justice M.C.Chagla about the big business magnate Mundhra who wanted to “build up industrial empire of dubious means”. There were as many as 124 prosecution against this business tycoon and companies

owned or controlled by him between 1958 to 1960 and as many as 113 of them resulted in to assurance.

Economic offences may either be cognizable or non-cognizable in nature. In view of their prevalence, Various Types of White Collar Crime in India are:

- **Bank Fraud:** To engage in an act or pattern of activity where the purpose is to defraud a bank of funds.
- **Blackmail:** A demand for money or other consideration under threat to do bodily harm, to injure property, to accuse of a crime, or to expose secrets.
- **Bribery:** When money, goods, services, information or anything else of value is offered with intent to influence the actions, opinions, or decisions of the taker. You may be charged with bribery whether you offer the bribe or accept it.
- **Cellular Phone Fraud:** The unauthorized use, tampering, or manipulation of a cellular phone or service. This can be accomplished by either use of a stolen phone, or where an actor signs up for service under false identification or where the actor clones a valid electronic serial number (ESN) by using an ESN reader and reprograms another cellular phone with a valid ESN number.
- **Computer fraud:** Where computer hackers steal information sources contained on computers such as: bank information, credit cards, and proprietary information.
- **Counterfeiting:** Occurs when someone copies or imitates an item without having been authorized to do so and passes the copy off for the genuine or original item. Counterfeiting is most often associated with money however can also be associated with designer clothing, handbags and watches.
- **Credit Card Fraud:** The unauthorized use of a credit card to obtain goods of value.
- **Currency Schemes:** The practice of speculating on the future value of currencies.
- **Educational Institutions:** Yet another field where collar criminals operate with impunity are the privately run educational institutional in this country. The governing bodies of those institutions manage to secure large sums by way of government grants of financial aid by submitting fictitious and fake details about their institutions. The teachers and other staff working in these institutions receive a meager salary far less than what they actually sign for, thus allowing a big margin for the management to grab huge amount in this illegal manner.
- **Embezzlement:** When a person who has been entrusted with money or property appropriates it for his or her own use and benefit.



- **Environmental Schemes:** The overbilling and fraudulent practices exercised by corporations which purport to clean up the environment.
- **Extortion:** Occurs when one person illegally obtains property from another by actual or threatened force, fear, or violence, or under cover of official right.
- **Engineering:** In the engineering profession underhand dealing with contractors and suppliers, passing of sub-standard works and materials and maintenance of bogus records of work-charged labour are some of the common examples of white collar crime. Scandals of this kind are reported in newspapers and magazines almost every day in our country.
- **Fake Employment Placement Rackets:** A number of cheating cases are reported in various parts of the country by the so called manpower consultancies and employment placement agencies which deceive the youth with false promises of providing them white collar jobs on payment of huge amount ranging from 50 thousands to two lakhs of rupees
- **Forgery:** When a person passes a false or worthless instrument such as a check or counterfeit security with the intent to defraud or injure the recipient.
- **Health Care Fraud:** Where an unlicensed health care provider provides services under the guise of being licensed and obtains monetary benefit for the service. The white collar crimes which are common to Indian trade and business world are hoardings, profiteering and black marketing. Violation of foreign exchange regulations and import and export laws are frequently resorted to for the sake of huge profits. That apart, adulteration of foodstuffs, edibles and drugs which causes irreparable danger to public health is yet another white collar crime common in India.
- **Insider Trading:** When a person uses inside, confidential, or advance information to trade in shares of publicly held corporations.
- **Insurance Fraud:** To engage in an act or pattern of activity wherein one obtains proceeds from an insurance company through deception.
- **Investment Schemes:** Where an unsuspecting victim is contacted by the actor who promises to provide a large return on a small investment.
- **Kickback:** Occurs when a person who sells an item pays back a portion of the purchase price to the buyer.
- **Larceny/Theft:** When a person wrongfully takes another person's money or property with the intent to appropriate, convert or steal it.
- **Legal Profession:** The instances of fabricating false evidence, engaging professional witness, violating ethical standards of legal profession and dilatory tactics in collusion with the ministerial staff of the courts are

some of the common practices which are, truly speaking, the white collar crimes quite often practiced by the legal practitioners.

- **Money Laundering:** The investment or transfer of money from racketeering, drug transactions or other embezzlement schemes so that it appears that its original source either cannot be traced or is legitimate.
- **Medical profession:** White collar crimes which are commonly committed by persons belonging to medical profession include issuance of false medical certificates, helping illegal abortions, secret service to dacoits by giving expert opinion leading to their acquittal and selling sample-drug and medicines to patients or chemists in India.
- **Racketeering:** The operation of an illegal business for personal profit.
- **Securities Fraud:** The act of artificially inflating the price of stocks by brokers so that buyers can purchase a stock on the rise.
- **Tax Evasion:** When a person commits fraud in filing or paying taxes. The complexity of tax laws in India has provided sufficient scope for the taxpayers to evade taxes. The evasion is more common with influential categories of persons such as traders, businessmen, lawyers, doctors, engineers, contractors etc. The main difficulty posed before the Income Tax Department is to know the real and exact income of these Professionals. It is often alleged that the actual tax paid by these persons is only a fraction of their income and rest of the money goes into circulation as 'black money'.
- **Telemarketing Fraud:** Actors operate out of boiler rooms and place telephone calls to residences and corporations where the actor requests a donation to an alleged charitable organization or where the actor requests money up front or a credit card number up front, and does not use the donation for the stated purpose.
- **Welfare Fraud:** To engage in an act or acts where the purpose is to obtain benefits (i.e. Public Assistance, Food Stamps, or Medicaid) from the State or Federal Government.
- **Weights and Measures:** The act of placing an item for sale at one price yet charging a higher price at the time of sale or short weighing an item when the label reflects a higher weight.

Hence, White Collar Crimes can be classified, inter alia, in the following broad categories:

- (a) Commercial, banking and insurance fraud.
- (b) Foreign exchange violations including hawala transactions, under-invoicing exports or over-invoicing of imports and exports.



- (c) Violations of industrial, labor and environmental regulations.
- (d) Tax and duty evasion and smuggling. Duty evasion can be of customs of excise. Misuse of advance license is an offence in this category.
- (e) Adulteration of food and drugs.
- (f) Hoarding and black-marketing. This will be an offence only if the commodity is a statutorily controlled item.
- (g) Counterfeiting currency notes and coins.
- (h) Criminal misappropriation and criminal breach of trust, which generally involve forgery of documents and falsification of accounts. Many directors and senior executives of companies commit these offences.
- (i) Cheating.
- (j) Illegal antique deals.
- (k) Trafficking in drugs and money laundering of the proceeds.
- (l) Smuggling.
- (m) Chit fund frauds.
- (n) Bribery and other modes of corruption.

### 1.5 CRIME AND FRAUD IN WHITE COLLAR CRIME IN INDIA

2010-2011 Annual Global Fraud Survey report of Kroll conducted by Economist Intelligence Unit gives expected results. Fraud continues to be a big difficulty worldwide and more so in India. Of the companies surveyed, globally 75% reported experiencing scam during the year. Though the figure has reduced in contrast to previous year's 88%, the situation is still miserable. In India, the situation is catastrophic, with 84% organizations reporting that they suffered from fraud during the year. It is wake-up call for India, as it is ranked second universally after Africa and shares the position with China. The chart below compares the top six fraud categories at global level with India. In most of the cases, India is doing much inferior than its global counterparts are. Worldwide management conflict of interest, internal financial fraud, corruption and bribery and vendor procurement related frauds have amplified. Physical theft of assets and information theft decreased. Indian business vital pain points are corruption and bribery, information theft, internal financial fraud, financial mismanagement and vendor procurement.

### 1.6 WHITE COLLAR CRIMES VIS-A-VIS OTHER CRIMES

It must be noted white collar criminality has a close similarity to the attitudes and values of culture in a particular society. This is evident from the fact that **white collar criminals are intelligent, stable &**

**successful and men of high social status as compared with the ordinary criminals. They are foresighted persons belonging to the high-status group of society.** White Collar crimes which are committed in commercial world are not direct, anonymous, impersonal and difficult to detect, as against this, ordinary criminal commit crimes which are direct and occupy physical action such as beating, removal of property of use of force, etc. which can be easily identified and detected. **It is often said that ordinary crimes which are otherwise called 'blue collar crimes' are more universal with the under-privileged class while the white collar crimes are committed by the members of privileged group who belong to upper strata of society.**

Thus, Blue-collar crime: The types of crime committed are a occupation of the opportunities available to the potential offender. Thus, those employed in relatively unskilled environments and living in inner-city areas have less "situations" to take advantage of than those who work in "situations" where large financial transactions happen and live in areas where there is virtual prosperity. Note that Newman (2003) applies the Situational Crime Prevention strategy to e-crime where the opportunities can be more regularly distributed between the classes. Blue-collar crime tends to be more understandable and attract more active police attention (e.g. for crimes such as vandalism or shoplifting which protect property interests), whereas white-collar employees can blend together legitimate and criminal behavior and be less obvious when committing the crime. Thus, blue-collar crime will more frequently use physical force whereas **white collar crime** will tend to be more technical in character, e.g. in the manipulation of accountancy or inventory records. In victimology, blue-collar crime attacks more apparent victims who report the crime, whereas in this, reporting is complicated by a culture of commercial confidentiality to protect shareholder value. It is estimated that a great deal of white collar crime is unnoticed or, if detected, it is not reported. Corporate world, the identification of a victim is less understandable and the issue.

### DIFFERENCE BETWEEN WHITE COLLAR CRIMES AND CORPORATE CRIMES

The distinction is that white-collar crime is likely to be a offense against the corporation, whereas corporate crime is crime committed by the corporation, although the distinction blurs when the given crime promotes the interests of the corporation and its senior



employees because a business body can only act through the agency of the natural persons whom it employs. Corporate crime has become politically receptive in some countries. In the United Kingdom, for example, following a number of deadly disasters on the rail network and at sea, the term is commonly used in reference to corporate manslaughter and to involve a more general discussion about the technological hazards posed by business enterprises. Similar incidents of corporate crime, such as the 1985 Union Carbide accident in Bhopal<sup>7</sup>, India (Pearce & Tombs: 1993) and the behavior of the pharmaceutical industry (Braithwaite: 1984). The Law Reform Commission of New South Wales offers a clarification of such criminal activities: "Corporate crime poses a significant danger to the welfare of the community. Given the pervasive presence of corporations in a wide range of activities in our society, and the impact of their actions on a much wider group of people than are affected by individual action, the potential for both economic and physical harm caused by a corporation is great." Similarly, Russell Mokhiber and Robert Weissman (1999) assert: "At one level, corporations expand the new technologies and economies of scale. These may serve the economic interests of mass consumers by introducing new products and more efficient methods of mass production. On another level, given the absence of political Control today, corporations serve to destroy the foundations of the civic community and the lives of people who reside in them."

### **DIFFERENCE BETWEEN WHITE COLLAR CRIMES AND STATE CRIMES**

In terms of social class and standing, those employed by the state, whether directly or indirectly, are more likely to be white-collar and so additional state crime will be committed through the group of white-collar employees.

### **DIFFERENCE BETWEEN WHITE COLLAR CRIMES AND STATE CORPORATE CRIMES**

Because the negotiation of agreements between a state and a corporation will be at a comparatively senior level on both sides, this is almost a select white-collar "situation" which offers the possibility for organized crime at a global level and complex, undetected arrangements between global private parties and national jurisdictions: 'incorporated governance' within public-private partnerships like the world's biggest, Gasunie of 1963, where Exxon Mobil forced the Netherlands to join the Iraq coalition.

### **DIFFERENCE BETWEEN WHITE COLLAR CRIME AND ECONOMIC CRIME**

The terms 'Economic Crime' and 'White Collar Crimes' are more often than not, used as synonyms. In fact, both the terms need to be used to describe different categories of crime. While white collar crimes can be said to be crimes committed by professionals like chartered accountants, public servants, private employees in the course of their occupation, economic offences are crimes committed by intelligent but deceitful individuals involving huge sums of public or government money.

### **DIFFERENCE BETWEEN WHITE COLLAR CRIME & ORGANISED CRIME**

1. In organized crime there is a group of persons of considerable size which engages itself in continuous crime over a long, usually indefinite period of time.
2. It has a tendency to dominate, through political clout or corruption, the law enforcement agencies.
3. The organization is generally high centralized; the authority is vested in one or just a few members of the group.
4. Functioning of the mafia in the U.S.A. has been likened to the working of corporations and big business houses. There is division of labor, delegation of duties and responsibility and specialization of functions. Like any modern business, organized crimes also involve careful planning, risk insurance and have expansive and monopolistic tendencies.
5. The criminal organizations adopt measures to protect the group and to guard against the prevention of their activities. To this end, arrangements are made with doctors lawyers, policemen, judges, politicians and governmental officials whereas, White Collar Crime having not such features as prearranged crimes.

### **1.7 WHITE-COLLAR OR SOCIO-ECONOMIC CRIMES ARE RADICALLY DIFFERENT FROM ORDINARY OR CONVENTIONAL TYPE OF CRIMES IN SEVERAL RESPECTS:**

1. These crimes are committed by status people in society such as — doctors, advocates, chartered accountants, government officials, repairers of mechanical goods [such as T.V.s,



- radios, refrigerators, etc.] and not the customary criminals such as — robbers, thieves, dacoits, murderers, rapists, etc.
2. These crimes are normally committed by means of fraud, deceit, misappropriation, misrepresentation, adulteration, malpractices, and irregularities and so on.
  3. These crimes are committed by means of purposeful and planned conspiracies without any feelings and sentiments.
  4. When socio-economic crimes are committed people tend to bear them because they themselves spoil in them and they themselves often recognize with those who do them.
  5. Originally white-collar crime meant to make clear middle and upper class business persons who committed crime in the normal course of their work. But now it refers to a wide selection of occupationally oriented violations committed by persons in any class.
  6. The victim of socio-economic crimes is normally the entire community, society or even the entire nation besides the individuals.
  7. These crimes do not involve or carry with them any shame while the ‘traditional crimes carry a stigma involving disgrace and depravity.
  8. These crimes constitute a separate group because the organization of such crimes “involves the protection and preservation of the general health and economic system of the entire society against misuse and waste...”

### 1.8 FOUR SHOCKING MISCONCEPTIONS ABOUT WHITE COLLARED CRIME

The recent issue of Psychology Today has a short column on four major myths that are widely when it comes to white-collared crime—usually described as an unlawful act committed for financial gain.

1. White-collared crimes are peaceful—since white-collared crime is usually characterized as non-violent, many are prone to this myth. But criminals in general have a sense of right and need for control.
2. White-collar criminals are highly paid—you may be thinking of well-known Ponzi schemers like Bernie Madoff or Allen Sanford here, but white collared criminals also depend on poorly paid underlings.
3. White-collar criminals are otherwise honorable citizens—about 40% of white collared criminals have a record.

4. it’s all about cash—yes, there are inadequately paid white-collar criminals, but the instigator of the crime could be very rich. Researchers say “peer pressure, company culture, and pure hubris” cause people to commit white-collared crimes.

### CONCLUSIONS

White collared crime is referred as the conduct of a corporation or employees acting on behalf of a corporation which is prescribed or punishable in law. Thus white collared crimes are committed for corporate gain or to bring harm to any other person or body corporate. Such crimes are committed in a quite environment. These are also considered to be universal varieties of white collar crimes. However the criminal behavior in corporate crimes seems too different from the traditional crimes committed by individuals. Corporate crimes are socially damaging or blameworthy acts which grounds financial, physical or environmental harm or harm caused to the workers and the general public.

It is believed that corporate criminal behavior is also a consequence of learning process from with the functioning of the corporations. This behavior is also accredited to major social and moral change. In a pursuit to convene targets or goals there could be implementation of unlawful means. Further there is neutralization theory where in the given circumstances conduct is tried to be justified. Lack of sufficient control could also endorse criminal behavior. In addition there are factors like cost benefit considerations, socio-economic developments, organizational structure and criminological market which are qualified to white collar criminal behavior.

In the corporate control there is criminality of the corporation itself and also the legal responsibility of the accountable persons which can be vicariously fixed. Law in this repeat needs to be more clearly defined.

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# DEVELOPMENT OF SOCIO-CULTURAL COMPETENCE OF FUTURE FOREIGN LANGUAGE TEACHERS

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## ABSTRACT

*Goal of research is to reveal the characteristics of future English teachers of the social skills that are required to learn the skills used in the social life of the country where they are learning. As teachers teach students the language learning process, it is also important to introduce the culture of the social life of the countries where the language is taught. Therefore, prospective English teachers should first and foremost form their own socio-cultural competence. The importance of this competence is revealed through the analysis of activity-games used in the Subject of "culture" by foreign language teachers.*

**INDEX TERMS** – *competence, social cultural competence, component, specialist, realization, worldview, assessment, behind looking a glass, folklore, constructing a cultural context, activity- games.*

## I. INTRODUCTION

Today, the training of qualified specialist is one of the most important and urgent goals in educating the younger generation and building a bright future. That is why our country is training a lot of people on the basis of the National Program of Training Specialists, and they are really serious about their work. It is also an important task to learn and teach the language of the world, and to train future English teachers, as English is now one of the world's major languages. There are many professional pedagogical competencies that a foreign language teacher should have, and one of the most important for communication is Socio-Cultural Competence.

Socio-cultural competence has been debated for many years, and its main founders are Canale, Swain, Celce-Marcia, and Littlewood. Also, Safanova, Juan C, Roman, Hudson, P. Milrud, G. Varabjev and many other scientists have done a lot of work on social and cultural competence and contributed to its development. In our academic University of World Languages, Professor Riskolova Kamola has also focused on the key competences of future English language teachers in her academic career. This can be further enriched with more detailed information on the specific features of the social cultural competences of the future English language teachers within this topic.

Just as the period does not stand still, neither education nor research in it stands still. For this reason, there is a lot of work to be done on this social and cultural competence, through this research work to reveal the necessary aspects of socio-cultural competence to future English teachers, important factors in its development and undergraduate learners. The importance of this is highlighted through the analysis of some of the game activities that are important to use in the culture classroom.

These question can be discussed in the research:

- a) What are the ways to develop socio-cultural competence?
- b) What is the role of games in the development of socio-cultural competence?
- c) How to build socio-cultural competence in the training of future English teachers?

The development of social and cultural competence is important for the development of future foreign language teachers, and the process of its implementation depends on the correct organization and active use of the lesson, subjects, assignments and games used in the cultural classroom.

## II BACKGROUND KNOWLEDGE

In terms of a sociocultural competence, language is means of communication and, at the same time, a means of receiving and transmitting



information about foreign language culture. Main purpose teaching the socio-cultural component is familiarization students not only with history, geography, art, but also with the way of life of the people, with a more complete picture of public traditions and foundations.

Sociocultural education through foreign language aimed at:

- 1) Development of the student's worldview and preparation for perception of the history of mankind, their country and their people, to self-awareness as a carrier of national values, the interdependence between themselves and all the people of the planet in the search for solutions to global problems;
- 2) The development of the communicative culture of students, their spiritual potential, planetary way of thinking in relation to civil human rights and political freedoms, their awareness of peacekeeping duties and responsibilities for your future, the future of your country;
- 3) Training in ethically acceptable and legally justified forms of self-expression in society;
- 4) Teaching the ethics of discussion communication and the ethics of interaction with people who hold different views and belonging to different faiths;
- 5) The development of the need for self-education.

In general, the sociocultural competence of a teacher of a foreign language is understood as the totality of knowledge, skills, and abilities of a person that ensure communication in a foreign language in accordance with the norms of language and speech and the traditions of the culture of native speakers (Riske, 2000).

The socio cultural component is a prerequisite for the socio cultural approach to learning (V. V. Safonova), which implies a cultural approach, oriented towards social pedagogical orientation under language teaching in a "spirit of peace, in the context of a dialogue of cultures". The provisions of the socio cultural approach are intertwined with the provisions of socio cultural education in the formation of bicultural and multicultural competencies, in the recognition by future specialists of their role as participants in intercultural communication, which should cause the need for a constant increase in the level of socio cultural competence.

Socio-cultural competence expands opportunities for application of authentic learning materials. It requires the selection of socio-cultural lexical minimum and development of techniques for its assimilation. That will make students' speech more natural. Authenticity of the speech

is one of the requirements of modern methodological standards of teaching foreign languages in school. It is closely related to the authenticity of behavior, which is also a characteristic feature of modern methodological concepts (R. Milrood). Social and cultural specificity of the material at the initial phase of study, including elements of folklore, songs, poetry, etc., creates real preconditions for the implementation of the ideas of humanization, humanization and integration of education.

### III METHODOLOGY

#### A. Research Design

The purpose of Socio cultural competence of bachelor students is integrative in nature. It involves preparing for intercultural communication at the level of the most typical situations based on communicative culture. It must include a certain amount of geographic and lingual knowledge. Realization of this goal should facilitate harmonization of the learning process, education and development of the student through the foreign language.

The content of Socio-cultural competence of bachelor students includes the following components:

1) socio-cultural knowledge: language (authentic vocabulary), knowledge of certain facts of national culture (national realities, etiquette<sup>1</sup>, folklore elements in its small form);

2) skills and abilities of speech and non speech behavior.

Acquisition of new socio-cultural information and ensuring the required quality of skills and abilities can be promoted by:

1) planning lesson - scenarios - imaginary meeting of students with native speakers, especially with their English-speaking peers;

2) a reasoned use of relaxation, aerobics, songs, recitation etc.;

3) hidden forms of control;

4) graphics supports in the form of transcription signs, which promotes accuracy in auditory-speaking pronunciation skills;

5) geographic aids (visual, auditory, audiovisual).

6) Activities and games

These reinforce the illusion of involvement in the authentic speech environment and provide the required quality of speech skills that are being formed. Formation of lingual, socio-cultural and spiritual values of a different ethnic reality is the basic content of speech. The formation of socio-

<sup>1</sup> conventional requirements as to social behavior; proprieties of conduct as established in any class or community or for any occasion



cultural competence constitutes a whole lesson, and its developments of which depends on the techniques, quizzes and activity games carried out in the course of the lesson.

### **B. Participants**

The population of this study consisted of Uzbek students attending to 3<sup>rd</sup> year first semester and 3<sup>rd</sup> year second semester at English Faculty, at the Department of English Language Teaching at Uzbekistan State World Language University. Including two semesters, it was aimed to reveal the development of the participants' socio-cultural competence from the very beginning of the course to the end of their subject "Culture". These students were candidates for English teachers and they learned English as a foreign language. The admission of 3<sup>rd</sup> year students is related to the subject they are taught, that is, they teach the subject of "culture" scientifically and practically. Since the aim of our research is to inculcate socio-cultural competence in future English teachers, the subject of "Culture" is important in the analysis of this scientific research. For this reason, we selected only 4 groups for analysis. To comprehensively characterize the socio-cultural capabilities of ELT specialties, well-defined game activities were conducted. 94% of students participated actively and effectively. A survey was distributed to determine the effectiveness of these games and all students participated in the survey.

### **C. Instruments**

During the study we used our traditional teaching methods: theoretical and empirical. We applied theoretical analysis of the literature, analysis of basic concepts and research terms of study, construction of experimental hypotheses as theoretical methods. Empirical methods are intended for creating, collecting and organizing empirical material. These include questioning, the method of measurement<sup>2</sup> and control, activity games, pedagogical experiment<sup>3</sup>.

In addition to the importance of disciplines that specialize in culture in the formation of socio-cultural competence in future foreign language teachers, the importance of various techniques and games used in the teaching of these subjects is high. Different games are an interesting process and activity that helps to strengthen the knowledge of the subject, as well as to develop the skills of applying information in the minds and practices of students. The games to be played for the experiment are as follows:

<sup>2</sup> the act of measuring

<sup>3</sup> a test, trial, or tentative procedure; an act or operation for the purpose of discovering something unknown or of testing a principle, supposition

- *Behind the Looking Glass* (suggested by Kramsch)

Put together a short brochure in the foreign language about your country for foreign students or tourists, taking into account what you know about their constructs and stereotypes of your country. Students can use foreign websites, guidebooks of their country published abroad or simply use their imagination. The key information students should include would be e.g. greetings, invitations, punctuality, gestures rather than factual information such as sightseeing or history.

The advantage of this is that the student is puzzled about how to convey the culture and social life of his country and related places, books, places, traditions, ceremonies, holidays, etc. to foreigners while explaining them, as a result he learns about foreign life and also learns and compares the culture. In doing so, he tries to convey concepts to them. For example:

The student uses the word "pub" in English culture to describe the place of Uzbek culture, "teahouse", and can classify some of its peculiarities as follows. The "Chaykhana" is like a 'pub', where mostly men go, drink not only alcohol, but also tea, as well as eat through Uzbek national dishes (lagan) foods such as kasan kebab, pilaf and others. A group of men sit around the "Khantakhta", eat pilaf, drinking tea and speak each other, talk "askiya". The words "Khantakhta", "pilaf", "kasankebab", "hangoma" and "askiya" are also described here by the student.

- *Folklore* (suggested by Kramsch)

Folk tales (but also proverbs or sayings) are a rich source of values and beliefs of a society. Apart from international fairy tales such as Little Red Riding Hood, there are national fairy tales specific to every culture. Incorporating foreign fairy tales can serve as an interesting comparison with one's own culture. Kramsch claims that "understanding a foreign culture requires putting that culture in relation with one's own". Fairy tales and folk tales are great materials for that. Students can collect fairly/folk tales from various cultures, compare them with their national fairly/folk tales and find some common or distinctive features.

For example, if we take the English fairy tale "Cinderella" and read it, we can see that some of the events are similar to the fairy tales "Emerald and Precious", which clearly reflect the Uzbek culture. And then the task that students do is to compare and analyze the factors that reflect the culture within them. In the process of comparison, they witnessed the differences between cultures, while identifying and analyzing universal cultures and national cultures and values. This process develops students' cultural and social knowledge.



Proverbs also play a role in the folklore genre, shaping cultural and social competence. According to Khun, proverbs are a part of communication. Students will be able to independently study foreign

proverbs, find and analyze the equivalent appropriate to their language and culture. You can see the table 1 below for sample.

English proverb	Uzbek proverb	Meaning
Practice makes perfect	Harakatda barokat	The more you practice, the better you become.
Measure thrice before you cut once	Yetti o'lchab bir kes	Think carefully before doing something.
The grass is always greener on the other side	Oldingda oqqan suvning qadri yo'q.	People always long for what they do not have, they are never happy what they have.
Out of the frying pan into the fire.	Yomg'irdan qochib do'lga tutilmoq.	Going from bad situation to one that is worse.
Don't put all your eggs in one basket.	2 oyog'ingni bir etikka tiqma	Don't put all enery on one thing.

**Table 1. Sample for analyzing of cultural proverbs.**

- **Constructing a Cultural Context**(suggested by Kramsch)

Give your student a conversation between two native speakers without an ending. Let them to finish the conversation and then compare their results with the, now revealed, original ending. This exercise can serve as a situational and cultural comprehension check. This type of exercise is also called general speculative activity.

Example: Two friends meet in a cafe:

Tom: Hi Javlon, how are you?

Javlon: Hey Tom, how are you?

Tom: Actually, I've got something for you ...

What is going to happen next? How is Javlon going to react?

A supposed (maybe a little embarrassed) answer in Uzbek context could be "Really? But it's not my birthday. You should not buy anything...thanks." A supposed answer in English context could be "Oh, thank you. That's really nice of you!"

In this game, the situation is created by the teacher, or uses a dialogue of two different nationalities on the Internet. Only the initial communication is given

to the students, and the students then predict the event. Through this game, too, students show the extent of their impressions of world culture and society as a result of their independent coverage of the situation.

After these games, a survey was conducted to analyze the result more accurately. The survey consists of questions about the state of the game, its relevance to the topic, its focus on knowledge, its usefulness.

**D. Data Collection and Analysis**

Socio-cultural competence includes knowledge of social and cultural life, the knowledge and experience of own and foreign language culture, the possession of own and foreign language, the ability to recognize and analyze the situation, to give it an adequate assessment, to find ways of solving problems and achieve set goals (Herbrand, 2008).

The distribution of the number of participants explaining the collected data and the ones involved in the analysis are given in the Table 2.

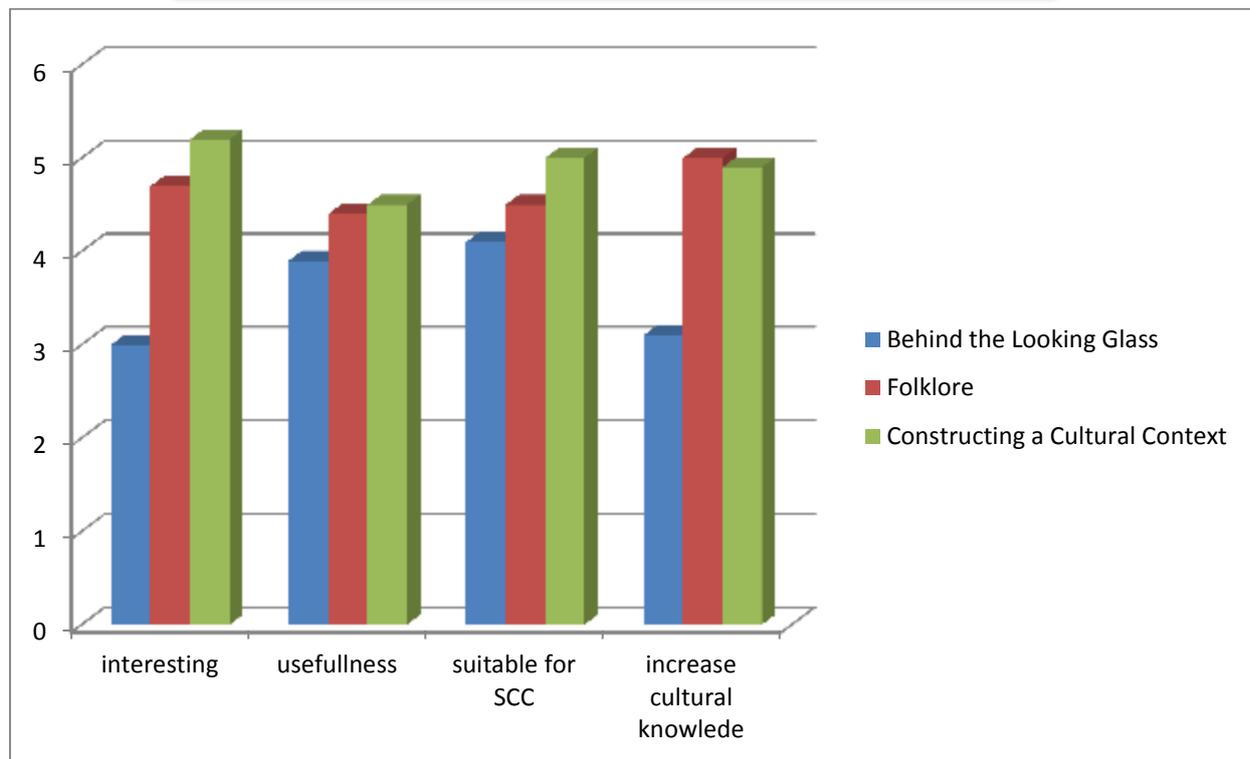
Participants Groups	Names of games		
	Behind the Looking Glass	Folklore	Constructing a Cultural Context
1 <sup>st</sup> group	12	12	12
2 <sup>nd</sup> group	11	11	10
3 <sup>rd</sup> group	12	12	12
4 <sup>th</sup> group	10	10	10

**Table 2. Participants on the Socio-cultural competence's games.**

**IV. RESULTS**

As for the socio-cultural abilities of the participants, their knowledge and skills about the country-wide sciences, language learning level and culture of the country where the language is studied

were formed through games and the importance of games in shaping socio-cultural competence was examined through the survey. The results obtained are shown and shown in Figure 1.



**Figure 1. Effectiveness of games for development of Socio-cultural competence.**

In this research, we explored the specifics of shaping the social and cultural competence of future English teachers, as well as discussing the challenges that need to be addressed. As a result, there is a need to develop a methodological manual for future English teachers, that bachelor students, enriched with topics based on the formation of socio-cultural competence and containing examples of various interesting activities and games. This is a great achievement not only for linguistic activities, but also for methodological research.

## V. DISCUSSION AND CONCLUSION

As a result of this research, the textbook "culture" for bachelor students that will be created as well as that will be useful for both the teacher and the student as a whole. This is the theme of our work "Specific features of the formation of socio-cultural competence of future English teachers" can be a necessary guide in the formation of social and cultural competence of future English teachers and language teaching, as well as in the next research on this topic. As we know that any research and achievements should serve as a basis for future generations. The main goal of this work is to further improve the future and create a favorable environment for the younger generation. All the work done in this regard and all the research, presentations are of great importance for the next generation.

Prospective English teachers need to develop their knowledge and social and cultural competencies.

Thus, socio-cultural competence of foreign language teachers is considered as the possession of and the ability to apply a set of multicultural knowledge, skills and qualities in the process of intercultural communication in the specific conditions of life with the connection of society and tolerance towards people of other nationalities. So, developed sociocultural competence will help a person avoid difficulties communicating with different nations. After all, often difficulties are differences in cultural concepts about any phenomena and subjects. So in the process of teaching a foreign language, the teacher develops a personality student in such a way that at the end of the course a new ready social type of personality.

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# EMERGING INFECTIOUS DISEASE AND BIOTERRORISM

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## ABSTRACT

*The emerging infectious disease is the undesirable condition in public health. However, there are several new emerging infectious diseases within the former decade. The consideration of the global epidemic of the new emerging infectious disease is batched. A fascinating situation is the tendency of bioterrorism applying the new emerging infectious pathogen. This subject will be better explained in this editorial.*

**KEYWORDS:** *Emerging; Infection; Bioterrorism*

## INTRODUCTION

Infectious disease disasters are events that involve a biological agent/disease and that result in mass casualties, such as a bioterrorism attack, a pandemic, or an outbreak of an emerging infectious disease. Infectious disease disasters are different from other types of disasters because they increase the risk of communicable disease spread during and after the incident. Subsequently, they involve the need for specialized mitigation, planning, and response interventions to prevent and control the spread of disease. As experts in the fields of surveillance, epidemiology, and prevention of communicable disease spread, infection preventionists play a critical role in emergency management of infectious disease disasters at the personal, hospital/healthcare facility, and community level. Emergency management of infectious disease disasters is a multidepartment and multi agency endeavour that encompasses the four principles of emergency management: mitigation, preparedness, response, and recovery

## KEY CONCEPTS

- Infectious disease disasters consist of biological terrorism, emerging infectious disease outbreaks, and pandemics.
- Infectious disease disasters pose unique challenges to infection preventionists and disaster planners.

- There are a broad range of potential bioterrorism agents, including bacteria, viruses, and toxins (of microbial, plant, or animal origin). Common characteristics of this diverse group of agents include:
  - The ability to be dispersed in aerosols of 1 to 5 micron-sized particles, which can penetrate the distal bronchioles
  - The ability to deliver these aerosols with simple technology
  - The feasibility of these agents, if delivered from a line source (e.g., an airplane) upwind from the target, to infect large numbers of the population
  - The ability to spread infection, disease, panic, and fear.
- Infectious diseases continuously emerge and/or re-emerge, resulting in epidemics of varying sizes and scope.
- Pandemics pose the biggest potential threat to the public's health in terms of morbidity and mortality, and there is a high likelihood of a pandemic occurring in the future.
- Infection preventionists must undertake preparedness activities to ensure that they and their healthcare facilities and communities are better prepared to effectively recognize and respond to an infectious disease disaster.
- Infectious disease disaster preparedness is an ever-evolving process that addresses the four principles of emergency management:



mitigation, preparedness, response, and recovery.

## **BIOTERRORISM**

Bioterrorism refers to the use of biological agents on civilian or military populations, animals, or crops. A combination of factors have all raised concerns about the actual use of bioterrorism agents, including the breakup of the former Soviet Union and the concomitant dispersal of scientists and agents involved in bioterrorism research, the rise of radical groups focused on destroying what they believe to be evil forces, and the discovery of Iraq's stockpiled anthrax, botulinum toxin, and other biological warfare agents.

There are a broad range of potential bioterrorism agents, including bacteria, viruses, and toxins (of microbial, plant, or animal origin). Common characteristics of this diverse group of agents include (1) the ability to be dispersed in aerosols of 1 to 5 mm particles, which can penetrate the distal bronchioles; (2) the ability to deliver these aerosols with simple technology; (3) the feasibility of these agents, if delivered from a line source (e.g., an airplane) upwind from the target, to infect large numbers of the population; and (4) the ability to spread infection, disease, panic, and fear.

The most likely route of dissemination is an aerosolized release of 1- to 5-mm particles. Other methods of dissemination include oral (intentional contamination of food/water supply), percutaneous, infected animal vector (e.g., release of infected fleas), and human-to-human spread (individual infected with communicable disease walking among a crowd of healthy people). As the anthrax attacks of 2001 proved, even physical objects, such as letters, can be used to help spread biological agents.

## **Identification of an Infectious Disease Disaster**

Morbidity and mortality related to many agents that could be involved in an infectious disease disaster can be decreased if treatment, isolation, and prophylaxis are provided as soon as possible. A rapid response depends on the foundation of the plan that is in place before the event occurs and the participants' familiarity with the emergency management plan.

When even a single case of an unusual disease is suspected or identified, bioterrorism or an emerging infectious disease should be considered. Groups of nonspecific illnesses clustered in time or place should also be strongly considered for bioterrorism or an outbreak of an emerging infectious disease. This includes the clustering of flulike syndrome in patients. All cases of unusual disease, including even a single case of any of the diseases mentioned in this chapter, should be reported

immediately to local public health officials; if cases are recognized during evenings or weekends, after-hours or emergency numbers should be used [1].

Specific diagnosis of the agents discussed in this chapter has historically relied heavily on the presence of appropriate epidemiologic exposure (e.g., exposure to infected animals during meat rendering for anthrax, ingestion of home-canned foods for botulism, or travel to an area where an emerging infectious disease is endemic). Dissemination of biological agents via an aerosol route will require diagnosis of these generally uncommon diseases without the aid of usual exposure history. Furthermore, many of these syndromes can only be diagnosed on the basis of clinical knowledge of presenting symptoms and expected disease progression. Maintaining a high level of suspicion and clinical knowledge about these diseases is essential to timely diagnosis. Assays/tests for bioterrorism agents and emerging infectious diseases are often only available in specific research laboratories (state public health laboratories, Centres for Disease Control and Prevention [CDC], or United States Army Medical Research Institute of Infectious Diseases [USAMRIID]).

## **BIOWATCH**

BioWatch is an environmental monitoring program that is managed in coordination by the CDC, Environmental Protection Agency (EPA), and the United States Department of Homeland Security. This program uses air samplers to test for aerosolized biological agents around the United States, with the goal of rapidly identifying biological events. Rapid detection of an infectious disease disaster would help minimize morbidity, mortality, and costs. The BioWatch air samplers are located in undisclosed cities and monitor the air 24 hours a day, 7 days a week. The specimens collected by BioWatch are sent to the Laboratory Response Network (LRN) and tested for various agents. When biological particles are detected in the air, a report is sent to emergency managers and public health professionals in the communities in which the agents were detected. These reports are termed "BioWatch Actionable Results" (BARs).

Communities must decide how to respond to these BARs in terms of the extent to which an investigation is conducted or interventions are implemented. Although BioWatch has not detected a single bioterrorism attack (because no aerosolized attacks have occurred since the start of the program), BioWatch has been credited with strengthening the United States' existing bio surveillance program and enhancing coordination between public health agencies and healthcare systems as a means of increasing community resilience. BioWatch is currently considered a complementary system to



existing biosurveillance programs established in communities.

#### **Is it Possible that the New Emerging Infectious Pathogen becomes the Bioterrorism Agent?**

“Is it possible that the new emerging infectious pathogen becomes the bioterrorism agent?” is an interesting question. In fact, as a new disease, the limited knowledge can be expected; treatment and diagnosis might not be easy. According to the CDC report, “a new focus on emerging infectious diseases and bioterrorism” is mentioned [2]. Ashford et al. noted that “bioterrorism preparedness should emphasize education and support of this frontline as well as methods to shorten the time between outbreak and reporting [3].” The well-known “BioWatch” is a good project to correspond to bioterrorism and emerging infection [4].

#### **How to Fight and Manage Bioterrorism using New Emerging Infection?**

As noted, it is no doubt that the terrorist scientist team might use the new emerging infectious pathogen as a tool for performing bioterrorism. The first thing is to investigate any new emerging infection to answer whether this is a natural or intended outbreak [5,6]. Radosavljevic and Belojevic recently reported the use of new scoring system that might be useful for such discrimination [5]. In case that the bioterrorism is approved, the standard infection control must be applied. To set a preventive action, setting of the public free available online database of the new pathogen is the new action to fight with the possible bioterrorism [7]. Setting of the good “public health legislation” to the possible episode is also needed [8].

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## **A CASE OF STEROID INDUCED CUSHING'S SYNDROME: CASE REPORT**

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### **ABSTRACT**

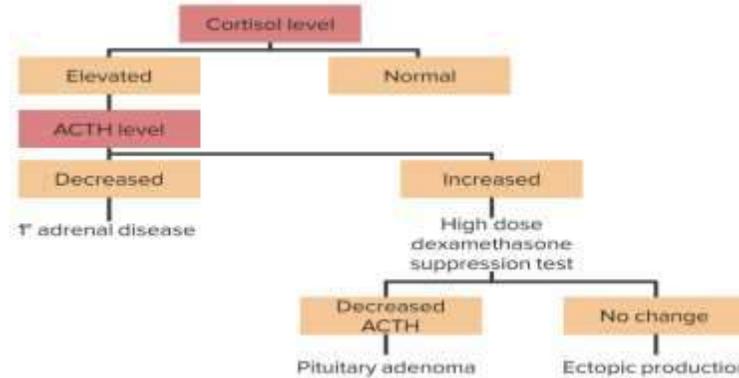
*Cushing Syndrome is mostly occurred by use of steroids but also caused with the overproduction of cortisol. The incidence rate of Cushing disease is 0.7-2.4 per million populations. Case report of a 52 yr. old women with Cushing syndrome; she had major features of the Cushing syndrome. Cushing's disease is a rarity that can be difficult to diagnose due to the significant number of varied pathologies indicated by its signs and symptoms. This is an interesting case of Cushing's disease as the levels of cortisol measured in the patient were incredibly high.*

**KEYWORDS:** *Cortisol, Steroids, Cushing syndrome, ACTH*

### **BACKGROUND**

Cushing Syndrome is mostly occurred by use of steroids but also caused with the overproduction of cortisol.<sup>[1,2]</sup> The incidence rate of Cushing disease is 0.7-2.4 per million populations.<sup>[3]</sup> Cushing syndrome is a rare disorder with multiple type's signs and symptoms and it is characterized with increase the secretion of adrenocorticotrophic hormone (ACTH) because of pituitary adenoma that cause endogenous

hypercortisolism by activating adrenal gland.<sup>[4,5]</sup> The signs and symptoms of syndrome such as follows, fatty hump, round face, pink & purple stretch mark, these all the clinical signs and symptoms such as obesity, excessive hunger & sweating, weakness, loss of muscle, weight gain, high blood pressure and osteoporosis.<sup>[7,8]</sup> Cushing syndrome is increase the morbidity and mortality, if it is not treated.<sup>[9]</sup>



**Figure 1 Stepwise approach to diagnosing Cushing's syndrome. [6]**

**CASE REPORT**

A 52 yr. old women presented with complaints of joints pain, fever, excessive weight gain and vomiting last 15 days. She had significant history of

rheumatoid arthritis and patient on oral steroid therapy prednisolone (5mg). Patient was admitted in general medicine department. She came with chief complaints excessive weight gain, hypertension and fatty hump.

The physical examination of patient summarized in table no. 1

Parameter	Observed value
Blood Pressure	170/100 mmhg
Pulse Rate	100 bpm
Respiration Rate	22/min
Temperature	102 f
Cyanosis	Present
Pallor	Present

Patient was anemic and also have high blood pressure and pulse rate.

Patient had to under gone to laboratorial examination; which summarized in table no. 2

Parameter	Observed value
Hemoglobin	8.2 g/dl (low)
Platelet count	1 lac (normal)
SGOT	70 U/L (high)
SGPT	60 U/L (high)
Serum potassium	2.8 mmol/dl (low)
RBS	160 mg/dl (normal)
Serum cortisol	42.2 mcg/ dl(high)

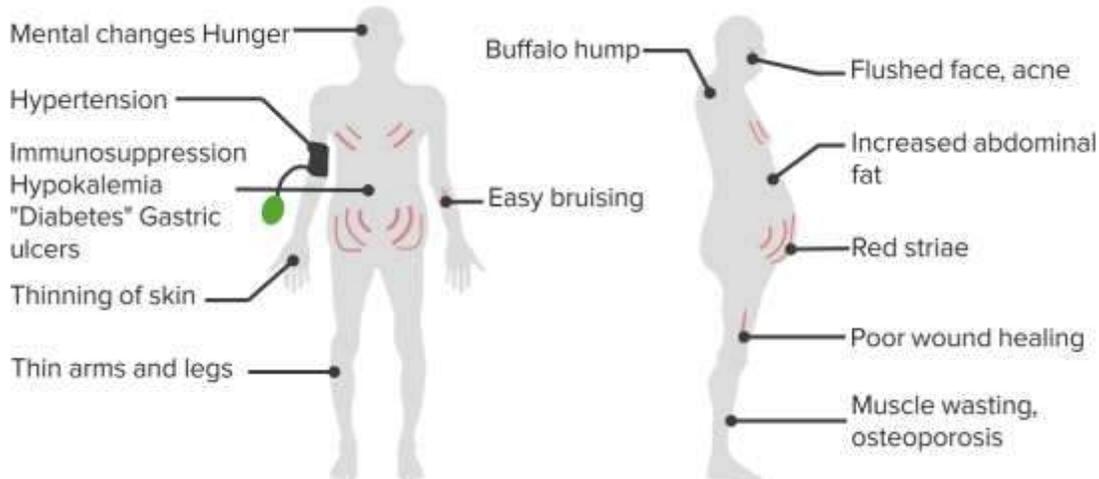
Diagnosis of Cushing syndrome was made and confirmed with help of serum cortisol level. Patient was put on symptomatic treatment and furosemide (40 mg) twice in a day. Treatment is going on through monitoring of cortisol level in patient.

**DISSCUSION**

Cushing Syndrome is mostly occurred by use of steroids but also caused with the overproduction of cortisol figure 1 shown the mechanism. [1,2] Cushing

syndrome is increase the morbidity and mortality, if it is not treated. The signs and symptoms of syndrome such as follows, fatty hump, round face, pink & purple stretch mark, these all the clinical signs and symptoms

such as obesity, excessive hunger & sweating, weakness, loss of muscle, weight gain, high blood pressure and osteoporosis. [3,4]



**Figure 2 symptoms of Cushing syndrome [6]**

Here presented case of steroid induced Cushing with complaints of joints pain, fever, excessive weight gain and vomiting last 15 days. [5,7] She had significant history of rheumatoid arthritis and patient on oral steroid therapy prednisolone (5mg). she was anemic, hypertensive and in laboratorial examination find level of cortisol was high and put on antidiuretic. [8,9]

## CONCLUSION

Cushing's disease is a rarity that can be difficult to diagnose due to the significant number of varied pathologies indicated by its signs and symptoms. This is an interesting case of Cushing's disease as the levels of cortisol measured in the patient were incredibly high.

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# INTEGRATION OF DIGITALISATION IN ROAD TRANSPORT: THE IMPACT OF E – TICKETING

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## ABSTRACT

*The rapid development of information technology has made the management of on-line ticket orders, payment and ticket generation possible. It is a facility which is used to reserve seats, cancellation of reservation and different types of route enquiries used on securing quick reservations. E-ticketing systems that meet the requirements will provide the organization with satisfied customers who will express their satisfaction through loyalty and by remaining with the organization over the long-term. A sample size of 150 respondents was selected for his study. Convenience sampling method has been followed to choose the sample and the data was analysed using simple percentage. The study reveals that socio-economic variables and online ticket reservation association with customer's satisfaction on e-ticketing.*

**KEY WORDS:** *E-ticketing, Customer satisfaction, Problem facing*

## INTRODUCTION

The popularity of Internet technology has increased substantially over the course of the last several years. As a result, organizations have worked diligently to develop new methods for interfacing with customers. E-tickets appear to offer a number of advantages to organizations, including lower costs and increased operational efficiency. It is projected that the use of e-tickets will only continue to increase over time. With the rise of the internet and smart phones, most events have switched to e-tickets. Consumers expect e-tickets as standard for all events, but there are some segments of the market that are stuck doing things the old-fashioned way. E-Tickets are better for the environment using an online ticketing platform drastically reduces the need for paper at the event. E-Tickets are more secure and are impossible to lose and hard to steal. Customer satisfaction in e-ticketing is a complex phenomenon that is shaped by a wide range of variables including customer technical support, infrastructure, data

security and user-friendliness. Understanding these issues is critical for organizations to create e-ticketing systems that initially meet customer needs and generate a high level of satisfaction. Although creating e-ticketing systems that achieve customer satisfaction is a significant undertaking for the organization, addressing the key issues noted in this investigation should facilitate the ability of the organization to create an e-ticket system that allows for building customer satisfaction, loyalty and retention.

## REVIEW OF LITERATURE

According to Kevin (2012) Web-based Bus Reservation and Ticketing System is a generic web portal application that aids bus customers to reserve a seat in a certain bus company anytime and anywhere and variety of buses that satisfy the customer's requirements are provided. The project, on the bus company's side, serves as a marketing



strategy and aids an efficient processing and delivery of itinerary receipts.

- To measure the level of satisfaction of the customers towards E-Tickets.

### STATEMENT OF THE PROBLEM

The propensity to search and book travel online is expanding in the present scenario. The convenience, choice and transparency of online bookings continue to attract and retain more travellers. Internet penetration and robustness of network are the key concern areas. Today all we need is a smart phone and a variety of e-commerce experiences, and the entire planning, researching and booking process can be completed through online. Quite a lot of people find it hard to go to bus stand each time to check whether there is any availability of ticket. Thoothukudi is a Industrialised city, which consist of a high number of working class people who prefer online ticket booking. Hence, the researcher has made an attempt to find the satisfaction level of e-ticketing in Thoothukudi.

### OBJECTIVES OF THE STUDY

- To analyze the perception of customers regarding the advancement of technology of e-ticketing.
- To trace the problems faced by the customer online reservation of bus tickets.

### SCOPE OF THE STUDY

The scope of the present study is to analyse the customer's perception towards reservation of e-tickets. The study reveals the impact of technology and digitalized ticketing platform of both public and private buses. The benefits and importance of the e-ticketing was also focused in the study. The sample respondents are selected for the study who is residing within the limit of Thoothukudi city only.

### RESEARCH METHODOLOGY

This study concerned with obtaining information by administering a questionnaire to the respondents is descriptive in nature. By adopting convenience sampling method, respondents were selected from various parts of Thoothukudi. The sample size of this study is 150 respondents. A structured questionnaire was used to collect the relevant data. Primary data were collected through questionnaire. Secondary data were collected through books, websites, published articles, magazines and journals. The selection of statistical tools was based upon the nature of data used and objectives. The applied statistical analyses are Percentage analysis and Chi-Square Analysis.

## RESULTS AND DISCUSSION

**Table1: Demographic profile of the respondents**

Factor	Sub - category	No. of respondents	Percentage
Age	Below 30 years	55	36.7
	31 years - 40 years	36	24.0
	41 years - 50 years	22	14.7
	51 years - 60 years	23	15.3
	Above 60 years	14	9.3
	<b>Total</b>	<b>150</b>	<b>100</b>
Gender	Male	87	58
	Female	61	40.7
	Transgender	2	1.3
	<b>Total</b>	<b>150</b>	<b>100</b>
Educational Qualification	School level	41	27.3
	Graduate	53	35.3
	Post graduate	22	14.7
	Professional	23	15.3
	Others	11	7.3
	<b>Total</b>	<b>150</b>	<b>100.0</b>
Occupation	Students	22	14.7
	Businessman	22	14.7
	Government Employee	29	19.3
	Private Employee	46	30.7
	Others	31	20.6
	<b>Total</b>	<b>150</b>	<b>100.0</b>



Monthly Income	Below Rs.10,000	32	21.3
	Rs.10,001 - Rs.20,000	36	24.0
	Rs.20,001 - Rs.30,000	25	16.7
	Rs.30,001 - Rs.40,000	37	24.7
	Above 40,000	20	13.3
<b>Total</b>		<b>150</b>	<b>100.0</b>

\*Source: Primary data

Table 1 shows that majority (36.7 per cent) of the respondents belong to the age group of below 30 years, majority (58 per cent) of the respondents are male, majority (35.3 per cent) of the respondents

are graduate, majority (30.7 per cent) of the respondents are booking the private employee and majority (24.7 per cent) of the respondents earn income Rs. 30,001 to Rs. 40,000.

**Table 2: Indicate the respondents selection of e-ticket provider**

Indicate e-ticket provider	Frequency	Percentage
SETC	7	4.7
Private Omni Bus	65	43.3
Both (SETC and Private Omni Bus)	78	52.0
<b>Total</b>	<b>150</b>	<b>100.0</b>

\*Source: Primary data

Table 2 shows that majority (52 per cent) of the respondents are indicate both (SETC and Private bus.

**Table 3: Prefer of the customers**

Preference E-ticket	Frequency	Percentage
Better E- Ticketing price	5	3.3
Elimination of waiting time	50	33.3
Faster	26	17.3
More Convenient	61	40.7
Secured	8	5.3
<b>Total</b>	<b>150</b>	<b>100.0</b>

\*Source: Primary data

Table 3 shows that (40.7 per cent) of the respondents prefer e – ticketing in more convenient.

**Table 4: Problem faced by the customers**

Problem faced E - ticketing	Frequency	Percentage
High charge during Cancellation	80	53.3
Lack accurate information	7	4.7
Non availability of ticket during seasonal time	63	42.0
<b>Total</b>	<b>150</b>	<b>100.0</b>

\*Source: Primary data

Table 4 shows that (53.3 per cent) of the respondents are facing the high charge during cancellation.

**Table 5: Age of the respondents and their preference of travel class towards E-ticketing (Chi-square Test)**

H<sub>0</sub>: There is no significant difference between the age of the respondents and their preference of travel class towards e-ticketing.

Factors	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	26.504 <sup>a</sup>	4	.000

\*Source: Primary data

The table 5 shows that there is no relationship between the age of the respondents and preference of travel class on towards e- ticketing. Significant value

(0.000) is less than the level of significance (0.05). It is shown that null hypothesis is accepted.

**Table 6: Monthly income of the respondents and their usually spend on E-ticketing (Chi-square Test)**

H<sub>0</sub>: There is no significant difference between the monthly income of the respondents and their usually spend on e-ticketing

Factors	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	52.866 <sup>a</sup>	12	.000

\*Source: Primary data

The table 6 shows that there is no relationship between the monthly income of the respondents and usually spend on e - ticketing. Significant value (0.000) is less than the level of significance (0.05). It is shown that null hypothesis is accepted.

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## SUGGESTION AND CONCLUSION

These days, bus agencies plays attractive essential role in road transportation, and to make reservation dependable they require a strong solid system that they will make reservation less demanding, faster and more secure. Technological developments are being witnessed by this sector which forms major part of economy. In the modern era the travellers are educated, well informed and are very aware about the trending technology. They want to adopt better and smarter ways to buy products or avail services. Modern passengers do not have time to go the traditional reservation centres and book their tickets. They just book their tickets through internet which helps them in saving time and at the same time avail various other benefits. Online ticketing has got great market opportunity in the future with increasing number of techno savvy youngsters and working women in India. There are some factors such as privacy, hacking etc. due to which people refrain from booking e-tickets. The online travel agencies should adopt various measures to cope up with these challenges and sustain in this competitive market.



# PSYCHOLOGICAL FACTORS OF MALADJUSTED TEENAGERS

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## ABSTRACT

*The overwhelming majority of adolescent delinquency has purely social causes, disadvantages of upbringing above all. From 30 to 85% of delinquent adolescents grow up in an incomplete family, that is, without a father, or in a family deformed - with a recently appeared stepfather, less often, with a stepmother.*

**KEY WORDS:** *teenagers, psychological factors, social upheaval, deviant, emotional and psychological relations, criminalizing factor, biopsychological aspects.*

## INTRODUCTION

The overwhelming majority of adolescent delinquency has purely social causes, disadvantages of upbringing above all. From 30 to 85% of delinquent adolescents grow up in an incomplete family, that is, without a father, or in a family deformed - with a recently appeared stepfather, less often, with a stepmother.

## METHODOLOGY

The study was conducted using objectivity, analysis, synthesis, comparative analysis, generalization, historical analysis, chronological methods.

## RESULTS

The growth of delinquency among adolescents is accompanied by social upheaval, entailing fatherlessness and depriving of family custody[1]. Delinquency is far from always associated with character anomalies, with psychopathologies. Moreover, for some of these anomalies, including extreme variants of the norm in the form of accentuations of character, there is less stability with respect to the adverse effects of the immediate environment, and greater compliance with harmful influences. The emergence of socially unapproved

forms of behavior speak of a condition called social maladaptation. No matter how diverse these forms are, they are almost always characterized by poor relationships with other children, which are manifested in fights, quarrels, or, for example, aggressiveness, demonstrative disobedience, destructive actions or deceit. They may also include antisocial acts such as theft, absenteeism and arson. There are important connections between these various forms of behavior. They are manifested in the fact that those children who were aggressive and cocky at an early school age, becoming older, are more likely to become prone to antisocial behavior. Social maladaptation syndrome is much more common among boys. What is clearly manifested in cases of antisocial acts. Adolescents with the so-called socialized forms of antisocial behavior are not characterized by emotional disorders and, moreover, they easily adapt to social norms within those antisocial groups of friends than relatives to whom they belong. Such children often come from large families, where inappropriate upbringing measures are applied and where antisocial forms of behavior are learned from the immediate family environment.

All forms of diverting behavior naturally lead to a violation of legislative norms. Going beyond social rules, accompanied by extraordinary cruelty, is always



suspicious as a possible mental anomaly. Deviant and delinquent forms of behavior is an adaptation to the social and psychological realities of adolescence and youth, although it is condemned by society for its extremism. Many of the causes of the violation of adolescent behavior can be identified and addressed in a timely manner. At the same time, among the factors of deviant behavior, those are found for the prevention and elimination of which no effective means have yet been found. Psychological and pedagogical factors can be fully attributed to this category. So, more and more often, when determining the causes and conditions of violation by teenagers of norms and rules of behavior, we turn to an analysis of the psychological climate of the family, the emotional and psychological relations of a teenager with peers and adults. Deviating behavior is often explained by the fact that a child, teenager or youth cannot by lawful means satisfy their socio-psychological needs for recognition, trust, self-affirmation. A significant part of discipline violations is committed by adolescents in a state of reduced level of psychological activity or in a state bordering between norm and pathology. Therefore, the prevention and overcoming of difficulties in the education of students of adolescents depends on the correctness and completeness of the determination of the factors that generate and cause deviation. Russian psychologists and many modern foreign scientists deny the decisive influence on the behavior of "difficult" children of the genetic factor, the hereditary burden of their consciousness and actions. Natural prerequisites for certain features of the psyche, of course, exist. Undergoing qualitative changes, they do not act directly, but through special factors. The formation of criminal trends by most authors is considered to be a process of interaction of biological and social causes. Social influence (intra-family conflicts, the impact of the example of adolescent groups, the information climate, the prevalence of certain values in society, etc.) acts as a pathogenic external factor that affects all adolescents without exception, and either a catalyst of antisocial and anti-moral ideas, or a factor in reducing the compensatory capabilities of the individual in its opposition to alien influence[2]. The main causes of adolescent difficulties: in the wrong relationships in the family, in school miscalculations, isolation from peers, in general maladaptation, in the desire to establish oneself in any way and in any small group. Often there is a combination, a complex of all these reasons. Violations of the behavior and emotional-volitional sphere of children, adolescents, youth are not inherited. Exceptions are associated with a rare number of diseases caused by mental retardation. Another reason for deviations is the age-related features of the psyche of a teenager. Mental development is characterized by age-related crises. With their educational influences of

adults, the appearance of a child begins to resist the educational influences of adults, conflict with them, rude and disobedient to behave. L.S. Vygotsky spoke of crises of a newborn, 1 year old, 3,7,13 and 17 years old. The period of adulthood, in itself, is not a disease, but can provoke the emergence of deep psychological problems. A teenage crisis is understood as a condition in which "distortions of a teenager's relationship with reality" may occur (H.Remschmidt., 1992). One of the cardinal signs of this crisis is the experience of alienation of one's self (depersonalization), one's loneliness and isolation from the world. Many aggressive actions of adolescents that fall into the field of view of law enforcement agencies are a consequence of a personality crisis. [3] Particularly worth mentioning are the complications of adolescence that entail the rapid and uneven development of the body that accompanies the process of puberty in a teenager. This unevenness can manifest itself both in the development of the musculoskeletal system and somatic body organization, and in the development of the cardiovascular system and internal organs of a teenager. In one case, this leads to somatic imbalances (high growth with a small head, narrow chest, long limbs, etc.), which is painfully perceived by a teenager. In another case, the uneven development of the cardiovascular system can lead to blood pressure, headaches. And, perhaps, the increased activity of the endocrine system, the so-called "hormonal storm" caused by accelerated puberty, and, as a result of this, emotional instability, increased excitability, imbalance, inadequacy of the reaction, resulting in unjustified sharpness and increased ability, can exert the most noticeable behavior on a teenager conflict, which in itself can complicate his relationship with others. The increased conflict, especially in relation to adults, which often manifests itself in adolescence, is explained not only by organic changes, but also by the body, which changes the whole system of relations between a teenager and adults, and with peers. In an effort to get rid of the assessment and influence of adults, a teenager becomes critical of his parents and teachers, begins to sharply feel and notice their shortcomings. The active process of mastering social behavior skills continues. The crisis of adolescence with a more or less pronounced tendency to criminalization is also manifested in the fact that a teenager has significantly restructured relationships with peers. A teenager is characterized by an increased need for communication with peers, a desire for self-affirmation in their midst, and a sensitive reaction to the opinion of peers. Such manifestations at this age are by no means accidental. They are due to the fact that in adolescence, self-consciousness, self-esteem are laid. The need for communication and self-affirmation of a teenager should be realized in a favorable environment.



If for some reason this does not happen, self-affirmation is carried out in informal teenage groups, street, yard companies in the form of asocial manifestations (drinking, smoking, obscene language, hooliganism), it can become a dangerous, criminalizing factor. [4] Teenage grouping reactions are closely related to the crisis processes of self-awareness. Antisocial companies (socially negative) are associated with entertainment and communication, but they are based on activities aimed at harming society. The origins of gang crime lie in the neglect of street companies whose leaders are difficult teenagers or adult offenders. A healthy youthful craving for collectivity is expressed here as a dangerous group egoism, uncritical hyperidentification with a group and its leader, inability and unwillingness to consciously weigh and evaluate private group norms and values in the light of more general social and moral criteria. Obeying the laws of the group, adolescents go to incredibly violent crimes in order to, as it seems to them, "restore the vital connection of their own Self with the group"[5]. Amorphous morality of a teenager makes him dependent in his judgments on the opinions of others. Compensation for non-independence, for all this, is achieved through extreme devotion to the commonality of "we" and a critical, nihilistic attitude towards all who are included in "them." "Difficult" adolescents have a strongly developed "imitation reflex", which encourages them not to critically adopt behaviors from more advanced adolescents. This explains the increase in the degree of difficulty in education, regardless of the pedagogical influences of movements along the vector of deviant behavior, up to delinquency (offense). With the anatomical and physiological transformations of the body in a teenager, one can observe an increase in interest in the topic of "sexual norm". Moreover, the results of "measuring" the standards of adult sexual behavior are mostly not in his favor, which causes either various manifestations of sexual aggression or anxiety. Distorted development of sexual interest, orientation to various kinds of ersatz of sexual relations lead individual adolescents to sexual perversions of immoral acts, individual and group offenses. Adolescents, as a rule, avoid talking with adults about biopsychological aspects of the relationship between men and women, hide their awareness or, on the contrary, show shamelessness, open cynicism when they want to shock others and prove their maturity[6]. Quickly and easily, teenagers master the "forbidden" methods of psychological defense against attack, which are found in the arsenal of an adult: crowding out unpleasant ideas about the consequences of their act, cunning, deceit, conformity to compliance with a demand, demonstration of physical strength, aggressiveness, rudeness, threat, blackmail. A separate group is constituted by factors of

difficult education connected with the negative impact on the pedagogical process of the dysfunctional family of a teenager. The family, in this case, should be considered primarily as a factor determining the psychophysiological usefulness or inferiority of the child. A dysfunctional family can have a direct decomposing effect on a formative personality and impede its normal development. Negative family conditions, the absence of a normal, moral environment, the violation of psychological contact with the closest people are acutely experienced by adolescents who begin to recognize the contradiction of adult life. Bitterness, leading to despair or cruelty, distrust of people, disregard for norms, cynicism, indifference - this is not a complete list of the inner attitudes of a teenager who are experiencing disagreement or divorce of parents living in conditions of drunkenness, debauchery, incessant quarrels and conflicts, ignorance, indifference. Moreover, there are frequent cases when a distorted moral atmosphere around a child is created by those who love him and wish him all the best. Great harm by their actions is done by parents who try to preempt all his desires, impose their ideas about the world, lifestyle criteria among people. "The artificial delay of childhood is fraught with dangerous consequences," writes I.S. Con - Young people who do not take a serious part in social activities do not develop a sense of responsibility inherent in an adult. Their activity can be directed through antisocial channels, resulting in drunkenness, hooliganism, all kinds of crime. A special place among the unfavorable individual characteristics that make up the psychophysiological prerequisites for antisocial behavior is occupied by a lag in mental development, oligophrenia, and congenital craniocerebral injuries. In some cases, the role of prerequisites may be various physical defects, speech defects, external unattractiveness, constitutional-somatic deficiencies. Thus, adolescence is a difficult period of mental development; it is difficult for the teenager himself, he is difficult when working with him. A tangle of internal contradictions of this age, especially acute at this stage, the resistance of adolescents to education lead to the emergence of a large group of difficult adolescents. Antisocial behavior is interdependent on the influence of factors, primarily, the external social environment (especially the microenvironment), as well as the individual personality traits of the adolescent, which determine his individual response to various "life failures".

## CONCLUSION

The causes leading to psychological disorders, character accentuations are associated both with organic brain injuries (birth asphyxia, traumatic brain injuries, severe intoxication) and social factors, in



which the conditions for family education can be put in the first place. Most often, these factors are so closely related that they cause serious difficulties for researchers in determining the root cause of "deviant" behavior in adolescents.

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## THE ISSUES OF CULTURE AND ETHNOGRAPHY OF SPEECH

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### ABSTRACT

*The article under discussion depicts the issues of culture and ethnography of speech. The traditional wedding rites that continue the traditions of the Russian and Uzbek peoples have been considered in the target article, which are of great interest for linguists and ethnographers. The author of the target article considers that traditional wedding customs and rites are the most interesting material on the basis of which one can get acquainted with the mentality of the people. Despite the fact that cultural traditions are changing due to changes in society, some cultural traditions, wedding customs in Russia and Uzbekistan still retain their original and peculiar form.*

**KEY WORDS:** *social, culture, communication, spiritual, development, society, ethnography, a bilingual student, communicative competence, language, cooperation, environment, interaction.*

### DISCUSSION

In today's world, changes in the social and cultural life of countries pose another challenge for researchers in language learning. There is a need to study the culture of speech as an effective means of communication between peoples. Language learning is no longer just a matter of philology, but also issues related to cultural and spiritual development and problems of society, because language is not only a means of communication, but also a charge (positive or negative), which affects us, our mental health and our environment. Culture of speech influences the process going on in society, the consciousness and behavior of people. Mutual respect between people of different nationalities and stable interethnic relations between them is promoted by the culture of speech [2]. The culture of speech is an indicator of people's educational level and culture. A high culture of speech in all spheres of society is a guarantee of successful or poor development of economy, science and technology. These conditions have encouraged people to learn languages and communicative competences. But it is not enough just to replenish the vocabulary of the language studied, it is necessary to study the culture and traditions of this people. This will help to understand and identify problems in practice, to better understand the

conditions for the development of the region being studied. Recently, many studies have been conducted in our country to study the language situation related to the historical interaction between the Uzbek and Russian languages in the fields of economics, culture, ethnography, etc.

The practical application of this study can influence the development of national relations in the field of youth work, education, in strengthening cooperation between the two peoples. Bilingualism has a great influence on the formation of a culture of speech and the development of interethnic relations.

Russian-Uzbek bilingualism is still in need of development. All students of the Russian higher educational institutions I have interviewed have shown interest in the culture, ethnography, traditions and customs of the Uzbek people. Uzbek students have also shown genuine interest in the Russian ethnography, the life of the Slavic peoples and Russian as a foreign language. An increasing number of students wishing to continue their studies in Russia and upon their return to Uzbekistan are planning to work together with leading Russian companies. However, such students usually communicate informally and more often in a spoken language. Spelling skills of students, i.e. speech activity in a written form, are weak or even don't exist. It can be



concluded that each person should make full and complete use of the opportunities of his/her self-development in order to improve constantly the level of culture of speech [3].

A bilingual student does not have sufficient knowledge of the culture of the country in which he/she studies because his/her personality was shaped by the culture of the country where he/she was born and educated. What is important here is the attitude of the bilingual student towards the ethnic characteristics of a particular ethnic group. Ethnicity: life, character, traditional forms of life are especially distinguished in them. When describing national peculiarities of this or that country, the so-called ethnographic terminology is used.

The development of speech culture of bilingual students is promoted by visiting clubs and sections, participation in various contests and competitions, which are good speech practice for them. Speech culture is formed through the following points: favorable environment with a high culture of speech, the influence of culture, art and the best ethnic traditions and customs of the people, active social activities and self-development. One can judge about a person's intellectual development by his or her speech and the variety of speech techniques used in it.

The culture of speech can reveal the social hierarchy, and when social statuses are equal, it can express a personal attitude towards a partner. It was believed that a person of low social status did not have to talk too much, especially when communicating with people of higher social status: it is impossible to demonstrate familiarity in a conversation with a superior, a respectable solid person. Naturally, during verbal interaction it is necessary to take into account the social status of the addressee, and the social status of the addressee, not allowing either understatement of style or unjustified overstatement. Even today the official position is the main one in determining the social status, however, the tone of the attitude towards high-ranking officials is changing.

Speech development is also affected by borrowings from other languages, especially English, which has recently been used in many technical documents. The media, unfortunately, is not an example of speech culture. Announcers, TV presenters, journalists working for television and radio who make speech mistakes in information transmission are criticized. They are allowed to use slang and jargon, to express themselves rudely and emotionally towards each other. The low level of speech culture is influenced by the political situation, the struggle for power between parties, and the reevaluation of values. And another important factor is the lack of attention to this problem from the family,

so it is necessary to improve the speech culture starting from the family and at all levels of the educational system. We can be calm for the constructive solution of this problem, because modern researchers, especially young scientists, by working clearly defining the problems, connect the theory, methodology and practice together. The study of speech culture can be studied firmly and deeply, based on such directions in science as anthropology and linguistics.

However, for the anthropological study of behavior, there is another area of interest that has been neglected at all. It can be called the ethnography of speech [5]. In some sense this area is a missing link between that is usually described in grammar, and that is usually described in ethnography. Both grammar and ethnography use speech reading to detect other models; neither focuses on its own models. In another sense, it is a question of what information about speech besides grammar and vocabulary rules, a child learns in the process of becoming a full member of a given linguistic society. Finally, it is a question of what the foreigner must learn about the speech behavior of the group in order to be able to participate correctly and effectively in its actions. Ethnography of speech deals with situations and practices, models and functions of speaking as a fully independent activity. One or another speech can be analyzed in an ethnographic context. How can the corresponding analysis be done? We use a comparative method. Let's carry out the ethnographic analysis of some rituals adopted by a certain nationality (for example: marriage rite). We will compare the use of speech communications during the ritual. And is there a total number of primary sources.

## **THE RITE OF MARRIAGE OF THE UZBEK PEOPLE**

The wedding is preceded by several stages: matchmaking (non syndirish); engagement (fatiha tuy), the rite of "nikah" (Arab. النكاح - marriage). The Muslim rite of marriage (nikah) consists of several parts. The sermon is delivered by the mosque imam (or mufti, kadiy) who officiates the marriage ceremony. The sermon begins with a glorification of the Lord: "Āshhadu' an lāh ilāka illāh Llāhu va ashhādu anna Muhāmmadan Rasulu-Llāhī" (I testify that there is no other God but Allah, and that Muhammad is the Messenger of Allah). According to the rules of "nikah", the bridegroom must recite the prayer: "Allaahumma inni as'elyukya hayrahaa va hayra maa jabaltahaa alaikhi va a'uuzu bikya min sharrihaa va sharri maa jabaltahaa alaikh," which means in translation: "O Allah, I ask You for her [bride's] goodness and the goodness for which You created her. I ask You for protection from her evil



and the evil that [maybe] was laid down in creating her." The mullah asks the groom and bride about everyone's consent to the marriage. At the end of the sermon, the imam reads Du'a (prayer) for the full welfare of the family. Congratulating the groom and bride, he says: "Baarakyal-Laahu klaq, va baarakyal-Laahu 'alaik, va jama'a bainekumaa fi fi khair", which means in translation: "May the Almighty send you God's grace in all things and unite you in goodness" [1].

### THE RITE OF MARRIAGE OF THE RUSSIAN PEOPLE

Rites held before the wedding: matchmaking, engagement, wedding. How is the wedding performed? Bride and groom enter the middle of the temple, holding the wedding candles. The priest glorifies God: "Glory to You, our God, glory to You", sings a psalm, glorifying God after each verse:

Blessed are all those who fear God.

Those who walk in His ways.

The fruits of your labors, you will eat.

Blessed are you, and you shall be well.

Your wife is like a vine that bears fruit on the sides of your house.

Your sons are like saplings of oil around your meal.

Blessed be the man who fears the Lord.

May God bless you from Sion, and see the good of Jerusalem in all your days.

And you will see the sons of your sons. Peace on Israel.

The Church minister asks the bride and groom the question of everyone's consent to marry. Then the priest, taking crowns, crowns the bridegroom first, saying, The servant of God (name) is crowned, with the servant of God (name) in the name of the Father, and of the Son, and of the Holy Ghost. Amen, also crowns the bride. He blesses them three times, saying, "Lord our God, crown them with glory and honor!"

### CONCLUSION

It should be noted that traditional wedding customs and rites are the most interesting material on the basis of which one can get acquainted with the mentality of the people. Despite the fact that cultural traditions are changing due to changes in society, some cultural traditions, wedding customs in Russia and Uzbekistan still retain their original and peculiar form. Wedding vocabulary and vocabulary of elements of wedding rites is of interest and has not been fully explored. As a result of comparison, we can note very similar moments in the rite of marriage of the Russian and Uzbek peoples. Both rites - wedding and nikah are preceded by matchmaking and engagement.

At the ceremony of the marriage ceremony, the church minister and the mullah begin the service by praising God, then there is a sermon about the importance of family in human life, after which they ask questions to the groom and bride about the consent of each of them to marry, ending the ceremony of marriage with congratulations and blessing for love and happiness in a strong and friendly family. In this way, we can discover signs of behavior and communication common to two cultures.

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# THE ESTABLISHMENT OF THE COTTON MONOPOLY OF THE RUSSIAN EMPIRE IN TURKESTAN AND ITS CONSEQUENCES (ON THE EXAMPLE OF FERGHANA REGION)

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## ABSTRACT

*The article shows on the basis of archive and other documentary materials, actions of Russian empire on providing central textile factories by cheap cotton and raw materials at the beginning of XX century that negatively reflected in social-economic life of people in Turkestan.*

**KEY WORDS:** *Establishment, Russian empire, Turkestan, Ferghana region, cotton monopoly, raw materials, social-economic life.*

## INTRODUCTION

As the Russian Empire strengthened its position in Turkestan, the nature of economic relations between the metropolis and the colony also began to change. The supply of raw cotton to the growing Russian textile industry was especially important. In addition, the civil war that began in North America in the early 1960s reduced the import of American cotton to Russia, the number of existing weaving mills in the metropolis fell from 659 to 338, increased unemployment, increased social tensions - all this required a faster increase in raw cotton in Turkestan. However, before the Russian invasion, several local varieties of cotton were grown here, such as mala cotton, red cotton, jaydari, and sozana, while in Tashkent and Fergana more local textile and handicraft cotton was grown collected by cotton bowls and separated by hand [1, p.17].

## METHODS OF RESEARCH

Most of the local cotton varieties could not meet the requirements of the textile industry in terms of their low yield, fiber shortness, quality, and could not compete with the "American" variety of cotton fiber. Therefore, the Russian government and investors interested in buying cotton have begun work in Turkestan to create varieties that can

compete with imported cotton. The service of the breeder N.N. Raevsky in this area is great. In 1878, "American" cotton was planted in Andizhan, Namangan, Kokand and Margilan, and the harvest was sent to the owners of the Moscow textile industry for evaluation. However, this variety has a low yield, although the fiber is long.

## RESULTS AND DISCUSSIONS

In 1875-1890, "Sea-Island" and "Upland" cotton varieties were imported from America and seeds were distributed free of charge to farmers. In addition, tax exemptions have been granted for land planted with American cotton. The price of this variety of cotton is also high, in the market in the Ferghana region 1 pud\* cotton in 1898 - 1 soum 50 tiyin - 1 soum 80 tiyin, in 1905 - 3 soums 33 tiyin, in 1910 - 4 soums 45 tiyin, in 1916 - 8 soums 50 tiyin and in 1917 - bought for 33 soums [2, p.120]. As a result of the increase in income from cotton, special attention has been paid to the improvement of cotton varieties. B.Shokhnazarov, G.Dinin, G.Mikhaylovsky, R.R.Shreder, A.Ya. Mukhina, B.A.Navrotsky worked effectively in it on selection of cotton and development and introduction of new varieties of cotton, introduction of use of mineral



fertilizers. In particular, the varieties “Navrotsky”, “Triumph Navrotskogo” gave great results [3, p.162].

The development of cotton growing and the income from it hastened the industrial owners, traders, and officials. Everyone who had money sought to establish cotton plantations and increase their wealth. As a result, several Russian plantations began to appear. In Fergana region, Russian cotton plantations grew cotton on 500 desyatinas\* of land, of which 100 desiatinas were in Namangan, 280 desyatinas in Andizhan, 40 desyatinas in Kokand, and 80 desyatinas in Margilan. “American” varieties

of cotton gave good results in Turkestan. Therefore, these high-yielding and fast-ripening varieties began to squeeze out local cotton varieties. In Fergana region, 31% of the total irrigated land is planted with American cotton [4, p.54].

In the Ferghana region for 12 years the area under cotton increased from 34,669 desyatinas in 1888 to 186,326 desyatinas in 1900. In turn, due to the increase in the amount of cotton, in 1896 in the Ferghana region, which became a major cotton deposit, more than 8.5 million pounds of “American” and local cotton varieties were harvested [1, p.24].

Counties	Lands planted with American cotton	Lands planted with local cotton	Yield from “American” cotton	Yield from local cotton variety
	(At the expense of Desyatinas)	(At the expense of Desyatinas)	(At the expense of Pud)	(At the expense of Pud))
Margilan	70180	5753	3509200	64475
Kokand	13090	6520	846950	252160
Andizhan	47130	870	2121720	33060
Osh	2448	355	103974	6922
Namangan	22790	1348	1414171	48900

In 1906, in connection with the launch of the Tashkent-Orenburg railway, grain began to be imported from Russia to Turkestan. The expansion of the railway network made it cheaper and easier to transport cotton to the central regions of Russia. There were two different views across the government on the development of cotton growing. Proponents of the first view suggested that the increase in cotton production on irrigated lands should be at the expense of reducing the area under wheat and other crops. Doing so would benefit not only Turkestan cotton but also Russian grain from the country, freeing it from dependence on imported cotton (mainly from the United States) and saving large sums of money.

“Every pound of Turkestan grain” the government document stated, “is a rival to grain grown in Russia, and every pound of surplus cotton is a rival to American cotton” [5, p. 88]. The goal is that if more grain is grown in the country, the amount of cotton will decrease, and the amount of grain will increase, leaving no need for Russian grain. As a result, Russia will suffer double damage.

Proponents of the second view suggested that cotton should be grown at the expense of new

lands. But this proposal was almost ignored as it required a lot of money.

In the 90s of the XIX century in the Fergana region “Iran and Central Asia trade and industry”, L. Knop, Alekseev, Poznansky, Yaroslav I manufactory, Panfin, Arens and Comp, Saliev, Shvetsov, Schmidt and Comp, Sobin, N. Konshin, T.S. Morozov and other firms were engaged in the sale of cotton.

Turkestan cotton accounted for 8% of the cotton used in the Russian textile industry in 1890, 33% in 1900, 43% in 1910, 58% in 1914, and 72% in 1916. More than half of the cotton exported to Russia is grown in the Ferghana region. For example, out of 14.6 million pounds of cotton in 1915, 9.5 million pounds, or 65%, were provided by this province [2, p. 134]. The textile industry accounted for 27.3% of the total industrial output in Russia. The textile industry produced goods worth 350 million soums in 1900, 610 million soums in 1903 and 900 million soums in 1913. Due to cotton fiber grown in Turkestan [8, p. 220].

The table below shows that the area under cotton in Ferghana has changed over 30 years (as a percentage) [4, p.54].

Plants	1886	1905	1915
Cotton	14	17	44
Wheat	26	47	27
Corn	22	16	11
The clover	15	8	8
Rice	16	8	7
Other plants	7	4	3



It can be seen from the data that the area of cotton in the region has expanded due to the area of other crops.

Specialization in cotton products, in turn, had a negative impact on the development of grain and livestock. According to a 1908 report on the Fergana region, local livestock began to suffer as a result of the desire to develop cotton growing. Livestock in the region began to be squeezed to such an extent (by cotton) that, as a result, the issue of self-sufficiency of the local population in meat and other livestock products remained unresolved. As a result, the Fergana region alone would have to move 150,000 head of livestock annually from neighboring Semireche.

All the hardships of growing cotton in the country were the responsibility of ordinary farmers. Usually in the early spring, a farmer who spent all his money on food and clothing would sign a contract to borrow money from a company that bought cotton for plowing, buying seeds, and planting. The obligation of indebtedness is certified by the seal of the judge of each place. In most cases, 50 percent of the money is paid in early spring, and the rest in mid-summer or after the cotton harvest. According to the loan document, each farm was required to hand over its produce only to the person who lent the money. In the early twentieth century, flour, grain, tea, cloth, and other things began to be given instead of money. This made the cotton growers even more homeless. Because in the early spring the price of the goods shown would increase 3-4 times, and the lenders would sell the industrial and food goods at the same market price to the cotton farmers [6, p. 111].

Typically, banks gave money to firms with a profit of 8-9%, while firms transferred this money to the "cleaner" at a rate of 12-16%. The Chistachi, on the other hand, transferred a portion of the money to the cotton-growers in favor of 40-50%, and the rest to the charioteers on the condition of giving 25-40% profit [7, p.4]. If he could not pay the debt that year, the debt was transferred to the next year at a higher interest rate.

In Turkestan, especially in the Fergana Valley, where 80-85% of arable land is specialized in cotton, there is a shortage of food and fodder. This had a negative impact on the lifestyle of the cotton growers. Poor peasants began to sell their land cheaply. For example, in Margilan district, farmers were forced to sell their land for 300-500 soums to get out of debt, with an average of 950-990 soums per tenth of land [1, p. 36].

The masses of cotton-growers and peasants also suffered from the weight of various taxes and duties. There are reports that the debt of cotton growers has increased in the early twentieth century. According to them, in 1912 cotton growers owed a total of 156,712 thousand soums from public and

private banks. Of this, 80,979 thousand soums (51%) belonged to the Fergana region. Between 1901 and 1912, farmers in the Fergana region were issued 43,656 writs of execution to repay their debts [2, p.130]. In 1900-1905, land was sold in the Fergana Valley for 19,067 soums, in 1905-1908 for 90, 585 soums and in 1909-1912 for 372,616 soums, and the number of landless and poor peasants increased year by year [8, p. 229].

The poor grain harvest in Turkestan in 1916 and the drought in the spring of 1917 caused great difficulties for the peasants, who were suffering during the war. By 1917, the price of 1 pound of grain had risen from 25 soums to 81 soums [7, p.41-42].

On October 15, 1914, the emperor issued a decree imposing a "military tax" of 2 soums 50 tiyin on each pound of cotton. The "military tax" has reduced 30-40 million soums to the government's treasury, making the situation of cotton growers unbearable. Peasants, deprived of their husbands and property in order to pay off their debts, worked on the lands of the rich.

## CONCLUSION

Chorikor was forced to pay three-fifths of the harvest if he borrowed money for work animals, seeds, farm implements, along with land. The daily wage of a quartermaster did not exceed 9 shillings. This income was obtained only when 9 quintals of crops were grown from one tenth of the land. However, the cotton yield was often below the indicated amount. As a result, the chorikors became more indebted and their farms became poorer. At that time, landless farms accounted for 40 percent in some parts of the country and homeless farms for 25 percent [1, p. 37]. The Russian government has made Turkestan not only a source of raw cotton, but also a market for finished products. The development of cotton growing in the colonial environment did more harm than good to the Uzbek people.

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*1 pud = weight measurement  
equal to 16.32 kg  
1 desyatina = unit of measurement  
equal to 1.09*



# THE STUDY OF THE FUNCTIONAL FEATURES OF THE SYNTHESIZED ALUMINUM-NICKEL-MOLYBDENUM HYDROTREATING CATALYSTS

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## ABSTRACT

The process of hydro-desulfurization of various mineral oils, which play a big role in the modern oil refining technology, continues to improve intensively and its value increases. Despite the fact that nowadays, hydro treating is one of the largest catalytic processes in the modern oil refining industry, the power of hydro desulfurization in the world is estimated as 950 million tons a year. So, it can be concluded that the study of hydro treating catalysts, the chemistry of hydro-desulfurization processes are the high priority tasks leading to the technological solving of the problem of hydro treating process. Moreover, it is also necessary to study other major issues related to the hydro treating process: study of the interaction between active metals and carriers; reactions in the solid phase as well as issues of oxide reduction or their conversion to sulfides. The determination of the surface state in equilibrium conditions, the amount of the coke deposits, the stoichiometry of the catalysts, its changes during activation and regeneration during catalytic process. This article outlines the development of the production of highly active aluminum-nickel-molybdenum catalysts for hydro treating distillate raw materials, improving its physical and chemical properties and activity by modification of the carrier and by studying of the influence of activation conditions.

**KEYWORDS:** hydrogenation activity, sulfurization of Al-Ni-Mo catalyst, activity of the catalyst, thiophene hydrogenolysis.

## INTRODUCTION

Nowadays the native hydrogenating catalysts, which are capable to provide a reduction of sulfur content in the refined gasoline (to 1,0) in diesel fuel up to 0,05%- are practically absent or are being developed. The development of highly effective and mechanically strong catalyst, instead of imported catalyst and establishing a correlation between physical and

chemical properties of catalyst- is the main aim of this work.

The study of the functional features of catalysts has a great importance for synthesis of active and selective catalysts. The creation of catalysts with optimal combination of hydrogenating, isomerizing and splitting activity is required in order to ensure the high selectivity in hydro treatment process. One of the ways



that determine the possibility of creating catalysts characterized by certain features is the study of chemism of conversion raw materials into them depending on the synthesis method, their composition and activation conditions during the chemical process. Activity, selectivity and stability of hydrotreating catalysts depend on the method of adding the catalyst in the process. This article is directed to the creation of highly effective hydro treating catalysts of materials in order to research the functional features of synthesized catalysts in the hydro treating mode, where was used a model mixture of benzene-thiophene (0,05%), the chemism of catalyst formations of which is widely investigated. This allowed to judge about the synthesized catalysts in different reactions, occurring during the process of hydro treatment.

## MATERIALS AND METHODS

The catalyst activity in hydrogenation and hydrogenolysis reactions of sulfur compounds, isomerization, splitting in the process – were investigated in this installation at constant technological parameters (360°C), pressure (5,0 MPa), volumetric speed of raw materials (1,5 hour - 1), hydrogen ratio is 800, the duration of the experiment- 12 hours, loading of catalysts (grain 0,4-0,5 mm) 10 cm<sup>3</sup>. Analysis of raw materials and catalysts were hold by using chromatographic method. The hydrogenating activity of the catalyst was estimated in relation to the sum of the amounts of methyl-cyclohexane, cleavage products to the amount of methyl cyclopentane.

The activity in the reaction of thiophene hydrogenolysis was evaluated by the residual content of thiophene sulfur in the catalyst, which is defined by photocolometric method. The study was carried out by comparison of the functional properties of catalysts with their physical and chemical characteristics: phase composition of the surface phase, determined by the photographic method, the specific surface, acidity, defined by method of high-temperature of pyridine adsorption and the acidity spectrum, which was estimated by the value of the energy value of activation of pyridine desorption. It is known that the most active are those catalysts, which contain metals and their compounds in the state of lower valences. The transfer of metal oxides from the highest valence state into lower valences often reduces the active surface of the catalyst, which should lead to the decrease in its activity. So, preliminary thermal processing of an

aluminum-nickel-molybdenum catalyst in the hydrogen medium at the temperature 500°C reduces the active surface of nickel and molybdenum. However, pre-restoration of catalyst can lead to the increase of hydrogenation activity and reduces the coke formation, therefore increases the stability of catalyst and the time of inter-regenerative mileage. On the other hand, the preliminary restoration and subsequent sulfurization of the Al-Ni-Mo of the catalyst increases its mechanical strength. Therefore, we can understand that there is no final representation of the catalyst at the stage of its activation. Consequently, the part of researches we conducted on catalysts, restored in the current of hydrogen.

## RESULTS AND DISCUSSION

In the study of system *NiO-MoO<sub>3</sub>*, it is shown that the optimal temperature at which the maximum surface of active phase is formed is 500°C. For this reason, in our research were taken the temperature 500°C and 600°C. In the table 1 is shown the comparative data by activity of binary compositions *NiO/Al<sub>2</sub>O<sub>3</sub>* (BF-1) and *MoO<sub>3</sub>/Al<sub>2</sub>O<sub>3</sub>* (BF-5), included in the composition of aluminum-nickel-molybdenum catalyst (BF-2), synthesized by traditional method. The activity was studied in the process of hydro treating the model mixture of carbon oil (benzene)- thiophene. The table shows the data at the end of the 12-hour cycle trials. Samples of catalysts were taken by co-deposition of aluminum hydroxide with aqueous solutions of nickel nitric acid salts and ammonium paromolybdate, drying at the temperature of 140°C during 4 hours and subsequent calcination at the temperature of 500°C and 600°C. The data in the table 1 shows that the model BF-1 (*NiO* - 4,0; *Al<sub>2</sub>O<sub>3</sub>* – 96,0%) is characterized only by hydrogenating activity which quickly falls in the first hours of operation and at the end of the cycle is only insignificant value. The sample BF-5 (*MoO<sub>3</sub>* – 12,5; *Al<sub>2</sub>O<sub>3</sub>* – 87,5%) after preliminary restoration shows the activity in hydrogenation and hydrogenolysis of thiophene. However, the activity of the catalyst in the hydrogenation reaction drops quickly and after 12 hours it is 4,5%-5,5%. High activity in the reaction of thiophene hydrogenolysis is shown by the model BF-5 without preliminary reduction (Table 1), when the duration of the experiment increases, its hydrogenating activity increases



Table 1

Changes in the composition of the catalyzate on different catalysts depending on the reduce temperature

Indicators	Sample BF-1	Sample BF-5	Sample BF-5	Sample BF-2	Sample BF-2	Sample BF-5
Calcination temperature, °C	600	600	600	600	600	550
Calcination medium	air	air	air	air	air	air
Reduce temperature, °C	600	500	600	500	600	600
<b>Composition of the catalyst, %</b>						
C <sub>4</sub>	-	-	-	0,04	0,44	0,04
C <sub>5</sub>	-	-	-	0,12	1,96	0,04
C <sub>6</sub>	-	-	-	0,72	4,17	0,04
MCP	-	0,20	0,1	2,38	3,19	0,06
CH	0,98	5,41	4,5	96,21	86,67	39,4
MCG	-	-	-	-	-	-
C <sub>6</sub> H <sub>6</sub>	99,02	94,39	95,4	0,54	0,57	60,5
Sulfur content in the catalyzate, ppm	300	6	13	6	11	1
Deposits on catalyst;						
Carbon, %	0,5	0,51	0,57	0,18	0,22	0,16
Sulfur, %	0,25	-	-	0,06	0,08	0,06
Specific surface, m <sup>2</sup> /g	167	-	-	169	140	200

MCP-methyl cyclophentane, CH-cyclohexane, MCG- methyl cyclohexane

The highest activity and stability of three catalysts is done by the sample BF-2 (*NiO* – 4,0; *MoO<sub>3</sub>* – 12,5; *Al<sub>2</sub>O<sub>3</sub>* – 83,5%). In this catalyst, along with the hydrogenating reactions of thiophene hydrogenolysis, isomerization and cleavage reactions occur (Table1). When the restore temperature reduces from 600°C to 500°C, the splitting activity of the catalyst decreases and

the hydrogenating activity increases. A significant influence on the activity of the catalyst is provided by the place, where it was calcined (air or nitrogen at the temperature of 600°C during 10 hours). It was found that the activity of the catalyst is higher after calcination in the air current.

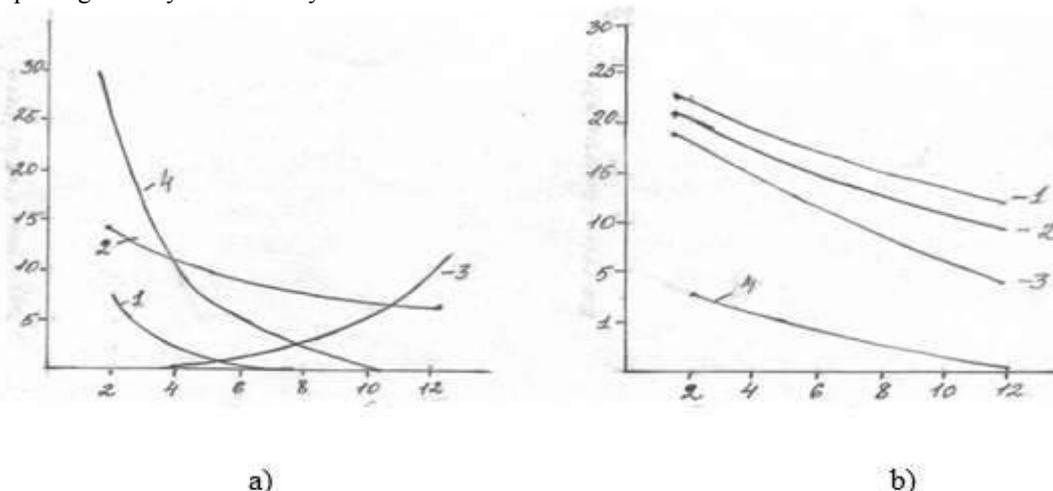


Fig. 1. Changes in the activity of catalysts in the hydrogenation reaction(a) and hydrogenolysis of thiophene (b) 1-BF-1-calcined in the air, reduced 500 °C, 2-BF-5-calcined in the air, reduced at the temperature 500 °C, 3-BF-5-calcined in the air without reduction; 4-BF-5-calcined in the nitrogen N<sub>2</sub>, reduced at the temperature 500 °C.

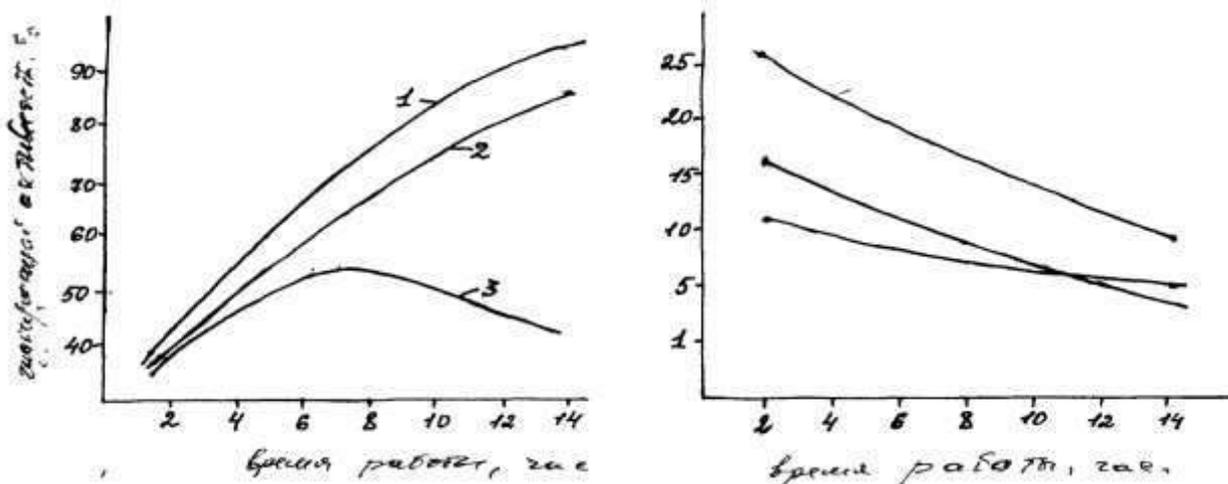
The activity of samples BF-2 and BF-5 catalysts, reduced at the temperature of 500°C and 600°C, the operating time decreases in hydrogenation reactions and increases in the reaction of thiophene hydrogenolysis (while operating time increases), the greatest activity in

the reaction of thiophene hydrogenolysis shows the catalyst reduced at the temperature 500°C, in contrast with the catalyst, reduced at the temperature 600°C. The differences in activity can be explained by considering the possible chemical nature of the catalyst surface.



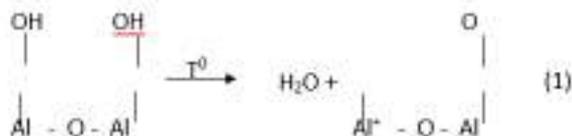
Hydroxyl groups, which are always present on the surface of the alumina act like bronsted acid centers. In the process of calcination during dehydration from two neighboring OH groups, which make an electron deficit

in one of the aluminum atoms, which act like a Lewis acid center.

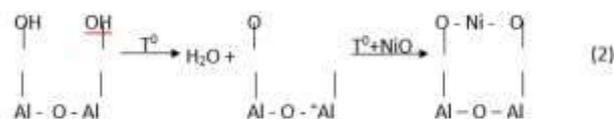


**Fig. 2. Changes in the activity in the hydrogenation reaction(a) and hydrogenolysis of thiophene(b) BF-2-calcined in the air, reduced at 500°C; BF-2-calcined in the air, reduced at 600°C; BF-2-calcined in the nitrogen, reduced at 500 °C.**

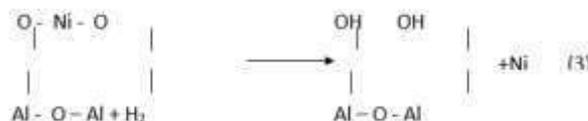
Schematically this can be represented as follows:



The results of determination of the acidity of aluminum oxide, calcined at the temperature 600°C T (table2), shows that the main part of pyridine is desorbed from the sample surface with an activation energy of 10-12 kcal/mole and only a small amount of pyridine (0,016 mole/g), remaining on the surface after desorption at the temperature 350°C, is characterized by the strength of binding is higher than 30 kcal/mole and caused by strong acidic centers. The presence of strong acid centers  $\text{Al}_2\text{O}_3$  is probably connected with the presence of sulfate-ions, that are an admixture of aluminum oxide. Consequently, aluminum oxide surfaces are dominated by weak acid centers. The sample of the BF-1 ( $\text{NiO} - 4.0$ ;  $\text{Al}_2\text{O}_3 - 96,0\%$ ), obtained by co-precipitation after drying and calcination, has a solid solution of  $\text{NiO} - \text{Al}_2\text{O}_3$ . It is possible that the surface centers can be formed by the following scheme:



The reaction (2) should lead to decrease in acidity of the catalyst compared to aluminum oxide. However, when you enter nickel, the number of strong centers increases (Table 2). The increase of acidity of the sample BF-1, is obviously ion due to the fact that during calcination, a solid solution of  $\text{NiO} - \text{Al}_2\text{O}_3$  is mainly formed, where nickel is in octahedral or tetrahedral coordination, filling vacancies in the defective spinel structure of aluminum oxide, which leads to strengthening of electron-acceptor properties of the catalyst and therefore, the increase of acidity. When restoring the catalyst in the medium of the hydrogen in the surface layer, the nickel is reduced according to the scheme:



At the same time, the bronsted weak acid centers are regenerated, while the acidity of catalyst reduces (table 2).

Sulfurization of nickel on silica-alumina carrier leads to the reduction of acidity.



**Table 2.**  
**The dependence of acidity and activity of co-deposited catalysts on chemical composition**

Catalyst	Acidity, mole/g	Spectrum of acid centers, kkal/mole	Hydrogenating activity, %	Isomerizing activity, %	Splitting activity, %	Thiophene conversion, %
$\gamma$ -Al <sub>2</sub> O <sub>3</sub>	0,016	30 10,9 11,9	-	-	-	-
BF-1	0,036	30 6,2	0,009	-	-	40,0
BF-1 reduced 500°C	0,009	30 9,7	0,097	0,024	-	96,5
BF-5	0,12	30	0,097	0,024	-	96,5

Comparing the data by the activity and acidity of catalyst BF-1, it can be concluded that only a small part of Ni can be in the free state, that participates in the benzol hydrogenation reaction. The hypothesis that nickel occupies free vacancies in the defective structure of aluminum oxide is confirmed by the data of investigation of the depth of sulfurizing catalysts. Sulfurization was hold in the current of hydrogen sulfide at the temperature of 380°C. The amount of sulfur on the reduced and not reduced samples of BF-1 catalysts is the same and significantly less than stoichiometric one (2.4 weight, % to nis). Low catalyst activity, stability to reducing and to the sulfurization say that nickel, which is in tetrahedral or octahedral coordination in a solid solution of nio- Al<sub>2</sub>O<sub>3</sub>, is catalytically inactive in the reactions of hydrogenation and hydrogenolysis of thiophene. According to the information of derivatographic research, during co-deposition of aluminum hydroxide with ammonium paramolybdate, a solid solution of MOO<sub>3</sub> – Al<sub>2</sub>O<sub>3</sub> is formed as it can be seen in the table 1 (sample BF-5), shows high activity in the reaction of thiophene hydrogen lysis. Derivatographic data studied also show that during calcination the sample BF-5 in the nitrogen medium, the concentration of MOO<sub>3</sub> decreases in contrast with air calcination, the activity in the hydrogenolysis of thiophene reaction is also reduced. Therefore, the activity of the catalyst in this reaction is in the direct dependence on the concentration MOO<sub>3</sub> in the solid solution. The intensive decline of hydrogenating activity in the first hours of operation is obviously explained by sulfurization of hydrogenating phase in the catalyst. It was found that aluminum oxide with applied molybdenum in the presence and absence of nickel, has acid centers of Bronsted and Lewis on its surface, which is defined by adsorption of pyridine by spectroscopic method. As a result, we can say that Mo on the surface of aluminum oxide is located in the tetrahedral and partially octahedral coordination, because during sulfurization, the sulfur should widen the coordinating sphere of molybdenum. As a result, the

sulfur content in the sulfurized catalyst is less than it should be in MO<sub>2</sub>S<sub>2</sub> or in MO<sub>3</sub>S<sub>3</sub>. The results obtained during studying the reducing and sulfurization of nio /Al<sub>2</sub>O<sub>3</sub> and MOO<sub>3</sub> /Al<sub>2</sub>O<sub>3</sub> catalysts is close to the described model. The low degree of reduction says that the connection between nio and MOO are very strong due to the bridge formations of Ni-O-Al and Mo-O-Al, the sulfurization occurs by connecting the sulfur to MOO<sub>4</sub> or by substitution oxide ions to MOO<sub>6</sub>.

## CONCLUSION

The development of technology for obtaining high active aluminum-nickel-molybdenum catalyst for hydro treating distillate types of raw material, improved its physical and chemical properties and activity by modifying the carrier, also the influence of activation conditions was studied.

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# IMPACT OF LOCK DOWN IN THE STATE ECONOMY KERALA

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## ABSTRACT

*Kerala's financial position has been stained over the years. At the time beginning of 2020 Kerala economy overcome many crucial problems such as Demonetization policy, Policies of nationalization, deferred liabilities of the previous government, financial management problem, and nipah virus, occasionally flood etc. unfortunately the COVID-19 and Lockdown are come from beginning of the new financial year. Impacts of lockdown faces each and every economy of the world. this paper analyse the impact of lockdown in the state economy of Kerala based on Secondary data.*

**KEY POINTS:** *Economic impacts, pandemic, Growth rate,*

## INTRODUCTION

Kerala has had unique economic and social history within India which has influenced its economic growth path over the last 50 years. Historically, physically and culturally Kerala is one of the most distinctive states of India. It is endowed with rich human, social and environment capital, which present enormous opportunities for its policy makers. It has had a unique pattern of development which is as much an outcome of its geography as of history. Today, Kerala is one of the most eligible aspirants for achieving a developed economy status among Indian state. Unfortunately, the unprecedented COVID-19 in Kerala caused extensive effects to economic and social situations. The total population of Kerala had been directly affected by the Covid-19 and related lockdown. Kerala economy contributes nearly 4 % OF GDP to the country's to the Indian economy. Thus, the southern state's per capita income is 60% higher than India's average. It is not a surprise that lockdown of the financial capital comes at a huge economic cost. Economists are predicting the GDP growth rate in the country will be about 1-2 per cent and in worst case scenario, it may enter negative territory. Lock down was firstly declared by the Kerala state in India to the first step for overcome from the pandemic. The economic impact of Covid-19 and lockdown crisis is unprecedented. Previous disasters were mainly natural disasters, when the economy suffered damage to its productive

capacity over a specific time. The production of goods and services during the Covid-19 pandemic came to an abrupt and almost total halt. Further, the halt to production during the Covid-19 pandemic is not locality-specific or scale-specific. Its effects are from top to bottom and across all locations.

## GROWTH RATE

Kerala's financial position has been stained over the years. At the time beginning of 2020 Kerala economy overcome many crucial problems such as Demonetization policy, Policies of nationalization, deferred liabilities of the previous government, financial management problem, and nipah virus, occasionally flood etc. State has smoothly overcome these type of problems. Preparedness and response to COVID-19 have differed at the state level. Kerala has drawn on its experience with the Nipah virus in 2018 to use extensive testing, contact tracing, and community mobilisation to contain the virus and maintain a very low mortality rate.

The State has always been proud of its high growth in State GDP with regard to the national average. However, the latest statistics of Central Statistical Organisation (CSO), State GDP growth are not very encouraging in this regard. The growth in the State economy now lags behind the national average for the first time. The Gross State Domestic Product (GSDP) of Kerala grew from the last 5 year. The Gross State Domestic Product of Kerala for



2020-21 (at current prices) is projected to be Rs 9,78,064 crore. This is 12.2% higher than the revised estimate for 2019-20. COVID 19 and related consequences are the greatly affected at this time. COVID -19 and lockdown effect should be reduced the growth rate of Kerala around above 1.5 % at from the estimated growth rate. According to Kerala Planning Board stimulates a loss of about Rs 80,000 crore in gross value added (GVA) to the Kerala economy in Q1 (Apr-Jun) of 2020. For March, the shortfall in GVA could have been roughly Rs 29,000 crore. The direct and indirect losses in gross state value addition (GSVA), based on an input-output model, is estimated to be 10% in 2019-20 and 20% in 2020-21.

### SERVICE SECTOR

Kerala economy has a service sector oriented economy. The service sector including tourism, public administration, banking and finance, transportation, and communication etc. services sector has the maximum contribution (63.1%) to GSDP. Manufacturing and agriculture contribute 25.6% and 11.3% to GSDP, respectively. The services sector accounts for about 63% of Kerala's gross state value added and of which tourism alone accounts for about 10%. The other two services that are complementary to tourism are hotels, restaurants and retail trade, besides transportation (essentially air and rail). The tourism industry will be among the worst hit in the state. The total losses in the tourism sector from March to September 2020 is estimated to be Rs 20,000 crore. The demand slowdown is expected to continue till September 2021. At the time of recover from the flood related issues on the basis of rebuild the infrastructure of tourism related areas and promote tourism on ecofriendly covid 19 create a troublesome in the sector. It should make a crucial impact on our service sector and growth rate of the economy.

According to planning board on each day during the period of the lockdown, the total loss of wages or earnings by the self-employed and casual workers in Kerala amounts to roughly Rs 350 crore.

The Fiscal Responsibility and Budget Management (FRBM) Act, 2003 provides annual targets to progressively reduce the outstanding liabilities, revenue deficit and fiscal deficit of the state government. Revenue deficit means that excess of revenue expenditure over revenue receipts. A revenue deficit implies that the government needs to borrow in order to finance its expenses which do not create capital assets. The budget estimates a revenue deficit of Rs 12,860 crore (1.7% of GSDP) in 2018-19. The 14th Finance Commission had recommended that states should eliminate revenue deficits. The estimates in the Kerala Budget 2019-20

suggest that the state will not be meeting this target of eliminating revenue deficit. Fiscal deficit means that excess of total expenditure over total receipts. This gap is filled by borrowings by the government, and leads to an increase in total liabilities.. Fiscal deficit may be increases aftermath of lockdown effect.

### AGRICULTURAL SECTOR

COVID-19 and lock down can have a long-term negative impact on agriculture and rural livelihoods. all type of agriculture is negatively affected by due to lockdown. In Kerala state, lock down period is also the harvest time in majority farming. The demand of such products decline due to exporting stagnation. The lower price is directly affected by farmers very deeply. There has a 3000 crore estimated loss in agriculture sector in Kerala. This significantly affects the livelihoods of the population dependent on agriculture for their income. however, the recovery period is moderately in low agricultural sector compared to other sector. Prices and demand may increase after the outbreak.

### RETAIL AND WHOLESALE

Demand for essential commodities will not be negatively impacted due to lock down. But the availability and price fluctuations are the major problems in this sector. The recovery period is very short related to essential commodities. With fewer vehicles plying on roads, consumption of petrol fell by 16.4 percent in March 2020 over a year ago, according to data from the Petroleum Planning and Analysis Cell. Diesel, consumed in factories and for plying commercial vehicles, saw a sharper hit as consumption fell by 24.2 percent year-on-year in March 2020. Analysts believe that fuel demand may remain weak even after the lockdown.

### AUTOMOBILE

The automobile industry, along with the auto components industry, is one of the core industries in India. A well-developed transportation system plays a key role in the development of an economy, and Kerala has no exception to it. Automobile is one of the largest industries in the global market. Demand for car likely to differed or dropped in the lockdown situation. the recovery period is very long in Automobile sector compared to other sector.

### ELECTRONICS

In this sector face a long term impact due to consumer expected to postponed their purchases. About 50-60 % of the products and 70 -80 % of the components are imported. So deficiency of products is an another problem faced in this sector



## **BANKING SECTOR**

The impact of the Lockdown is also severe in Kerala because of the distinct character of its banking sector. Kerala is the 10<sup>th</sup> largest state in terms of overall bank credit. Kerala share in total bank credit was 3.2% in 2018. Banking sector struggle due to Moratorium and there is a chance of increases the NPA.

## **CONCLUSION**

Impact of lockdown is faced by each and every economy of the world. State would be need about Rs.50000 crore for recovery. The Kerala government already announced an economic package to stimulate the economy. Free Ration distribution, food kit, loans for Kudambasree members, advance pension, community kitchen, special care to Migrant labour are the right move and initiatives of Kerala government.

Recovery of State and lives of people had the enormity of task. of flood affected people by government. Large number of people had contributed to Chief Minister's Distress Relief Fund (CMDRF). Salary cut is announced by government for stabilizing financial position of the government. Government has decided to re-prioritisation of already approved plan schemes of the 2019-20. Kerala government should overcome from all the problems at short period of time after the lockdown.

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# **BEST PRACTICES IN USING EDUCATIONAL TECHNOLOGY BY OUT-OF-SCHOOL TIME LEARNERS**

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## **ABSTRACT**

*This paper identifies the best practices in the use of educational technology during out-of-school time learning. The study was conducted in Arusha, Dar es Salaam and Mwanza regions in Tanzania. A preliminary study was first carried out to establish actual practices in the use of educational technology among learners. Learners were asked to state the actual practices that they apply in using the educational technology. The most frequent perceived best practices were used as a benchmark in constructing a questionnaire which was later administered to the respondents from the research regions for them to rank the perceived best practices. The findings suggest that effective use of educational technology demands users jot down key ideas, pay due attention to the media, identify problem areas, and keep records of essential programmes for future reference. Additionally, learners have to adhere to the schedules, and avoid unintended programmes especially those forbidden by adults. These findings call for the joint efforts among educational stakeholders especially school administrators, teachers and parents to ensure that learners in both public and private schools actually embrace the best practices in the course of using Information Communication Technology (ICT) with a view to creating enabling OST learning environment among learners and ultimately improve academic performance. Furthermore, studies need to be done to find the best ways the findings of this study could apply to other countries and higher levels of education.*

## **INTRODUCTION**

The political will towards the support of educational technology in Tanzania is implicit in various relevant policies. The policies include, among others, the National ICT Policy 2016, and the ICT Policy for Basic Education (URT, 2016; 2007). The former, in particular, underscores the need to support education delivery through development and deployment of an electronic education system. This policy has subsequently made some institutions to use ICT and develop Out- of -School Time (OST) learning programmes through local media. The institutions include the Ubongo Ltd, the Tanzania Broadcasting Corporation (TBC), UNESCO-China-Funds-in-Trust (CFIT) and XPRIZE Project (Communication Network Initiative, 2014; Semwaiko, 2014). Whereas the CFIT

project seeks to harness technology for quality teacher training in Africa, the XPRIZE Project promotes early learning through innovative technologies (UNESCO, 2017; WFP, 2017; UNESCO, 2018). Technology integration in the Tanzanian education system is also enabled through the use of ICT in teachers' colleges, secondary schools as well as inclusion of computer as a subject in schools. Technology integration in education has also surfaced as Education Management Information System (EMIS), the Tanzania Education Services Website, the Barclays Computer for Schools and the Computer Procurement and Refurbishment for Schools (Nyirenda, 2013).

It is also important to note that some OST learners abuse educational technologies as they may



use the technologies for perpetuating risky behaviours. A survey conducted in South Africa, for instance, found that only 13.5% of the primary school and secondary school learners used educational technology for school-related activities (UNICEF, 2011). Such activities include chatting on social networks, which consumes about 30% of children's time. The survey also revealed that children spend 16% of their time for watching non-academic television programmes while 16% is spent on movies and hanging out with friends and playing computer games consumes 12% and 4% of their time respectively.

Similar findings have also been seen in Terzian, Giesen, and Mbwana (2009), whose study indicated that it is not enough to expose children to learning technology; rather, effective use of technology should be sought, especially by making learners perceive the practice positively. Similarly, Kiwango (2006) opines that inadequate availability and application of contextual framework for ICT integration may also hinder effective exploitation of ICT in Tanzania. Essentially, a contextual framework of ICT use prescribes the best practices for effective adoption of educational technology. This study is an attempt to establish the best practices for effective use of educational technology by OST learners in Tanzanian primary schools. The paper draws from a Thesis submitted for award of a doctoral degree of the University of Dodoma (Kiwango, 2018). The Thesis focuses on the development of a model to hasten technology integration for OST learning for primary school pupils in Tanzania.

## LITERATURE REVIEW

### Learning theories

This paper subscribes to some learning theories in an attempt to situate it in technology integration for OST learning context. One of the theories is behaviourism; the theory calls for the need to predetermine objectives to foster learning practices. In other words, behaviourism requires the behaviour of learner to be predefined; and that learning is perceived as a permanent change of behaviour (Huitt and Hummel (2006). This point of view fits in this work since it agrees with the idea of having the learning practices defined beforehand such that the learners' behaviour is consequently controlled. This is particularly important as the use of technology like television may attract unintended programmes especially for young children in primary schools. Therefore, defining and explaining what is expected of learners becomes equally vital. However, among the opponent of behaviourism is Boulding (1984), who thinks that human behaviour can only be changed

through cognitive processes; the view which seems to be overlooked by behaviourists. This makes it imperative to review the Cognitive Theory as well.

The cognitive theory of learning is interplay of the nature of the subject matter, the learners' conception of the subject matter and the mechanisms for cognitive change (Strauss, 1997). In this case cognitive change has to do with the development in the learners' cognitive schema, resulting primarily from teaching and learning process (Shawer, 2006). In the context of technology integration, the cognitive theory is relevant in that technology has to use methods that echo learners' cognitive abilities. However, the cognitive theory tends to ignore the role of the learners' environment. This makes it necessary to review constructivists' views as well.

Constructivists assume that learning takes place through by thinking and doing as mediated by participation in activities (Jonassen, Peck, and Wilson, 1999). This kind of learning demands limited guidance and motivation and application of the accrued knowledge in new situations (Kirschner, Sweller, and Clark, 2006). The use of constructivist methods makes learners self-motivated and committed to think critically (Juniu, 2006). Techno-constructivist describes the teaching and learning practices which are technology-driven as an attempt to improve the learning environment (McKenzie, 2000). It has been claimed that technology may facilitate constructivist teaching and learning (Rakes, Flowers and Casey, 1999). Moreover, Collins (1991) contends that technology-driven learning results in more autonomous and individualized instruction, culminating in active learning. Ideas from constructivism fit in the OST practices as learning takes place mostly in the absence of teachers' total control. Therefore, determination of the best practices is imperative in facilitating independent learning.

### The Out-of-school Time learning

Out-of-School (OST) learning involves school activities conducted outside the school schedule. This could capture activities in which learners engage before school, after school, during vacations and weekends (Indianapolis Afterschool Coalition, 2002). According to Ashleigh (2010), effective use of educational technology in OST saves costs, cultivates independent learning and enhances morale for accomplishing and revising school assignments and contents.

### Technology integration

Technology integration has been viewed as the use of technology in regular classroom and school management activities (George Lucas Educational



Foundation (2007). According to Faulder (2011), technology integration entails application of technology to accomplish pre-defined learning outcomes. At a glance, these two outlooks tend to restrict technology to the classroom. However, Earle (2002) conceives of technology integration in broader terms; accordingly, effective technology integration captures technology content, technology tool and effective practices through which the technology content is delivered and applied. The conception of Earle (2002) is adopted in this work as it views technology integration as effective application of technology resources, in terms of technology content, technology tool and best practices.

### **ICT status for primary school learners in Tanzania**

A study by Maro (2014) investigated the use of computers in public and private primary schools in Tanzania; whereby data was extracted from the Basic Education Statistics (BEST) for the year 2012. It was found that primary schools in Tanzania (which were by then about 180,987) had only 7,035 computers. A study conducted by Komba and David in 2016 in Morogoro Municipality found that 95% of 120 primary school pupils could use computer following the introduction of ICT in the school curriculum. This is an indication that Tanzanian primary school learner can master ICT facilities if given the opportunity to learn. This is supported by David (2012); who adds that regardless of previous experience with digital media, pupils can learn and use ICT within a limited time without even teachers' assistance. The assumption of this research work is that Tanzania pupils can make use ICTs in OST for academic ends if they are properly guided. This calls for sensitization and orientation of primary school pupils to best practices; and this is the main thrust of this work.

### **Private tutoring practices in Tanzania**

In most developing countries, many students spend their OST time in private tutoring centres (Mark, 2003). In Tanzania, for instance, the practice is noticeable in both primary and secondary schools, even in the midst of the official ban imposed by the Ministry of Education (Mbelle and Katabaro (2003). One of the setbacks, however, is the observation by Osaki (2000) that some private tutors only give notes from books to learners; instead of making learners think and apply the gained knowledge in new and real life situations. Other challenges of private tutoring in Tanzania are identified by Astridah (2009) as under-qualification of teachers and abuse of tutoring time by learners. In particular, some tutors are business-oriented while also some

learners use the window to engage in immoral practices.

It has also been found that students who attend private tuition fail to think analytically since the teacher has to do everything for them; including the assignments given in regular classes (Astridah, 2009). Despite the outlined weaknesses, private tuitions have become such fashionable in developing countries that even the imposed restrictions have failed to stop the practice. This is partly attributed to the impact they have especially with regard to performance in examinations (Mark (2003).

It is the assumption of this work that the weaknesses associated with private tuitions could be mitigated by use of educational technology during OST learning which could assist learners to learn at home. In order for this to bear the expected outcomes, determination of the best practices is a pedagogical imperative. The best practices are expected to guide the OST learners to exploit educational technology at affordable costs and favourable environment.

## **METHODOLOGY**

### **Study location**

This paper draws from a research work conducted in Arusha, Dar es Salaam and Mwanza regions in Tanzania. The three regions represent the popular cities in the country, whose population was found to be well versed with relevant technology including decoders and televisions (Lamudi, 2015; TCRA, 2013). It was, therefore, expected that the respondents in such cities would be more conversant with educational technology and therefore in a better position to participate to the study. Kelly (2013) supports that the population in urban and peri-urban than in rural areas are more acquainted in the use of technologies.

Specifically, Meru District Council (Arusha), Kinondoni Rural (Dar es Salaam) and Misungwi District Council (Mwanza) were investigated as peri-urban districts. According to NACTE (2014) Kinondoni Rural is a peripheral area surrounding Kinondoni District whereby it is regarded as equivalent to a peri-urban district. It was considered that the three peri-urban districts have moderate socio-cultural and economic conditions that could represent the Tanzanian majority instead of typical rural or urban conditions. The use of the three regions was useful to reflect the varied socio-cultural conditions that might cascade from them.



### **The preliminary study**

It was necessary to capture the perceptions of stakeholders since the study aimed at defining the contextually best practices in the use of educational technology. To capture the stakeholders' perceptions, a preliminary study was a key starting point. The preliminary study was to be carried out in a school that already used educational technology for instructional pursuits, and a typical one was located in Arusha. It was thought that the use of educational technology in regular learning practices would hearten learners to use technology even during OST learning.

The preliminary study involved 27 (3 best pupils in 3 classes with 3 streams each) best performing pupils from class four to six. The selection was based on the pupils' performance in the latest semester examinations. The assumption was that the best performers were likely to have been more involved in learning activities during regular and OST; and that they could as well make more use of educational technology. Thus, such pupils were expected to be more conversant with educational technology and hence in a better position to respond to the study. Pupils in the upper classes were thought to be more experienced in using educational technology than pupils in lower classes. However, pupils in class 7 were not involved in the preliminary study since by then they had completed their studies.

The participants were instructed to list their preferred practices for the use of educational technology. The most frequently listed practices (at least by 50%) were compiled to form a list of the perceived best practices from which a questionnaire was constructed. The questionnaire was validated through experts' opinions and literature review as well. After that, the questionnaire was administered to the participants in the study regions for them to rank their preferred practices based on the Likert scale.

### **Primary schools learners as main participants**

The primary school pupils constitute a group considered most prone to technology abuse (UNICEF 2011) probably owing to their low reasoning capacity. Therefore, the best practices were envisaged to provide them with some kind of guidance on the use of educational technology during OST learning. The preference of primary school pupils was also motivated by the assumption that young learners need to cultivate positive attitudes towards the use of educational technology early enough for them to embrace

educational technology in future. Additionally, poor academic performance among primary school pupils has been reported (IIEP, 2010; Sumara and Katabaro, 2014); where the use of educational technology was also expected to address this challenge.

In the actual study, 11 best day schools were purposefully chosen each from the 11 Divisions of the three Districts. Misungwi District Council was partitioned in four administrative divisions while Meru District Council was divided into three divisions. As for Kinondoni Rural District, the researcher was assisted by the District Chief School Quality Assurance Office whose field officers had knowledge and practical experience of the area and the locations of the respective schools, in splitting it into 4 approximately equal geographical divisions. The divisions were therefore regarded as equivalent to the administrative divisions of the other two districts. The narrowing of districts into divisions was intended to capture the socio-cultural diversity of the regions. The basis for selection of such schools was the results of the 2015 NECTA Primary School Leaving Examination (PSLE).

The best school from each of these 11 divisions was purposively selected. Moreover, the best three learners in each class (irrespective of number of streams) from class 5 through 7 were included on the basis of the latest examination results. There were 92 pupils who responded to the administered questionnaire. Learners in best schools were thought to be active in OST learning and so they were likely to have more insights on OST learning as compared to poor performers. It was envisaged that best performers would be able to translate their conventional study experiences into the digital world. For that case, they were better positioned to share their perceptions of the best practices in the use of educational technology during OST learning.

### **RESULTS**

Participants were asked to rank the practices they considered best to accelerate the integration of educational technology in their OST learning. They were required to indicate whether they strongly disagreed, disagreed, neutral, agreed or strongly agreed. The results are presented in the following sections.

#### **Writing down main points**

Table 1 shows the results pertaining to writing down main points as a best practice in using educational technology.

**Table 1: Writing down main points**

Region	Responses (%)					Total
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Arusha	15.8	0	0	42.1	42.1	100
Mwanza	12.5	18.8	6.3	21.9	40.6	100
Dar es Salaam	8	16	8	32	36	100

Source: Adapted from Kiwango (2018)

The findings showed that 42.1% of pupils in Arusha strongly perceived and perceived writing down main points as the best practice, and 40.6% of those in Mwanza strongly perceived the idea as the best practice. For the case of Dar es Salaam, 36% of the pupils strongly perceived the practice as essential. These findings imply that writing down key points is

among the best practice presumably because it serves as reference.

### Concentration when using educational technology

The perceptions of pupils on concentration as a best practice are summarized in Table 2 below.

**Table 2: Concentration when using educational technology**

Region	Responses (%)					Total
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Arusha	0	0	5.3	26.3	68.4	100
Mwanza	3.1	0	0	21.9	75	100
Dar es Salaam	4	4	8	48	36	100

Source: Adapted from Kiwango (2018)

On the basis of the statistics in Table 2, 68.4% and 75% of pupils in Arusha and Mwanza respectively, strongly agreed that concentration on educational technology is among the best practices. As for Dar es Salaam, the practice was agreed by 48% of the respondents. Only between 0% and 4% of the respondents in the three study regions disagreed with the idea as the best practice. Thus, it could be concluded that most learners would concentrate on

presentation made through educational technology to enhance their understanding.

### Noting difficult areas

Pupils in the study were also asked to state the degree they agreed with noting down difficult areas as a best practice in educational technology. The findings are as presented in Table 3 below.

**Table 3: Noting Difficult Areas**

Region	Responses (%)					Total
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Arusha	0	5.3	0	36.8	57.9	100
Mwanza	6.3	15.6	3.1	18.8	56.3	100
Dar es Salaam	0	8	12	32	48	100

Source: Adapted from Kiwango (2018)



The findings indicate that those who strongly agreed with the practice of noting difficult areas were between 57.9% and 48%. The findings also show that only 8% to 15.6% of pupils in the three regions disagreed with the practice. This suggests pupils would note down problem areas and deal with them later. This could probably allow them ample time to consult reference sources for better understanding of the subject content.

### Recording important programmes for future use

Respondents were also to indicate the extent to which they agreed with recording programmes for future reference as a best practice. The findings are presented in Table 4 below.

**Table 4: Recording important programmes**

Region	Responses (%)					Total
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Arusha	0	5.3	5.3	36.8	52.6	100
Mwanza	0	15.6	6.3	25	46.9	100
Dar es Salaam	6.3	8	12	28	52	100

Source: Adapted from Kiwango (2018)

With reference to the findings in Table 4 above, between 52.6% and 46.9% of the respondents strongly agreed that recording important programmes for future use was among the best practices. On the contrary, neither pupils in Arusha nor in Mwanza strongly disagreed with the practice whereas 6.3% of pupils in Dar es Salaam strongly disagreed with the practice. It is thus logical to conclude that respondents in the three

regions gave credits to the practice of recording important programmes for future revision.

### Setting and following timetable for using educational technology

Regarding the practice of setting and following timetable as a best practice, the results appear in Table 5 below.

**Table 5: Setting and following timetable for educational technology use**

Region	Responses (%)					Total
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Arusha	0	5.3	0	31.6	63.2	100
Mwanza	3.1	15.6	3.1	15.6	62.5	100
Arusha	0	0	16	28	56	100

Source: Adapted from Kiwango (2018)

The findings in Table 5 indicate that between 63.2% and 56% of the pupils in the study regions were in strong agreement with the idea of setting and following timetable for educational technology as a best practice. On the other hand, between 0% and 3.1% of the pupils strongly disagreed with the idea. These findings mean most pupils were in agreement with the need to have a fixed time table for learning through educational technology.

### Avoiding the use of technology for programmes that compromise academic performance

Pupils in the study also indicated their perception on the avoidance of abusing educational technology as best practice. Results are summarized in Table 6 below.

**Table 6: Avoidance of bad technology use**

Region	Responses (%)					Total
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Arusha	0	15.8	0	36.8	47.4	100
Mwanza	3.1	0	0	40.6	56.3	100
Dar es Salaam	0	12	4	40	44	100

Source: Adapted from Kiwango (2018)

The results in Table 6 above suggest that 47.4% of pupils in Arusha, 56.3% in Mwanza, and 44% in Dar es Salaam strongly agreed that it was worth avoiding the use of educational technology for non academic pursuits. While 3.1% of pupils in Mwanza strongly disagreed with the idea, none of them in Arusha or Dar es Salaam had the similar outlook. This suggests that a good number of pupils in the study regions knew the impact of technological abuse on their academic performance; and this kept them safe against risky practice. As the findings show, however, some pupils

could still use educational technology for non academic ends, presumably due to the influence of peers.

#### **Not using programmes forbidden by adults**

Pupils were also required to show the degree to which they agreed or disagreed with the need to avoid forbidden technology programmes as a best practice. Results are presented in Table 7.

**Table 7: Avoidance of forbidden programmes**

Region	Responses (%)					Total
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Arusha	5.3	5.3	5	26.3	57.9	100
Mwanza	6.3	0	0	9.4	84.4	100
Dar es Salaam	0	0	8	24	68	100

Source: Adapted from Kiwango (2018)

The results show between 84.4% and 57.9% of the pupils were in strongly agreement with the practice of avoiding forbidden programmes. However, 5.3% of pupils in Arusha and none of them in the other two regions disagreed about the practice. This is an indication that a good proportion of pupils would use digital technology as directed.

## **DISCUSSION**

It has been shown in this study that effective use of educational technology demands that learners write down key points, and also concentrate on the technology. Similarly, they should also note down difficulties, record important programmes for future use, set and follow the set timetable. Moreover, learners should avoid abusing educational technology, while avoiding use of forbidden programmes. The

findings are in agreement with the existing body of knowledge as established in different studies. For example, Rowntree (1982) found that taking notes is essential as pupils interact with educational technology as it helps them to extend the span of attention as opposed to mere watching. Similarly, taking notes makes learners pay due attention to the technological content; while also enhancing memory (Kesselman, 1982). According to Rowntree (1982), notes should be organized in such a way as to ease review and reference. Alexandra (2005) claims that children do possess agronomies through which they communicate with one another, and this also subsumes hidden messages; and so they should be encouraged to take notes to capture more materials.



Taking notes can be extended to include recording difficult areas and this demand active concentration as learners should first understand the content before they take notes or locate problem areas. In the course of concentration for the sake of recording difficult areas, the learners automatically develop better understanding of the content. It has been found that concentration on educational technology presentation positively correlates with learning effectiveness. For instance, Solomon (1984) claims that learners who concentrate on technology seriously expend more mental effort and engage in active processing. This is to say, to foster OST learning, learners need to be guided to concentrate as they are using the educational technology.

The findings also win the support of the existing learning theories. For instance, constructivism requires the learner to actively engage in learning. It has been evident in the findings that learners have to be actively involved in several activities as they interact with educational technology in the context of OST learning. For example, learners have to set and follow the timetable, write down key points, and identify problem areas. Moreover, they have to record important programmes for future reference.

## CONCLUSION AND RECOMMENDATIONS

The findings of this study have shown that successful technology integration in primary school demands a clear definition of best practices so that learners become actively and effectively engaged. This should go hand in hand with co-operation between teachers and parents; for example, in terms of frequent home assignments by teachers; and supervision of parents and guardians for instance in ensuring that the timetable is closely adhered to, concentration on technology, and taking notes as well. Thus, this paper calls for a joint efforts among the educational stakeholders especially school administrators, teachers and parents to foster the best practices towards the use of educational technology so as to create a conducive environment where the learners can harness the benefits of this technological oriented century. In terms of further studies, focus should be on the way to customize and use the recommended best practices outside Tanzanian and in higher levels of education.

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# IMPACT OF MODELLING TECHNOLOGY INTEGRATION FOR OUT-OF-SCHOOL TIME LEARNING ON ACADEMIC ACHIEVEMENT

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## ABSTRACT

*This paper determines the impact of modelling technology integration for of out-of-school (OST) learning on academic achievement in primary schools. The research was conducted in Arusha Region, specifically in Meru District. The paper adopted the experimental design, involving experimental and control groups. Each of the two groups comprised three (3) schools, making a total of six (6) schools. The experiment was conducted using Digital Video Disks (DVDs), mobile phones, notebooks and home assignment booklets. The tools were further supplemented by a list of perceived best practices, and examination papers. The findings reveal a statistically significant difference in mean scores between the control and experimental groups as confirmed by 95% confidence level whereby,  $F(1, 180) = 28.63$ ,  $p=0$ . Based on the findings, null hypothesis was rejected, leading to the conclusion that the proposed model for OST technology integration is attributed to significant improvements in academic achievement for primary school OST learners. The implication of these findings is for researchers, and other educational stakeholders, including the government to invest in devising contextually relevant model, and mobilizing parents, teachers and learners with a view to hastening technology integration in order to improve academic achievements for primary school pupils. There is also a need for studies that further explore technology integration opportunities, and associated challenges in a bid to addressing poor academic performance among primary school pupils.*

## INTRODUCTION

This paper subscribes to the view that learning is a ubiquitous and life-long process. This implies that learning can occur across time and space especially when mediated by educational technology. To achieve this, technology adoption is necessary; and according to Hultman (2004), this is simply a decision to accept or reject the use of technology. Adoption of technology depends on the extent to which potential adopters are influenced through effective channels of communication. In the context of OST, and in the view of Ashleigh and Jacinta (2010), a communication tool and prerequisite for enticing the academic use of ICT by primary school pupils may entail establishment of guidelines and models of technology adoption.

It has been established that learners' participation in appropriate OST programmes positively correlates with improved school attendance, better interpersonal, higher aspirations for college, and more positive attitudes towards school work finer work habits (Posner & Vandell, 1994, 1999; Schinke, 1999; U.S. Department of Education, 1998). It is further correlated with reduced drop-out rates, reduced teen pregnancy and improved grades, higher quality homework completion, and also less time spent in unhealthy behaviors (Clark, 1988; Hamilton and Klein, 1998; Huang et al, 2000; McLaughlin, 2000). Researchers have also found that learners see the link between what they learn at school and what they learn after school such that full enjoyment afterschool learning begins



with effective school attendance (Metlife foundation, 2011).

There exist different approaches to making pupils learn during OST; and different approaches suit different socio-cultural contexts. For example, although the United States of America is considered the pioneer of community-based OST programmes, financial obligations and geographical diversity between schools, homes and the programme centres determine the efficiency of many programmes (Miller, 1995). It has also been established that several middle and low income countries place children in private tuitions. On the one hand, some private tuition have been found to help learners to do better in examination; on the other hand, however, it has been indicated that negative consequences of private tutoring overshadow the accrued benefits (Mark, 2003). In Tanzania, private tutoring has been overruled; however, some practitioners are still active at both primary and secondary school levels (Amon et al., 2003).

In Africa, the Nokia Mobile Mathematics (Momaths) project has been supporting OST programmes. This project supports the teaching and learning of mathematics with the aid of mobile devices (UNESCO, 2014). In Tanzania, the Tanzanian Commission for Science and Technology (COSTECH) launched the Momaths project in 2014 (Ippmedia October 19, 2014). OST learning has also been supported by use of mobile text messages. For instance, ELIMU Community Light (ECOLI) uses mobile technology to send text messages to guide, remind, and inform stakeholders (teachers, parents, and family members) about skills and best approaches to mediating learners' learning at school and out of the school environment (Center for Education Innovations, n.d). Moreover, since it is not bound by fixed class times, thereby enabling learning across time and space, ECOLI has devised social networks, public dialogue, and information sharing among ECD teachers, parents, and community members. Another OST learning initiative is presented by the Ubongo Kids project (Communication Initiative Network, 2014). Accordingly, Ubongo Kids is designed to mediate children's learning of mathematics and science in the form of songs, fun and local stories. The Ubongo Kids programme complements learning at school especially with regard to topics that seem difficult and essential for pupils. Given the local demands, the Ubongo Kids programme can inspire the use of technology in education in Tanzania. However, more and different educational programmes could join the Ubongo Kids programmes in order to complement the efforts.

Although there have been efforts to integrate ICT in OST learning different parts of the world, learners do

not seem to have been enticed to fully and sufficiently exploit the opportunities associated with use of educational technology (Adomi and Kpangban, 2010; Swart and Wachira 2010). The Chalk Board Project (2008) and Terzian, et al. (2009) maintain that the availability of learning technology is not sufficient to guarantee better academic performance; the availability has to be accompanied by a model that comprises strategies that make learners interested by developing positive perceptions towards the use of the developed technology.

Many studies around the world seem to pay much attention on teaching and learning models that are classroom-based, and thus less is known about teaching and learning experiences in OST settings (Georgia et al., 2004). This determines the impact of modelling technology integration for OST learning on academic achievement based on the model advanced by Kiwango (2018). The model proposed joints endeavours of parents, learners and schools throughout the process of technology integration as a driver of hastening technology adoption in OST learning, consequently improving academic performance of primary school pupils in Tanzania. The paper draws from a Thesis authored by Kiwango (2018) for award of a doctoral degree of the University of Dodoma. The Thesis was on a model to hasten technology integration for OST learning for primary school pupils in Tanzania.

## LITERATURE REVIEW

### Theory of Constructivism

According to constructivists, learners construct meaning through active participation which makes them develop cognitive representation of their experiences (Juniu, 2006). This is further supported by the observation that children learn by thinking and doing, and thinking is the aftermath of participating in an activity (Jonassen, Peck, & Wilson, 1999). In a class based on constructivism, therefore, learners interact with the surroundings and create their own understanding of the world; as opposed to merely receiving information from the mentor (Jonassen, 2000). Therefore, active learning calls for occasionally minimal guidance to improve learning and motivation of learners so that they can transfer what they learn new situations encountered elsewhere (Kirschner et al., 2006). Constructivists think that OST learning is an important supplement to learners' school experience (Maddux, 2001).

The application of constructivist thinking in teaching and learning as mediated by technology offers more learning opportunities that make learners self-motivated and committed to thinking critically (Juniu,



2006). The term techno-constructivist has been coined to denote teaching and learning practices that integrate technology into the school curriculum thereby complementing classroom instruction and redefining the same (McKenzie, 2000). According to Rakes, et al., (1999) “technology can provide the vehicle for accomplishing constructivist teaching practices”. The scholars are of the observation that the use of constructivist methods in the teaching and learning are directly related to the amount of the available technology, the level of technology skills that tutors possess and the use of technology. Collins (1991) opines that technology-rich learning makes the learner more autonomous while at the same time allowing individualized instruction and active engagement. This theory suits the present context since it capitalizes on the need to make technology integration sensitive to the learning environment.

### **Harvard Family Research Project (HFRP) Logic model for OST**

According to Kellogg Foundation (2000), a logic model explains the manner in which a programme is expected to work as related to activities, resources and the intended outcomes of the programme. Watson (2000) outlines six components of a logic model, which include programme desired results; programme motivating conditions and causes; programme strategies; programme activities, outcomes performance measures and outcomes indicators. According to Hamilton (2007), logic models are powerful tools for designing, planning, implementing and evaluating OST learning programmes. In implementing and measuring OST programmes, HFRP (1999), customizes the logic model into four components; which are inputs, activities, outputs, and outcomes. Whereas inputs pertain to plans or resources involved in the evolution of the programme, activities have to do with the components that define the main tasks and activities to be carried out during the implementation of the envisaged programme. As regards outputs, some programme aspects are expected to change instantaneously following the implementation of the programme. On the other hand, outcomes entail changes in the performance of individuals or community as a whole. This study supports the HFRP model because it insists on the need of evaluating the achievement of OST learning, which is the focus of this paper.

### **Out-of-school time learning technology integration model**

Kiwango (2018) came up with a model for OST technology integration that comprises three main

constructs, namely the OST technology integration strategies, hastened technology integration and improved academic achievement. As regards the OST technology integration strategies, the model is designed in a way that the operation of each activity relates to the participation of stakeholders as the two jointly form the strategies for integration of OST technology. The model comprises six strategies, which are the assessment of stakeholders’ perceptions, validation of stakeholders’ perceptions and partnership contracting. The other strategies include capacity building, technology acquisition, technology deployment, and participant evaluation. Whereas technology integration strategies are implemented in a manner that hastens technology integration, they are also implemented linearly; beginning with assessment of stakeholders’ perception and ending with participant evaluation.

Hastened technology integration is measured by intensity of technology use, timeliness of technology use and use of other technologies. Hastened technology is determined by the OST technology integration strategies, and in turn influences the academic achievement. On the other hand, improved academic achievement gauges the degree to which the use of new model and the associated technology impact on the learners’ academic performance. This paper adapted the out-of-school time learning technology integration model by Kiwango (2018) with a focus on the academic achievement construct.

### **The Concept of Out-of-School Time (OST) Learning**

The Afterschool Coalition of Indianapolis (2002) views OST learning as a range of activities that are learned before school, after school, including weekends, holidays and vacations. Recently, there has been the urge to come up with a more expansive definition of learning to include all the means by which young learners can have access and make use of educational opportunities. This is opposed to the traditional school model, and instead includes afterschool activities, time spent with the family, and more and more, interaction with the digital media (Sarah *et al.*, 2012). Studies have attributed participation of learners in OST learning programmes to better school attendance and more positive attitudes towards school work. The practice is also linked with finer work habits, higher aspirations for college, reduced drop-out rates and better interpersonal skills (Clark, 1988; Hamilton and Klein, 1998). Other benefits include higher quality homework completion, less time spent in unhealthy behaviors, improved grades and reduced teen pregnancy (Huang *et al.*, 2000; McLaughlin, 2000).



## **METHODOLOGY**

### **Research design and approach**

Data resulted from an experiment which involved experimental and control groups; while quantitative analysis of data was adopted.

### **Research location**

Data was collected in Meru District, located in Arusha, one of the cities in Tanzania and whose population was found to have sufficient access to technological digital devices such as decoders and television sets (Lamudi, 2015; TCRA, 2013). This made the population more aware of educational technology, and better positioned to participate in the study. This is coupled with the fact that urban and peri-urban population is more advanced in the use of technologies than rural population (Kelly, 2013). Therefore, being peri-urban, Meru District was thought to be a moderate representation of majority of Tanzanians culturally and economically.

### **Participants in the experiment**

A quasi-experiment was mounted in the study site; involving six (6) schools in the experimental and control groups. Class 6 pupils whose families own a DVD player device specifically a television qualified for the experiment. Class 6 pupils were assumed to be more mature, as compared to those in lower classes and therefore in a better position to respond to the study. Class seven was not involved because they were expecting to sit for the National examination and hence it would not be wise to interfere the busy schedule that they had with their teachers. There were 99 and 83 participants who responded to the study in the experimental and control group respectively. Given that the experiment was meant to determine the effectiveness of the new model in the context of OST learning, day scholars were preferred instead of boarding scholars.

Schools were selected with consideration of the learning contexts of Tanzanian primary school pupils. To that end, criterion sampling was used so as to involve public schools since they mostly use the curriculum maintained by the National Examinations Council of Tanzania (NECTA), and which also use Kiswahili as a medium of instruction. Since all of the schools were Government-owned, the selected schools followed the same curriculum and had similar recruitment modalities. The schools were also guided by similar procedures as guided by schemes of work, while they also shared criteria for enrolment of pupils.

Another important consideration was physical accessibility; as the experiment involved six schools

while requiring several examinations, distribution and supervision of tests, returning the marked test papers as well as distribution of DVDs. Since also these movements depended wholly on public surface transport, the experiment was arranged in a manner that eased movements. This dictated the selection of schools from geographically friendly settings. With reference to the geographical orientation of Meru District, the transport was mainly the Moshi - Arusha road. Thus, the selection favored the stretch of four kilometers along the road.

### **The experiment**

Creswell (2005) asserts that the experiments conducted in natural environments do not usually allow full control and random selection of participants. In this case, data collection involved a quasi-experiment which was conducted in a natural setting since it took place in an educational system. To check the impact that might be caused by a single group or single measurement, experimental and control groups engaged three schools each; while also measurements involved a pre-test and three progressive tests.

### **Treatment of experimental and control groups**

Pupils in both groups took a monthly class test as part of the experiment. Pupils who had access to television were given free DVDs with contents of class six topics where they were required to study the topics and prepare for tests. Test schedule was communicated to the potential participants beforehand for them to make necessary preparations for the impending test. After the test, marking was done and marked works were given back to the participants. As per the requirement of the out-of-school time learning technology integration model by Kiwango (2018) pupils of the control group were supplied with and oriented to best practices with respect to the use of the DVDs. Additionally, parents and teachers of the experiment group were also equipped with and oriented to strategies that were essential to support and guide the pupils in making effective use of the provided DVDs. Thus, the main aspect that differentiated the experimental from the control group is that for the former, the use of the educational technology was controlled by the strategies related to the model; while the latter remained under the traditional model of schooling. Therefore, the effectiveness of the new model was measured on the basis of this difference.

### **Tools for the experiment**

The experiment involved the use of Digital Video Disks (DVDs) to be used in DVD players,



notebooks, mobile phones, examination papers, and a list of perceived best practices.

### Procedures

The experiment involved the issuance of DVDs for both groups, issuance of best practices to pupils as well as teachers and parents of experiment group, and administration of a pre-test followed by progress tests. Both groups took a total of three monthly progress tests.

### Measurements of the experiment

It was important to monitor the progress to find out whether the use of the proposed model for OST technology integration led to better academic achievements among the learners. The pre-test served as a covariance which made it possible for the scores of the progress tests to be adjusted. The assumption was that pupils who used the educational technology would be more likely to have made more use of the model. For a better picture of the proposed model questions were picked from topics which had been covered in the materials distributed to the participants up to the test period. To maintain the normality of distribution, the log base 10 function in SPSS programme was used to manipulate the test scores. The General Linear Model (Analysis of covariance - ANCOVA) with repeated measures used to measure the learners' performance whereas the pre-test was used as covariance.

## RESULTS

### Progress test achievements

To establish whether the use of the proposed models for OST technology integration improves learners' academic performance, the following hypothesis was tested;

Null hypothesis (Ho): The use of the proposed model for OST technology integration will not improve the academic achievements in primary schools.

The descriptive analysis shows that the overall mean for the three tests was 29% for experimental groups and 22% for control groups. This shows that performance of the experimental group was higher than that of control group. It was revealed that there was a statistically significant difference in mean scores between the experimental group and control group where,  $F(1, 180) = 28.63, p=0$ . Therefore, null hypothesis was rejected at 95% confidence level and it was concluded that the use of the proposed model for OST technology integration leads to significant improvements in academic achievements.

## DISCUSSION

The results of this study revealed that the use of OST learning improves pupils' academic achievements. The findings corroborate previous studies which have shown a positive relationship between the technology use and academic performance among school children. For example, a study by Letao and Kelly (2010) sought to find out whether 15 years old students who used computer frequently performed better than those who did not. The study found that students who use computer frequently had statistically significant higher performance than those who used computers less frequently. This is because the use of technology reinforces classroom learning, reduces material costs, and increases parental involvement. According to Ashleigh (2010) and David (2013), the practice also cultivates the spirit of independent learning while also building interest in school-related activities.

It is worth understanding, however, that the effectiveness of educational technology on learners' academic performance depends on some conditions. For example, Nazir (2016) concludes that learners at a high risk of smartphone addiction are less likely to have any improvements in their academic achievements. Another study by Tabassum and Hanan (2016) found that the use of technology is positively linked with learners' engagement and self-directed learning, but did not find any significant effect on learners' academic achievements. It can be said that the lack of relationship could be attributed to the view that learners' exposure to technology in the absence of a guided model, inspire them to engage in non-academic uses. According to Adel and Aladwani (2016), the use of technology could have adverse impact on learners' academic performance, if irrationally used.

## CONCLUSION AND RECOMMENDATIONS

It has been found here that the findings on the use of technology among learners are contradicting. The point of concern is whether or not the use of technology positively impacts on academic performance of learners. This inspires the conclusion that learners' use of educational technology may or may not improve academic performance depending on the extent to which some conditions are met. In the same veins, one could say that under ceteris paribus, non-educational use of technology is more prevalent in lower levels of education because their learners may not be conversant to discern between good and bad use of technology as compared to learners in higher levels of education. This being the case, one could think that the use of technology leads to improvement in



academic achievements in primary schools where the integration is coupled with effectively monitored settings. This has implications for learning in the Tanzanian context in the sense that if not closely monitored the exposure of technology to primary school pupils may lead to its abuse that may perpetuate risky behaviour and compromise their academic achievement. Therefore, pertinent efforts need to be made to encourage pupils to use educational technology for academic pursuits. It is thus recommended that researchers and educational stakeholders including the government need to invest more in designing contextually relevant models that actively involve learners, parents and teachers in hastening technology integration with a view to improving pupils' academic performance in Tanzanian primary schools. To make this a reality, the government should intervene especially in terms of making policies which favour integration of OST technology. Another area which is really important pertains to studies which aim at further exploring opportunities for technology integration; including also challenges that may hinder exploitation of technology and the way the findings can be used to address issues pertaining to poor academic performance among students and pupils.

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# DIGITAL ECONOMY: GLOBAL TRENDS AND DEVELOPMENT OPPORTUNITIES IN THE REPUBLIC OF UZBEKISTAN

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## ABSTRACT

*Today, new digital technologies and innovative business models penetrate into all spheres of economic life, influencing the very essence of the economy and forming qualitative structural changes in it. As a result, the digital economy is formed as a subsystem of traditional economy, characterized by the active use of digital technologies and the turnover of specific electronic products. The level of development of digital economy is closely correlated with country competitiveness, which requires special attention of the state and business to its development. The article analyzes the impact of the digital economy on the economic development of the Republic of Uzbekistan.*

**KEYWORDS:** *digital economy, digitalization, information and communication technologies, digital platforms*

## INTRODUCTION

The peculiarity of economic relations in modern conditions is the increasing use of various networks and electronic mechanisms for their implementation and optimization. In this connection, the term “digital economy” has emerged, which in recent years has become actively used in periodical literature and in scientific publications related to the functioning of the economy in the new environment. The increased interest in the use of digital technologies in various fields of activity is linked to the great potential for reducing the costs of business enterprises through them. Also, for state and municipal structures, the use of such technologies has great potential for reducing the budget burden, which contributes to the emergence of various strategies, plans and programs for the development of the digital economy.

However, despite the wealth of information on the digital economy and its development issues, most of the information is either a description of digital technologies in terms of the diversity of perspectives and uses or a direct practice of applying one of their varieties. Theoretical issues relating to the reflection of the impact of digital processes on economic activity with the help of the categorical

apparatus of economic science are insufficiently covered. The consequence of this situation is that almost every author is forced to define the digital economy. Such definitions, of course, turn out to be primarily focused on the subject of the relevant research and may differ significantly from one another. For the same reason, it is difficult to understand the relationship between the category of “digital economy” and other economic categories, and thus to determine its place in modern economic science. Such a situation complicates the theoretical analysis of the digital economy, in some cases causing confusion, because the digital economy is not distinguished and sometimes even identified with other economic categories used to reflect the presence of information component in economic, financial and social processes. In connection with the problems listed above, it is clear that since the emergence of a new category has a significant impact on the entire terminology apparatus of economic science, its generally accepted definition must meet certain requirements. First of all, the content of the new category must demonstrate its necessity: the set of relations it describes must be sufficiently new and specific to be able to be disclosed through already



existing economic categories (or it would be too complicated).

## METHODOLOGY

The research methodology is based on an analysis of scientific sources and normative instruments, scientific literature and reports on the digital economy and ICT development. The author analyzed selected publications addressing both the problems of conceptualizing the digital economy as a complex socio-economic phenomenon and its differences from other concepts and categories, and applied aspects of the digital economy, including the introduction of appropriate technologies. The decision to reflect the publication in the present article was made by experts, including on the basis of its potential interest for research in the field of digital economy and the formulation of recommendations on implementation of state policy in the sphere of development of information society and digital economy as a whole.

## RESULTS

As this review shows, the definition of digital economy in domestic and foreign literature is diverse, and in general it can be understood as *the economic activity that results from billions of everyday online connections among people, businesses, devices, data, and processes*. The backbone of the digital economy is hyper-connectivity, which means the growing interconnectedness of people, organizations, and machines that results from the Internet, mobile technology and the Internet of things (IoT). The digital economy is taking shape and undermining conventional notions about how businesses are structured, how firms interact, and how consumers obtain services, information, and goods.

Professor Walter Brenner of the University of St. Gallen in Switzerland states: *“The aggressive use of data is transforming business models, facilitating new products and services, creating new processes, generating greater utility, and ushering in a new culture of management.”*

Recently, TechCrunch, a digital economy news site, noted, *“Uber, the world's largest taxi company, owns no vehicles. Facebook, the world's most popular media owner, creates no content. Alibaba, the most valuable retailer, has no inventory. And Airbnb, the world's largest accommodation provider, owns no real estate. Something interesting is happening”*[1].

## Examples of definitions of the digital economy abroad

*A global network of economic and social activities that are supported through boards such as the Internet and mobile and sensor-based networks* [2].

*A new way of thinking about the knowledge and digital economy, which shapes new digital skills and opportunities for society, business and government* [3].

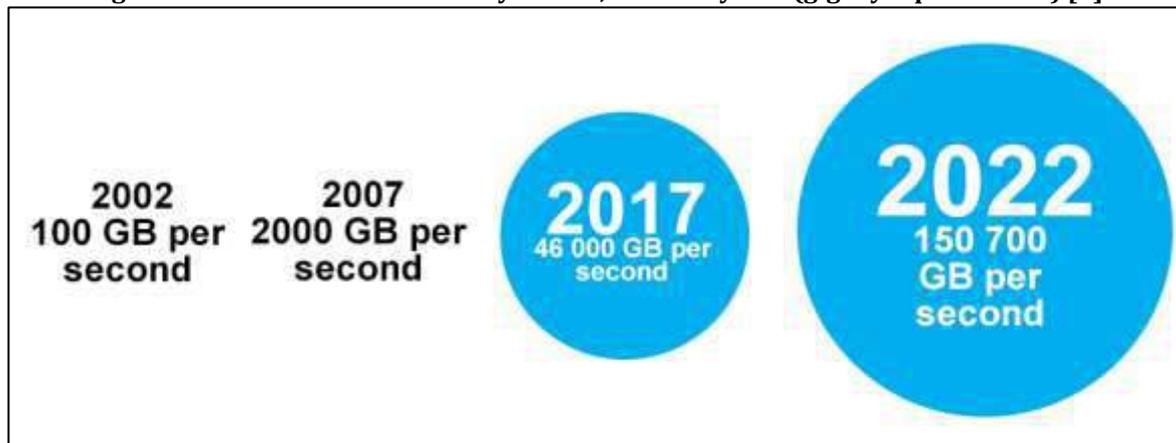
*A digital economy, however, is better understood as a business transaction in markets based on the Internet and the World Wide Web* [4].

*A complex structure consisting of several levels/slots connected by an almost infinite and growing number of nodes* [5].

*An economy that can provide high-quality ICT infrastructure and mobilize ICT capabilities for the benefit of consumers, business and Government* [6].

## Drivers of the digital economy.

The digital economy continues to develop at an incredible speed thanks to its ability to collect, use and analyze huge amounts of machine-readable information (digital data) about virtually everything. Such digital data are collected through analysis of the “digital footprints” that remain on different digital platforms as a result of the activities of individuals, social groups or enterprises. Global Internet Protocol (IP) based traffic, which provides a rough idea of the scale of data flows, increased from about 100 gigabytes (GB) per day in 1992 to over 45,000 GB per second in 2017 (see figure 1).

**Figure 1. World Internet Traffic dynamics, selected years (gigabyte per second) [7].**

This is despite the fact that the data-based economy is now only in its infancy; global IP traffic is projected to reach 150,700 GB per second by 2022 as a result of an increasing number of new users on the Internet and the expansion of the Internet of Things.

The impact that data collection and use have on development and policy depends largely on the type of data concerned: personal or impersonal; closed or publicly available; used for commercial or public purposes; provided voluntarily; obtained through surveillance or extrapolated analytically; confidential or non-confidential. An entirely new “data value chain” has emerged, linked to companies that collect, summarize, store, analyze and model data. The cost is created as a result of the transformation of data into “digital intelligence” and monetization in the process of their commercial use.

### **Global implications of the growing influence of digital platforms**

Digital platforms are playing an increasing role in the world economy. In 2017, the combined value of platform-based companies with a market capitalization of more than \$100 million was estimated to be more than \$100 billion. The United States of America's \$2.5 trillion budget exceeded an estimated \$7 trillion. This is 67% more than in 2015. Some global digital platforms have gained very strong market positions in certain segments. For example, Google owns about 90% of the market for Internet search engines. Facebook accounts for two-thirds of the world's social networking market and is the most popular social networking platform in over 90% of countries. Nearly 40 percent of the world's online retail sales are made through Amazon's network, and its subsidiary Amazon Web Services accounts for roughly the same share of the global market for cloud infrastructure services. In China, the communication network “Wechat” (owned by the company “Tencent”) has more than a billion active

users, and its payment system, together with the system “Alipay” (owned by the company “Alibaba”) covers virtually the entire Chinese market for payments made through the cellular network. It is estimated that Alibaba accounts for almost 60% of China's e-commerce market [8].

The rapid consolidation of the dominance of these major digital giants in the market is due to a number of factors. The first factor is related to the network effect (i.e. the more users a platform has, the more its value for all). The second factor concerns the ability of platforms to extract, monitor and analyze data. As with the network effect, more users mean more data, which in turn allows you to outperform potential competitors and take advantage of the pioneer. The third factor is that as soon as the platform begins to scale up and offer a variety of integrated services, the cost to users associated with the transition to other service providers will begin to increase.

Global digital platforms have taken steps to strengthen their competitive position, including absorbing potential competitors and offering related products and services. Examples of the most notable takeovers of companies operating on digital platforms include the acquisition of the social network “LinkedIn” by Microsoft and the acquisition of the communications network “Whatsapp” by Facebook. Alphabet companies (Google) and Microsoft invested in telecommunications equipment by taking over Motorola and Nokia, respectively. Other large-scale acquisitions in the retail, advertising and marketing, and non-residential real estate sectors have also taken place on major platforms.

The information and communication technology development Index

The ICT Development Index (IDI), which has been published annually since 2009 by International Telecommunication Union (United Nations specialized agency for information and



communication technologies), is a composite index that combines 11 indicators into one benchmark measure. It is used to monitor and compare developments in information and communication technology (ICT) between countries and over time.

The main objectives of the IDI are to measure:

- the *level and evolution over time* of ICT developments within countries and the experience of those countries relative to others;
- progress in ICT development *in both developed and developing countries*;
- the *digital divide*, i.e. differences between countries in terms of their levels of ICT development;
- the *development potential* of ICTs and the extent to which countries can make use of them to enhance growth and development in the context of available capabilities and skills [9].

### The development of the digital economy in Uzbekistan

The initial step towards the formation, implementation and development of digitalization as a new innovative component of the economy was the adoption of the Decree of the President of the Republic of Uzbekistan “On the State Program for the implementation of the Strategy of Action on five priority directions of development of the Republic of Uzbekistan in 2017-2021”, the main direction of which is the formation of an innovative model of economic development of Uzbekistan. Further, the resolution of the President of the Republic of Uzbekistan Shavkat Mirziyoev from July 3, 2018 “About actions on the development of digital economy in the Republic of Uzbekistan” is accepted [10]. In fact, this document represents a comprehensive strategy for the development of information technologies in the country for the next decade. In addition, in accordance with the tasks defined in the State Program for the implementation

of the Strategy for Action on five priority directions of development of the Republic of Uzbekistan in 2017-2021 in the “The Year of science, education and digital economy”, as well as to further enhance the competitiveness of the economy through the widespread introduction of modern information technologies in the sector of the economy and the system of public administration and expansion of telecommunications networks, the President of the Republic of Uzbekistan has decreed the resolution from April 28, 2020 “On additional measures to widely introduce the digital economy and e-government [11]. At present, information and telecommunication systems are an essential attribute of human life. The rapid evolution of information and communication technologies increases the possibility of new products, innovative techniques and technologies in all sectors of the economy of Uzbekistan.

### The digital economy in numbers and comparisons

According to the ICT Development Index (IDI), in 2017, Uzbekistan ranked 95th (Index - 4.9) among 176 countries (for comparison: Belarus - 32nd (7.55), Russia - 45th (7.07), Kazakhstan - 52nd (6.79). The first place was occupied by Iceland (8.98), the second - by South Korea (8.85).

According to the Index of telecommunication infrastructure, Uzbekistan outperforms only Turkmenistan and Tajikistan among CIS countries and lags almost twice behind Russia, Belarus and Kazakhstan with the Index of 0.3307, while South Korea has the best Index 0.8496.

Telecommunication Infrastructure Index (TII) is based on the following five indicators per 100 inhabitants: a number of Internet users (1) and fixed telephone lines (2), as well as subscribers: mobile communications (3), wireless broadband (4) and fixed broadband (5) networks.

**Table 1. ICT Development Index 2017 [12]**

IDI 2017 Rank	Economy	IDI 2017 Value
1	Iceland	8.78
2	Korea (Rep.)	8.80
3	Switzerland	8.66
4	Denmark	8.68
5	United Kingdom	8.53
6	Hong Kong, China	8.47
7	Netherlands	8.40
8	Norway	8.45
9	Luxembourg	8.40
10	Japan	8.32



In terms of Internet speed indicators (data from Speedtest Global Index website for September 2019), Uzbekistan is ranked 116th among 176 countries in terms of broadband (fixed) and 129th in terms of mobile Internet, behind Tajikistan (111th and 135th places), Kyrgyzstan (83rd and 101st), Kazakhstan (68th and 97th), Belarus (51st and 121st) and Russia (46th and 93rd).

The first place in this indicator is occupied by Singapore for fixed Internet, and South Korea for mobile Internet. At the same time, if this rating indicates the speed of broadband Internet in Singapore - 196.88 Mbit / s, in Uzbekistan - 19.91 Mbit / s, for mobile in South Korea - 95.11 Mbit / s, in Uzbekistan - 10.79 Mbit / s, that is ten times lower than the leaders of the rating [13].

According to the e-Government Development Index (EGDI), one of the indicators in the UN e-Government 2018 study, Uzbekistan was ranked 81st, ahead of Kyrgyzstan (91st), Tajikistan (131st) and Turkmenistan (147th), and lost to Kazakhstan (39th), Belarus (38th) and Russia (32nd) [14].

“The e-Government Development Index is a weighted average of normalized indicators for three main aspects of e-government: the volume and quality of online service expressed as the “online service index” (OSI); the state of telecommunication infrastructure development, or “telecommunication infrastructure index”. (TII) and internal human capital, or “human capital index” (HCI).

## CONCLUSION

The experience of foreign countries shows that the digital economy develops simultaneously in a wide range of directions and cannot be built by a limited number of companies, even if they are given special powers and resources. Therefore, a major role in the digital economy should be played by private businesses with a strong entrepreneurial and innovative approach, and the state should create infrastructure and conditions for private initiative.

At the same time, it is important that the development of ICT in the country, including accessible high-speed Internet, keep pace with the interest of businesses to introduce digital technologies in various production processes in order to increase productivity, reduce costs, and increase productivity and profits.

The digital economy is a new kind of economic relationship that is already present in all sectors of the world market and is actively developing. The digital economy may soon become a leading segment, a driver of growth and development of the economic system as a whole. This is due to the fact that the digital economy has some advantages over material commodity-money exchanges, such as the speed of delivery of goods or almost

instantaneous service. Another advantage of the digital economy is the lower production and transaction costs. One of the key advantages of the digital economy over traditional ones is that electronic goods are almost inexhaustible and exist in virtual form, while material goods are almost always limited in quantity and are much more difficult to access. Today electronic economy is already going beyond purely economic processes. Digitalization is being introduced into social processes, people's successful life is increasingly dependent on it, and there is also a large-scale introduction of digital technologies into the work of government organizations and structures. If we consider the situation as a whole, Uzbekistan does not hold leading positions in terms of the level of development of digital economy, but it has potential, year by year improving its position. At the same time, the competition in this area remains very tough, therefore, we must not rest on our laurels, it is necessary for the government and business to work together to further develop the digital economy. These activities need to consider a number of issues, risks and threats highlighted in the article in order to focus resources and efforts on neutralizing them.

Based on the analyzed literature, it can be concluded that the target indicators for further development of information and telecommunication systems in the long term will be:

- restoration of modern infrastructure in the field of telecommunications and informatization;
- providing access to infrastructure in all districts and corners of the Republic of Uzbekistan;
- informatization of the economy of the Republic of Uzbekistan;
- improving the competitiveness of information and communication technologies;
- improvement of education, quality provision of medical services, development of science, social protection based on information and communication technologies.

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# INTERPRETATION OF ZAHIRIDDIN MUHAMMAD BABUR'S IMAGE IN UZBEK AND WORLD LITERATURE

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## ABSTRACT

*This article researches on interpretation of Zahiriddin Muhammad Babur's image in world and Uzbek literature. During the investigations literary works by authors of these nations are widely analyzed. Description of Babur's image as a great king and commander, an unmatched writer and poet, a true expert in the arts, gardening and construction are displayed in a comparative way including several samples of author's opinions about Zahiriddin Muhammad.*

**KEY WORDS:** *Zahiriddin Muhammad Babur, turks, mongols, king, commander, poet, writer, composer, music writer, gardener, constructor.*

## INTRODUCTION

When we look through the human history, we can see that from past to present, many kings and commanders, poets and writers, musicians and craftsmen have left their mark in world history. But it is Zahiriddin Muhammad Babur who combines all of the above qualities, leaving a lasting mark on the history of Central Asia, Afghanistan and India. It is also worth noting that Zahiriddin Muhammad is interpreted in the historical literature of Uzbekistan and the world as a king with a complex destiny, a highly educated scholar, a priceless writer in poetry and prose.

The main purpose of writing this article is the interpretation of Babur's image in Uzbek and world literature, as well as the analysis of works dedicated to the great person.

Known as the famous writer Zahiriddin was born in Ferghana region on February 14, 1483. He was the son of Timurid Omar Sheikh Mirzo. However, Indian writer S.M.Jaffar indicated some misconception in his work "The Mughal Empire from Babar to Aurangzeb" that Zahiriddin was born on February 24, 1483.

According to the information given by Babur himself, his father was the son of Abu Said Mirzo, and he was a descendant of Sultan Miranshah, the third son of Amir Temur. There are numerous references that Bobur was the descendant of the Mongols. The main reason for this data that Zahiriddin's mother, Kutlug Nigor Khanum was the second daughter of the Honorable Yunus Khan, and Yunus Khan was descendant of Chigatai Khan who was the second son of the Mongol invader Chingiz Khan. (S.M. Edwardes *et al.*, 1926)

Babur inherited his qualities from his ancestors, Chingiz Khan and Amir Temur, who were brutal and cruel invaders, who plagued various disasters and tribulations in Central Asia. In particular, the courage and bravery of the Turks, the infinite power of the Moguls were absorbed in Bobur's blood. (S.M. Edwardes *et al.*, 1926). From this information, we can see that foreign writers, in particular Stephen Meredith Edwardes was not very positive attitude towards the personality of Babur's great-great-grandfather, Amir Temur, and Genghis Khan. However, writer emphasizes that despite being descendants of Genghis Khan, Zahiriddin inherited only noble qualities from his ancestors.



After the birth, newborn baby was given the Arabic name "Zahiriddin", which means "Defender of the Faith." But his grandparents Yunus Khan and Eson Davlat Begim who were unable to pronounce the Arabic name correctly, called their grandchild like "Babur", meaning "Little Tiger". (H. Lamb *et al.*, 1961)

After gaining the reign of father in 1494, Babur was forced to fight with his own uncles for the throne. As a result, Zahiriddin lost his lands for the sake of Shaibanids and then in 1504 "Tiger" established his new country in Khurasan and continued his reign as a king. Soon Kandahar and Herat lands were also conquered.

Subsequently, while continuing his rule in Khurasan, Zahiriddin began to think of conquering India. In his youth, Babur had read and heard about the triumphal procession of his ancestor Temur to India. At that time Babur himself was planning to conquer the fertile fields, rich nature and vast plains of India. However, he could not fully state the reason why Babur put his family and his army in danger of occupying the territory of North India. Despite the fact that royal power was in the blood of Babur, he was more commonly known as a "born traveler" and his character determined his fate. (H. Lamb *et al.*, 1961)

Zahiriddin conducted military actions towards India for 5 times during 1519-1526. As the famous writer Harold Lamb wrote in his book, "The First Reign of the Great Mughals in India began on Friday, April 27, 1526 and Zahiriddin Muhammad Babur's name was declared as "King of Kabul and India" at the mosque during the religious ceremony".

In order to establish his rule in other parts of India, Babur marched against the ruler Ibrahim Lodi. Ibrahim's humiliation and mismanagement had wiped out the whole nation. Even his close relatives were on Zahiriddin's side. Zahiriddin worked hard at planning every military action and was able to achieve many of his goals. This is evidenced by the fact that he could take advantage of this situation, Babur defeated the weak 12,000 men army of Ibrahim Lodi with his well-trained, strong army, including only 100,000 men. After that time, Babur became the sole ruler of the whole North India. (S.M. Jaffar *et al.*, 1936)

In 1530, Babur decided to inherit his throne to his elder son Humayun, and he intended to spend the rest of his life with gardening. But in the summer of 1530, Humayun fell ill with fever. Babur then consulted with world-renowned healers to cure his son, and they offered him to give a precious brilliant "Kohinur" in exchange for Humayun's life. Although Zahiriddin refused because his intention was to save his son's life in exchange for his own life, which was more precious than anything else. (S.M. Edwardes *et al.*, 1926) First of all, Zahiriddin went around the bed of his son three times and exclaimed: "O Allah! If life

is to be taken instead of life, I – who is, Babur – will give my life and everything to my son Humayun." (H. Lamb *et al.*, 1961)

After that incident, Humayun's condition began to improve, and Babur's health, on the contrary, began to deteriorate. Great king struggled against serious illness for more than three months. One day, Babur summoned his son Humayun and told him: "If God grants you the throne, do not kill your brothers, don't hurt them, but always keep them close to your wings." (F. Grenard *et al.*, 1931) From his words we can understand that he took care of not only Humayun but also all of his other children.

On December 26, 1530, the great king and commander Zahiriddin Muhammad Babur, the incomparable writer and poet, passed away this world forever. He himself bequeathed his burial at the "Aram Bagh" garden in Kabul, but according to the English writer Harold Lamb's "Babur The Tiger: First of the Great Moguls", Babur was buried in the garden of Agra, which was later called like "Taj Mahal". Later, the tomb of the great commander was decorated as a sacred place, and future generations used to come for visit his grandfather's grave. His grave remained there for 9 years. Babur's tomb was then moved to "Aram Bagh" garden which was created by him during his lifetime in Kabul.

### **Interpretation of Zahiriddin Muhammad Babur's image as a great king and commander**

As mentioned earlier, Babur has left a mark in history as a king, commander, writer and poet, musician and gardener, and architect and painter. The autobiographical work of the Babur "Baburnama" and masterpieces of Uzbek and world literature which are devoted to his life and work can be acknowledged.

Zahiriddin Muhammad, who ruled Kabul from 1504-1526, established a centralized, strong state. He did extensive work on improving the country. He ordered to build big markets. It boosted both domestic and foreign trade. The release of new canals was a major factor in the regulation of dams. "Tiger" expanded the cultivated area, created new parks. He built monuments based on oriental architectural traditions. As a result, this contributed to the spiritual and economic value of the people. (Zokirjon Mashrabov *et al.*, 1997)

According to Jawaharlal Nehru's "The Discovery of India", one of the most important reasons for Babur's easy and quick access to the Indian land was that he used new and improved artillery that had not yet existed in India. The use of new weapons brought success against enemies. From this information, it is clear that, first of all, Zahiriddin started every march on the basis of careful preparation and a well-thought-out military plan. And



that was a victory factor in his main battles. With the arrival of Babur to the Indian land, the most prosperous period in Indian history began. At the time, the common people were devastated by the mismanagement of Ibrahim Lodi. Under the rule of Mongols, India reached its peak of development. (J. Nehru *et al.*, 1985)

With the entry of the Timurids, the state ownership of the state ceased. The Turks and the Safavid dynasty also refused to divide the state into shares. However, the Baburids introduced a better system of government in the Indian subcontinent than their predecessors. Although the Baburid government was similar to the Indian system, it still had the effect on compact management. (Zokirjon Mashrabov *et al.*, 1997)

### **Description of Babur's human qualities as a person, husband and father**

Although Zahiriddin was a great king and commander, he was, above all, a loving father and beloved companion in family circle. Now let's talk about his character traits.

According to the information given by great historian Muhammad Haydar Rashidiy, at an early age Zahiriddin Muhammad had innumerable virtues and was different from others with his bravery and plight. One of Babur's most important qualities is his sense of loyalty to both generations. He has always been generous and respectful towards his brothers.

And now let's learn about "Tiger's" life in marriage. During his 48 years of life, Babur was married seven times and became father of 17 children, but 8 of them died when they were only infants. Mohim Begim was one of Zahiriddin's favorite wives who gave birth to Babur's first son, Humoyun and his other four children. Another favourite one was Gulruh Begim who gave birth to 5 children of Babur. (S.M.Edwardes *et al.*, 1926) According to sources, no women, especially their spouses, were never made to live like slaves in Zahiriddin's palace. Despite being a great king, Babur had a high respect towards his spouses who gave birth to his children and raised them.

As a father, Babur was very kind, thoughtful and caring. He was even ready to sacrifice his life for the life and future of his children. In summary, Babur is interpreted in Uzbek and world literature not only as king and commander, but also as an exemplary father.

### **Zahiriddin Muhammad Babur's interpretation as an artist, naturalist and musician**

Although Zahiriddin Muhammad Babur, as a great king and commander, conducted several brutal battles and inflicted heavy attacks on his enemies, he had a very affectionate heart. This is

evidenced by his admiration for attractive music and unparalleled art. Babur himself was a true music fan and composer of several samples of songs. He listened attentively to songs performed by artists at various events and gatherings, and did not intend to spend long periods of time with unacceptable works of art.

Babur founded dozens of gardens near Kabul, such as "Baghi Vafo", "Baghi Kalon", and "Ram Bagh" in Agra. He himself created and maintained garden in Kabul which were full with citrus fruits, pomegranates and oranges. At the "Ram Bagh" in Agra, he ordered to build dams, baths, chimneys, and planted roses and other types of flowers in the garden. Even after his death, his grave was settled in "Aram Bagh" in Kabul, which was founded by himself. (H. Lamb *et al.*, 1961)

Despite being a young prince, he enjoyed travelling, visiting all the cities and villages of the Fergana Valley, Samarkand, Tashkent, Bukhara, Hissar, and Herat, and the mountains. As he was in Afghanistan, Iran, Pakistan and India, he wrote down valuable scientific information about those lands. At that time Babur tried to penetrate every sphere, such as composition, geology, nature, administrative division, mountains, water, valleys and the surrounding areas, where he lived, ruled, namely Andijan, Kabul, and Agra. It gives a great deal of insight into the world of simulations, and gives a clear view of the geological resources, geotectonic processes and seismology. (Zokirjon Mashrabov *et al.*, 1997)

The famous Indian writer Jawaharlal Nehru, in his book "The Discovery of India" says that Zahiriddin ordered Agra to be the capital of the Mogul Empire and then he used the service of unimaginable Constantinople architects of that time in order to reconstruct it. In his comment J. Nehru gave a description to "the Great Commander" in this way: "Babur saw very few parts of India. Many changes took place after the Mongol invasion. At that time, the Indian population was at a higher level of culture and way of life than Afghans. The Moguls introduced the noble way of living. Babur was a true Renaissance prince, traveler, historian, art specialist and literary writer." Zahiriddin's greatest contribution to India was his introduction of gardening, construction of fountains, small waterfall structures, flowers and plants. (S.M. Edwardes *et al.*, 1926)

"If Zahiriddin had lived longer, he would have proved himself as a great leader," writes S.M. Jaffar in his book "The Mughal Empire from Babur to Aurangzeb". From these considerations, we can conclude that by the people of India, Babur was regarded only as a literary scholar and poet, art historian, naturalist and construction expert. Although he was known as a great commander because of his courage during the conquest of the



Indian province, he was not interpreted in the image of the great king because he ruled the country for only a few years.

### Interpretation of Zahiriddin's image as an unmatched writer and poet

First and foremost, while describing Zahiriddin as a writer, we must mention about the "Baburnama" written by him throughout his life, which is the autobiographical work of the great leader containing life story. However, the book was not given this name by Babur himself. The name "Baburnama" was given by later historians and writers. In some sources, the work is also called "Memories". The well-known writer Lane-Poole also describes Zahiriddin's creative work in the following way: "Babur's role in history is significant with his travel to India, but his role in literary studies is determined by his first actions in his book "Memoirs". After all, Babur was a true master of poetry and prose in Turkish."

The famous English writer Stephen Meredith describes "Baburnama" as follows: "Its main feature is its correctness. The "Baburnoma" contains only the truth. The truth, and again the truth, is not anything else."

By collecting all his lyrical poetry, Zahiriddin created the "Kabul devon" in 1519, and the "Indian devon" in 1528-1529. The total number of poems created by the great poet is 400, 119 of them are in the ghazal genre and 231 in the rubai genre. He also co-authored the book "Mubayyin-i-Zakot", written in 1522 especially to his son Humayun Mirzo. There is given the data on which includes tax rate that what amount of taxes should be collected according to the level of population. (<https://uz.wikipedia.org/wiki/Bobur>)

Being a well-versed linguist, Zahiriddin created the book "Mukhtasar" dedicated to the science of "Aruz" in 1523-1526, and it now serves linguists as a great source in linguistics. Babur, who was also interested in translation, translated the Hodja Ahror's "Volidia" from Persian into Turkish.

In addition, there is information that Babur wrote books such as "Harb ishi" in order to share his knowledge, skills in the military field and "Musika ilmi" to contribute to the development of music, but these two cultural and spiritual heritage have not been preserved to this day.

### CONCLUSION

In summing up we can say that by taking into account all his military campaigns, efforts to revive the empire of Timur, conquering Samarkand three times and establishing a new empire not only in Khurasan and but also in the Indian province with only a few soldiers, we are sure that it was justful to give Zahiriddin the nickname "Babur", meaning

"Tiger". It is also worth noting that despite many years of surrendering, he endured all sorts of adversities, lost his homeland, and lived in a life of long-sufferings.

Undoubtedly, we can see princes in Central Asia at a higher level than Babur, including Zahiriddin's grandsons Akbar, Aurangzeb and his two great ancestors, Genghis Khan and Amir Temur. But when we regard Babur's mental maturity and social goodness; his actions as a prince; love of writing letters, paintings; his interest in art, nature, construction and architecture; not anyone in Asia can replace him.

In conclusion, it is known from all abovementioned facts that Babur had endless knowledge in constructing buildings, analyzing natural resources, creating masterpieces in music, poetry and literature. Due to all of his qualities and features, Zahiriddin Muhammad Babur can be described as an incomparable person that we can rarely find anybody who can stay above him.

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# MOTIVATION AND CAREER SUCCESS, ARE THEY RELATED? AN EMPIRICAL STUDY IN INDIAN IT INDUSTRIES

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## ABSTRACT

*In today's environment, organizations thrive and survive on human resources. Therefore, it has become important to realize organizational and individual goals, which in turn depend on self-motivation as well as self-satisfaction. Acquiring and retaining talent has posed a major challenge in recent time, more or less in each and every organization. In desperate efforts to retain their talents, people in charge of organizations try several options - from deferred payment, offering bonus related to their tenure in the job to even tying them with bond or other types of financial contracts. But none of these have ever been proved to be truly effective. Available research evidence has, however, indicated a strong linkage between motivation and employee tenure (Bull, 2005). In the present paper, an attempt has been made to find out whether scope for career progression and attainment of promotions lead to creating a better-motivated workforce. Employees (n = 155) working in the Information Technology Sectors in different cities in India were the sample of the present study. The data was subjected to a number of statistical analyses such as Correlation and One way ANOVA. The available data seem to indicate that there exists a highly significant relationship ( $p < 0.000$ ) between the number of promotions attained by an individual employee and their level of motivation. The present finding might provide a valuable insight in understanding employee behaviour and should perhaps be taken into account while making a strategy for retaining employees in an organization.*

**KEYTERMS:** *Employee Motivation, Expectancy theory, Promotion, Employee Retention, Organizational Commitment*

## INTRODUCTION

In today's highly competitive business environment, organizations thrive and survive on human resources. A firm can have a sustainable competitive advantage only when it possesses a unique human capital that is not only able to contribute towards adding value to the product or services rendered by the firm, but also is committed and loyal to the organization. The most important asset of any organization is its human resources. Even when all the other resources owned by an organization, such as financial, technological or physical resources are in place, everything might go haywire if the firm does not possess an excellent group of people who will be handling these resources in the right way. In addition, unlike other resources, which will be either eroded over time or would be eventually imitated by other firms and thus would be losing the edge over other firms, the

human resource will become only richer with passing time and experience. This, of course, does not happen automatically and the organization will have to invest a lot in its employees in order to transform them into true resource that will add value to the organization. This also means that one has not only to find the best talent available and nurture them, but also to retain the talent in the firm and develop them to their fullest potential. However, once a group of employees are developed painstakingly over a period of time by an organization, the competitors would always be stalking around to 'snatch' or 'poach' them away. So it's a major challenge for the organization to sustain and retain its workforce as a lot of cost is incurred on them directly or indirectly. High productivity and performance of most organizations could not be realized without employee's support and contribution. Therefore managers should concern on issues and problems



encountered by employee in organizations. Therefore, it has become important to realize organizational and individual goals, which in turn depend on self-motivation and self-satisfaction. Good human resource is becoming an increasingly scarce commodity. With the fierce market competition, it is difficult to find good people in the first place but retaining them in the firm and protecting them from poachers and head hunters are becoming a truly uphill task. Job opportunities today are much better compared to yester years and people are hardly found to stay in any job for too long. Unlike the employees of the past generation, today people are always on the move.

### **Employee Work Motivation, Career Success and Promotion**

The term motivation is originally derived from a Latin word meaning 'push to act for satisfying a need' (Butkus & Green, 1999), and various researchers have offered various definitions of motivation. A number of authors have described motivation as a goal directed behavior. According to Kreitner and Kinicki (2001) motivation represents "those psychological processes that cause the stimulation and persistence of voluntary actions that are goal directed". The process of motivation is usually explained in terms of a driving force within an individual, which compels him/her to achieve the specific goal/s in order to fulfill the need or expectation.

The concept of motivation thus implies that motivation provides an individual with both direction and intention to behave in such a way as to attain a desirable objective (Mukherjee, 2007). Oosthuizen (2001) argues that any comprehensive theory of motivation should be able to explain how human behaviour is guided or focussed in accordance to their levels of motivation. Motivation is traditionally explained in terms of driving force acting within an individual, which compels him to achieve some objective/s in order to fulfill his specific needs or expectation.

Employee motivation remains a key issue for organizations today. With the rapidly changing environment in the age of globalization and open market scenario the solution to problems related with employee motivation is becoming increasingly complex. This is due, in part, to the fact that what motivates the employees keeps on changing constantly (Bowen & Radhakrishna, 1991). Organizations need to understand the need of the employees as well as ways to motivate them within the context of the roles they perform. The managers need to

understand the fundamental components of motivation, and the underlying processes involved to

develop a motivated workforce. According to Oosthuizen (2001), motivation is the reason behind any goal-directed behaviour of an individual. This belief is being strongly shared by Houkes et al (2001) when they pointed out that it is the lack of motivation that might eventually lead to the decision of leaving the organization. In a longitudinal study conducted by them, they found that the turnover intention is primarily predicted by unmet career expectations of the employees. Oosthuizen (2000), also strongly believes that one of the most important roles of a manager is not only to motivate the employees successfully but also to influence their job related behaviour in order to achieve the organisational goal more efficiently as well as effectively.

The factors that motivate employees can be divided into two groups; external and internal factors (Jones et al., 2005). According to Dundar et al., (2007) the external factors for motivation are working condition, wages, company's image, job guaranty, promotion, social environment, and status. Internal factors can briefly be defined as providing employee satisfaction over businesses responsibility. Internal factors not only provide employees with satisfaction but also ensure opportunities for career growth, which shows an important effect on employee's motivation (Karatepe & Uludağ, 2007).

There are also reasons to believe that promotions can very well lead to increasing employee movement. Within the firm, promotions are used as signals of ability of the employee (Forbes & Wertheim, 1995). Armstrong (2001) revealed in his research that people are motivated when they expect a course of action is likely to lead to the achievement of a certain goal and a valued reward - one that satisfies their needs. He goes even further to assert that the organization can provide the framework that can facilitate higher levels of motivation through incentives and rewards, satisfying work and opportunities for learning as well as career prosperity. Graham and Bennett (1995) agree with this and reveal that career development involves higher status and responsibilities which can take place in one organization or through movement between organizations or a combination of both but the prospect of career advancement always motivate employees to work hard.

Promotions can be a major determinant in overall salary growth over time (Gerhart & Milkovich, 1989). With a promotion the employee typically receives a pay increase and moves to a lower relative position to a new pay hike at the same time having the opportunity to earn more and perhaps more frequent within-grade increases with much more responsibilities also (Milkovich & Newman, 1993). Hence, it is



expected that highly promoted employees to experience greater salary growth and obviously very less voluntarily leave the organization. Indeed, it has been found out by Stumpf and Dawley (1981) and Dreher (1982) in their studies that there has a very significant and negative relationship exist between promotions and employee turnover.

Nomura Research Institute Ltd (2005) also agreed that career advancement and reward systems are the sources of motivation at the work place. It is, therefore, logical to believe that there may be a negative impact on motivation, morale, job satisfaction and performance in instances where employees' expectations for advancement are not met. Indeed in their study, Nomura Research Institute Ltd (2005) also found out that employees (especially young people) get tremendously demotivated when they feel there is little chance of personal growth in their career.

Different researchers have found out that employee motivation is always related to career success or number of promotions they received from the organization as well as career growth. We have also seen that career development involves higher status and responsibilities which can always motivate employees to work hard.

### **Vroom's Expectancy Theory or VIE Theory of Work Motivation**

The original thinking behind what has come to be known as expectancy theory, or Vroom's Valence-Instrumentality-Expectancy (VIE) theory (Beck, 1983), can be traced back in the theory of Tolman and Lewin in 1932 and 1938 respectively (Petri, 1996). Vroom was, however, the first scholar to elaborate on this thinking in a motivational context in 1964 (Gouws, 1995). Since it has been originated in the psychological thinking of some 60 years ago, the expectancy theory has been presented in many variations till today. But the most common to all versions of this theory is the basic concept that people's behaviour depends on their beliefs and expectations regarding future events, especially those which are most important to them (Baron et al., 2002).

This model is based on three key variables, viz. valence, instrumentality and expectancy (hence is also known as VIE theory). Valence is the attractiveness of, or preference for, a particular outcome to the individual. Instrumentality refers to the perceived relationship between the two levels of outcomes – first and second. Expectancy is the subjective probability or belief that the individual will be able to attain a particular level of performance. Another important component of this theory is Outcome, which is usually considered as the end result or what people can expect

from their job. Two distinct levels of outcomes are: First-level outcomes that refer to the quantity / quality of output or the performance level and the Second-level outcomes are those which refer to the end result that is expected to follow the first level outcome.

According to Vroom, a multiplicative combination of valence, instrumentality and expectancy determine the motivational force of an individual. Expressed symbolically,

$$MF = E \times \Sigma [I \times V] \dots\dots\dots$$

*Equation (1)*

MF is the motivational force or the willingness to expend effort, V is the valence, I is the instrumentality and E is the expectancy. The implication of the multiplicative model of motivational force is that not a single variable, but all the three variables are important in determining the motivation of a person. Thus, no matter how desirable a particular outcome is (say, promotion or high grade in examination) for an individual (valence), the resultant force would be low if the individual does not believe that his working hard (a first-order outcome) would lead to the particular sought-after outcome, say, promotion, (instrumentality) or whether the individual is capable of attaining the required level of performance (expectancy).

More specifically, motivational force or the willingness to exert effort for a particular outcome is influenced by three variables: (a) valence or the perceived value of the outcome of the behavior, (b) instrumentality or the perceived correlation between one's effort and attainment of the outcome and (c) expectancy or the perceived probability that one will be able to put in the desired level of effort. If any of these factors increase, the motivation strength would also increase. But more interestingly, the reverse is also true! If any one of the factors goes down, the resultant motivational force, or the willingness to exert effort would also decrease. This explains why people are not found to put in adequate effort for even a desired outcome, if the other two factors, viz. instrumentality or expectancy are perceived to be low by the individual. In fact, according to the expectancy theory, it seems that an individual tries to intuitively solve a personal equation of his own before taking the decision of spending the amount of effort towards achieving a certain goal.

Porter and Lawler's (1968) subsequent work on expectancy theory model pointed out that an individual's motivation to complete a task is affected by the reward they expect to receive for completing the task from their organizations. Porter and Lawler (1968) categorized all the possible rewards in the work situation as intrinsic and extrinsic. Intrinsic rewards are



the positive feelings that an individual experiences from completing the task that means job satisfaction, sense of achievement etc while extrinsic rewards are rewards that come from outside the individual such as bonus, commission and pay increases, promotion, foreign tour with family etc. According to them an individual's perceived attractiveness and fairness of these rewards will affect his/her motivation.

### Objectives of the present study

The objectives of the present study are as follows: To find out what employees, engaged in the Technical Academic sector in India, look for from their jobs

- To determine the level of employee motivational force following Vroom's (1964) VIE model
- To determine the nature of the relationship that may exist between employee motivational force and their career success in IT Industries.

Accordingly the following null hypothesis ( $H_0$ ) will be tested in the present study:

- **Hypothesis 1:** There is no relationship whatsoever between the level of employee

motivational force and the number of promotions attained by the employees in IT Industries.

### METHODOLOGY

#### Sample

The subjects of the present study were people employed in different Information Technology Industry (n = 155) in India. In the following section a brief description of the sample of the present study is given.

#### Age

The age of the respondents is grouped into four categories. The First group is the Young Age group with the age between 23-30 years. The Middle Age group is the second group where age lies between 31-40 years

As shown in Exhibit 1, the age of the employees' concentrates in the Young Category, comprising 73.54% of the sample while 26.46% of the respondents belong in the Middle aged group, which indicates the fact that most of the respondents belong to Young aged group in the IT sector in India.

**Exhibit 1: Percentage of Age Distribution of the Sample in IT Industries**

Percentage of Sample Having	
Young (23-30 years)	Middle Aged (31-40 years)
73.54	26.46

**Exhibit 2: Mean and Standard Deviation of Age (in years) in IT Industries**

Age of the Sample	
Mean (in Years)	28.57
Standard Deviation	4.32

### Gender

**Exhibit 3: Percentage of Male and Female Distribution in IT Industries**

Percentage of Respondents		
Male	Female	Total
74.84	25.16	100

As shown in Exhibit 3, almost seventy-five percent of the present sample in IT Industry is found to be male, while the rest (25 percent) are female in India.

### Qualifications

In the present study, educational qualification is considered in terms of the number of years spent in completing the study. Two of educational level have been created: Group 1 is the one where respondents have 16 years of education and referring to the

technical graduates (BE/BTech) and Group 2 having 18 years of education (BE/B.Tech + MBA/PGDBA).

As shown in Exhibit 4, it is evident that the majority of the respondents (about 97.14 %) in IT Sector have 16 years of education, with only 2.58% respondents having 18 years of education which indicates the fact that most of the respondents are having a technical bachelor degree in IT Industries in India.

**Exhibit 4: Percentage of the Sample Having Different Levels of Educational Qualification (in years) in IT Sector**

Percentage of Sample Having		
B.E/B.Tech (16 years)	B.E/B.Tech+MBA/ (18 years)	PGDBA
97.41	2.58	

**Exhibit 5: Mean and Standard Deviation of Educational Qualification in IT Sector**

Educational Qualification of the Sample	
Mean (in Years)	16.05
Standard Deviation	0.17

**Work Experience**

The years of service or experience of the respondents are categorized in to five groups: Group 1: 6 months-2 Years, Group 2: 2.5-5 Years, Group 3: 6-10 years and Group 4 represents people with more than 10 years of experience.

As it is seen in the Exhibit 6, in IT Industry the highest number of respondents (37.41%) falls under Group 2 followed by Group 3 (30.32%). Group 1 has only 22.58% of the respondents while only 9.67% people are left in Group 4 with more than ten years of experience. The average experience of the respondents in IT sector is almost five years (Exhibit 7), in India.

**Exhibit 6: Percentage of the Sample Having Different Levels of Experience (Years of Service) in IT Industries**

Percentage of Sample Having			
0.6-2 Years	2.5-5 Years	5.5-10 Years	10+ Years
22.58	37.41	30.32	9.67

**Exhibit 7: Mean and Standard Deviation of Experience (Years of Service) in IT Industries**

Experience of the Sample	
Mean (in Years)	5.26
Standard Deviation	3.65

**Employee Tenure in the present Job (in Years)**

In the IT Industry the largest number of people (49.03%) is found to have a maximum of two years of tenure in their present job (Exhibit 8) while 38.06% of the respondents are found to have up to five years of

tenure in the present job, though employees continuing with their job for more than five years are found to relatively less (12.91%). The average employee tenure in the IT Industry is found to be around three years only (Exhibit 9).

**Exhibit 8: Percentage of the Sample Having Different Tenure (in Present Job) in IT Sector**

Percentage of Sample Having Tenure in the Present Job of		
0.6-2 Years	2.5-5 Years	5+ Years
49.03	38.06	12.91

**Exhibit 9: Mean and Standard Deviation of Tenure (in the Present Job) of the sample in Academic Sector**

Tenure in the Present Job of the Sample	
Mean (in Years)	3.03
Standard Deviation	2.15

**Number of Promotions (Attained in last 5 Years)**

The number of promotions of the respondents are categorized in to five groups: Group 1: no promotions, Group 2: 1 promotion, Group 3: 2 promotions, Group 4 represents 3 promotions and Group 5 people with 4 promotions.

As shown in Exhibit 10, the largest number of people (37.41%) in the IT Industry is found to achieve only 1 promotion in their career, while only 8% of

people are found to have attained no promotion. The percentage of employees attaining either two or three promotions is found to be 18 and 13 respectively. However, the percentage of employees attaining up to four promotions is not too low (approximately 23% of the respondents in the present study). The average number of promotions in the IT sector is found to be around 2 which seems to indicate a healthy trend (Exhibit 11).

**Exhibit 10: Percentage of the Sample Having Different Number of Promotions in IT Sector**

Percentage of Number of Promotions of the Sample				
No Promotions	One Promotion	Two Promotions	Three Promotions	Four promotions
8.38	37.41	18.06	13.54	22.58

**Exhibit 11: Mean and Standard Deviation of Number of Promotions in IT Sector**

Number of Promotions of the Sample	
Mean (in Years)	2.03
Standard Deviation	1.33

**Tool**

'What People Want from Their Job', a standardized 14-item questionnaire by Pareek (2002) was followed to identify employees' valence for different job outcomes along with an Personal Information Sheet that records the respondents' the details of demographic data (viz. gender, age in years, educational qualifications, years of service, tenure in present job in years, number of promotions attained in last five years.)

After thus identifying the priority of the different organizational outcomes for the employees, they were then asked to answer the following two questions to determine the other two components of the Expectancy theory model, viz. instrumentality and expectancy:

- What, according to you, is the relationship between your present level of performance and the attainment of these outcomes?
- What, according to you, is your chance of putting in your 100% effort in your job?

**Method of Data Collection**

The questionnaire was administered individually to the each of the subjects of the present study and their responses to the questionnaire items were duly recorded.

**Statistical Tools**

The Statistical Package for the Social Sciences (SPSS) version 19 was utilised to analyse the data in. The upper level of statistical significance for null hypothesis testing was set at 5%

**FINDINGS OF THE PRESENT STUDY****Table 1: Mean and Standard Deviation of Employee Motivational Force (as determined by the Multiplicative Model)**

Employee Motivational Force (n = 155)	
Mean	61.42
Standard Deviation	21.24

**Table 2: Pearson Correlation Coefficient between Employee Motivational Force and Number of Promotions Attained by the Employee on the Present Job (n = 155)**

Variables	df	Correlation Coefficient
1. Employee Motivational Force	153	0.581**
2. Number of Promotions Attained		

\*\* p < 0.000



As is evident from Table 2 above, there exists a significant positive relationship between Employee

Motivational Force and the number of promotions attained by them in their current job.

**Table 3: ANOVA to Identify Differences in Employee Motivational Force based on Employee Number of Promotions in IT Industries**

	Sum of Squares	Df	Mean Square	F	Sig.
<b>Between Groups</b>	25763.245	4	6440.811	22.077	.000
<b>Within Groups</b>	43762.034	150	291.747		
<b>Total</b>	69525.278	154			

As evident from the Table 7.2.i.B, between groups variability due to number of promotion is 4 while the within group variability arising due to random error is 150. The F value is 22.077 ( $p < 0.000$ ). Therefore we can say that a significant difference lies between employee motivational forces based on different number of promotions of the employees in IT Industries.

\*\*  $p < 0.01$

Thus it is evident that there is a significant difference between the motivational forces of the employees attaining different number of promotions in their job.

## DISCUSSION

Table 1 shows the mean and standard deviation of employee motivational force, as determined by the multiplicative model. This seems to indicate that employees engaged in the Information Technology sector in India are only moderately motivated. One of the most possible reasons behind this could very well be the relatively less scope for promotions in their job, average number of promotions attained by the employees being 2 (refer to Exhibit 11) which means the average number of promotion is not very bad in last five years as per our study. The resultant frustration seems to be reflected in the high level of employee turnover prevalent in this sector with the average tenure being as less as 3 years only (refer to Exhibit 9). Usually in the IT sector, the number of promotions freezes after a level, as the organizational structure in the IT sector is predominantly flatter, with few hierarchical levels, thus restricting growth beyond a point and employees' hands on experience, rather than formal education, matter most in career growth.

The next phase of the present study aimed at checking the possible impact of number of promotions attained by the individual employees on their levels of motivational force, as determined by the VIE model of employee motivation and according to Equation 1. The findings of the present study shows a significant ( $p < 0.00$ ) positive relationship between employee motivation and the number of promotions attained by the employees in their current job (refer to Tables 2 and 3). Therefore we can say that there is a significant

difference between employee motivational forces and the number of promotions attained by them at IT Industries. Highly motivated employees indeed do put more effort to their job, which enables them to achieve greater number of promotions. The policies in the IT sector in general are usually crafted more carefully to ensure employees' career growth and advancement as employee retention is considered as one of the major challenges in this highly competitive market environment.

Results of the present study thus indicate a statistically significant and direct correlation existing between promotion and motivation. Thus, the findings of the present study seem to reject Null Hypothesis 2, viz. there is no relationship whatsoever between the level of employee motivation and the number of promotions attained by the employees. Accordingly, we find the support for the alternative hypothesis, i.e. the higher the level of employee motivation, the higher the chances of career success in both the sectors, i.e. IT sector.

The existing research seems to support the present finding. Robbins (2001) asserts that promotions create the opportunity for personal growth, increased levels of responsibility and an increase in social standing, growth and job satisfaction. It is indeed a part of performance evaluation process where an employee is provided with an opportunity for growth and development according to his or her abilities, skills and work. A number of researchers are of the opinion that job satisfaction as well as motivation is strongly related to opportunities for promotion (Pergamit & Veum, 1999; Peterson et al., 2003; Scalfane, 1999).

As noted earlier, opportunity for promotion or growth is one of the most coveted outcomes that an employee might seek from his organization. Available research in this area has also indicated a strong linkage between employee motivation and their willingness to stay in the job for a longer period of time (Houkes et al, 2003; Stumpf and Dawley, 1981). Porter and Lawler (1968) had also noted that if employees' needs (of which promotion is a significant one), are not adequately met in the organization, this would decrease



their motivational force considerably, and in turn, the organization might very well lose the employee.

The existence of a significant positive relationship between number of promotions attained by the employees and their levels of motivational force, as is found in the present study, seems to account for the lack of motivation in this particular sector that has been traditionally linked with employee attrition rates. So the present findings may be seen to provide a valuable insight into the retention policy of the valued employees in an organization.

## CONCLUSION

Organisations across the board are conceding to the noteworthy opportunity to improve the return on investments in their human resources, by aligning strategies for employee motivation with business strategy and enhancing the value delivered to and by employees. This has been identified as critical to the ability of the organisation to firstly attract, but also most importantly retaining critical skills and adding to the organisation's competitiveness in the global market.

So how employees are motivated and that the organisational strategies developed should be cognoscente of the fact that the strategies should have an important motivational impact on the employees of the organization and help to retain and sustain the valuable assets of the firm.

## Recommendations and Scope of Future Research

For any organization it is almost impossible to change the preference for various organizational outcomes (the valence) for any particular employee but what the organization could aim for is to strengthen the perception of instrumentality through revising the organizational policies and bringing in more transparency in the system. Another one important thing that the organization should also attempt is to enhance the feeling of self-efficacy of the employees through proper exposure, experience to handle difficult and challenging projects and providing with adequate training to enhance their skill level and expertise for further growth and development.

The results of this study have shown a remarkable leading factor in assessing the contribution the selected factor (number of promotions) on employee motivational force. However, this study is limited in the selected IT industries in India. So the external validity of the results may be limited. Factor such as organizational (Brand), personal, occupational and cultural elements, job characteristics, and demographic variables apart from number of promotions or possibility for career success that may

influence employee motivation should be explored for further research.

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# PROBLEMS AND PROSPECTS OF IMPROVING THE EFFICIENCY OF INNOVATION ACTIVITIES IN UZBEKISTAN

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## ABSTRACT

*In modern conditions, an important condition for the dynamic development of the Republic of Uzbekistan is the accelerated introduction of modern innovative technologies in the economy, social and other spheres with a wide application of science and technology. Dynamically developing all spheres of public and state life of the country require close support of the ongoing reforms based on modern innovative ideas, developments and technologies that ensure a quick and qualitative leap of the country into the ranks of the leaders of world civilization. This determines the relevance of the topic being developed. This paper examines current situation related to innovation potential worldwide and challenges confronted by countries. It also examines innovation system in Uzbekistan and strategies to improve the climate for development of innovation economy.*

**KEYWORDS:** *innovation, innovation process, innovative developments, national innovative system, state regulation.*

## INTRODUCTION

At present, it is quite obvious that different states demonstrate different levels of the innovative development, but sometimes they can be similar to each other in terms of models, institutions, mechanisms of this development, the subject-object and subject side of innovation. Thus, the relevance of the study of this problems we have stated is increasing due to the presence of a large number of countries for analyzing the prerequisites, factors and conditions for the implementation of innovation policy. An important condition for the dynamic development of the Republic of Uzbekistan is the accelerated introduction of modern innovative technologies in the economy, social and other areas with widespread use of the achievements of science and technology.

In the increasingly competitive world, several nations are striving to enhance creative ability with a view to economic growth and efficiency. Competition and innovation are important in building innovation capacity for the countries, as they provide possible pathways to accelerate the technological catch-up cycle as well as maintain productivity growth and competitiveness. Charting the innovation index will enable developed economies to catch up, as it

provides countries' overall innovation output. At the heart of the innovative development of the economy is the process of finding, training, creation, implementation and commercialization of innovations, i. e. ensuring the transformation of ideas directly to innovation (Kurpayinidi, 2015).

Companies' ability to fulfill customer standards is highly dependent on their ability to develop and produce new products at reasonable prices. Innovation is a crucial catalyst for achieving sustainable competitive advantages and is becoming one of the biggest obstacles for small and medium-sized enterprises (SMEs) in particular (O'Regan et al., 2006).

Many analysts believe that this century would be a culture focused on know-how. It will be defined by the development, diffusion and adoption of new technologies that are very active. In this sense, a new term, the national system of innovation (NIS), has been introduced and intensively studied. Some analysts also suggest that this century is going to be a century of regionalisation in these days. Within the globalized world, the nation-state has lost its significance in cultural, R&D and innovation activities.



A system approach is needed to effectively strengthen national potential for innovation. In this paper we highlight that the RIS (Regional Innovation System) framework is a good tool for this reason. Efficient RISs create a competent NIS (National Innovation Systems) through the generation of competitive SISs (Sectoral Innovation Systems) in the regions concerned. We also claim that the correct number of applicable innovation actors should be composed of a RIS in three groups: academia, the public research sector and industry (Chung, 2002).

Global economic growth appears to be losing momentum relative to last year. Productivity growth is at a record low. Trade battles are brewing. Economic uncertainty is high. Despite this contemplative outlook, innovation is thriving worldwide. Formal innovation – as measured by research and development (R&D) and patents – and less formal forms of innovation are flourishing in developed and emerging economies simultaneously. Established and emerging economies of all kinds today facilitate innovation for economic and social growth. This is now much well understood that creativity exists in all economic fields, not just in high-tech firms and development sectors. As a result, economies are concentrating their attention squarely on building and sustaining environments and networks for sound and dynamic innovation.

As part of the implementation of the Concept of Administrative Reforms in the Republic of Uzbekistan approved by Decree of the President of the Republic of Uzbekistan of September 8, 2017 No. UP-5185, the task of creating a system of strategic planning, allowing the formation of future models of innovative development of priority areas and industries based on long-term growth scenarios intellectual and technological potential of the country.

**The degree to which the problem is developed.** The theoretical and methodological foundations of the innovative development of the industrial enterprises are considered in the works of foreign scientists, such as P.F. Drucker, J. Clark, R. Solow, K. Freeman, J. Schumpeter, F. Hayek, R. Harrod.

The founders of the modern approach to the analysis of innovations are F. Agion, R. Atkinson, E. Beinhoker, W. Baumol, P. Krugman, R. Lipsi, M. Mandel, E. Mansfield, R. Nelson, D. Audrets, P. Romer, R. Solow, F. Hayek, E. Helpman, P. Hitt, J. Schumpeter. Significant theoretical contribution to the study of the innovative economics, the conceptualization of the term “innovation” and the classification of its components were made by scientists of the CIS countries O.N. Antipina, L.M. Gokhberg, S.D. Ilyenkova, G.I. Morozova, A.A. Porokhovskiy, A.I. Prigozhin, S.N. Silvestrov, E.A. Utkin, N.L. Frolova, Yu.V. Yakovets.

## RESEARCH METHODOLOGY

The article used high-quality analytical methods, expert assessment methods, scientific review, abstract-logical thinking, comparative analysis, as well as methods of induction and deduction. The study used statistical data from the Ministry of Economy and Industry of the Republic of Uzbekistan, the State Committee on Statistics of the Republic of Uzbekistan. The paper used secondary sources of information.

## RESULTS AND DISCUSSION

Role of innovation in economic growth. International research and development spending expanded faster than the world economy, more than doubling between 1996 and 2016. Global government spending on R&D (GERD) increased by about 5% in 2017, while company R&D spending increased by 6.7%, the largest increase since 2011. Only so many scientists around the world have ever worked in history to address the most important global scientific problems.

Over past years, the globe has seen an rise over expenditure in innovation, as assessed by the economies' average investments at all stages of growth. In 2017 and 2018 the use of intellectual property (IP) hit record highs. Amid economic instability, spending on innovation has increased and seems robust in given the current economic cycle. The challenge is whether this pattern will continue as global economic growth declines in 2019. There are two issues which stand out (Global Innovation Index, 2019):

*First*, the Global Innovation Index 2019 shows that public R&D expenditures—in particular, in some high-income economies responsible for driving the technology frontier—are growing slowly or not at all. Waning public support for R&D in high-income economies is concerning given its central role in funding basic R&D and other blue sky research, which are key to future innovations including for health innovation.

*Second*, increased protectionism—in particular, protectionism that impacts technology-intensive sectors and knowledge flows—poses risks to global innovation networks and innovation diffusion. If left uncontained, these new obstacles to international trade, investment, and workforce mobility will lead to a slowdown of growth in innovation productivity and diffusion across the globe.

It is well known that innovation is one of the main factors of intensive economic growth. It is no coincidence that the most developed countries (Switzerland, 63.9 thousand dollars of GDP per capita at PPP, USA - 57.6 thousand dollars, Singapore - 87.8 thousand dollars, the Netherlands - 50.5 thousand dollars, Ireland - 71.5 thousand dollars, etc.) top the



list of countries with the highest competitive indices, according to experts from the World Bank for 2016.

Uzbekistan Global Innovation Index is about 30 points (on a 100-point scale), and the republic takes a position within the 80-90th place in World Economic Forum (WEF) ranking by global competitiveness index. The gap with the average rating of this index for the leading countries (57.8) is about 2 times. In other indicators of innovative development, the gaps are even more significant: in the number of articles in international scientific journals (per million people) - almost 400 times, in the export of high-tech products (in the structure of exports) Uzbekistan is 4.5 times behind.

A similar picture develops for indicators patent activity, the number of innovative small enterprises, the share of innovative products in the volume of output industries and sectors of the innovation activity of the economy. Currently, due to the reduction of the period of realization of scientific innovations to entrepreneurs/enterprises, it is necessary to quickly respond to changing national and international needs. Display matching conditions and factors innovation development in Uzbekistan with world landmarks allows you to make conclusion: the main factors hindering the transition to innovative economy in Uzbekistan, are underdeveloped institutions and inadequate funding science and new technologies in republic. In Uzbekistan there are certain divided scientific and technological backlogs in cotton growing solar metallurgy breeding plants and row other directions.

economy, the presence of innovative products in the market and other indicators of innovative activity. Nevertheless, in Uzbekistan there are certain scientific and technological reserves in cotton growing, solar metallurgy (solar physics), plant breeding, biology, chemistry, mathematics, geology and a number of other areas. This state of affairs indicates relevance and timeliness of the issue of creating the necessary conditions and macroeconomic prerequisites for intensification innovation activity in Uzbekistan.

Kurpayanidi and Muminova (2016) states that the key challenge in all countries is to accelerate the technological development of the global economy, increasing competition for the factors that determine the competitiveness of national innovation systems. Based on this, the aim is to increase the level of

### **EMPHASIS ON INCENTIVES**

In order to accelerate development innovation economy in Uzbekistan is proposed pay particular attention to following points:

- provide incentives for enhance innovation activities that arise only in conditions of amplification fair competition competitive markets for goods and services through all kinds of contests, innovation fairs, and stimulate large corporations in the development of long-term plans innovation development;

- efficiently use credit and investment resources. An econometric analysis of world development statistics carried out at the IPMI showed that an increase in investments in science and technology, the training of researchers and technicians employed in the R&D sector, does not necessarily automatically entail an increase in total factor productivity (TFP).

**Leading countries in terms of intensive economic growth**

Countries	Level of development		Indicators of innovative development		
	GDP per capita (in thousand \$)	PPP per capita GDP (in thousands \$)	Global Innovation Index	Export of high-tech goods (% of export of industrial goods)	Articles in international journals
Switzerland	79,9	63,9	66,3	27,1	2534,4
USA	57,6	57,6	61,4	20	1265,7
Singapore	53,0	87,8	59,2	67,4	2007,0
Ireland	64,2	71,5	59,0	29,8	1431,8
Netherlands	45,6	50,5	58,3	-	1759,8
Country average	50,8	53,8	57,8	21,4	4455,7
Uzbekistan	2,1	6,5	29,1	4,7	11,2
The gap between the average for countries and Uzbekistan	24,1	8,3	2,0	4,5	397,5

Source: author's calculations according to the World Bank (WDI) and Government Statistics Committee indicators of the Republic of Uzbekistan

This is possible only when the index the quality of the country's institutions exceeds the identified threshold a value of 5.0 on a 10-point scale. The quality of state institutions by the corruption control index is 7.2 in Chile, 5.3 in Malaysia, 7.3 in Slovenia, and 2.1 in Uzbekistan;

- focus on the modernization and development of the manufacturing sector. However this process will be lengthy and should be carried out as part of carefully planned steps based on existing comparative advantages of the country. In Uzbekistan, rural the economy plays an important

role in the economy. Therefore creating new manufacturing capacities integrated with agriculture, as well as the formation of new agricultural value chains can become important an element of diversification strategies.

The main factors hindering the transition to innovative economy in Uzbekistan are underdeveloped institutions and inadequate funding of science and new technologies.



## Factors of inclusive growth and innovative development

Countries	R&D expenses (% of GDP, 2015)	Human Development Index (HDI 1 = the most developed)	Energy Efficiency (GDP per unit of energy consumption; dollars per 1 kg of oil equivalent per post. prices)	State effectiveness (from 0 to +5)	Inclusive Growth Index (2017)	Level of compliance with current legislation (from 0 to +5)	*Corruption Control Index (0-100, where 100 - lack of corruption)
Switzerland	2.96	0.939	18.70	4.5	5.75	4.44	86
Sweden	3.3	0.913	8.89	4.3	5.3	4.54	88
United Kingdom	1.7	0.909	13.78	4.1	4.69	4.13	81
USA	2.8	0.92	7.46	4.0	4.44	4.17	74
Finland	2.9	0.895	6.28	4.4	5.04	4.52	89
Singapore	2.2	0.925	15.88	4.7	n/a	4.33	84
Ireland	1.51	0.923	17.84	3.9	5.01	4.04	73
Denmark	3	0.925	15.89	4.4	5.31	4.4	90
Netherlands	2	0.924	10.56	4.3	5.28	4.39	83
Germany	2.9	0.926	11.53	4.2	4.99	4.11	81
South Korea	4.2	0.901	6.32	3.6	4.95	3.64	53
Luxembourg	1.3	0.898	13.65	4.2	5.86	4.21	81
Iceland	2.2	0.921	2.31	3.9	5.48	4.01	78
Hong Kong	0.8	0.917	25.79	4.4	n/a	4.2	77
Canada	1.6	0.92	5.45	4.3	4.9	4.34	82
Japan	3.3	0.903	10.75	4.3	4.36	3.88	72
New Zealand	1.2	0.915	7.56	4.4	5.09	4.43	90
France	2.2	0.897	10.26	3.9	4.83	3.91	69
Australia	2.2	0.938	8.13	4.1	5.18	4.25	78
Austria	3.1	0.893	11.77	4.0	5.05	4.26	75
Country average	2.4	0.915	11.47	4.2	5.1	4.21	79.3
Uzbekistan	0.2	0.701	3.57	1.9	3.93	1.37	21
The gap between the average for countries and Uzbekistan (in	11.8	1.305	3.21	2.2	1.29	3.07	3.8

Source: author's calculations according to the World Bank (WDI) and Government Statistics Committee indicators of the Republic of Uzbekistan

## CONCLUSION

In conclusion, it should be noted that the creation of an effective national infrastructure to support innovation is one of the most important conditions for the further scientific, technical, and economic development of the Republic of Uzbekistan, and will also create truly favorable conditions for innovation in the context of the formation of a global digital economy.

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# **ADMINISTRATION AND MANAGEMENT: A DETERMINANT TO ORGANIZATIONAL EFFICIENCY AND PROGRESS**

**(A Consideration to Henri Fayol's Principles; Luther Gulick and Lyndall Urwick Edited Papers of Science)**

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## **ABSTRACT**

*Plans and actions in an organization initially starts with decision making, which is done within the administration and management chambers. This encompasses laying structures of hierarchy; effective strategies and plans of what is to be done; how to achieve it including the required resources and procedures; and considering who is responsible in achieving the planned agenda within an organization. Administration and management do not mean being "a manager sitted in an office", rather it can mean one'sself being responsible for whatever duty he/she is assigned to do. According to Fayol's administrative principles; Luther Gulick and Lyndall Urwick's edited papers in the science of administration; and Focal Organizational Variables, considered in this paper all contends that administration and management sections in any organization are assigned to responsibilities they must effectively perform for the efficiency and progress of their organizations. Effective management of an organization gives a high output even with limited resources and, or without wasting the available resources. An administrator has to be well aware of his/her position as almost every member looks on to what is practiced in the "administration section/office". Poor administrators and managers are of a great setback to any organization's efficient production and progress.*

**KEYWORDS:** *Administration and Management, Management Principles, Organizational Efficiency, and Progress.*

## **INTRODUCTION**

### **What is Administration?**

Administration can be activities of groups cooperating to accomplish common goals; that administrative process is a function that is performed in every sector, (Abah, 2007). He, (Abah, 2007) further specified types of administration in two categories of public administration (administrative organization in government institution) and private administration (administrative processes and

organizations by non-governmental institutions). In my viewpoint, the administration is a state where a particular individual(s) is in charge of making duties and responsibilities to be performed in an organization or cooperation. This means that a policy is formulated by an individual(s) and discharged to a specific individual or section of the organization for effective enforcement. Therefore, the administration is a process of getting things to work effectively



rather than being a section within an organization structure.

### What is Management?

Management is a universal human activity in domestic, social, and political settings, as well as in organizations, Boddy (2017, p.11) as cited in (Boris, & Jens, 2019). Management has got four main elements of which include a process comprised of interrelated social and technical functions and activities; that accomplish organizational objectives; achieves these objectives through the use of people and other resources; and in a formal organizational setting, (Darr, 2007). In my viewpoint, management is a process(ess) of utilizing the available resources to achieve the desired output either as an individual or group.

This sheds light that, administration and management go hand-in-hand because for someone to administer policy and effect it has to take a management duty (even to self). Likewise, as an administrator in getting assigned policies to work, he has to manage his position and get resources (humans inclusive) utilized effectively for a better output.

### IMPROVING ORGANIZATIONAL EFFICIENCY AND PROGRESS (A Consideration to Henri Fayol's Principles; Luther Gulick and Lyndall Urwick's Edited Papers in the Science of Administration)

An organization can be under one of the following categories including; mutual benefit organizations, business organizations, the service organization, and the common-weal organization, (Abah, 2007). Henri Fayol advanced management principles in a book titled "General and Industrial Management (1916)", (Manithaneyam, 2009); (Arthur, 1961); (Abah, 2007), and the outlined principles are the following:

Division of work, authority, and responsibility, discipline, unity of command, unity of direction, scalar chain, the subordination of individual interests to general interests, centralization, remuneration, order, equity, the stability of tenure, initiative, and esprit de corps.

Luther Gulick and Lyndall Urwick's editions, "Papers in the Science of Administration, (1937)" as cited (Manithaneyam, 2009); (Thomas, 1990); and came up with a general summarized overview of principles of Organization in a short word "POSDCORB" where each one of the acronym letters standing for administrative activities:

Planning, organizing, staffing, directing, coordinating, reporting, and budgeting. *Focal Organizational Variables* (William, 1977), also shares close commonalities with *Fayol's administrative principles*, and edited *papers in the*

*science of administration by Luther Gulick and Lyndall Urwick*, as outlined below; organizational size, organizational age, the complexity of task structure, technological complexity, functional specialization, degree of boundary role of specialization, degree of professionalization of personnel, type of normative reference group orientation of boundary personnel, centralization of decision making, formalization, departmental specialization, administrative intensity.

According to how these principles are highlighted, they can best serve to be an effective foundation to guiding the organizations' administrators, managers, and even their subjects on what it takes; how to get to; and who can be responsible for what is to be done in an organization setting.

In efforts to shed light on "Administration and Management as a Determinant to Improving on Organization Efficiency and Progress", the researcher shall elaborate basing on *Henri Fayol's 1916 General and Industrial Management*; and *1937 Edited Papers in the Science of Administration by Luther Gulick and Lyndall Urwick*, (Manithaneyam, 2009) and (Thomas, 1990); as follows:

#### (i) Division of work / Organizing.

This deals with specialization and encompasses making clear delineations in duties assigned to be performed within the departments and the departments and, or faculties in the organization. This means it is clear to the organization stakeholders on who does what? What department performs what duty? It is important when workers (stakeholders) of an organization know who performs what, and in what department (faculty) a particular issue is handled. Division of work and being organized within an organization makes every stakeholder play his / her duties with no collision with others; feeling positive conscious of being responsible; self-motivated due to a harmonious working environment; and gaining expertise and deeper insight knowledge in that particular organization department (faculty) or duty. When there is no or minimal friction in an organization, it makes every planned effort come out positively to a greater percentage because everyone does what he or she is supposed to perform.

#### (ii) Authority and responsibility

This goes with power. It rotates around the allocation of duties and responsible controls. It should be universal that in every departmental division of an organization, it should have delegated powers and the responsibilities to perform, but not the whole large organization falling under one authority at ago.



Let us take an example of a secondary school. It would be advisable to have different authorities and each of them assigned duties to perform. For example, welfare department can have authority over such related issues; and make sure that it fulfills its responsibilities including preparing meals on time, serving well-cooked meals, and ensuring the safety of the served meals; but not the headteacher running from office to classrooms; to the kitchen, and elsewhere.

Empowering authorities and assigning responsibilities on an organization, let us say, a school; it impacts progress as concerned authorities feel it is their duty and have powers to such duties complete and successfully; innovations as departmental authorities strive to better and positively execute their responsibilities; and it gives the top management administrators concentrate on other organization related programs.

Without assigning authorities and responsibilities to respective stakeholders, and assigning powers and responsibilities to departments make every member of an organization feel "it is all about us, not me alone" which to organization failures in different fields of its operations.

### **(iii) Discipline**

In an organization setting, efficiency and progress are all about the conduct of the participating stakeholders. Discipline is not sold anywhere; it is about the organization's laid down standards of operation and personal respect for everyone irrespective of this or that. A discipline that is up to standard (valuing every stakeholder) makes execution of duties easier and stakeholders feel social equality, hence themselves can enhance the organization's reputation in the market of production and competition.

The irony of efficiency comes in and distorts everything especially when some members of the organization consider themselves being special over others, very superior, becomes abusive, forming on-site social subdivisions. This can make some other members feel useless and humiliated; and finally, they start to perform their duties without will and zeal. This can be maintained by the organization laying down is agreed mode, standards, and codes of discipline conduct follow by the stakeholders of that particular organization to promote a harmonious and conducive working environment. For example, the teachers' codes of conduct that govern the operations of all education practitioners in Uganda.

### **(iv) Unity of command.**

This is a major pillar administration principle since orders and directives in an organization or department (faculty) should be given by, and received from a specified person or office. It is nutty when different offices or persons assign contradicting

directives to the same stakeholders; as this can finally cause a collision, production faults, and losses.

Let us talk of a secondary school administration where a headteacher instructs students to go early for classes; and thereafter, a deputy headteacher assigns a different directive for the students to go for drama rehearsals; and a head cook (welfare manager) instructs students to always fetch water for their meals, and all these orders from different directions assigned for the same duration (morning before class lessons begin) to one stakeholder (students). What a mess! It finally confuses both the commander and the commanded. Having a specific order of command reduces on power collision, saves time as a command is adhered to, and performed at its specified time.

### **(v) Unity of direction / directing**

Unity of direction relates to having a specific head (office, faculty, department) to whom all related duties are directed. This is good when the stakeholders are aware of from which office, and to whom certain organization issues are handled.

Unity of direction reduces time wastage since each department handles its cases, working stability, trustworthiness as issues about a certain department are handled there.

A good example is a secondary school setting where the students are informed that a school bursar collects and handles payments (school fees, registration fees, exams fees) and related to financial issues. This means that students will not handover the school payments to a cook or night watchman. Therefore, a school bursar will collect the school payments as the teachers, gateman, heads of departments will do their duties and not interrupted by the students.

### **(vi) Scalar chain / Reporting**

The scalar chain of an organization is more concerned with leadership hierarchy from the topmost administrator to the lowest common man (stakeholder). This means that orders, directives, plans, and reports should be given to subjects in the respective chain order. This is very important because it equips every office or department in its capacity to be aware of what is taking place in that area of control, and the organization in general.

For example, in a school setting, it would be unfair for a student to report or make a request to the school board of directors without passing through his teachers, to heads of departments, to deputy headteacher, to the headteacher and related hierarchy.

Reporting is very important responsible made because it updates the responsible stakeholders on the current state of their organization; about what is missing; what is in excess, what new reforms to be



adopted. This reduces deficiencies, increases efficiency, production, and general organizational progress.

**(vii) Subordination of individual interests to general interests**

This goes with questions like what is the organization's overall goals, aims, objectives as an organization. An individual should not front his or her concerns over the intentions of the organization. Having every individual striving to achieve his intentions can end up in "scramble and partition" since they no longer consider the organization but only conflicting for their interests. Finally, the organization lacks focus and breaks up to decline.

**(viii) Centralization**

This is all about the overall central point of the organization. These are the top administrators. Policies designed by the central office determine the direction of the organization's success because all duties pursued are targeting the wishes of the central office, simply because "you can not perform what your boss does not want, whether good or bad". However, this does not mean that lower subjects have no impact on changing the worldview of these central managers. Good communication, coordination, and effective channels of sharing ideas can get the central leadership informed of what is trending in the outside market, as *Isaac Newton* termed it "... standing on the shoulders of the giants" because everyone can be advised.

In a school setting, teachers can advise on the headteacher and the managing board on what has to be in a school to achieve good academic grades. And worst of all, undermining your lower subjects in an organization means rejecting new reforms and innovations, only because "a wheel must agree with axles to have a bicycle moving".

**(ix) Renumeration / Reward**

This is related to salaries and similar appraisals to the stakeholders for the services they offer to your organization. Members should be paid or rewarded fairly according to the services they perform. It is a blunder for an employer to think "after all, I pay you my money", remember it is not your money because your employee has put in much energy to see your organization stand up to now.

However, employers should not only gauge employees' efforts on salary payments but also can assign aside appraisals like certificates of merit awards, commission allowances, special outings, extra time (overload or overtime) payments, and on-time salary payments. This motivates the employees on-site and everything is done on goodwill to meet the set goals, aims, objectives, and mission of the organization.

For example, in a school setting, teachers may be given awarded merit certificates, remedial compensation commissions, weekend off school, on-time salary payments, provision of requested funds; and free onsite accommodation which in turn will have them (employees) feel interested in their school-related duties that boost academic progress.

**(x) Order**

This clarifies that "every stakeholder in the right position". This simply relates to authority and responsibility as every member has to make his contribution to the organization through and agree on the channel. Orders will have every stakeholder in his duty without friction and collision in performing the assigned duties.

Let us imagine a games captain in a certain secondary needs funds to support his team in forthcoming soccer competitions, it requires a games captain to make a requisition letter through the games teacher who will, in turn, submit to the head of the department concerned but no a student going directly to the finance office to collect money to support his soccer team. The disorder makes those in charge feel humiliated, abused, and finally, they lose morale to perform their duties.

**(xi) Equity**

It is advisable to take it that every stakeholder in an organization is important in his greatest or lowest capacity because he has value in the long run of the organization. This means that every member should be treated kindly, with respect and justice; as injustice can cause subdivisions that can bring "tear apart" perception and make members lose focus. In this sense, injustice does not only apply to abuse and disrespect but includes favoritism amongst the organization stakeholders. Developing a sense of intimacy (falling in love) with your subjects, treating your relatives favorably, and or, forming a social group with some of your subjects instill injustice in your decision concerning those subjects you love or favor. Controlling your relationship affairs outside on duty decisions is a good option however, not easy to make it. Voices of all members in your organization should be heard with humanity and passion and legitimately attended to irrespective of any form of inequity.

**(xii) Stability of tenure**

An employer or manager should make sure that the employers are secured on their duties. Employees should not be in either way exposed to losses concerned with the organization. This means that managers should have the working terms and conditions guidelines that are neutral without infringement on the employees. Having a signed contract or job appointment letter assures employees of reduced job termination risks whatsoever which makes them deliver maximumly. Thinking of no job



assurance will make the employees think of other alternatives to guard their future against untimely termination of their services which makes them pay little or no attention at all to their on-site roles that end up in deficiencies in different departments or faculties.

We can take an example of a secondary school where teachers are not given terms of service and working appointments. This means that teachers will think of part-timing to secure their survival than paying attention to their duties and risk suffering after untimely termination of their services by the school board.

### **(xiii) Initiative**

This sums up to confidence and self-esteem. Of course, this is cultivated by the administrative authorities. It has to do with the leadership in championing the lower subjects in believing, becoming more confident, and esteemed to deliver to their maximum. An administrator should not just sit and give orders; he or she should at times sacrifice to become a motivating example to initiate a sense of "equality, equity, and justice" to make all employees feel zealous.

When a leader becomes a leading example in initiating a good cause, it makes the stakeholders feel a sense of "togetherness and cooperation" that pulls them at ago to work and achieve the goals, aims, and objectives of the organization.

### **(xiv) Esprit de corps / Coordinating**

This entails coordination and a harmonious working environment. Not only organizational progress needs harmony, but almost it is any program or project that exists and targets success. This can be achieved through establishing effective communication channels through which all members of the organization can equally address their issues, be heard, and worked upon; as this, in turn, boosts a worldview of equality, equity, and justice within the organization's departments and employees.

### **(xv) Planning**

Management is responsible to adequately plan for the organization, (Abah, 2007). This a general direction outlay of a program or an organization has to operate. It is majorly concerned with what is to be done? What methods or resources are required? And who is responsible to do it?

This will make duty performance easy and with efficient outcomes. In this case, every stakeholder is aware of what required from him, how to deliver it (have it successfully done). This minimizes collision within the organization. Failure by the concerned department to make planned agenda will have employees redundant when nothing is done only because no one is responsible for anything.

What a mess inefficiency! This leads to a waste of available resources.

Take an example of a bakery plant, power cables are switched on and engines are running yet there is no production in progress only because no one was assigned to duty that day or that week. Another good example of planning is a secondary school, where there is a timetable scheduling how school programs will be operating like class lessons; having a library and a laboratory for teaching-learning resources; and different teachers assigned to different classes, with different lesson loads, and to be delivered at different specified time schedules.

### **(xvi) Staffing**

This is concerned with labor and employee recruitment on jobs. Regarding the set goals, aims, and objectives target by the organization, employees who are qualified and able should be screened before they are employed on duty. A qualified employee will perform duties greatly perfect that unqualified employees. The recruitment of new employees should be done by those (recruitment panel) who know the competencies required of those to be employed in a particular field.

For example, in a school setting a science department should not design an interview for the art department because the sciences department may not be aware of the competencies to be possessed by the arts subject's teacher. It is a common preference by most administrators to recruit semi-skilled or at times unskilled workers in influential positions just because they cost low payments. This lower production standard (grades) of the organization. Employing skilled and qualified staff is a key point towards an organization's success.

Important is that administrators should guard against favoritism on grounds of relationships, religion, tribe, race, region, as this can lead to recruiting incompetent workers. This does not mean we should not employ our family relatives, boyfriends, and girlfriends in organizations we operate; but we should distance ourselves from intimacy when performing organization duties.

### **(xvii) Budgeting**

This is all about resourcing. A resource is a useful or valuable possession or quality of a country, organization, or person, (Tam V. Ekwen, & Prof. Fonkeng E. George, 2018). Budgeting is about what should be done, costs to be incurred, and the time frame to perform and have a program successfully done. Budgeting improves an organization's efficiency because each duty is done in its scheduled time, using the resources budgeted and what may be left undone or surplus on the initial budget. Budgeting saves time, overwork is minimized, and limited chances to run short of resources. It is advisable for the managers and administrators



(planners) to budget for miscellaneous (or have surplus budget) in case of insufficiency of the initially planned inputs.

Take an example of a farming organization that budgets its time, inputs, and labor. This will clarify on when is planting, weeding, spraying and fertilizers will be applied; no overuse of resources (wastage) since let us say if fifty liters jerrycan was initially budgeted to spray one hectare of crops; and agreed number of employees will do the spraying while others are attending to remaining duties rather than the whole staff spending the whole day in the farm yet few of them are doing the needful.

In a school setting, heads of departments and board administrators will together budget on how many staff (teaching and non-teaching) to recruit; how many sacks of maize flour and beans to store, and a share (meal portion) of each student per day; salary scale and related commission for each staff recruited; times schedules for academic and non-academic school activities. This will, in turn, have school activities done smoothly with minimal wastage of resources and deficiencies. Tam & Prof. Fonkeng, (2018) further cites Nworgu (1991) that the misappropriation of available resources and the poor management of other input components in education account for the ineffectiveness in schooling and educational systems as a whole, especially in Africa.

### **ADMINISTRATION AND MANAGEMENT STRATEGIES FOR BOOSTING ORGANIZATIONAL EFFICIENCY AND PROGRESS**

On a review and analysis of the papers (Henri Fayol's Principles; Luther Gulick and Lyndall Urwick), the author has come up with a proposed way forward that any organization's management and administration can try initiating, administering, effecting, and implement to realize its laid down targets. The author's proposed strategies to organizational efficiency and progress are briefly explained below:

#### **(i) Effective Communication Channels.**

This drives with how best-concerned organization's issues are harmoniously addressed. Good communication promotes understanding among the stakeholders. Having effective channels in an organization where every member can genuinely give his ideas, proposals, and complaints make them feel important members of the organization.

For instance, let us consider a school setting. It is important to have a suggestion box, board meetings, staff meetings, general meetings which gives room for parents and well-wishers to forward their ideas they think can make positive reforms to the success

of the school. However, it is unprofessional and backward to humiliate, harass, collide with and, or fight a member in an organization just because he raises issues and ideas in meetings or other related communication platforms. Students and parents being the major target clients for a school to exist, they should be given attention in case they raise a concern.

#### **(ii) Regular Seminars (Retooling Courses).**

This involves supplementary professional schedules intended to add on skills and knowledge possessed by members in a certain organization. These refreshing courses keep the members of the organization updated about new reforms made in their fields of the profession which likewise improves on the quality of the services they offer on their duties of work. Regular training, seminars, and workshops are good in refreshing knowledge and skills, (Amusan, April 2020). Let us talk about an agricultural seminar about modern ways of farming. This can make the farmers updated about trending and modern methods of farming; from planting to harvesting; modern storage facilities, quality of produce required on the market. This all leads to uplifting the quality of services and efficiency since products meet market demand. Administrators should be sent for further studies and training, (Dora, Feb. 2019); further added that personnel development as a process of human resource management influences productivity.

For example, in 2018 at Nyakyera United Secondary School in Ntungamo district (Uganda), the managing board hired a tutor from *Makerere Leadership Training and Management Centre*, who came at the school site and trained teachers on Effective leadership, Planning and School Management skills to keep their teaching profession successful.

#### **(iii) Regular Evaluations.**

The evaluation has to do with establishing the worthiness of something. Evaluation establishes the quality and quantity (if can quantified) of the production of an organization. Organizations that conduct evaluations in their production can know what is lacking, what is excessive, what is outdated that needs new reforms, and upgrades to the quality of its services unbeaten by other competitors. Evaluations minimize deficiencies, wastage of resources; and promote efficiency and productivity.

A good example is a school setting, teachers are always engaged in an evaluation of their student's standards through administering classwork exercises, end of topic tests, weekly and monthly examinations, and promotional examinations to standardize learners capabilities.

#### **(iv) Equity and Justice (fairness).**

This is all about free and fair treatment of organization members irrespective of their status, "let a mistake be a mistake and be condemned". Equal



sharing of responsibilities justified attention to the members' understandings, philosophies, and sentiments that can give them feel psychologically valued and they strive to "better their best" in the organization's production process.

Take an example of a school setting, students and staff ideas, views, and opinions should be heard, attended to, and they get feedback on the issues they raised.

**(v) Emphasize Motivation Strategies.**

Motivation is an act of cultivating a sense of satisfaction in individuals. This is mostly related to actions that happen and bear good outcomes. Motivation can be both intrinsic and extrinsic; meaning that an individual can work because it within himself (intrinsic) or can work because he is after something tangible (extrinsic). Motivating members of the organization can be through;

**Administrators creating a hospitable working environment.**

In an environment where every member feels at ease worried about nothing can make him deliver to expect maximum because nothing can interrupt his working agenda. This can be the provision of security to guard against any unnecessary intruder in the organization premises. In a school, staff and students feeling secured are motivated to do learning fearfully.

**Added incentives and commissions alongside salary payment.**

This a situation where the organization members get a top-up to compensate their efforts (services) in case of any extra-time and, or overload work performed, of which can be remedial lessons taught, and any other special assignments. This makes them realize value for their efforts and consequently, they endeavor to maximize their efforts in uplifting the organization productions.

**On-time salary payments.**

It is fair that any individual hired to get his wage once the task is complete without unnecessary delays. As agreed on recruitment terms of services, workers should be rewarded for their services rendered to the organization. Timely payment of salaries makes workers settled their expenses and related personal administration, which makes each member realize the benefit of his services (efforts).

**Tangible incentives.**

These are a gift like rewards of appreciating members' efforts and services they render to the organization. These can be depending on merit like certificates of merit, and other related rewards. This makes nearly every member maximize his efforts in a bid to compete for such incentives in the following turn of rewarding.

**Promotions and Sponsorships.**

These are forms of appreciation that an organization can offer to its member(s) as a result of their hard work on their duties. Promoting an employee from one rank (office) to another higher one makes him feel self-esteem and doubling his efforts to the organization's operations. Sponsorships do not necessarily mean enrolling from abroad! Never it can be! An organization can sponsor its staff member(s) to attend a seminar or a conference. This makes him feel unbeaten in the organization and turn to deliver the same acquired skills while performing his duties in that particular organization.

**Fair and justifiable terms of service (Employment terms and conditions).**

This is entirely about assigning conditions that do not humiliate the employees either. Favorable terms of service make all the members in the organization work towards a common goal because working terms are bearable.

**Humanity and Justice**

It is all about the fair treatment of stakeholders. This underlies with treating all members of the organization with empathy and sympathy. This cultivates a sense and attitude of equity and equality within the members which finally spearheads cooperation to work for common achievement.

**(vi) Recruit Skilled Personnel (Professional and qualified) or Use Quality Inputs for Quality Outputs**

"To achieve what you want, you must be knowing how to do it". Having skilled personnel reduces risks to incur losses and unnecessary wastage of resources. Qualified workers have extra skills even on how to go on with production even when resources are scarce on-site. However, employers should be conscious of their organization's environment as one can not recruit a skilled employee just to pay him "a peanut salary". Skilled stakeholders who are qualified in what they perform increases production efficiency. Skilled employees know how to go about innovations and coping up with the changing world of surviving. Governors who are proficient will experience very little difficulty in managing the school's resources effectively, (Raj, M. & Kishan, B., 2015); and found out in their study that many governing bodies lack the necessary skills to develop practical budgets and procure physical resources economically for their schools.

Take an example of a professionally trained teacher, he will beware of how to go about teaching and learning to enriched students' academic performance. He is aware of the up to date teaching resources, teaching techniques, assessment of students, and action plans to modify teaching and learning for



better results. Similarly, quality inputs yield quality outputs in a good working and management system.

**(vii) Attend to Clients'/ Workers' Opinions.**

In this sense, it is clear that who knows about something is one who practices or involved in it. Clients' issues and concerns must raise within and related to the organization's operations be taken with concern, solved, and give feedback to clients on the issues they forwarded. In an organization, clients (stakeholders) are the ones who are aware of what is concerned with their duty operations of the organization.

For example, in a soft drinks processing and packaging plant; it is all about the employees in different departments, and consumers in the field who know what would be done to check on the quality of products. In a school setting, potential opinions are from administrators themselves, different staff involved, students, parents, and their wellwishers who can oversee the education reforms on trending.

**(viii) Advertise Services Offered by Your Organization.**

This a major concept of a successful business. The advertisement makes the consumers aware of what offered by a particular organization. However, this should be done when proven needful. Letting the public aware of what is from your company increases on the number of customers, increased sales and profits, and be accessed by the potential suppliers of raw materials that may be on-demand or consumed by the organization for its sustainable production.

**(ix) Avoid Unnecessary Expenditures.**

This is all about differentiating on "what is wanted" and "what is urgent" for continued production and organization success. This is most of the time called "opportunity cost". Those resources that can be sidelined and still the organization progresses, should not be considered when there is scarcity. For example, in a school setting, it is not advisable to purchase and install a DSTv satellite set yet the school has no foodstuffs to feed the school stakeholders. Unnecessary expenditures keep the organization in progress even in scarcity of resources.

**(x) Restrict Personal Biases (Interests) From Professional Duty.**

This is a great set back to the success of any administration duty. Interfering professional duties with personal biases or interests minimizes gaps for the revision of personal weaknesses about assigned duties at work. It should be a principle to put personal and professional ethics on center stage in leadership practice, (Joseph, M.; Karen, S. L. & Mark Smylie, 2017). This ends leading to faults at works.

Similarly, other members who raise their concerns are framed as "rebels" which finally creates harassment and disunity among the organization's stakeholders and poor performance at work.

**(xi) Plan Sufficient Budget.**

Budgeting entails considering what is to be done, resources needed, and time frame to complete a particular program. This can be done in series or quarters, let us say the budget for resources, budget for marketing, productions as within the overall budget plan. However, it is important to consider whether there are available sources of income to sustain the planned budget before passing it to avoid insufficiency during the production process. It is important to budget for surplus or miscellaneous in case there will be a gap in planning when the budget is already passed. Strategic planning is a useful tool, of helping in managing the enterprise, especially if a strategy and strategic plans can be successfully deployed throughout the organization; thinking and managing strategically are important aspects of senior managers' responsibilities, too, (Nickolas, 2008).

**(xii) Transparency and Accountability**

This mounts to having clarity and openness about the assigned budget, the general income, and expenditure of the organization. It is ideal to make all the concerned stakeholders of the organization access the records (it can be addressed or displayed) for general expenses and profits in planned sessions annually, quarterly, or as planned by the administration. The most organization informs their members of their plans, resources required, and expenses at the end of a specific time frame (can be quarterly, or annually).

**(xiii) Establish Standardized Modes or Regulations of Operation**

This is concerned with ethics and moral standards upheld in the working environment. This can help to guide the stakeholders on ways to deal with empathy, sympathy, equity, equality, and creating a harmonious working environment that prompts to hospitality. Inhumane behaviors and modes of conduct that deviates from normal perceived standards should be cautioned, warned through standardized procedures, and generally agreed on penalty can be designed. A misbehaving employee can be suspended from duty for three or four days from service to create a room for revising his behaviors.

**(xiv) Integrate Technology (ICT) in your Organization.**

This entails associating technology (using calculators, phones, televisions, radios, computers, CDs, flash discs, ATMs, etc) in performing routine organizational tasks. This can ease the production costs, increased productivity, and similarly reduced



labor force. ATMs eases bank transactions even without human assistance, phones can ease communication within the organization, and likewise, radios and televisions can better advertisement rather than traditional means of using trumpets. However administrators may need IT training and use in their tasks, (Mwambo, 2019); further that ICT can be used to create and maintain the database, creating schedules of activities and timetables, typing and storing administration documents that ensures effective storage and retrieval, better for time-saving, accuracy, legibility, data storage, records checks, and general use for further reference. In a secondary school setting, teachers can be refreshed on the modern techniques of teaching, use of technology in teaching, and up to date resources to integrate into teaching and learning.

## CONCLUSION

Administration and management is not just an office in an organization but it is rather the virtue and status of an individual in initiating, designing, effecting, and acting to have things successfully achieved. Every individual on his/ her duty seems an administrator and a manager because he/she has the responsibilities to have duties performed in the right way that can meet his/her target. Incompetences in handling organizational affairs end up in deficiencies and losses, as being aware and competent ones are liable to do the needful for efficiency and progress of an organization, incompetent administrators and managers, all ends in compromises and progress stagnation. It is an archaic perception to assume that high payments will improve on organizational efficiency when the “working environment” is not ideal, though the “working environment” combines different aspects of organizational productivity that managers and administrators must meet for their organizations to be successful. Competent and skilled managers and administrators can be aware on different strategies on how to have their organization’s goals, aims, targets, and objectives achieved and resources effectively utilized; and consequently incompetent and unskilled managers can hardly administer effective strategies and finally lowers efficiency, production, progress, and finally an organization extinct.

It is clear that the analysed strategies to boosting organizational efficiency and progress can apply to almost all organizations because they almost share a large percentage of commonalities in terms of labour, capital, materials, production, management and other related aspects for a successful organization.

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# MORPHOLOGICAL CHANGES IN TERRESTRIAL MOLLUSKS UNDER ENVIRONMENTAL FACTORS

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## ABSTRACT

*The article analyzes the morphological changes that occur in terrestrial mollusks under the influence of environmental factors.*

**KEY WORDS:** *abiotic, biotic, xerophile, reduction, cephalopodium, conchiolin, epiphragm.*

## DISCUSSION

Abiotic and biotic factors of the external environment have a complex effect on mollusks. This is manifested primarily in the morphological features of existing terrestrial mollusks. At this point, the shell of the mollusk holds a great deal of information. The morphological structure of the shell can provide information not only about which taxonomic group the mollusk belongs to, but also about the environment in which it lived. Typically, the shell of terrestrial mollusks is divided into the following 6 types according to their morphological structure: helicoid, microhelicoid, buliminoid, pupilloid, zonitoid and succinoid (Uvalieva, 1990). The zonitoid type was described by A.A. Shileyko (1986).

In mollusks with helicoid and buliminoid type shells, the color of the shell can range from brown to white depending on the environmental conditions. In particular, in the representatives of Helicoidea, according to A.A. Shileyko (1978), the shell is brown, with a light-colored stripe at the edge, which is of a primary nature. A secondary feature is the fact that the shell color fades to a general background and has dark spiral bands as it passes into the xerophilic environment and survives. An example of this is the representatives of Hygromiidae. Representatives of Buliminidae also live mainly in xerophilic, open environments, with a common background white shell. Of course, the fact that mollusks living in xerophilic environments have a white shell is one of the means of protection from strong solar radiation.

Terrestrial mollusks with succinoid, pupilloid, and zonitoid shells live mainly in moist biotopes with thick grass cover. Such biotopes often form a topsoil composed of plant debris. Such topsoil

consists not only of plant remains (leaves, branches), but also of fine soil and rock fragments (Gilyarov, 1970). Topsoil has the property of reducing sudden changes in humidity and temperature, and has a constant food supply consisting of detritus and fungi. Of course, such an ecological environment is extremely favorable for terrestrial mollusks, especially for slugs. Since shellfish are slightly more difficult to move in such an environment, A.N.Suvorov (1999d) suggests the following adaptation options, which are related to the movement in soil bed: 1. reduction of the shell; 2. development of a snail-shaped shell; 3. Development of mechanisms of placement of the shell relative to the cephalopodium; 4. formation of conchiolin tumors that reduce the contact of shell surface with wet substrate; 5. The development of a smooth conchiolin layer that pushes water on the surface of shell.

According to the first adaptation variant, it may have originated from small soil-dwelling slugs (Agriolimacidae, Boettgerillidae), as well as representatives of Arionidae, Milacidae and Parmacellidae (Suvorov, 2003).

The development of the snail-shaped shell is related to the apical angle of shell. With the transition of terrestrial mollusks from water to land, the shell shape changed from conical to oval (oval, axial, obtuse, cylindrical, towering). That is, in the evolutionary stage of development, mollusks with a constant apical angle, while adapting to live in the topsoil, in the next stage acquired a curved shape by successively reducing the apical angle in each package of shell. Such an adaptive shape reduces the resistance that occurs between the topsoil and the shell wall.



In mollusks moving in topsoil arises the problem of keeping the shell in a stable position relative to the cephalopodium. This problem is often solved by teeth developing in the mouth of shell (Suvorov, 1993, 1999a, 1999b, 1999d, 2003).

There are various hypotheses about the importance of developing teeth in the mouth of shell. In particular, P.V. Matyokin (1959) believes that the teeth absorb mucous fluid from the foot of mollusk, which is pulled into the shell, and use it to form the epiphragmatic membrane. However, according to A.N.Suvorov (2003), teeth are not involved in the formation of epiphragmatic membrane at all. In addition, the developed epiphragmatic membrane can also be formed by terrestrial mollusks that do not have teeth (Suvorov, 2003; Block, 1971).

The first functional analysis of shell teeth was given by A.A.Shileyko (1984). He divides the teeth that make up the oral apparatus into 2 groups: the surface layer teeth formed by the enlargement of the lip and the internal teeth located in the last roll.

Internal teeth are involved in keeping shell in a stable position on the foot and facilitating the movement of high shell (Shileyko, 1984).

Importance and developmental laws of shell teeth After A.A.Shileyko, were completely analyzed by A.N.Suvorov (1993, 1999a, 1999b, 1999c, 1999d).

The epiphragmatic membrane plays a special role in the adaptation of terrestrial mollusks to live in different biotopes, especially in arid environments. Block (1971) distinguishes 2 types of epiphragmatic membrane: a thick consisting of a limestone plate and a thin type consisting of a semi-transparent membrane.

The epiphragmatic membrane is as important as the shell of terrestrial mollusks. Before going to daytime or seasonal sleep, any mollusk will cover its shell mouth with an epiphragmatic membrane. This membrane protects mollusk from the effects of different air temperatures, some insects and most importantly from drying out its body. According to some data, the epiphragmatic membrane was able to keep mollusks under temperature of -110, -120°C for several days (Pasternak, 1988).

In long-lasting arid environments, multi-layered epiphragmatic membranes may be formed. For example, in Block experiments, *Cryptomphalus aspersa* produced up to 6 epiphragms when caught together with other mollusks and up to 16 epiphragms when caught separately (Block, 1971).

As a result of our observations in the Turkestan mountain range, it was found out that in the conditions of Central Asia, all terrestrial mollusks can form 1-3 epiphragmatic membranes. In hygrobiont mollusks, which usually live along the

water, the epiphragm consists of a single layer. Some species form a two-layered epiphragmatic membrane. The first of these membranes is located on the surface of shell mouth and serves to attach the mollusk to various substrates. There is a solid second membrane enriched with  $\text{CaCO}_3$  inside this membrane. Its main function is to protect the body of the mollusk from drying out during dry season.

This means that mollusks can control the composition of mucous membranes according to environmental conditions. In particular, they increase or decrease the amount of  $\text{CaCO}_3$  when needed. In general, it was noted 8 types of mucus release from terrestrial mollusks (Campion, 1961). The mucous substance consists of mucopolysaccharide, protein, small particles of  $\text{CaCO}_3$ , fat droplets and pigments (Shileyko, 1978). Of these substances,  $\text{CaCO}_3$  is of particular importance.  $\text{CaCO}_3$  is found not only in the mucus, but also in the shell, making up the bulk of it. There is a great need for  $\text{CaCO}_3$  during the growth of the shell, in the process of recovery of broken parts and the formation of epiphragmatic membrane.  $\text{CaCO}_3$  is obtained by mollusks mainly at the expense of plant nutrients and from the soil. A.A.Shileyko (1978) emphasizes the importance of the degree of calcium enrichment of the substrate in the spread of mollusks and divides them into 2 groups: obligate and non-obligate calcifil.

In addition to A. Shileyko's information about mollusks in relation to calcium, it can be said that all terrestrial mollusks, even slugs, are calcifil. This is because calcium not only consists in the shell, but also provides the viscosity of the mucous substance secreted from the body of mollusk (Runham, Hunter, 1970). Mucous membranes of slugs have a higher viscosity level of mucous material than of shellfish, allowing them to move faster and consuming more of it. In addition, many slugs cover their bodies with a mucous membrane produced by themselves in sheltered places (under rocks, in cracks of soil) during the summer drought season (Likharev, Victor, 1980). In the view of all above, we have every right to call the caterpillars calciphyl, along with the shell mollusks. Of course, the degree of calcification is manifested differently in different mollusks. We can see this in the mollusks whose shell wall is developed at different levels. The shell wall of mollusks living in open and xerophilous biotopes is usually more developed than that of mollusks living in humid, hygrophilous biotopes. Some (*Phenacolimax annularis*) have undergone a reduction process. But in any case, the fact that the shell has a thin wall or is wrapped in a reduced mantle does not drastically reduce their demand for calcium.

In conclusion, it can be said that as a result of the influence of various factors of the external



environment, first of all, there are adaptive changes in the morphological characteristics of existing mollusks. This is reflected in the color, shape, and size of shell and body of mollusk, as well as in the different levels of development of the shell mouth teeth.

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# PHILOSOPHICAL ANALYSIS OF THE RELATIONSHIP OF LANGUAGE AND CULTURE

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## ANNOTATION

*This article attempts to philosophically analyze the issues of the relationship between language and culture, it is impossible to imagine a culture without a language and a language outside of culture. It is shown that there are a great many definitions of the term culture, various concepts of the relationship and mutual influence of language and culture in the system of human civilization are considered. In this interaction, a fairly clear sequence can be traced. It is obvious that language is a product of human development, part of the development of the culture of the human community.*

**KEY WORDS:** *culture, language, civilization, spiritual world, form of being, human activity, cultural phenomenon.*

## DISCUSSION

The term "culture", which is derived from the Latin "solere", means "cultivation, development." Starting from the XVIII century, culture includes the entire sphere of human activity, his thoughts, the spiritual world. The above definitions of culture have survived to this day, although initially it was meant human activity to change it for their own purposes, cultivating the land.

In the scientific literature, the definition of the term culture was introduced by E. Taylor, who represented culture as a component of knowledge, art, religious beliefs, art, laws, customs, values that were mastered by a person as a result of his social development. Researcher P.S. Gurevich believes that today there are more than four hundred definitions of the concept of culture, which indicates how differentiated are the methodological approaches to the culture itself. To date, there is no one generally accepted definition of culture, and there is no generally accepted methodological concept of its study.

Of all the approaches to culture known to science, we consider activity, normative and value, which are closest in essence to the objectives of our study, more acceptable.

Culture cannot develop outside the human community, since the activity of the individual contributed to the emergence of the fourth form of being - culture. This implies the conclusion that culture can be understood as the transformation of the

natural environment according to the laws of development of society.

M. Heidegger writes in this connection: "... human activity is understood and organized as a culture. Culture is now the realization of supreme values by cultivating the highest human virtues. It follows from the essence of culture that as such cultivation, it, in turn, begins to cultivate itself, becoming thus a cultural policy." [8, 93]

The world of images is a derivative of the world of products of human activity, the field of the mind of people, it has no boundaries. Thus, culture, which is the result of human practice, includes in its scope the individual as a subject of activity, and production methods that are in the subject field of human practice.

As a result of transformations, assimilation into the surrounding reality of a person, a culture appears. From this it follows that the culture of each people differs in the type of its practical activity, that is, a deliberate change in nature, a kind of reaction to the outside world. People's activity is based on moral attitudes and precepts adopted in any community that come from the culture in place. And the culture itself can be considered the choice of objects for the appropriation of products and its interpretation in this society.

The German researcher O. Spengler in his work "The Sunset of Europe" points out that each culture has its own civilization, which is the source of the death of this culture: "Culture and civilization are



a living body of soul and its mummy." [9, 305] Culture is characterized by pluralism, which implies the inequality and absoluteness of each individual, and civilization seeks to create some kind of unification, standards. Culture is elitist and aristocratic, while civilizations are characterized by democratic principles. Culture is beyond the practical needs of man, as it is aimed at the development of spiritual ideals, and utilitarianism is inherent in civilization. Culture is national in nature, and civilization is unified. Culture closely interacts with cults, myths and religious beliefs, and civilization is the guarantor of freedom of conscience.

Undoubtedly, language is a product of human development, part of the development of the culture of the human community. Language and culture are closely related, interacting with each other. In this interaction, a fairly clear sequence can be traced.

The interconnection of language and culture is a debatable issue in philosophical and linguistic sciences, which is still not resolved. Discussion is the very definition of the concept of culture, which the American scientists of the school of "cultural anthropology" represent the spiritual component of human development, and sociolinguists and psycholinguists view culture through the prism of the material and spiritual world. So, the philosopher P.N. Fedoseev notes that material culture can be understood as the terms of the visible aspects of human activity, which ultimately leads to the consumption of spiritual values based on the production and distribution of the latter. [7, 34]

Language is a kind of cultural phenomenon, which contains the genome of the culture of the people, expressing the national mentality, which is an incentive for further study. That is why scientists of various fields are interested in the issues of genesis, evolution and functioning of the language.

Studying the problems of language transformation as a cultural phenomenon, as a way of interpreting the spiritual world of a person, it is necessary to point out the linguistic essence of the evolutionary process, as well as questions regarding the interaction of language and society, as well as people and social groups through language projections.

We consider it necessary to indicate that through the anthropocentric approach to the study of linguistic processes, it is possible to identify the national essence of linguistic mechanisms, thereby determining the influence of the human community on the language and the language itself on the evolution of man and his culture. Through the study of linguistic processes, one can discover the mentality of the people, which, according to Humboldt, "is able to express the most peculiar and subtlest features of

the national spirit and character and penetrate their innermost secrets." [2, 80]

The problem of the relationship between language and culture is relevant at the present stage of the development of science. Some scholars are supporters of the approach about the relationship between language and culture as part of the whole, while others believe that language is a form of expression of the evolution of culture, a third group of scientists defends a position that expresses the point of view that language has nothing to do with culture. Thus, the American culturologist E. Sepir argues that "culture can be defined as what a given society does and thinks, but language is how it thinks." [5, 193]

Russian writer N.I. Tolstoy notes that "the relationship between culture and language can be considered as relations of the whole and its part. Language can be perceived as a component of culture or an instrument of culture (which is not the same thing), especially when it comes to the literary language or the language of folklore. However, at the same time, language is autonomous with respect to culture as a whole, and it can be considered separately from culture (which is constantly being done) or in comparison with culture as an equivalent and equal phenomenon." [6, 16]

Through language, you can talk about everyday life, material and spiritual culture, reproduce the social relations of peoples who lived in a certain period. So, for example, speaking about the national essence of the Uzbek people, it can be pointed out that it developed in a sedentary culture, which was certainly reflected in the language, customs and traditions of the people.

The study of the relationship between language and culture is a complex task of linguists, anthropologists, cultural scientists, philosophers. A comparative analysis of culture and language makes it possible to find out the correspondence between the ways of developing linguistics and the culture of mankind, identifying the general universals of the language and getting closer to understanding the nature and process of thinking. [10, 10]

Culture is a multifunctional phenomenon, studied by many humanities, including linguistics, semiotics, history, sociology, anthropology, ethnology.

The successes of ethno linguistics and psycholinguistics indicate that language as a social phenomenon must be correlated with the sphere of spiritual culture and investigated as one of its components. Although it is impossible not to notice that some areas of culture like music, art are in no way associated with language.

If we consider culture as a process and the final result of spiritual production, which is focused on the reproduction, storage, consumption of spiritual



values, then in this case, it should be pointed out that language is a means of shaping the spiritual world of society and man, due to the knowledge system, helps the spiritual relationship of society as a single system, as well as its various social groups. The language in this case "acts as a kind of concentrate of the culture of the nation, embodied in various groups of this cultural-language community." [3, 28]

Although language has a direct connection with material and spiritual culture, the production process, and social relations of people, it at the same time acts as a means of communication, an instrument of struggle, thus being an important component of the social sphere. However, it should be pointed out that "language is basically a phenomenon of spiritual culture." [7, 34]

In cultural studies, it is generally accepted that language is a mirror of culture, which reflects objective reality, the mentality of peoples, that is, its ability to perceive the world through the prism of national character, customs, morality, norms and values. The language can be identified with the treasury of culture, which collects all the knowledge, values of a material and spiritual nature that have been accumulated by the ethnic group and stored in the ethnic language system, in the speech of the people. That is why the individual takes over the experience of generations, and does not begin his development again.

Language is the bearer of culture, because thanks to language, the cultural heritage of peoples is transmitted from generation to generation, and the young generation, mastering the language of their ethnic group, learn the experience of past generations.

Language is a means of identifying objects of surrounding reality, their systematization and ordering of data about them. Language helps to accelerate the adaptation of an individual in an objective reality, allows you to evaluate objects, phenomena, their relationship, the language provides the organization and coordination of individuals in social interaction.

Language can also be taken as an instrument of culture, which contributes to the formation of the individual's personality, thanks to which he perceives the traditions and values of his people, his own special image of the world. [4. 247]

In the interaction of language and culture, it is advisable to determine such aspects as the reflection of culture in the language, that is, its reflection in texts, in means of a specific nature, which are associated with the perception of the world's picture by the people, connected with the mental characteristics of traditions, customs, and faith. Language is reflected in culture through the implementation of language formulas, which are considered an integral part of cultural attitudes, such

as etiquette of behavior, which is expressed in the choice of pronouns when referring to a person, etc.

The language culture is also manifested in the struggle for the purity of the language, since human speech practice reflects linguistic and cultural competencies, which indicate the degree of inclusion in the norms of culture.

Language is closely connected with culture as a system of basic structures of ethnic culture, which make up the essence of material and spiritual forms of life. [1, 461]

Culture as the sum of the material and spiritual values of society can be perceived through the thinking of individuals, where the main tool of thinking is language.

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# **SPIRITUAL HERITAGE OF ALISHER NAVOI AND ITS INFLUENCE ON YOUTH EDUCATION**

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## **ANNOTATION**

*This article examines the essence of the spiritual heritage of the great poet and thinker Alisher Navoi and its impact on the education of the young generation in the spirit of tolerance, tolerance, social justice and the exaltation of the spiritual qualities of the individual. In the treatises "Farhad and Shirin," "The Wall of Iskandar," he showed the greatness of man, his ability to love his people, all people, regardless of their nationality.*

**KEY WORDS:** *spiritual heritage, youth education, tolerance, social justice, tolerance, increase of spiritual culture.*

## **DISCUSSION**

In the modern realities of socio-economic and political instability, the growth of social stratification and tension in society, the decay of moral values, the decline in the level of spiritual culture, the problem of relationships between people is aggravated. In this regard, issues related to the development of tolerance acquire special significance and relevance.

The growing attention to the problem of tolerance is caused, first of all, by the fact that recently, ongoing conflicts and processes between countries of the world, aggravated relations between social groups, peoples of different cultures, religions become the main cause of death of people, which emphasizes the timely study of this problem. The Republic of Uzbekistan is a multinational and multiconfessional country, and therefore the education of tolerance, peacefulness, religious tolerance and the prevention of terrorism and extremism today are of particular importance and relevance.

International practice defines the development of tolerance as a necessary condition for communication between people with different psychological characteristics, different cultures, ethnic and interfaith groups. This trend is reflected in the "Declaration of the Principles of Tolerance", signed in November 1995 by 185 Member States of UNESCO, including our country. The document

states that "tolerance means respect, acceptance and a correct understanding of the diversity of cultures, forms of expression and manifestation of human personality." [6] The cultivation of tolerance at the level of individual and public consciousness is a necessary condition for the education of a moral person.

In modern conditions, the formation of tolerance should not only be the task of spiritual and moral education of society, but one of the priority areas for ensuring the national security of the Republic of Uzbekistan.

A great contribution to the formation and development of tolerance among young people is called upon to play the invaluable heritage of our people, which is a source of spiritual purification and exaltation of the individual. A great contribution to the development of ideas about a tolerant attitude in society was made by our great thinkers, among whom are Farabi, Ibn Sino, Beruni, Navoi.

The invaluable works of Alisher Navoi were written by him in different languages - Farsi and Uzbek, which is also proof of the poet's tolerance and friendly attitude to the two great languages and two great nations - Tajik and Uzbek. Yes, and Navoi himself was a role model - he made friends with the great representative of the Tajik people Abdurahman Jami, who became for him a spiritual mentor and senior friend.



In his works, Navoi pointed out that all people are equal to each other from birth, regardless of whether it is a ruler or a simple hard worker:

Like everyone, you are dust and doomed to the earth,

Like everyone else, you are a bunch of darkness, not light in the darkness ... [3, p. 51]

And therefore, calls on rulers, government officials, and rich people to help people with low incomes in every way, encouraging generosity and patronage in every possible way. He appreciated the generosity of people, comparing it with the fruitful tree of the human garden. Generosity, according to Navoi - "the stormy sea of the land of man, or rather, the precious pearls of the bottom of the sea." [1, p.150] Navoi himself can be fully called a philanthropist who invested a lot of money in the development of human capital, realizing that this will certainly bear fruit. And during the life of Navoi, he saw the fruits of his activity in the work of Kamoliddin Bekzod, the historians of Mirkhond and Honda.

In the treatises "Farhad and Shirin," "The Wall of Iskandar," he showed the greatness of man, his ability to love his people, all people, regardless of their nationality. It is no coincidence that Navoi's hateful attitude to bloody wars, as a humanist, he wholeheartedly wished for all peoples to live in peace, friendship and good. Farhad - Uyghur, Shirin - Armenian, Shapur - Iranian, Masud and Farrukh - Indians, Leili - Arabian, Majnun - Arab, Iskandar, Arasta and Aflatun - Greeks, Pliny - Roman - all these heroes who are very dear to Navoi.

His hero Farhad tirelessly works for the good of the Armenian people, being himself a Uyghur, Iskandar seeks to help foreign nations in order to free them from the yoke of monsters. Shirin, being an Armenian, loves Farhad with a heart of a stranger to his people.

Navoi called on all nations to live in peace and mutual understanding, he often acted as a diplomat, reconciling fathers and sons, mired in long wars in the struggle for the throne. The boundless love for his people and homeland did not in the least prevent the poet from treating other peoples with great respect and warmth. He glorified and glorified friendship between nations regardless of where they live, what language they speak, what race they belong to, and what their religion is. He believed that this friendship enriches, ennobles peoples:

Understand, people of the whole earth: enmity is a bad thing,

Live in friendship with each other - there is no better destiny. [5, p. 29]

Alisher Navoi himself, through his socio-political and creative activities, contributed to friendship, which is an excellent expression and

symbol of the centuries-old brotherhood of the Uzbek and Tajik peoples.

In modern conditions, higher education institutions are called upon to realize the most important task of educating future specialists of those moral qualities that will ensure the successful development of highly qualified specialists.

It should be especially noted that in the formation of moral qualities and in the upbringing of the future generation a great role is played by the works of the great thinkers of our people, who, through their creations, made a great contribution to the treasury of world culture.

Of great importance for the formation of moral and spiritual qualities of youth is the socio-political heritage of Alisher Navoi. The great poet, thinker, prominent statesman of Navoi glorified himself and his country by putting all his talent, strength and knowledge at the service of the people, progress. He was a passionate accuser, a ruthless critic of feudal society, oppression and social injustice of modern society.

Alisher Navoi, living in a very difficult time, waged the most vigorous struggle for the unification of the country into a single centralized state; for the cessation and prevention of civil strife, for the improvement of the life of the working people, for the spread of education in the country. His services to history, to his people are not limited to this. Alisher Navoi left us a rich creative heritage - more than thirty major works, which are the best examples of the creation of human genius, both in form and in content. In them, the poet with amazing skill glorifies the true human qualities and aspirations: friendship, love, freedom, equality, happiness.

The political views of the thinker are complex and contradictory in the same way as his era. However, in his legacy, along with idealistic thoughts, the most progressive ideas that belong to the present and the future coexist extremely rarely.

Political views of A. Navoi are revealed in the poem "The Wall of Iskandar", in which the sociopolitical ideals of the thinker about a just state are laid out in a concentrated form. Another widely known poem, "Farhad and Shirin," is notable for the fact that it comprehensively glorifies the true, noble features of a person - friendship, love, hard work, heroism, modesty, honesty.

The greatness of the genius of Navoi lies in the fact that noting the importance and necessity of showing mercy and generosity, at the same time he urges people to live not with the hope for the generosity of the rich, but to try to achieve something in life themselves. Undoubtedly, to be generous and merciful means to have high moral qualities, but if a person tries to earn his living by honest work, to achieve prosperity in this way, in this case the person



Navoi in his poem in a story about Hatama Thai describes precisely these high moral qualities that should be inherent in every person in society as an example of an old man who refuses the bounty of a rich man in favor of his hard but noble work, which he earns for his life:

Believe me: my hard work is not harder will enjoy the results of his activities and will be happy in the end.

Than the yoke of your gratitude.  
And it's better for me to get dirhams  
How to get a flock from Hatam! [1, p. 79]

Of great interest is the poet's works such as Mahbul-Kulub, Munshoat, and Wakfiya, in which he expresses his hatred of the feudal state, the shah, and the clergy. In the poem Confusion of the Righteous, Navoi addresses the nature of human relations in society. The poem reflects the holistic system of worldviews of the poet. At its center is the attitude of the thinker to man, his concept of humanism, ideas about justice, the great mission of good and peace.

In Beloved Hearts, the poet exposes the genuine, explicit face of the clergy, officials, thieves, and fraudsters. In this poem, the role of the working people, the simple peasant, is magnified. In his famous "Letters" addressed to a friend, Shah Hussein Baykar, specific practical advice is given that, according to Navoi, will strengthen and centralize state power, expand and improve educational activities in the country.

The path to perfection is long and thorny, not everyone can achieve this cherished goal, but still the poet urges everyone to embark on this path, because a person, having traveled such a difficult path, will eventually reach the truth:

Lucky man! Let it drop under the sun,  
The ocean of knowledge is enclosed in it!  
He studied all the sciences in the world,  
He spoke in all languages.  
He is the soul embracing the world  
He is a drop reflecting the world. [1, 139]

The great poet and thinker Alisher Navoi in his immortal works expressed ideas about a perfect person, an ideal society and a just ruler. His views on humanism, spirituality and morality, wise advice on the need to master knowledge, a profession have not lost their relevance and educational significance from those times to the present day. The ideas of Alisher Navoi are called upon to develop among our youth the principles of humanism, love for the motherland, selflessness, the struggle for justice

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# LEXICAL AND PHRASEOLOGICAL REPRODUCIBILITY OF SYNTACTIC CONSTRUCTIONS

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## ABSTRACT

*The main idea of this article is to describe lexical and phraseological reproducibility of syntactic constructions. The article issued to show idiomatic phraseological unit in order speakers creativity. The author tried to explain phrases with the semantic or metasemiotic level of linguistic analysis.*

**KEY WORDS:** syntactic model, idiomatism, sociolinguistic, dialect, small syntax, metasemiotic, morphosyntactic.

## DISCUSSION

Representatives of formal linguistics believe that the construction of statements is carried out simply by using abstract syntactic models or constructions typical of a given language in speech. Moreover, it is believed that the speaker is free to choose lexical means for “filling” one or another productive (unlimitedly repeated, reproduced in speech) structure. According to this point of view, absolutely free groups of words are those linguistic units that, in contrast to idiomatic phraseological units, combine lexemes “chosen completely arbitrarily” by the speaker. Thus, stable global complexes of the type “to give up” in the meaning of abandoning something or as a matter of fact in the meaning are in fact characterized by idiomatism, phraseological connectedness in the sense of the impossibility of replacing the tokens that compose them, while strictly private in “That would never do - my information is strictly private, of course ” or humanly possible in “I'd try to stay out of this thing as much as is humanly possible ”for example, are introduced from these positions by unlimited formations obtained as a result of the speaker's “free” creativity.

In this regard, it must again be emphasized that linguistics, the science of natural human languages, must proceed from reality, the reality of diverse speech uses. When analyzing specific material, it turns out that all statements feel to a greater or lesser degree the influence of factors that limit the compatibility of words in speech, of which the factor of sociolinguistic conditioning is the most powerful and comprehensive . The fact is that

linguistic structures do not exist on their own, abstractly, but in a specific socio-historical context. The speaker in each individual case is not free from the specific conditions of the place and time of communication, and he himself is a representative of a particular social group with its culture, traditions and customs . Therefore, the idea of an absolutely free combination of words, understood as a mechanical combination of lexical units arbitrarily filling a productive syntactic construction, becomes virtually unacceptable.

Thus, on the one hand, on the basis of the fact that this syntactic structure (structure) belongs to the layer of productive formations, we can freely implement it in speech.

On the other hand, the impossibility of automatic substitution of words instead of characters (“Word in -ly” + Adj) is quite clear, since we are not dealing with a frozen system of categories, but with the natural human language in all the variety of its forms, functions, options, spheres use.

For example, a badly white face in the meaning of a very white face and horribly grateful in the value of extremely grateful would hardly be possible phrases from the point of view of the correct English language, since horribly is able to determine in terms of amplification only negative quality or unpleasant condition of the face, a badly in the function of the amplifier characterized by only limited occurrence due to the characteristics of the lexical content expressed by him.

From the foregoing it follows that grammatical productivity, providing free and regular reproducibility in speech of a particular syntactic



construction, cannot be considered in isolation from the lexical and phraseological productivity.

From the definition of a phrase, it appears to be a contradictory character: a combination of two or more significant words that serves to express a single, but dissected concept or representation.

However, this definition reflects the dialects of the complex process of education and the use of phrases in speech, i.e. The "duality" that distinguishes this basic unit of "small syntax."

The fact is that most phrases (excluding only absolutely "free" units, the existence of which are mostly thought possible only in theory, as well as stable clichés equivalent to phraseological complexes) are both reproducible and recreated.

Although the syntactic models that "generate" specific statements are quite productive and how structures are unlimitedly reproduced in speech, this regularity cannot be automatically transferred to the sphere of actual speech use, i.e. to the area where we are dealing with the real facts of speech.

As noted above, specific statements cannot be studied by abstract methods that do not provide for an analysis of the characteristics of their use by various people in various circumstances.

A study of real textual material shows that each phrase is differently perceived at different time periods. This is confirmed, in particular, by the existence of a certain number of the most common combinations characteristic of a given stage of development of a society and regularly reproduced by its members.

So, it is impossible to say about most phrases that we really were their authors and that no one ever used them before us.

Such units, as a rule, are determined sociolinguistically, which creates the prerequisites for the formation of a close semantic connection between elements of the phrase, which gradually turns into a single complex that expresses global content.

For example: I'm awfully sorry about that; I'm awfully glad to hear you're better; ... it's terribly important; He was horribly afraid, etc.

At the same time, a completely justifiable desire to form an occasional combination of words may arise, which is especially typical of verbal and artistic creation. In these cases, the speaker (more often, the writer, the writer) only starts from the literal, real meanings of the words, which are subsequently rethought in accordance with the needs of the context of the situation.

For example, immoderately verbose and overpoweringly dull in "On the rumor of its conception this work was eagerly bid for among publishers, but as it proved after his death to be immoderately verbose and overpoweringly dull, it never obtained even a private printing" are free phrases, the complex content of which can be

understood only at the metasemiotic level. Here, the desire for a figurative expression of thought makes the speaker seek new, original linguistic means. Using a productive morphosyntactic model, he independently produces the word -1 -1 from the base of the adjective, the meaning of which (including emotional shades) corresponds to his intention.

Such usage is innovation at the metasemiotic level.

We examined in the most general form polar cases that do not raise doubts as to the association of the studied phrases with the semantic or metasemiotic level of linguistic analysis.

However, the greatest difficulty is represented by units occupying an intermediate position between these extreme capabilities.

The dialectics of phraseologically related, non-free meanings that are realized in specific contexts can be traced only with a clear distinction between the figurative individual use of a particular word (or phrase) and its socially conscious (settled) use. At the same time, occasional phrases with favorable changes in the situation of communication in general and the extra-linguistic context, in particular, can acquire stability.

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## **ABOUT PROBLEMS OF MATHEMATICAL MODELING OF DEVELOPMENT OF CHILDREN'S SPORTS IN REGIONS**

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### **ANNOTATION**

*In article questions of development of national system education and vocational training are considered. Hast years on strengthening of its legal base complex measures have been taken for development of vocational training, modernization and modernization of educational process, a number of system measures for and competitions has been undertaken.*

**KEY WORDS:** *Mathematic, Modeling, sports, children's, education, system, development, national education program, continuous, formation, republic, preschool.*

**Language:** English. Buribayev B., Buriboyev A., Otabekov A., Rahmatov A., Egamov S.

**Citation:** About Problems of Mathematical Modeling of Development of Children's sports in Regions.

**Introduction:** For yeas of independence the national education system and training became on of state policy pressing questions in republic.

The president of the Republic if Uzbekistan Shavkat Mirziaev I December, 29<sup>th</sup>, indicate the reform in the school educations, on janvasry, 25<sup>th</sup> 2018 said about measures on the further perfection of system of an average social and system of vocational training on the basis of perfection of system of higher education on a condition and july 25<sup>th</sup> 2018 year strategy of innovative development of republic Uzbekistan.

Materials and Methods.

The president of Republic Uzbekistan Sh.Mirziaev on February, 7<sup>th</sup>, 2017 said about movement on strategy of the further development of the Republic of Uzbekistan.

The decree №4947 from the decision "about the international competitiveness of the country and innovative theoretical the size as the key factor in definition of progress of human reason - the main objective of strategy of development".

The formation all-round advanced, healthy generations are the basic task of each country, including republic of Uzbekistan.

As the president of Republic of Uzbekistan "Development has emphasized, the historical priority and pride of nations is defined in intellectual and physical potential of your "-that is the basic criterion of a problem of their education.



Now in the field of development of physical culture and children’s sports it is expedient to use mathematical models with use of modern achievement information technologies.

At development of physical education and children’s sports the account of their efficiency is resulted in the generalized model developed by the

out hors, which allows action of the experts in regions.

In this connection in the present messages the results of research till calculation of effectiveness ratio of socio economic aspect are given. The prospect, connected by modeling, of development of children’s sports in regions.

Thus the following formula is offered

$$X_{ym} = a_1c_1 + a_2c_2 + \dots + a_nc_m = \sum_{i=1}^n \sum_{j=1}^m a_i c_i \quad (1)$$

Where

$X_{ym}$ = Total efficiency of branch on physical culture and children’s sports,

$c_1, c_2, \dots, c_m$  – Efficiency of parameter on branches of system,

$a_1, a_2, \dots, a_n$  – Factor of strategy after development of sports in the country whole

The version of sports is a communication facility, and object in system of development and management. The charges at Cush of the attitudes of social Strategy is defined by the education

$$X_n = \frac{\Delta x_n}{(c + Z_n k) - C_{3c}} \quad (2)$$

Where

$X_n$ = Efficiency of branches of system;

$\Delta x_n$  - parameter of growth of social development in sports during one year;

$C$  – means selected in the current year for development of children’s sports.

$Z_n$  – Normative effectiveness ratio;

$C_{3c}$  - Economic efficiency of development of children’s sports in the certain period.

In the whole application of mathematical modeling and modern information technologies at the analysis of development of children’s sports in regions has of huge importance at education comprehensively advanced of youth, which are pride of the country.

Two-step system of children’s sports in region

- The definition of efficiency improvement of children’s sports in region is reduced: to the following;

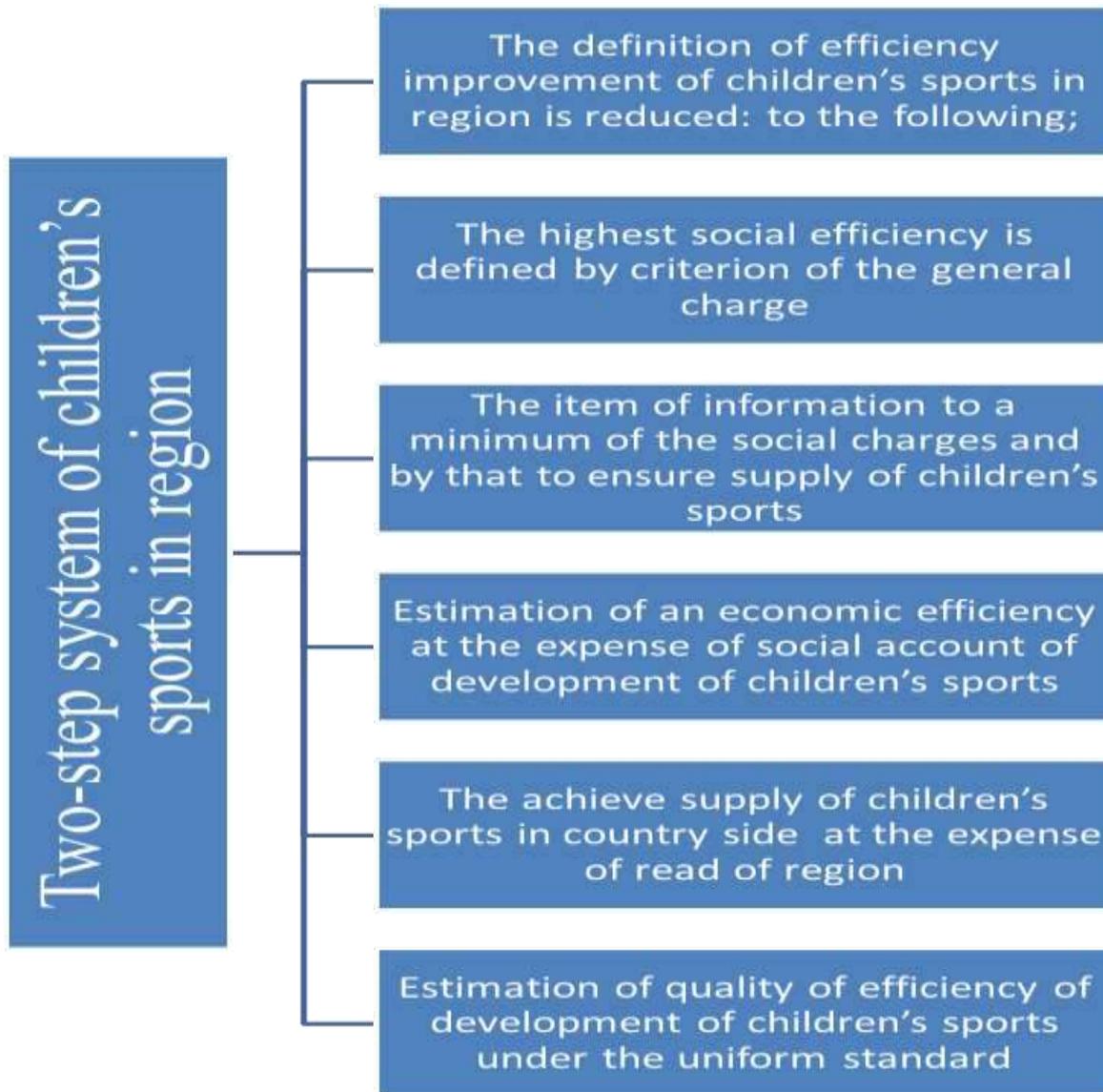
- The highest social efficiency is defined by criterion of the general charge

- The item of information to a minimum of the social charges and by that to ensure supply of children’s sports

- Estimation of an economic efficiency at the expense of social account of development of children’s sports

- The achieve supply of children’s sports in country side at the expense of read of region

- Estimation of quality of efficiency of development of children’s sports under the uniform standard (Figure )



**Figure – Two-step system of children’s sports in region**

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# THE BIOGRAPHY (SIYRAH) OF IMAM BUKHARI IN THE WORKS OF IMAM ZAHABI “AL-JAME AS-SAHIX” IS A CHAPTER ON THE INTERPRETATION OF THE QUR’AN

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## DISCUSSION

Abu Abdullah Muhammad ibn Ismail bin Ibrahim ibn Mughirah ibn Bardizbah. In another story - Bazduzbah. In Bukhara, the word means a farmer.

In fact, the pagan Mughirah embraced Islam at the hands of the governor of Bukhara Yamon Ju'fi. Ismail ibn Ibrahim was well-educated person.

We were informed by Al-Hasan ibn Ali, Jafar Hamadani, Abu Tahir bin Silafah, Abu Ali Bardani, Hannad ibn Ibrahim, Hafiz Muhammad ibn Ahmad, Abdul Rahman ibn Muhammad and Muhammad ibn Hussein.

It is related from Ishaq ibn Ahmad ibn Khalaf, who was informed by Bukhari, "I heard a hadith from my father Malik ibn Anas. He saw Hammad ibn Zayd. He greeted 'Abdullah ibn Mubarak with both his hands."

Abu Abdullah was born in 1948 in Shawwal. This was stated by Abu Ja'far Muhammad ibn Abu Hatim Bukhari, the secretary who collected the book "Shamoilul Bukhari" by Abu Abdullah. This was a great book. Ahmad ibn Abul Khayr informed me about this from Muhammad ibn Ismail Tarasusi.

Al-Hafiz Muhammad ibn Tahir gave him permission and said: We were informed by Ahmed bin Ali bin Halaf, he was informed by Abu Thahir Ahmad bin Abdullah bin Mahrawayh Farisiy Mu'adib, who came from Merv to visit Abu Abdullah Sulami, and he was informed by Yusuf ibn Matar Firabri and he was told by his grandfather, "I heard from Muhammad ibn Abu Hatim and mentioned the book with this date."

Then in 616 about Abu Abdullah Ismail ibn 'Abdu'r-Rahman a scholar Abdullah ibn Ahmad was informed by Muhammad ibn Abdulboqiy, then Abu Bakr Ahmad ibn Ali, then hafiz Hibatulloh ibn Hasan, Ahmad ibn Muhammad ibn Hafs, then Muhammad ibn Ahmad ibn Sulayman, Khalaf ibn Muhammad, and Muhammad ibn Ahmad ibn Fadhl Balkhi: "My father said, " When he was young,

Muhammad bin Ishmael was blind. His mother saw Ibrahim (May Allah be pleased with him) in her dream. Ibrahim said: O, my mother! With your many tears and your prayers, Allah has brought your son back to the light." When I woke up in the morning, I heard him saying, "Allah has really blessed him his eyes."

It is narrated on the authority of Muhammad ibn Abi Hatim: "One day I asked Abu Abdullah," How did your thirst for knowledge begin?"

He said, "I was inspired to memorize hadiths when I was in school." I asked, "How old were you then?" They said, "I was ten or less years old. At the age of ten, I left primary school. I started attending the lessons of Master Dakhiliy and others. One day when Dakhiliy was reciting a hadith to us, he said, "Sufyan is from Abu Zubayr, he is from Ibrahim." I said to him, "Abu Zubayr did not narrate from Ibrahim." Then I was bullied. I said to him, "Look at the original source." Then he entered his house and looked at his books and said to me, "Oh boy, you are right. How did you know that?"

I said, "This was not Abu Zubayr but Zubayr ibn 'Adi narrated from Ibrahim:

"He took a pencil from me and corrected the mistake in the book. When he was asked, "How old were you when you corrected him?" Abu Abdullah said, "I was eleven. When I was sixteen, I memorized the books of Ibn Mubarak and Waki. I knew what they said about the hadith. At that time, I went to Mecca with my mother and my brother Ahmed. After performing Hajj, my brother brought my mother back. I am left to study the science of hadith."

## Description of his Teachers and Disciples

Before traveling to Bukhara, Imam al-Bukhaari heard some hadiths from Abdullah ibn Muhammad ibn Abdulloh ibn Ja'far ibn Yamon Jufiy Musnadiy, Muhammad ibn Salom Paykandiy and others. They were the early teachers of Imam Bukhari. Then he heard a hadith from al-Makkiy ibn Ibrahim in Balkh.



He was one of the superior sheikhs (a spiritual master, Muslimclergy) of Bukhari in the hadith.

He heard some hadiths from Abdon ibn 'Uthman, Ali ibn Hasan ibn Sheikh, Sadaqah ibn Fadl and others in Marw, Yahya ibn Yahya and others in Naysabur, and from Ibrahim ibn Musa in Ray.

When he arrived in Iraq at the end of 210, he heard the hadith from Muhammad ibn Isa ibn Tabbo, Suraydj ibn Nu'man, Muhammad ibn Sabiq and Affan in Baghdad.

In Basra, he heard hadith from Abu 'Asim Nabil, Ansari, Ibn' Awn's disciples: 'Abdul-Rahman ibn Hammad Shu'aisy, Muhammad ibn Ar'ara, Hajjaj ibn Minhoh, Badal ibn Muhabbir,' Abdullah ibn Rajo and others. He heard a lot of hadiths from

Ubaydullah ibn Musa, Abu Nuaym, Khalid ibn Mahlad, Talq ibn Gannam, Khalid bin Yazid al-Mukri (they were Hamza's disciples) in Kufa, and in Mecca Abu Abdul Rahman Mukri, Khalid bin Yahya, Hasson ibn Hasson Basri, Abul Walid Ahmad ibn Muhammad Azraqi, and Madina Abdul Aziz Uvaysi, Ayub ibn Suleyman bin Bilal, Ismail bin Abu Uwais, Saeed bin Abu Maryam, Ahmad ibn Ishkab, Abdullah ibn Yusuf, Asbagh and others in Egypt, Abu Yamon, Adam ibn Abu Iyas, Ali bin Ayyash, Bishr ibn Shu'ayb, Abul Mughirah Abdulquddus, Ahmad ibn Khalid Wahbi, Muhammad ibn Yusuf al-Firyabi, Abu Mushir and many others.

The highest sheikhs of Imam Bukhari, Abu 'Asim, Ansari, Makki ibn Ibrahim, Ubaydullah ibn Musa, Abul Mughirah and others narrated directly from the followers.

Sheikhs of the middle class narrated from Al-Awza'i, Ibn Abi Zi'b, Shu'ba, Shu'ayb ibn Abi Hamza and al-Sawri.

Sheikhs of the lower classes were the disciples of Malik, Lays, Hammad bin Zayd and Abu Avona.

Sheikhs of the fourth class are the disciples of Ibn Mubarak, Sufyan ibn Uyayna, Ibn Wahb and Walid ibn Muslim. Imam Bukhari narrated many hadiths from the fifth class of sheikh, Muhammad ibn Yahya Zuhli. He was persecuted.

Many have narrated hadiths from Imam Bukhari. These include: Abu Isa Termezi, Abu Hatim, Ibrahim ibn Ishaq Harbi, Abu Bakr ibn Abi Duna, Abu Bakr Ahmad bin Amr bin Abu Asim, Salih bin Muhammad Jazara, Muhammad ibn Abdullah Hazrami Mutain, Ibrahim ibn Maqil Nasafi, Abdullah ibn Najiya, Abu Bakr Muhammad ibn Ishaq bin Khuzaima, Umar ibn Muhammad ibn Bujayr, Abu Quraysh Muhammad ibn Jum'a, Yahya ibn Muhammad ibn Sa'id

The narrators of the "Sahihi Bukhari" are Muhammad ibn Yusuf Farabri, Mansur ibn Muhammad Mizbazda, Abu Bakr ibn Abu Dawud, Mahomili's sons Hussein and Qasim, Abdullah ibn Muhammad ibn Ashkar, Muhammad ibn Suleyman

ibn Faris, Mahmud ibn Anbar Nasafi and other unnumbered narrators.

Mu'ammeen ibn Muhammad and others, Abu'l Yumn Al-Lugawi, Abu Mansur Qazzoz, Abu Bakr Khatib and his judge Abu Bakr Ahmed bin Hasan Harashi reported in Naysabur: It is narrated by Ishaq Ibrahim ibn Ahmad Balkhiy: I heard from Muhammad ibn Yusuf Farabiy said: "Ninety thousand people heard as-Sahih from Imam Bukhari. There is no one to narrate it today except me."

Amir and Hafiz Abu Nasr ibn Makkulah said: "The last person who narrated the Sahihi Bukhari from Bukhari was Abu Tahir Mansur ibn Muhammad ibn Ali Bazdi. He was a member of the Bazda tribe who died in 329." Both of these hadiths are authentic, sahih. These hadiths are not mentioned in other books except in Imam Bukhari's book As-Sahih. But the hadiths I heard in Sahih Bukhari are the best-known of the six famous hadith books. I heard them in 692. I did not know what would be the condition in 715 ?! Because the manuscript was getting away from day to day. If a person traveled for a year to hear the hadith, he would never waste it. What if the value of the hadith would continue until 730?! This book was one of the six best known books in pre-Islamic history. Because Abu Abdullah was the oldest of this field and has seen the leaders narrating hadith. The other five heard the hadith together with one person

### **Wandering around the country in the quest for knowledge and his writings**

Muhammad ibn Abi Hatim Bukhari said: I heard Abu Abdullah Muhammad ibn Isma'il said, "I have performed Hajj. My brother brought my mother back. I stayed in the quest of science of hadith. When I was 18, I began to write the "Qada'a as-Sahabah waat-taba'in va aqawiluhum" (Fatawa and Sayings of the Companions and the Followers). This was in the time of Ubaydullah ibn Musa.

I also wrote the book "At-Tarih"(History) near the grave of the Prophet (peace be upon him) in the moonlight. Every person had his own story in this book. But I didn't write them because I didn't want the book to be lasted. In Merv, I used to attend meetings of faqihs (one who has a deep understanding of Islam, its laws. And jurisprudence). I was young. When I met, I was ashamed to greet them. A man who arranged those lessons asked me, "How much did you write today?"

I said, "Two." I meant two hadiths. People who were present laughed. Then the sheikh said, "Don't laugh, he may laugh at you some day."

We were informed by Muammar bin Muhammad, Abul Yumn Kindi, Abu Mansur Ghazaz, Abu Bakr Khatib, Rayda Ali ibn Muhammad Attor, Abu Haysam Kushmihaniy, Farabriy: "Muhammad ibn Ishmael said to me,



“What hadith I have written to Sahih Bukhari is that before I performed ablution and prayed two rakats.”

Abu Ja'far Muhammad ibn Abu Hatim said: “I asked Abu Abdullah, “Do you remember all the hadiths you have mentioned in your book?” His reply was, “Not a single hadith in my book has ever been forgotten. I have written all my books three times. If some of my teachers had come back to life, they would never grasp how I wrote my History book. I also wrote it three times.”

Ishaq ibn Rawahaih brought my book At-Tarih to 'Abdullah ibn Tahir and asked, “O, Amir, shall I show you magic?” The Amir looked at the book and was amazed and said, “I do not know how it was written.” Khalaf Khayyam said, “I heard Ishaq ibn Ahmad ibn Khalaf said, “Muhammad ibn Ismail came Iraq at the end of 210.” Muhammad ibn Abu Hatim said: “I heard al-Bukhari said, “I went to Baghdad eight times. Every time I used to sit with Ahmad ibn Hanbal. The last time I said goodbye to him, he said, “O Abu Abdullah! Will you go to Khurasan leaving the scholars and knowledge?” I still remember what he said.”

Abu Abdullah Al-Hakim said: “Imam Bukhari first came to Naysabur in 209 and then in 250. He had lived in Naysabur for five years. He always retold hadith.”

Abu Hafs bin Qawwas reported to us and he was reported by Abul Qasim ibn Harastaniin 609 I was there too.

He was informed by faqih Abu Hassan Ali ibn Musallam, later to him Hussein ibn Muhammad, and Muhammad ibn Ahmad Ghassani, then was informed by Ahmad ibn Muhammad ibn Adam, Muhammad ibn Yusuf Bukhari: “One night I stayed at Muhammad ibn Ismail's house. I reckoned that he had gotten up 18 times and turned the light on and recorded what he remembered.”

Muhammad ibn Abi Hatim Varak said: “While traveling with Abu Abdullah, we used to stay in a house only in the cold. I would see that he would wake up 15-20 times a night, take a flashlight and then set the hadiths as an interpretation.”

According to Ibn 'Adi, Abdulquddus ibn Hammam heard from many of the sheikhs: “Imam al-Bukhari wrote the translation in “Al-Jami” (the title of each chapter) standing between the grave and the pulpit of the Prophet (peace be upon him). He used to pray two rakats before writing each chapter.” Al-Bukhari said: “I wrote As-Sahih for sixteen years. I have made it a covenant between myself and my Lord.” Bukhari said: “When I was in Naysabur, I received letters of salutation from my kith and kin. I would also send them my greetings. Although I forgot the names of some of my relatives in sending the greetings, I did not forget any particle of hadith. Writing hadith was not like writing letters to them. If I wrote a hadith from a man, I would ask the person

who understood it, his name, his nickname, his parentage, and his circumstances of learning hadith. If the person whom I asked was a person who does not understand (that is, his intelligence was weak), of course, I would inquire into the origin and proof of the hadith. But others didn't pay much attention to what they wrote and how they wrote. “

### **Width of his memory, intelligence and knowledge**

Muhammad ibn Ahmad Gunjor said in his book “History of Bukhara”: “I heard from Abu Amr Ahmad ibn Muhammad Muqri. He was informed by Mahib bin Sulaym and Ja'far ibn Muhammad Qatton who was imam of Karmana: “I have written ten thousand and more hadiths from each of them. I memorize every hadith by counting it.” Gunjor said: Muhammad ibn Imran Jurjoni told us what he heard from Sheikh Abdur Rahman ibn Muhammad Bukhari.

He said: “I have encountered over a thousand hadith narrators from Hijaz, Iraq, Syria and Egypt. I met them several times. I went to Syria, Egypt, and Algeria twice, four times in Basra, and I've lived in Hijaz for six years. I do not know how many times I went to Kufa and Baghdad with the collectors of hadith of Khurasan, such as Makki ibn Ibrahim, Yahya ibn Yahya, Ibn Shikha, Qutayba, Shihab ibn Ma'mar.

In Syria I met with Firyabi, Abu Mushir, Abul Mughirah, Abu al-Yaman and others. I didn't see anyone who conflicted with the saying, “Religion is a word and a deed. The Qur'an is the word of Allah.”

Muhammad ibn Abi Hatim Varak said: “Hashid ibn Ismail and another man reported: “Abu Abdullah Bukhari used to attend the lessons of the Sheikhs of Basra with us when he was young. He did not write anything even some days passed. We would ask him, “You are attending with us, but you do not write anything. What will you do?” Sixteen days later, we were told, “You have asked me this question several times. You asked me a lot about what to do. Show me what you have written.” We handed over to him what we had written. The hadiths we wrote were over fifteen thousand. He mentioned all these hadith by heart. We even remedied our mistakes from him. Then he said, “Do you think I am wasting my time?” We knew then that no one would be equal to him.”

Al-Hafiz Abu Ahmad Abdullah ibn Adi said: “As I have heard from several sheikhs that the leaders of the science of hadith found out that Muhammad ibn Ismail Bukhari came to Baghdad and they gathered around him. They had memorized one hundred hadiths to test Imam al-Bukhari, changing their texts and proof to ten and substituting one text for another and a text for another. When they were all gathered, one of them stood up and asked al-Bukhari about a dozen. He said, “I do not know.” The other



asked. He said, "I do not know." He even asked for ten hadiths. His reply was "I don't know." The scientists looked at each other and said, "This man knows." And those who were unaware of this knowledge thought that al-Bukhari was weak and did not know the hadiths. Then the second man got up. He began to confuse the hadiths as before one. Al-Bukhari said, "I do not know." Then the third stood. Ten had narrated one hundred such hadiths. He said nothing except "I do not know." When their questions came to the end, he turned to the one who started the hadith and said, "The first is like this, the second is this, the third is, and so is the tenth." He retold next hadiths correcting them in the same way. Those in attendance were making fun of him and confessing that he had a great energy.

Al-Firabri narrated: Abu 'Abdullah said, "I did not humble myself before anyone except Ali ibn Madini. I must have been astonished that man too." Muhammad ibn Abu Hatim said: Hafiz Raja came to Imam Bukhari and said, "You didn't do any preparation, even you've heard about my arrival. What are you arguing about?" Bukhari replied: "I did not repeat anything; I did not do any preparation. If you want to ask me something, ask me." Then the two began to argue. Rajo wondered where they were. Al-Bukhari said, "Do you have any more questions?" Embarrassed Rajo said, "Yes." Al-Bukhari said, "Then ask for it." Raja mentioned the name of thirteen Ayub. Bukhari paused and then said, "You have accumulated a lot." Rajo thought that he admired him even in one chapter, and he said to Bukhari, "O Abu Abdullah, you have lost a lot of knowledge." Al-Bukhari narrated more than sixty narrators from Abu Ayyub, and weakened seven or eight of the thirteen narrators whom Rajo counted. Rajo asked, "How many hadiths have you narrated about the black turban?" Then Al-Bukhari said, "I have narrated over forty hadiths." Rajo was embarrassed and could not speak any word."

Ibn 'Adi said: I was told by Muhammad ibn Ahmad al-Qumsisi. He heard from Muhammad ibn Hamirawayh. He heard, al-Bukhari said, "I remember a hundred thousand authentic and two hundred thousand hadiths which are not authentic."

Abu Bakr Kalwazani said: "I have never seen a scholar equal to Muhammad ibn Ismail. He would take books from scholars. Once he looked at them and he memorized all of them."

Muhammad ibn Yusuf Al-Farabi related: "I heard from Abu Ja'far Muhammad ibn Abi Hatim Varak that in the cover of the book "Shamoili Abu Abdulloh" he wrote: I heard Muhammad ibn Ismail Bukhari said: "Participating in several meetings I found out its weakness and authenticity. I have read all the books of fiqh. I visited Basra five times. I have written almost all of the authentic hadiths that I have not heard there."

Günor wrote in his book "History". Abu Amr Ahmad ibn Muhammad Mukri, Abu Bakr Muhammad ibn Ya'qub ibn Yusuf Al-Paykandi said to him, "Ali bin Husayn ibn Asim Pikandi said: "When Muhammad ibn Ismail arrived, we gathered. Someone said, "I heard Ishaq ibn Rawahaih said, "I remember seventy thousand hadiths from my book." Al-Bukhari said, "Do you wonder this? At this time there is someone who knows about two hundred thousand hadiths from his own book." And saying this he meant himself.

### **Scholars' statements about Imam Bukhari**

Abu Ja'far Muhammad ibn Abu Hatim said: "One of my friends said, "I was with Muhammad ibn Salam. Muhammad ibn Ismail entered. After his leaving, Muhammad ibn Salam said, "I am confused when this child comes to me. The hadiths and other sciences confuse me. I will be afraid until he leaves."

Abu Ja'far said: "One of my comrades said, "Abu Abdullah Bukhari went to visit Abu Ishaq Surmari. When he left, Abu Ishaq said, "Anyone who wants to see a true and honest faqih should look at this person." When al-Bukhari entered, he was seated next to him."

'Abdullah ibn Sa'id ibn Ja'far said: "When Ahmad ibn Harb Naysaburi died, Muhammad ibn Ishmael and Ishaq bin Rawawaih were following the funeral in Naysabur. I heard people from Naysabur saying, "Muhammad is better than Ishaq." 'Umar ibn Hafs Ashkar said: "I heard Abdon's pointing to Muhammad ibn Ismail with his hands and saying, "I have never seen any wiser than this young man with my eyes."

Salih ibn Mismar Al-Marwazi narrated: "I heard Nu'aim ibn Hammad said, "Muhammad ibn Ismail is a scholar of this Ummah."

Ibrahim ibn Khalid Marwazi informed, "Musaddad said, "O people of Khorasan, do not put anyone else ahead of Muhammad ibn Ismail."

I heard from Musa ibn Quraishi, when 'Abdullah ibn Yusuf said to Imam al-Bukhari, "O Abu Abdullah, look at these books and tell me about their shortcomings." Imam Bukhari replied "Yes."

Muhammad ibn Ismail said to me, "Whenever I went to Sulayman ibn Harb he would say, "Find out the mistakes of Shu'ba." Imam Bukhari said, "The hadithers have gathered. I was approached to visit Ismail ibn Abi Uvays and asked to read the text of the hadith. I agreed. Ismael called the maid and ordered her to bring a wallet. He gave it to me and said, "Abu Abdullah, divide it for them." Then I said, "This people wanted to hear a hadith from you." He said, "I will do your part. But by adding these dinars I want to boost your reputation in front of them."

Hashid ibn Ismail said to me, "When Muhammad ibn Ismael came to Sulayman ibn Harb,



he said to Bukhari, "One day he will become an eminent person."

Khalaf Khayyam reported from, "Ishaq ibn Ahmad ibn Khalaf and Ahmad ibn Abdusalom" When we told Ali ibn Madini that Bukhari said, "I did not feel inferior to anyone but Ali ibn Madini." He said, "Muhammad ibn Ismail has not met a scholar like him yet."

Muhammad ibn Abi Hatim said: I heard the words of Imam Bukhari: The disciples of Amr ibn Ali Fallas argued with me in a hadith. I said, "I do not know such a hadith." When they came to Amr and told him about it, he said, "Hadith is not considered a hadith which Muhammad ibn Ismail doesn't know."

Ahmad ibn Zaw said, "I heard Abu Bakr ibn Abu Shayba and Muhammad ibn Abdullah ibn Numayr's saying, "We have never seen a man like Muhammad ibn Isma'il."

Abdullah ibn Ahmad ibn Hanbal heard from his father: "Khorasan did not raise a great scholar like Muhammad ibn Ismail." Muhammad ibn Ibrahim Bushanji said: "In 228, I heard Muhammad ibn Bashshar say, "No man like Muhammad ibn Ismail came to our country." Hashid ibn Ishmael said: I was in Basra. I heard the coming of Muhammad ibn Ismail. When he came, Bundor said, "The scholar of hadith came today."

Muhammad said that Muhammad ibn Bashshar told Imam Bukhari: "I cannot feel free unless you come to me. I am afraid that you will find a defect in my hadiths that will degrade me. If you come to me and read my hadiths, I will be free from fear and I will be at peace."

Muhammad ibn Abu Hatim reported, "I heard Ibrahim ibn Khalid Marwazi said, "Abu Ammar Hussain ibn Hurayspraised Imam Bukhari, saying, "I do not know its equivalent. Verily, he was created exclusively for the hadith."

Hafiz Abu Quraish said to Muhammad ibn Juma, "I heard what Muhammad ibn Bashshar said. "There are four outstanding scholars in the world: Abu Zur'a in Ray, Dorimi in Samarkand, Muhammad ibn Ismail in Bukhara, Muslim in Naysabur" Muhammad ibn Umar ibn Ash'as al-Paykandi said: "I heard from Abdullah ibn Ahmad ibn Hanbal. He heard from his father said, "The people of Khorasan have been perfected their knowledge in four hadithers: Abu Zur'a Razi, Muhammad ibn Ismail Bukhari, Abdullah ibn Abdurahman Al-Samani, Hasan ibn Shujo Balkhi."

Ibn Ash'as said, I narrated the words of Abdullah ibn Ahmad ibn Hanbal to Muhammad ibn Aqil Balkhi. Ibn Shuja praised Balkhi too much. I asked, "Why then were they not so popular?" They replied, "Their lives were short."

Hasan ibn Shujou Balkhiy traveled the country in the pursuit of knowledge. He heard a hadith from

Makki ibn Ibrahim, Ubaydullah ibn Musa and Abu Mushir. He died in 244.

Narrated by Nasr ibn Zakariya Marwazi, I heard what Qutayba ibn Sa'id said, "The sons of Khorasan are four: Muhammad ibn Ismail, Abdullah bin Abdurrahman Dorimi, Zakariya bin Yahya Lu'luyi, Hasan ibn Shujo."

Abu Ja'far Musnidi said: "The three hadith scholars of our time are: Muhammad ibn Ismail, Hashid ibn Ismail, Yahya ibn Sahl." Muhammad informed: Ja'far ibn Muhammad Firabry said, "One of the disciples of Abdullah ibn Munir came to Bukhara with a business case. When he came back to Ibn Munir, he asked, "Did you visit Abu 'Abdullah?" He said, "No." Ibn Munir chased him and said, "It is not good when you want to go to Bukhara and do not meet Abu Abdullah Muhammad ibn Ismail."

Hashid ibn Ismail said: I heard Qutaiba say, "The sincerity and piety of Muhammad ibn Ismail towards his contemporaries were like 'Umar's sincerity and piety towards his Companions."

Hashid ibn Ismail said, I heard Ahmad ibn Hanbal say, "No one else has come to us from Khorasan as Muhammad ibn Ismail." Abu Hatim Razi said: "Muhammad ibn Ismail was the most knowledgeable of the scholars who came to Iraq." Hakim said: "I heard it from Hasan ibn Ahmad Shaybani Muaddal."

He heard Ahmad ibn Hamdun said, "I saw Muhammad ibn Ismail at the funeral of Sa'id ibn Marwan." Muhammad ibn Yahya Zuhli asked Imam al-Bukhari about names, nicknames, and weak illnesses of hadiths by the narrators. Al-Bukhari answered him at once, as if he had recited: "Say, He is Allah, (who is) One."

We were told by Muhammad ibn Khalid Muttovvi'i in Bukhara. Musabbih ibn Sa'id al-Bukhari said to him, I heard 'Abdullah ibn' Abd al-Rahman Al-Samari said: "I have seen Iraqi and Hijazi scientists. But I did not see an encyclopedist among them, like Bukhari"

Muhammad ibn Hamdun ibn Rustam said: I heard from Muslim ibn al-Hajjaj. He came to Bukhari and said, "Teacher, master of scholars, a wiseman of Hadith illness. Let me kiss your feet if you give me permission." Abu Isa Termizi said: "In Iraq and Khorasan, I did not find anyone with deep knowledge of hadith, its history, and proof than Muhammad ibn Ismail."

Abu Isa Termizi said: Muhammad ibn Ismail was with Abdullah ibn Munir. When he left, Abdullah ibn Munir said to him, "O Abu Abdullah! May Allah make you the beauty of this Ummah. The teacher's prayers were accepted."

Ibn Munir is considered to be one of the most prominent. He said: "When Bukhari came to Iraq for the last time, people came out to meet him and worked hard to do well. When this was said to



Bukhari, he said, "How would you have been surprised if you saw the respect we were in Basra?"

Abu Ali Salih ibn Muhammad Al-Jazara said: Muhammad ibn Ismail was sitting in a class of science in Baghdad. I would write a hadith from him. He had over twenty thousand people in his meetings.

'Abd al-Mu'min ibn Khalaf al-Nasafi said: I asked Abu Ali Saleh ibn Muhammad about Dorimi, Bukhari and Abu Zura. He said, "Muhammad ibn Ismail is more knowledgeable in the hadith, and Abu Zur'a is sharper in defense."

Ishaq ibn Zubrak said: I heard Muhammad ibn Idris (may Allah have mercy on him) said in 247: "A man will come to you from Khorasan. There was no more emperor out there, and no greater one came to Iraq." Al-Bukhari came after a while."

Abu Sa'id Hatim ibn Muhammad said: Hafiz Musa ibn Harun said, "Even if all the people of Islam come together to prepare a man like Bukhari, they will not be able to do that."

Al-Faqih Abu al-'Abbas Muhammad ibn 'Abd al-Rahman Daghuli said:

"The people of Baghdad wrote the following verses for Imam Bukhari:

If you are this Ummah, it is for good.

If you lose, the community is unhappy.

(The poetic description of the contents of the Uzbek version of the poems in the book belongs to the editor Nasrullah Shukrullah ogli)

Abu Bakr Khatib said: Abu Zur'a was asked about Ibn Lahiyah. He said: "Al-Bukhari did not get his hadiths"

He was asked about Muhammad ibn Humaid . He said, "Abu 'Abdullah did not take his hadith too." Then when Abu 'Abdullah Bukhari was told this, he said, "Abu Zur'a has done good to us from the beginning."

Ahmad ibn Sayyar says in his books of History: "Muhammad ibn Ismail Ju'fiy asked for knowledge, sat down with scholars, traveled for the science of hadith, became proficient in this field. He was excellent scholar in education and protection." 'Abd al-Rahman ibn Abu Hatim said: "My father praised Ahmad ibn Sayyar remembering him as a scholar."

'Umar ibn Hafs al-Ash'ar said: "When Raja bin Murajja crossed to Shash, he came to Bukhara and went into a rabat. Our Mashaikhs (poets) went to see him. I also went with them. I was asked about Abu 'Abdullah Muhammad ibn Ismail. I told them about his health and I said, "Perhaps, he will come to you today." We have written several hadiths. The science session was over. But Bukhari did not come. Bukhari did not come on the second day. On the third day Rajo said: "Abu 'Abdullah probably did not want to visit us. Take us to him. I want to go on a trip." Rajo reluctantly set off. Our team came to Bukhari. Rajo said: "O Abu 'Abdullah, I was eager to see you.

I want you to tell a hadith. I am going out to Shash." Al-Bukhari said, "Yes, as it is." He narrated several hadiths from Rajo Ayub. As soon as Rajo was silent, Abu 'Abdullah was answering every narrated hadith. Rajo told Imam al-Bukhari: "Is there any hadith that we have not said?" Al-Bukhari began to narrate the hadith. When Rajo asked who had narrated it, he quoted it. He narrated more than ten hadiths. Rajo was shocked to see this. Imam Bukhari's eyes suddenly fell on Rajo's face and he saw a change in him and stopped narrating.

After Rajo's departure, Bukhari said, "I wanted to tell him so many hadiths. But I was afraid that nothing would happen to me."

Khalaf ibn Muhammad said: "I heard Abu Amr Ahmad ibn Nasr Haffof said: In the science of hadith Muhammad ibn Ismail knows twenty times more than Ishaq ibn Rohavayh, Ahmad ibn Hanbal and others. If someone speaks wrong about him, there will be thousands of condemnation by me. Muhammad ibn Isma'il, who had narrated hadith to us, is a righteous, pure, and knowledgeable person. I have never seen anyone like him."

Muhammad ibn Ya'qub ibn Ahram said: "I heard my companions said, "When Bukhari came to Naysabur, he was greeted by four thousand horsemen, with mules and donkeys except passer-by."

'Abdullah ibn Hammad Omuli said, "I wish I were a hair in the bosoms of Bukhari." Muhammad ibn Abi Hatim said: I heard Hashid ibn Ismail and another man said, "The young well-educated people of the Basra used to rush behind Bukhari to write down hadiths from him. Even they insisted on him asking hadiths. Thousands of people would sit him on the roads and record the hadiths he had narrated. Muhammad was a young man at that time.

I have been informed by Hasan ibn Ali, he was informed by Abdullah ibn Umar, Abdulawwal ibn Isa, Abdullah ibn Muhammad Ansari, Ahmad ibn Muhammad ibn Ismail Mahdawi. He heard it from Khalid ibn Abdullah Marwazi, Abu Sahl Muhammad ibn Ahmad Marwazi, and he from the jurist Abu Zayd Marwazi: I was sleeping near the Ka'abah between the ranks and the Maqam. And I saw the Prophet (peace be upon him) in my dream. He said to me, "O Abu Zayd, how long will you read Shafi'i's books but do not read my book?" I said, "O, the Messenger of Allah, what is your book?" He replied, "Al-Jami 'as-Sahih, the book of Muhammad ibn Ismail."

### **His prayers, virtues, piety and righteousness**

Hakim said: "We were informed by Muhammad ibn Khalid Al-Muttawwi and he was informed by Musabbih ibn Sa'id: "Muhammad ibn Ismail used to read the Qur'an in the day time during Ramadan.



After the Taraweeh prayer, he would finish the recitation of Qur'an every three nights."

Bakr ibn Munir said: I heard Abu Abdullah Bukhari said, "I hope when I face with Allah, He will not hold me accountable. Because I did not slander anybody."

Al-Bukhari (may Allaah have mercy on him) told the truth. Whoever heard the words of Bukhari at the time of the change, knew how devout and upright he was in his use of the word.

When he considered someone's hadith was weak, he often said: This is munkar (not authentic) hadith. Scientists have not spoken about it, they have different opinions about it," he used delicate and sensitive phrases like these.

In few cases he used "so-and-so is a liar," "So-and-so thought out this." Even he said: "There is a hesitation in so-and-so's hadith." It is clear from his words, "I did not gossip about anyone." that he was high in piety.

Muhammad ibn Abi Hatim Al-Wakr narrated: Imam Bukhari said, "I do not think that there will be any hostile to me on the Day of Resurrection."

I said, "Some people say that when you talk about your history, you are gossiping" Al-Bukhari said, "We have only narrated these words. We did not do it ourselves. In the hadith narrated by Aisha (r.a.) "The Prophet (peace and blessings of Allaah be upon him) said: "...He is the worst member of his tribe."

Al-Bukhari said, "Since I knew that gossip would hurt the person who spoke it, I did not slander anyone."

## His Death

Ibn 'Adi said: I heard, "Abdulquddus bin Abdul Jabbor Samarqandi said: "Muhammad ibn Ismail came to the village of Khartang. This village was located two miles from Samarkand. There were relatives there. He stayed in their houses. One night after Tahajjud prayer I heard his supplication, he said, "O Allah, this wide land is now became narrow for me. Take me to you." He died less than a month later. His grave was in Khartang."

Muhammad ibn Abu Hatim said: I heard from Abu Mansur Ghalib ibn Jibril. Imam Bukhari was in this man's house in Hartang. He said: "Imam Bukhari stayed in our house for several days. He became seriously ill. His disease was exacerbated. He sent an envoy to Samarkand. When his wishes were met, he prepared for the journey.

He prepared his horse, put on his boots (makhsi) and wrapped a turban on his head. When he was about twenty feet away, he became weak. I grabbed one of the wrists with a man to mount.

Then Imam Bukhari said, "Leave me alone, my energy is dry." Then he prayed long and his spirits left his body. There was a sweat on his forehead that

could not be described. After the sweat stopped, we got him dressed with white clothes. For the last time we were instructed: "Shroud me in three white garments, so that there should be no shirts or turbans." We did the same. After the funeral, a more sweet scent than musk came from the grave. This continued for several days. Then a white pillar rose over the tomb and stopped in the sky.

People came every day and were surprised. They used to take some soil away from the grave. Even the tomb has fallen considerably. Even though we were guards, we were unable to save the soil of the grave.

We were tired of protecting the grave. For this reason, we closed the tomb with fodder so that no one could touch it. But the people carried it away from the surrounding soil without damaging it.

The scent of the fragrance of the tomb continued for several days, and people were amazed at what had happened.

Those who opposed him in his lifetime knew who this man was after his death. They came to the grave of Bukhari and repented for their bad words."

Muhammad ibn Abu Hatim said: "After Imam Bukhari's death, his relatives Abu Mansur Ghalib bin Jibril lived very little. He ordered them to bury him beside him. Muhammad ibn Muhammad ibn Makki Jurjani said: I heard AbdulWahid ibn Adam said: "In my dream, I saw the Prophet (pbuh). He had several Companions with him. When he was in one place, I greeted him. He also greeted. I asked, "What are you doing standing here, O Messenger of Allah?" He said, "I am waiting for Muhammad ibn Ismail Bukhari." A few days later I was informed that Imam Bukhari passed away. I think his death was about the time when I dreamed of the Prophet s.a.w.

It was narrated by Khalaf ibn Muhammad Khayyam: I heard Ma'rib ibn Sulaym al-Karmini said: "Imam Bukhari died at the age of 62 at night of Ramadan. He was alone in the house. When we went in the morning he died."

"Imam Bukhari died on the night of Ramadan in 256 in the evening prayer on Saturday. He was buried after the noon prayer on Eid al-Fitr. Bukhari turns 62 in 13 days. Muhammad ibn Abu Hatim reported: "Abu Dharr said: I saw Muhammad bin Hatam Khalqani, the disciples of Muhammad ibn Hafsin my dream. I knew he had died. I asked, "Did you see my teacher Muhammad bin Hafsa?" And Khalqani looked at me and said, "Yes. He was like this." and he pointed He pointed at the roof. Then I asked him about al-Bukhari. He said, "I saw al-Bukhari too," and pointed to the sky. He would fall off the height of the area he was showing."

Abu Ali Ghassani said: "Abu Fath Nasr ibn Hasan Sakati came to Balance in 464 and told us: "There was a year of drought in Samarkand. Although people have repeatedly asked Allah for rain, there



was no rain. A man of good character and piety came to the judge in Samarkand and said, "I have an idea. I will tell it to you." He asked, "What is your opinion?" He said, "Let us go to the village of Khartang and pray near the grave of Imam Bukhari there. It may be that Allah will send down rain on us." The judge said, "A good idea," and went with them to Khartang. The judge performed the prayer with people. And all the people were weeping near the tomb. They asked the owner of the grave for rain.

Allah sent down abundant rain from the sky. No one could return to Samarkand and stay in Khartang for seven days because of the heavy rain. The distance between Samarkand and Khartang was three miles.

Khatib Baghdadi said in his "History" book: "Judge Abu Bakr Ahmed ibn Hasan Harashi informed us in Naysabur. He heard a hadith from the faqih Abu Ishaq Ibrahim ibn Ahmad Balkhi. "

Al-Khatib said in another hadith, "I heard from Ahmad ibn Abdullah Saffar Balkhi. He had heard from Abu Ishaq Mustari. He heard Muhammad ibn Yusuf Mustamli said, "He heard "As-Sahih" from Imam Bukhari ninety thousand times. But today there is no narrator except me."

### ***The Importance of Sahih Al-Bukhari in Tafsir***

By the commentators "Tafsir" is the interpretation of the meaning in the language, while preserving both the inner and outer meaning of the words of the Qur'an.

Siyarul-Nabi is a discipline which studies the Prophet's life.

The term "zuhd", according to my imagination, means renunciation of world, wealth, prestige, and position.

The word "riqaaq" means "health", "peace" and "living only for the hereafter." According to the lexicon scholars, "riqaaq" is a plural form of "roqiq" and the opposite of the words "hate" and "anger" which means "gentle nature."

The aforementioned disciplines are reflected in the work of Imam Bukhari. In addition to his profound knowledge of the Sunnah, Sīrah, and Tafsīr, he had sincere heart. To distinguish the 'sahih' from the 'weak' of the hadiths, one must have such a heart.

Imam Bukhari took this rule in a peculiar way, elevated it to the highest level of art and made an invention that others could not. He has proven that Al-Jaami 'As-Sahih was different from other works. Scholars acknowledge that this discovery did not exist before Bukhari.

The work opens with the book The Beginning of the Revelation (في هال) and ends with the book Tawhid (يداج الت).

According to Umdat ul-qori, the Arabic word "revelation" (في هال الكلامال) is "secret talk" (في هال الكلامال), "inspiration" (اللهام), "messenger" (السالة), "writing" (التابع). (البتاراع) and is synonymous with these words.

Abu Abdullah al-Taymi al-Isbahani said that the word "revelation" means "to explain." His description of this is as follows: "يو كما فهم هال هم نال بتار قول اللهامو التبتفهو" "Any gesture, inspiration, and understanding of the books is a revelation."

The reason that the chapter begins with the "Revelation" is the beginning of the prophecy which is directly related to the revelation.

Scholars and researchers have expressed differing views on chapters and chapter commentaries of Al-Jami 'As-Sahih.

Scientist Kirmani counts the number of books with less than 100 variations and 3450 chapters in different versions. Hoja Khalifa, the author of the book "Kashf az-Zunun", also supported this view.

Ibn Hajar Asqalani stated in his book "Fath ul-Bari" that the number of sections is 97. Dr. Mahmoud Tahhon, an Arab scholar of the 20th-century, supported Asqalani's view in his research

The Jordanian publication An-Nahda cited 91 books and 3882 chapters. The Arab scholar Sheikh Abdullah Gunaiman also cited information in the catalog "Dalil al-Qari" about this work. As for the number of hadiths quoted in the work, the scholar Ibn Salah said that they were 7,275, and 4,000 were unrepeated.

Imam al-Nawawi said in his work: "All the hadiths in Sahih Bukhari are 7275 and 4000 are excluded."

In recent years, Uzbek-language researches have produced 97 books and 3881 chapters in the hadith collection of "Sahih al-Bukhari" There are 7563 hadiths when they collected with repeated ones.

There are 1391 hadiths in the scope of the book, 344 hadiths related to any hadith, and 9082 the scope of all hadiths in this book.

Other scholars have added 122 hadiths to the mention. There are 1341 teachings in the book, most of which are repeated based on the text of the book.

All of the hadiths of the book contain 9082 except the mukuf of the Companions, the Tabi'een, and the praise of those who follow them.

Al-Jome' as-Sahih, nowadays widely distributed, is the first of many copies made by Ali bin Muhammad Yunini (d. 1302), a disciple of the scholar Muhammad ibn Yusuf Firabiy, who was twice heard and transmitted from Bukhari in Firabr and Bukhara.

There are also some copies based on the narrations of Hammad ibn Shakir (d. 902), al-Mahamili (d. 941), Ibrahim ibn Ma'qal Nasafi (d. 908) and Mansur ibn Muhammad Pazdavi (d. 932). These copies were not accepted by scholars because of their errors and shortcomings



In most cases, Imam Bukhari used the first chapter of each book to provide evidence-based evidence from the verses of the Qur'an.

For example, in the book *The Beginning of Revelation*, this is how we see:

1- باب كيف كان بدء الوحي إلى رسول الله صلى الله عليه وسلم و قوله جل ذكره (إنا أوحينا إليك كما أوحينا لى نوح و النبيين من بعده) "How did the revelation come to the Messenger of Allah? Allah (swt) said: "Verily, We have revealed to you as We revealed to Noah and the Prophets after him." This verse is a strong evidence that the revelation was revealed to the Prophet (s.a.w.). He then consistently presented the hadiths that were in harmony with the scriptures, which supported them, and which were inextricably linked.

### **Separating Chapters on Interpretation of the Quran**

#### **In Al-Jami As-Sahih**

The book "*Al-Jami As-Sahih*" is a collection of hadiths, narrators, jurisprudence and history. It is clear that there is an interpretation in the work.

Ibn Hajar Asqalani separated a book from the book "Jome'" (about commentary). Sheikh Mohammed Fuad Abdulbaqi has written a book about Imam Bukhari's attitude to the "Gharib ul-Quran"

Bukhari began the tradition of separating independent sections of commentary in hadiths. Muslim, who lived with him at the same time, had a small chapter in the *Sahih*, which consisted of seven chapters called *Tafsir*. At-Tirmidhi, in his "*Sunan*" and Nasa'i in his "*Al-Sunan al-Kubro*" have also opened chapters of interpretation.

In the commentary sections of the hadiths, the verses are mentioned in the form of the chapter title, and the following are the hadiths that are thought to relate to the verses. Chapters organized in this form are divided into sections of interpretation.

The interpretation of the verses of the Holy Quran with the words of the Prophet (a.s.) and his Companions is called *tafsir*.

The interpretation of a *tafsir* is an interpretation or a narration, which means to explain the meaning of a verse by another verse or hadith of the Prophet (s.a.w.), or by a narration from a companion or natural person.

There are many different opinions about Imam Bukhari, who was one of the scholars who studied both Hadith and *Tafsir*.

In particular, Khoji Khalifa cited information that he was an independent commentator of Imam Bukhari, besides the work of Hadith, based on the information of one of the famous disciples of Imam Bukhari Abu Abdullah al-Firabri (d. 932).

In addition, Dr. Abdurrahman Umayra, who published Imam Bukhari's "*Khalqu Af'al ul-Ibad*", also reported on the existence of an independent work of Imam Bukhari entitled "*at-Tafsir al-Kabir*" and currently has two copies at the Algerian National Library and in Paris. .

As we have already mentioned, it is natural for Imam Bukhari to write independent comments as a commentator among the commentators from different schools of *tafseer*.

In the hadith books written before al-Bukhari, we do not find a separate section, which was divided by the name of the commentator. Even in the work of Al-Musannaf of Abdurazzaq bin Hammam (d. 826), who died 45 years before Bukhari, such section is not found.

Also in the *Sunan* work of Imam Dorimi, a contemporary of Imam Bukhari, we find no section dedicated to interpretation.

However, in the hadith collections of Imam Muslim (b. 874) and Imam Tirmidhi (d. 892), written later in Bukhara, the commentary section can be found. This shows that the commentary was first introduced by Imam Bukhari.

In the section of *Kitab at-Tafsir* in *Sahihi al-Bukhari*, certain verses are written as chapter titles, followed by hadiths related to the verses.

Some books, other than the *Kitab at-Tafsir*, are also mentioned by specific verses. The chapters ending in this form constitute a book of commentary.

As we examined the interpretations of the chapters, the number of them was 1129. This shows that one third of the work is devoted to interpretation.

At the same time, there are 18 books that begin with verses. In addition to the commentary book, commentaries are cited in 613 verses in other sections, and 516 in the book of commentary. The proof of our opinion can be expressed more clearly by the following table:



Jiz (section)	Comments of the verses
1-juz	35 comments
2-juz	32 comments
3- juz	66 comments
4- juz	42 comments
5- juz	67 comments
6- juz	97 comments
7- juz	23 comments
8- juz	516 comments. This is the section of Kitab at-tafsir and al-Maghazi.
9- juz	51 comments
10- juz	33comments
11- juz	7comments
12- juz	30 comments
13 juz	71 comments.

This feature of the Sahih al-Bukhari illustrates the role and significance of Imam Bukhari's interpretation. It is also important to note that as a scholar, the scholar has added commentary to the hadith collection and, in some cases, left comments on philology.

In the commentary section of Bukhari, unlike the other hadith writers; he tried to expand the interpretative possibilities.

He provided commentary on the chapters of the "Kitobut Tafsir". On the other hand, the selection and sequencing of the hadiths in both the work and the relevant sections suggests that it has a different aspect than the interpretive chapters in other hadith works.

Although the commentary section of Bukhari in his work is the first example of this kind of work, it is possible to say that he used more than his commentary tradition, due to the high level of commentary among his contemporaries.

With Abdullah Ibn Abbas (r.a.), a specific field of interpretation was established.

The majority of the tafsir narrated by the Companions, about 80%, and most of them are from Abdullah Ibn Abbas. The scholars attribute this to the fact that the Sahabah was a bit younger than the others and his enthusiasm was great for the study of the Qur'an.

At that time, tafsir began to be formed as a separate field of knowledge in terms of the movement on Mushaf. The main source of this knowledge is the "tafsir narrations".

The inclusion of commentators in the writings by al-Bukhaari, Tirmidhi and Al-Nasa'i indicates that they did not at least approve of the Prophet's (pbuh) approach to interpreting the Qur'an as a whole.

If they had acted according to this view, they would not have allocated a specific section called

tafsir in their works, which directly or indirectly included the narrations of the Prophet (s.a.w.).

At the same time, the fact that tafsir narratives are transmitted in limited quantities and often relates non-narrated texts to verses indicates that they did not move at least in the third-century narrative interpretation.

Taking into account the traditional structure of classified works, it is clear that Bukhari's Sahih is a source which can create opportunities to express his own views.

Turkish researcher Fuad Sezgin considered this information to be approximately one-fifth of the Sahih texts, citing Bukhari's direct linguistic books by quoting or interpreting narrations.

According to him, Bukhari has omitted all or part of his hadiths, which he did not have the right to narrate, and often transmitted with the word "qola".

In the book of Tafsir, tafsir is only mentioned in the chapters, with no narration in some chapters.

The information given by al-Bukhari in the chapter on tafsir can be analyzed in the form of 'words' and 'tafsirs of tafsir narrated by the chapters.'

This feature of the Sahih al-Bukhari illustrates the role and significance of Imam Bukhari's interpretation. It is also important to note that as a scholar, the scholar has added commentary to the hadith collection and, in some cases, left comments on philology.

Al-Bukhari sometimes explains tafsir narratives that help him to understand verses in chapters. Some of the aforementioned examples may be included in this group if we interpret the tafsir narrative in the form of information from the Prophet (PBUH), the Companions, and the followers of the Prophet (pbuh) who are directly explaining the verses. We have only mentioned such information to give an example of Bukhari's unified approach to word interpretation.



It can be seen that almost all of the interpretations of Bukhari related to the Companions narrated by the Kita but-Tavsir belong to Ibn Abbas. For example, in the section 158 of Surat al-Baqara, "Verily, Safa and Marwa are among the slogans of Allah." he narrated "Qola Ibn Abbas (r.a.)" like "is stone" In this example an issue deserves attention.

The narration of al-Bukhaari in order to interpret the word "Safa" was in fact the explanation of the word "عَفُون" in Surah al-Baqara 266. Al-Tabari and Ibn Abi Hatim have also mentioned this hadith in the interpretation of this ayat

In this example, Bukhari uses other information about another word made from the same root when commenting on a word. Another noteworthy aspect is that this narration, which is quoted in the commentaries, is mentioned here without any mention.

On the subject of the Sura an-Naas, "Ibn 'Abbas (ra) narrated:" "الووساس" "When a child is born, Satan whispers. When the name of Allah mentioned he will be driven out. He will dwell in the heart of the child if Allah is not mentioned."

However, this statement of Ibn 'Abbas (pbuh) is transmitted with slight variation in the books of tafsir. In Surat al-A'raf, it is stated in the verse: Show me and I will look at you. "He mentioned the words of Ibn Abbas (ra) in the form of "give me" (أُتِن), linking to the expression "rny" in the subject of the verse.

It is possible to say that the narratives that Bukhari collected in the chapters are in harmony with the themes of the chapter and constitute a mutually exclusive whole. Certainly, the presence of this condition in each chapter requires detailed research. In many chapters, one can easily state that there is a consensus between the order of hadith and the ideas expressed in the chapters.

To sum up, Bukhari has worked hard on the harmony of the chapters and hadiths, and the harmony between the hadiths, and their arrangement in a meaningful way. This is manifested only in the form of an opportunity to express his personal views, in a way that does not allow interpretations to permit him to transmit the legends.

The fact that he put questions on interpretations, along with the interpretative information he provided in the translations, actually expanded the possibilities of interpretation in a work that went from the principle of narration.

However, this is not enough, however, when viewed from the point of view of an ideal explanation such as uncovering every aspect of a verse or reaching a conclusion.

The relation of Tafsir to the book Al-Jami 'as-sahih can be summarized as follows:

- ✓ The fact that al-Jaami 'al-sahih containing various books indicates that it is related to the section of tafsir and not the hadith and fiqh. For example: the Book of Revelation, the Book of the Beginning of Creation, the Prophets, the Book and the Sunnah, the Book of Tawheed, the Book of Interpretation, the Book of Virtues.
- ✓ It contains interpretations of commentary in many different books. For example: the Book of Faith, the Book of Tillings, the Book of Injustice, the Book of Testimony, and so on.
- ✓ In some places, Imam al-Bukhari interprets verses from the Qur'an or quotes from the Qur'an without quotations and hadiths. This is mentioned in many parts of the work.



# COMPARATIVE-TYOLOGICAL STUDY OF PHONETIC SYSTEMS IN THE COMMUNICATIVE ASPECT

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## ABSTRACT

*In accordance with the current requirements for training, the entire learning process should be focused on the student's ability to master the language as a means of communication. As a result, the student's ability to understand spoken language, read and express his thoughts, and also be able to express himself in writing, must be developed and developed in the reader.*

**KEYWORDS:** *grammatical construction, articulation-acoustic method, articulation training, pronunciation skills, prosodic or accent levels, positional laws.*

## DISCUSSION

In the process of teaching French in Uzbek schools, attention should be paid to working on specific levels of language and developing all types of speech activities. In accordance with the requirements of modern teaching, the whole teaching process should be focused on the student's mastery of the language as a means of communication. As a result, the ability to understand oral speech, read, speak, and express one's thoughts should be formed and developed in the student. Knowledge of phonetics, vocabulary and grammar as a model of the communication process is one of the main conditions for achieving this goal. In this article, we focus on defining our direction of the study of conscious speech from a comparative typological point of view. Because such speech is the beginning of the process of comparative and topological study of any language, including French and Uzbek.

It is known that the means of sound in the language system have a special place in comparison with the grammatical structure and vocabulary. It should not be seen as an element of language that stands alongside lexicon and grammar (morphology and syntax). We can also learn this from the possibilities of the phonetic or articulatory-acoustic method based on L.V. Sherba in the 1920s.

The task of articulatory teaching is, first of all, to teach the student to understand the work of pronunciation and to separate the whole articulation into its constituent elements, to synthesize these

elements into new unusual compounds. Research in this area has also promoted the idea that foreign language articulations and pronunciation skills of native speakers should be studied in constant proportion. In this case, our attention is drawn to a situation in which the phonological system is compared. In general, phonological systems, all levels of the phonetic syllable (phoneme variable or phonetic, prosodic or accent levels) can be compared [1].

In the process of comparing the segment level of language sound systems, three functional groups can be distinguished: 1) the structure of phonemes and their descriptive features; 2) articulatory base of sounds and their articulatory origin in Uzbek and French languages; 3) use of sound units.

Within the first group, two main trends can be distinguished: in the first, the low phoneme repertoire in Uzbek is compared to the multi-phoneme material in French; in the latter, the opposite is true: in this part of the phonetic system, the phoneme repertoire of the Uzbek language is wider than that of the phoneme repertoire of the French language.

The second group includes four groups of sounds; a) sounds that are more or less similar in both tones; b) sounds in French but not in Uzbek; g) Sounds in Uzbek but not in French.

The third group focuses on the similarities and differences in the use of sound systems in the two languages being compared. The positional laws of sound construction in languages are undoubtedly one of the areas of such application. The positional laws of



language sound construction can also be determined by the presence of positional changes in units of sound in certain positions [2].

The sound structure of a language consists not only of elements of the segment level, but also of super-segment (prosodic) phenomena. Thus, it is natural to emphasize and emphasize the object of research, that is, they serve as a means of communication. Hence the need to include these elements in the comparison process.

The emphasis is on his character and role. Emphasis is also placed on the rhythmic structure of words and phonetic words.

The melody is an important tool for distinguishing the meaning of a sentence or the modal (emotional) tone in the process of communication. Mispronouncing a sentence can not only change its meaning (or even distort it completely), but also offend the interlocutor and interrupt the conversation.

When comparing the phonetic systems of languages, certain aspects of them can form the basis of comparison, for example, when the articulatory base of sounds is based on the comparison of articulatory appearance in Uzbek and French, consonants can be compared and classified in at least two ways: articulation on the secret.

French consonant sounds are classified according to articulation:

- a) Consonant / consonant: The articulation of two rows of consonant sounds is of two kinds. Vowels [b, d, g, v, z, z, m, n, □, l, R] are formed by the vibration of the vocal cords, while vowels [p, t, k, f, s, □] are formed without vibration.
- b) Openness / closure of articulatory organs: in the pronunciation of explosive sounds [p, b, t, d, le, g, m, n, □] completely block the passage of air at the level of the oral cavity. then there is an explosion in the pronunciation of the phoneme, the sounds of sliders [f, v, s, z, □, □, R, l] cause the air to come out with strong pressure as a result of the narrowing of the sound channel.
- c) Explosive consonant sounds [m, n, □] are articulated by lowering the soft palate to expel air through the nasal cavity. The nasal sound is called oral-nasal or oral nasal.
- d) 1 lateral consonant sound [l]: at the level of the alveoli, the closure of the air passage through the apex of the tongue is observed with the lateral opening. This condition allows air to escape freely.
- e) 1 vibrating sound [R]: partial closure of the vocal tract with a dot allows air to pass to vibrate the root of the tongue.

Our observation of articulation positions shows that there are eight articulation positions in French.

1) The condition of the lower and upper lips with 3 lips [p, b, m,].

2) 2 labia [f, v,] belong to the upper teeth of the lower lip

3) 4 apical-teeth [t, d, n, l,] spread to the teeth of the tongue

4) 2 apical-palate [□, □,]: touch of the middle part of the tongue to the palate.

5) 2 picks [□, □]: the middle part of the tongue touches the picks.

6) 2 dorsi-velaires [k, g]: the middle part of the tongue and the back of the palate

7) 1 tooth-palate [□]: the middle part of the tongue and the middle of the palate

8) 1 tooth tongue [R]: middle part of the tongue and tongue.

Only after the observations on the articulation style and place of consonant sounds are fully systematized in the Uzbek language material will it be possible to carry out interlinguistic comparative-typological analysis [3].

Thus, given the nature and special role of language sound construction, we believe that the formation of phonetic literacy can only be achieved by using a combination of communicative and phonetic methods and techniques. Because the research, based solely on the results of comparing the phonetic systems of the mother tongue and French, allows teachers and students to reduce interference from the mother tongue from the beginning of learning, preventing the strengthening of mispronunciation skills that create foreign accents and promotes the development of phonemic hearing.

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# THE TEACHING METHODS OF THE PROPHET (S.A.V.)

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## ANNOTATION

*This article discusses some of the methods of pedagogy in some of the hadiths that came from the hadiths of the Prophet. Examples were also cited from the hadiths and attempts were made to shahkh through sources.*

**BASIC PHRASES:** *hadith, style, prophet, Qur'an, recitation.*

## DISCUSSION

Learning is an integral part of human life and is important. Throughout his life, a person learns not only language, knowledge, professional skills, but also certain habits, the constant development of his personality, self-management. This is why learning is so important in human life. The study of the fact that the first verses of the Qur'an are related to reading and writing also confirms their invaluable importance in human life.

The scholars also studied the teaching methods of the Prophet (peace and blessings of Allaah be upon him) separately, forbidding and analyzing the hadeeths. In particular, one of the 20th century scholars, Abdulfattah Abu Ghudda (d. 1997), in his book *Ar-Rasul al-Muallim*, described in detail the Prophet's teaching methods. Yusuf Qarzavi and other scholars have also written in this direction. Some hadiths have been used in this article using these books.

For example, the Prophet (s.a.v.) used beautiful and useful teaching methods for all times. These methods attracted the listeners together and took place in their hearts and always matched their level of understanding and perception. Moreover, the thoughts of the Prophet (peace and blessings of Allaah be upon him) were always clear.

Anyone who studies the books written by the Prophet (s.a.v.) about the way of life will see that he used different methods of teaching. Sometimes they would ask the question themselves, and other times they could answer it directly. Sometimes the

Prophet (s.a.v.) would give a short answer to a question, while in other cases he would give a broad and detailed answer that went beyond the scope of the question given. He also had the oath of allegiance in the name of Allah because they cited additional examples or as religious leaders. In some places, by acting prudently, the listener would divert attention away from the question. He could add images or parables to words and use metaphors. The Prophet (s.a.v.) could have doubted himself to give an appropriate answer. He also used humorous words to express his thoughts clearly, and at the same time argued where necessary. The Prophet (peace and blessings of Allaah be upon him) conveyed the main idea to the listener slowly or slowly, using comparisons. Sometimes he would explain the essence of the questions in order to give the necessary answer, or he could ask the Companions who knew the answer to this question before. Or, if not, in the process of finding the answer, the Companions would ask them questions so that they could come to a certain conclusion themselves. The Prophet (peace and blessings of Allaah be upon him) could have given certain information to those present before him before the questions. He said that in some cases, special classes were held for women, teaching them the necessary sciences. Given the level of children and adolescents present in their presence, they tried to explain the relevant information in a way that they could better absorb what they heard [2].



The Prophet (s.a.v.) himself showed that teaching is most effective by setting an example and setting an example by his behavior. If he issued a decree, they would obey it first. People learned from him. Indeed, the Qur'an states, "There is a good example in the Messenger of Allah for you, for those who hope for Allah and the Last Day, and remember Allah much." [3] (Al-Ahzab, 21) Teaching by example is one of the most effective teaching methods that can have a profound effect on hearts and help them understand and be absorbed. It is in this way that teaching is more (successful) effective, as opposed to being limited to speaking and explaining. It is also a natural way to teach by example. Therefore, this method is the most demonstrative and effective method of the Prophet (saas)<sup>1</sup>.

Comparisons and analogies are important in the learning process. If the various instructions and rules of the Prophet (peace and blessings of Allaah be upon him) seemed difficult for the listener, the Companions, to understand, he would explain them and compare them so that the Companions could understand them. Because of the analogies and comparisons, even complex things became clear to them, and at the same time the Companions understood the qridas, their goals and duties. This can

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<sup>1</sup> The scholar Hajji wrote in *al-Fikr as-somi fi tarikh al-fiqh al-Islami*: an example is that sample display is more efficient. He commanded his companions to come out of the ihram and slaughter the sacrificial animals.

But they did not immediately follow his instructions because they did not like the truce and they preferred to fight. The wives of the Prophet (peace and blessings of Allaah be upon him) went to Umm Salama and told her that the execution of her orders was delayed. Umm Salama advised him that if they were the first to shave their heads and slaughter the sacrificial animal, the Companions would see this and no doubt follow their example. The Messenger of Allah (saas) did so. When the Companions saw his action, they rushed to sacrifice the animals and take each other's hair. This incident indicates that Umm Salama (r.a.) was an intelligent woman. He felt that his companions were hesitant because of the need to leave ihram before the end of Umrah. He also knew that demonstrating a pattern in practice was more effective than verbal instruction. Everything was as he thought. May Allah be pleased with him! ” (Vol. 1, p. 154).

be seen from the following hadith. Al-Bukhari narrated on the authority of Ibn 'Abbas (may Allah be pleased with him) that a woman from the tribe of Juhayna came to the Messenger of Allah (may peace be upon him) and said: My mother intended to perform Hajj, but she died before performing it. Can I perform Hajj for my mother? Yes, they replied, and the Messenger of Allah, may Allah bless him and grant him peace, said, "Tell me, if you owed any money to your mother, would you pay it?" U: Yes, he said. The Messenger of Allah (peace and blessings of Allah be upon him) said: Then pay all the debts before Allah, for He is more deserving of fidelity than anyone else.

The Prophet (peace and blessings of Allaah be upon him) gave a comparative example to explain this matter to the people.

The Prophet (peace and blessings of Allaah be upon him) often gave examples to explain the information being narrated. Examples will be visualized in many places, this method will help the student to fully absorb the message being conveyed so that he can assimilate the information.

Speech therapists emphasize the importance of examples and metaphors in explaining the hidden meaning and various subtleties. There are many examples and metaphors given by Allah in the Qur'an, and the Prophet (peace and blessings of Allaah be upon him) followed them in the style of the Qur'aan, using them in his speeches and sermons. There are many examples of this in the hadiths. In particular, Imam Abu Dawud quoted the following words of the Prophet (peace and blessings of Allaah be upon him) from Anas (ra): "A believer who recites the Qur'an is like a *urtujja*<sup>2</sup>: The smell is fragrant, the taste is sweet. A believer who does not read the Qur'an is like a date<sup>3</sup>: it has no smell and tastes sweet. The example of the hypocrite who reads the Qur'an is like that of *hanzala*<sup>4</sup>: it smells fragrant and tastes bitter. The example of a hypocrite who does not read the Qur'an is like a *hanzala*: no smell, bitter taste. A righteous companion is like a perfumer, and a perverted companion is like a blacksmith's watchman: if he does not defile you with his black soot, he will suffocate you with smoke. [4]

The purpose of the example given by the Prophet (peace and blessings of Allaah be upon him) was to show that the believer and his deeds have a

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<sup>2</sup> *Utrujja* is a citrus fruit that looks like an orange and a lemon. The size is two palms, the smell is fragrant and the taste is sweet fruit.

<sup>3</sup> "Date" means an Arabic date. Because although the taste of Arabic dates is sweet, it has no smell.

<sup>4</sup> *Hanzala* is a plant with an unpleasant taste and smell. The fruit is slightly larger than an orange.



worthy status, and that the hypocrite and his crimes are ugly. In this hadith, the Prophet (peace and blessings of Allaah be upon him) divided people into four categories: a) The believers who recite the Qur'an are the best of people; b) People who are believers but do not recite the Qur'an are inferior to the first category. Nevertheless, they are also Muslims; c) Those who are given the Qur'an but do not believe in it are hypocrites; g) People who do not recite the Qur'an and do not believe.

Through this hadith, it is stated that both faith and the Qur'an are sources of enlightenment, and that Allah will bestow them on whomever He wills. It is said that these two sources are the basis of this world and any blessing in that world, and that knowing these sources is the best and most valuable of all sciences.”[5]

The metaphor in the hadith narrated by the Prophet (peace and blessings of Allaah be upon him) embodies a strong incentive to do good and the need to refrain from evil. Everything is expressed in such a way that those present at that meeting could easily understand his words. This metaphor also encourages us to choose pious people and scholars as companions and to attend the scientific meetings they organize frequently. It also means that it is obligatory not to associate or associate with corrupt people and hypocrites.

In a hadith narrated by Imam Bukhari and Muslim from Abu Musa al-Ash'ari, the Prophet (peace and blessings of Allaah be upon him) said: “Allaah sent me with guidance and knowledge, like rain that falls on the earth. There are lands that do not absorb water and grow a lot of grass. In some, the grass does not grow, but retains water. God uses people with it, drinks it, waters plants and animals. It also rains on lands that are flat, water does not accumulate, and grass does not grow. This is the case of one who knows the religion of Allah well, does not take advantage of what Allah has sent me, does not listen to what He knows and teaches, and does not accept my guidance as an ambassador.

Qurtubi and other scholars say: “The Prophet (peace and blessings of Allaah be upon him) likened the religion that was sent with them to rain. This was the situation of the people until Muhammad (saas) came as the Messenger of Allah. Just as rain sprouts dry land, Islam gives life to the soulless soul. Then he compared those who heard his message to the different parts of the earth where it rained:

- A person who has knowledge, applies it in practice and teaches it to other people is like a fertile land that absorbs water, benefits from it, grows trees and thus benefits others;

- A person who acquires the knowledge he needs in his time and transmits it to others, but does not fully follow them (about non-compulsory actions)

or does not fully understand them, is like a land that is flooded and then benefits others. Regarding such a person, the Prophet (peace and blessings of Allaah be upon him) said: “Yes, may Allaah bless those who hear my words, remember them, and then pass on what they hear to others. Most educated people do not fully understand them. There are many people who can pass on their knowledge to those who know more”[6];

- He who hears the message, but does not remember it, does not use it, and does not pass it on to others, is like a swampy place that does not absorb and harm other parts of the earth.

In this metaphor, the Prophet (peace and blessings of Allaah be upon him) mentioned two categories of people who are praiseworthy because they are beneficial. The third category of invalids is singled out because they do not benefit. And Allah knows best.”[7]

The first group includes those who pass on the hadiths to others, who are intelligent, who encourage others, and who apply the rules they know. Those who fall into the second category pass on the hadiths to others and are considered the custodians of knowledge. They apply knowledge, but their minds are limited. The third category of individuals includes the ignorant: they do not pass on the hadiths to others, they are not intelligent, they are not the custodians of knowledge, they do not remember them. They did not accept Allah's guidance or turn away from it and did not pay any attention to it.”[8]

Imam Nawawi said: “There are several lessons to be learned from this hadith: the use of metaphors, the importance of knowledge and teaching, the encouragement to acquire knowledge, and the condemnation of rejecting it while teaching others. And Allah knows best.”[9]

In conclusion, it can be said that the teaching methods of the Prophet are relevant to his time and at the same time important for modern pedagogy. Since some narrations have been narrated in the article, many such hadiths can be cited. Therefore, I think it is appropriate to use them in pedagogical lessons now.

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# OCCASIONAL WORDS IN THE POETRY OF A. ARIPOV

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## ABSTRACT

*In this article, we studied the views of linguists of the occurrence of words “tesha tegmagan (untouched)” and “randalanmagan (uncouth)” based on the words existing in linguistics which were found in the poetry of the famous Uzbek poet A. Aripov, and tried to interpret such words from the point of view of the norm.*

**KEY WORDS:** *linguistics, stylistics, norm, neologism, occasionalism, poetry.*

## DISCUSSION

The work of A.G. Lykov, “Occasionalism and the Linguistic Norm” refers to words that are normal, illegal, once used, expressive, created by a speaker or writer, having expressive properties both historical and modern correspondences, adhering to the rules of speech, and indicates that they have characters that belong to a particular person<sup>1</sup>.

N.I. Felman, G.I. Miskevich and L.K. Cheltsova argue that occasionalisms tend to be constantly updated and that the novelty of existing neologisms in a language gradually disappears over time and becomes ordinary words, occasionalisms are characterized by a “chronic” update. They argue that the perception of this update depends on the knowledge of users of the language, their ability to feel the language, feel the language subtleties<sup>2</sup>.

According to the linguist A. E. Mamatov, “Occasionalism is an individually and stylistic neologism based on an ineffective model, but it is only used in its context”<sup>3</sup>.

In her study, the Kazakh linguist G. Muratova argues that although occasional words appear on the basis of purely stylistic necessity, other new words (potential words, neologisms) appear on the basis of the need to express changes in society. The linguist also notes that occasional words are the words that show previously existing concepts in a different way and express the idea of an individual author, giving an additional stylistic color, delicate image and subtleties of meaning<sup>4</sup>.

I. Toshaliyev and M. Djurabaeva agree with the following opinion: “... them, that is, the structure

of occasionalisms (our description -U.H.T.), from the point of view of word-formation norms has relation to derivatological discussion on linguistics.

Studying the formation of occasionalisms, determining the conditions for their appearance studying the fact that the word morpheme is subject to various changes and rethinking is of particular importance for understanding the nature of various lexico-morphological processes in the language and plays an important role in word formation stylistics and culture of speech”<sup>5</sup>.

What are the reasons for the appearance of individual occasional words? Can they serve as new means for art? To answer these and other questions, we focused on the linguistic foundations of occasionalism. There are various motives for the appearance of individual author's aphorisms, including occasionalisms that are found in literary texts: to provide a clear, concise and direct feedback; give new, exact names, definitions and meanings to pre-existing concepts in our language; to feel the need to create events in a figurative sense; to avoid various repetitions and reuse of words.

Of course, all these motivations are the main tasks for achieving the same goal - the stylistic effect and expressiveness. Although we classify the origin of occasional words, as indicated above, it should be noted that in most cases not all of these motives are used simultaneously. Perhaps one of them is the main motive, while others may have additional or helping motivation. We will use the following examples to illustrate the function of the above motives.



The famous poet A. Aripov created wonderful occasional words in one poem:

Ажаб,битта юртнинг учта номи бор,  
Ажаб,битта юртнинг учта номи бор, Гарчи у  
уч номлик битта бустондир, Ойгулдан  
тарқалган бир гулистондир. Узоқ  
тарихлардан бир ном барқарор, Бу кун номи  
унинг метин ва пойдор, Урта Россияда  
**Ойгулистондир.** У-азиз,мутабар  
**Бошқирistonдир.**

Ажаб,битта юртнинг учта номи бор,

Учинчи ушбу ном менга аён дир.

Бу шеърый кургондир мангуликка ёр,

Бу улуғ шеър юрти-**Мустайistonдир.**

As shown in the above example, the literary words created by the author indicate the fact that "Aygulistan" is a prosperous country in the Republic of Bashkiristan, the fact that there are so many people and that great people like Mustai Karim are being created, that is they turn into a "Mustayiston".

Through these words, A. Aripov clearly and briefly expressed his thoughts, creating new concepts based on existing words and suffixes in the language, as well as raising the poetic spirit of the poem, as well as a new emotional and expressive link to the text as a whole. Let's look at another example:

Улкан чангалзорда икков кетардик,  
У факат сузларди, менчи тинглардим.  
Чангалзор –инсонлар **рухистонидек** . . (A. Aripov. «Selected works» p.23)

In this context, the ending **-iston**, which explains the significance of the region, was very skillfully added by the author and composed "**ruhistonidek**".

As a result, it is claimed that they have become "spirits for climbers".

Artists use a variety of linguistic means to enrich the language of their works.

Биз "Ранжком"миз, "Ранжком"миз,  
Келажаги гажкоммиз,  
Курунганни тишлаймиз,  
Ишимиз шу ишлаймиз.

Кучайса гар дахмаза,  
Бизларга булар мазза,  
Бор булсинлар ёввошлар,  
Галварслар,қовоқбошлар...(p.364)

In the aforementioned context, firstly, the rational and purposeful use of the word "Ranjkom", and secondly, a new occasional word based on this, created occasionalism "ganjkom" and additionally illustrated the artistic nature of his work, poetic techniques, that is rhyme and rhythm have been preserved, and, thirdly, the semantic context shade is enhanced.

Writers skillfully express the idea that they want to convey, without the need to explain the correct use of such occasionalism in the language of a literary work, even if the reader understands that the content of the entire work was expressed through one occasionalism.

The famous poet A. Aripov managed to assign a name to the entire work of his dramatic poem "Ranjkom". Here are some examples:

Биз маънавий ташкилотмиз  
"Ранжком" миз яъни

Узгаларни ранжитмоқлик бизнинг  
ишимиз .

Баб-баравар "сийла" гаймиз барча-  
барчани

Дуч келганга қадалади уткир  
нишимиз.

...Биз "Ранжком"миз , биз хаммани  
ранжитамиз , бас.

Шу асосий вазифамиз чиқарманг  
ёддан (p.353)

The lines with the occasional word "Ranj" were analyzed, and the meaning of the words of the following lines reveals the true face of the ending "com". This is the main reason why the writer used this new word.

Излаб топдинг , қайта изғир тухматчи ,  
учар ,

Аниқлангиз , ким юрибди кимнинг  
қасдида .

Айни шулар аъзо булур "Ранжком"га  
лойиқ ,

Сиз уларга вазифалар ваъда қилингиз  
.(p.355)

In order to determine the function of the occasional word "Ranj" in his work, he created another occasional word that coincided with this new word. For instance:

Майли кекса, майли ёш  
Беролмас бизга бардош,  
Чимчилаймиз билдирмай,  
Бурдалаймиз улдирмай.

Since "ganj" in modern Uzbek language means "word", "grace", our word means firmly, without organization. Thus, the use of occasional words "ranjkom" and "ganjkom" is justified, both semantic and stylistic.

Thus, the above examples clarify the linguistic nature of occasionalism, as well as their stylistic and semantic use, illustrate the language of works of art with colorful flowers and enrich our



speech, and for authors it serves to reveal the essence and meaning of their original goals.

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## DESCRIPTION OF THE DOCUMENTS OF THE PERSONAL FUND OF THE BIBLIOGRAPHER E.K.BETGER KEPT IN THE NATIONAL ARCHIVE OF UZBEKISTAN

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### ANNOTATION

*The archives and libraries of Uzbekistan contain documents and historical books from the earliest times of the history of Uzbekistan to the present day, which reflect the material and spiritual life of our people. These sources also contain archival documents on the life, work and research of famous bibliographers. One of them is the first head of the library department of the Turkestan People's Commissariat of Education, the great Central Asian librarian and bibliographer Evgeny Karlovich Betger (1887–1956). His scientific heritage is stored in the National Archives of Uzbekistan as personal fund documents № 2412. The fund includes of a collection of 567 storage units and contains valuable documents on the socio-political, economic and cultural spheres of the history of Uzbekistan from 1862 to 1956. In particular, E.K.Betger's books, researches, scientific pamphlets, textbooks and documents on his activity have a special place.*

**KEY WORDS:** *document, archive, archival fund, library catalog, universal decimal classification.*

### DISCUSSION

Nowadays, a new period of scientific and innovative development has begun in our country. New digital technologies are entering science. These include archives, libraries and museums. The great interest and attention paid to the culture of science and education in Uzbekistan is an invaluable value that brings our people closer to each other. The announcement of 2020 as "The Year of Science, Enlightenment and Digital Economy" in our country fully corresponds to our glorious idea of national revival.

Today, we cannot imagine our life without books, rare manuscripts and archival documents. The reason is that these sources contribute to the study of the history of Uzbekistan, the enrichment of historical knowledge and the growing interest in our past. In the words of the President of the Republic of Uzbekistan Sh.M.Mirziyoev, "Currently, more than 100,000 unique manuscripts are stored in the book funds of Uzbekistan. However, it should be noted

that most of them are still waiting for their researchers. It is an important and honorable task for us to study and popularize this spiritual treasure in all its aspects"[1].

The archives and libraries contain documents and historical books from the earliest times of the history of Uzbekistan to the present day, which reflect the material and spiritual life of our people. These sources contain archival documents on the life, work and research of the famous librarian bibliographers and documents on the activities of one of the founders of the National Library of Uzbekistan named after Alisher Navoi, major librarian and bibliographer Evgeny Karlovich Betger (1887–1956) with a history of 150 years [2].

We also know E.K.Betger as a bibliographer who made an invaluable contribution to the history of library work in Turkestan and a scientist who established libraries in Uzbekistan. His scientific heritage is stored in the National Archives of Uzbekistan as a personal fund document № 2412 [3].



The fund consists of a collection of 567 storage units and contains valuable documents on the socio-political, economic and cultural spheres of the history of Uzbekistan in 1862-1956. In particular, documents on the books, research, scientific pamphlets, manuals and activities of E.K.Betger have important role.

These documents can be divided into several groups depending on their structure and content:

- draft manuscripts of E.K.Betger's work and service duties: lists of books brought to the Turkestan Public Library from different regions, samples of catalogs developed for library books, universal decimal classification and other draft manuscripts;
- documents on administrative public administration bodies and court proceedings; documents reflecting the court cases of judges in the country, etc ;
- inner and foreign policy; Documents on the international relations of the Russian Empire with the countries of Europe (England) and Asia (China), documents on the foreign relations of the Governor-General of Turkestan;
- military operations and expeditions; foreign and domestic policy documents of different countries;
- excerpts from collections of articles by Russian local historians and researchers;
- materials on the population, history, ethnographic features of Central Asia;
- materials reflecting local lore on the territory of Central Asia;
- materials reflecting the religious and moral views of the people of Central Asia;
- scientific expeditions, geographical and archeological descriptions;
- materials on agriculture, irrigation, climate and migration; horticulture, animal husbandry, cotton growing, water use and irrigation facilities, resettlement issues, earthquake documents;
- materials related to industry, trade, handicrafts;
- transport and communication operator documents; railway construction, telegraph communication;
- materials on education, health, culture, enlightenment, literature, art, painting, criticism and bibliography;
- newspapers, magazines, maps and brochures; collection of books and articles by I. Timaev and other authors;
- various letters from unknown persons; direction indicators, letters, articles and notes;
- collection of books and articles from newspapers in Eastern and Turkic languages

and European languages; Manuscript "Badrul-asror-Vasanadu Abrf" by Khoja-Isa-Dohvedi-Samarkandi, son of Mukhammad Musso, dated 1192 [4]; A two-page excerpt from the "Isloh" newspaper donated by the King of Afghanistan, Nadirshakh, to the Central Asian State Public Library (with references to verses from the Quran) [5]; Kamolliddin Muhammad's son Abdul-Wahid's son Abdulhamid's son Mas'ud-Sivasi's Arabic manuscript "Fathul-Qadir" written in 1861 [6]; Manuscript book "Fiqhi-Akbar" by unknown author [7]; Poems of Alisher Navoi in Uzbek [8]. Details are shown in Table 1 in the appendix.

Among the documents, there is also the report of the Governor-General of Turkestan, K.P. Kaufman for the period from 1867 to 1880. The report informs that the region's urban population was about 30,000, which was 11 percent of the local population, and that the new cultural oases in the southern part of the governor-general's were densely populated, accounting for 85 percent of the total population and urban population was also said to be 20 percent [9]. Also, Russian detachments under the command of the Governor-General of the Russian Empire in Turkestan M.D. Skobelev from 1832 to 1876 were the leader and ruler of the Alay Kyrgyz, Kurmanjan-Dodho (Kyrgyz: Kurmanjan Datka: 1811-1907) The Queen of Alay, also known as the Queen) and a description of the military action against her sons, the victory of M.D. Skobelev and the transfer of Kurmanjan to the service of the tsarist government, the Kyrgyz revolt against the imperial government, the execution of the rebels as well as the death of the queen's sons, as well as China, reflected in the relations between the Afghan government and Kyrgyz are excerpts from journals [10].

There are also articles by K. Timarov, a former employee of the Department of Geography and State Property of Turkestan region, letters from unknown people to K. Timarov and a collection of newspaper clippings. Apparently, E.K.Betger used this type of documentation to create "The Collection of Turkistan" [11].

By the mid of 1930s, E.K.Betger was able to create the most valuable asset of the Tashkent State Library - "The Collection of Turkistan". Anyone who has started working on issues related to Central Asia and is interested in the history of library work in Turkestan is familiar with this collection.

E.K.Betger devoted a lot of time and effort to the great wealth of the state library - "The Collection of Turkistan". He supplemented the collection with sources later found. In 1952, E.K.Betger discovered that there were 29 more volumes of the "The Collection of Turkistan" in the department of rare



publications of the Moscow library. Compiled indexes on the scope, content and identity of the authors cited in the sources [12]. In 1953, he was able to compile the 594-volume "The Collection of Turkistan" which was without alternative in the Alisher Navoi Public Library of Uzbekistan with scientific descriptions and descriptions.

The above-mentioned personal fund documents of E.K.Betger were transferred by the National Library of Uzbekistan named after Alisher Navoi to the Department of Personal Funds of the National Archive of the Republic of Uzbekistan. However, the documents were scattered, that is, they were not collected and described [13]. These documents were then systematized by archivists, combined into a single fund, and their lists were compiled.

In addition, the personal fund № 2412 contains documents on the organization of libraries in the post-World War II Nazi-free areas, materials of the Geographical Society of Uzbekistan in the "service activities" section, all documents are arranged in chronological order on a single storage device [14].

In addition, E.K.Betger paid special attention to the search and scientific processing of rare books and manuscripts written in local languages, the creation of detailed bibliographic indexes in various collections of local sources [15]. He also achieved bibliographic activity, especially the compilation of bibliographic indexes of local lore.

If we study the history of library work in Uzbekistan, the name of E.K.Betger is especially of high importance. The reason is that the knowledge and archival documents collected as a result of his work are still important today. In particular, to achieve uniformity in the preparation of reports on its library activities, the organization of the library fund and library information apparatus; his work on the compilation of catalogs and card indexes, the preservation, classification and characterization of the book fund on the basis of decimal classification are commendable.

In 1918, E.K.Betger together with L.K. Davidov, for the first time published the "Decimal Bibliographic Classification". In 1922, he republished the work and added a preface, guidelines, and rules of use.

In the 1st meeting of the personal fund of E.K.Betger in Uz NA, as a proof of the above opinion, the draft versions of the catalogs compiled by E.K.Betger have been preserved. Among them, he compiled a list of manuscripts that E.K.Betger himself had. EK Betger's collection contains commentaries on books brought from 25 major libraries in the provinces in 1877 at the request of Governor-General von Kaufmann. Among these, the historical books of A.K. Geyes and N.F. Petrovsky are of special importance [16].

Among the unpublished works on the history of the Turkestan Public Library, the oldest generation of Uzbek bibliographers [17] EK Betger's "Three Quarter of Century's Cultural Work (1870–1945)" is noteworthy. This work provides information not only about the history of library work, but also about the cultural life of that time [18].

Academician M.E. Masson wrote in an article dedicated to the memory of E.K.Betger, "The name of this bibliographer is known not only in the USSR but also abroad, as he is often an invisible assistant in scientific research in various fields of knowledge, to which many experts owe their success. ..." [19].

E.K.Betger has left an indelible mark not only in the history of library work in Turkestan, but also as a bibliographer who worked tirelessly in a certain period of the history of Uzbekistan.

Thus, Evgeny Karlovich's pamphlet "Universal Decimal Classification" (UDC) and the accompanying methodological development have for many years served as the only guide for the staff of Turkestan library funds in UDC and other library techniques [20]. That is why, in 1953, E.K.Betger was awarded the title of "Honored Librarian of Uzbekistan" for many years of fruitful and effective work.

In the future, historians, archivists and bibliographers will have to solve innovative and topical issues related to the translation of the outdated library catalogs and the "Universal Decimal Classification" developed by E.K.Betger for the National Library of Uzbekistan named after Alisher Navoi. This should be a matter for today's historians, archivists and librarians.



**Table 1.**  
**Fond – R – 2412. List 1.**  
**The LIST of manuscripts in Turkic languages kept in the fund of E.K.Betger**

No	Number of compilation volume	The name of Manuscript	Author	Language	Year	Number of pages	Comment
1.	543	Batrul-asror-Vasanadu-Abrf	Mukhammad (Khoja-Isa-Dohvedi-Samarkandi, son of Musso)	Arabian	1192	286	
2.	545	Excerpt from the "Islah" newspaper	Gift by the King of Afghanistan, Nadirshakh, to the Central Asian State Public Library	Arabian	1352	2	
3.	546	"Fathul-Qadir" 4 <sup>th</sup> volume	Kamolliddin Muhammad's son Abdul-Wahid's son Abdulhamid's son Mas'ud-Sivasi	Arabian	1861	-	
4.	549	70, 152th volumes of newspaper «POCTA»	-	Uzbek, turkman	1921	32	The author is not indicated in the compilation volume
5.	554	Excerpt from a French newspaper about Central Asian Muslims and Amir Temur	-	French	1931	18	The author is not indicated in the compilation volume
6.	559	"Fiqhi-Akbar"	-	-	-	88	
7.	560	Gift of Khiva khan	Abdullah-Al-Khatib-Tabrizi, son of Valyuliddin Muhammad	Arabian	-	-	
8.	561	"Qasida-Burda"	-	Arabian	-	29	
9.	563	"Ismailia"	-	-	-	2	
10.	565	Poems of Alisher Navoi	-	Uzbek	-	143	

### List of used literature and archival documents.

1. *Speech by the President of the Republic of Uzbekistan Sh.M.Mirziyoev at the opening ceremony of the People's Library of the Office of the President of the Republic of Turkey. Socio-political newspaper "Uzbekistan". February 21, 2020.*
2. *Kormilitsyn A.I. The History of the Development of Librarianship in the Pre-Revolutionary in Turkistan (1868–1917): Abstract. Toshkent: Tashkent State University, 1969. p.12*
3. *UzMA Fund-R-2412. List 1, Volume 1. 2 sheets.*
4. *UzMA Fund-R-2412. List 1, Volume 543.*
5. *UzMA Fund-R-2412. List 1, Volume 545.*
6. *UzMA Fund-R-2412. List 1, Volume 546.*
7. *UzMA Fund-R-2412. List 1, Volume 559.*
8. *UzMA Fund-R-2412. List 1, Volume 565.*
9. *UzMA Fund-R-2412. List 1, Volume 71 Volume. 33 sheets.*
10. *UzMA Fund-R-2412. List 1, Volume 29 Volume. 37 sheets.*
11. *UzMA Fond-R-2412 List 1, Volume 2. 6 sheets.*
12. *UzMA Fund-R-2412 List 1, Volume 1. 2 sheets.*
13. *UzMA Fund-R-2412. List 1, Volume 2 Volume. 3 sheets.*
14. *UzMA Fund-R-2412. List 1, Volume 21 Volume. 12 sheets.*
15. *UzMA Fund-R-2412. List 1, Volume 21 Volume. 15 sheets.*
16. *UzMA Fund-R-2412. List 1, Volume 21, 3 sheets.*
17. *Kormilitsyn A.I. The history of the development of librarianship in the pre-revolutionary in*



- Turkistan (1868–1917). Abstract. Dis. Toshkent: Tashkent State University, 1969. p. 12.*
18. *Betger E.K. Three-quarters of a century of cultural work (1870-1945). Tashkent, 1945.p. 43.*
19. *Masson M.E. in the memory of Evgeny Karlovich Betger, // SAGUO Central Asian Archeology, IV, Toshkent, 1957. p.43*
20. *Kormilitsyn A.I. The History of the Development of Librarianship in the Pre-Revolutionary in Turkistan (1868–1917): Abstract. Dis. Tashkent: Tashkent State University, 1969. p.25.*



## THE EFFECTIVENESS OF USING VIDEO IN TEACHING FOREIGN LANGUAGES

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### ABSTRACT

*The current article aims at providing information about using video and its effective use and importance in foreign language classes. The article deals with different ways of using video, and suggestions by leading experts in this sphere and the advantages of their use as well as possible sources of them. The activities that can be done before, during or after when using video in foreign language classes have also been discussed in the article.*

**KEY WORDS:** *authentic materials, communication, cross-cultural comparison, entertainment, sequence, projector presentation, discussion method, facilitator;*

### DISCUSSION

In the 21<sup>st</sup> century the English language has already become the most widespread and world standard language on Earth. Over 85% of the world's scientists read and use English. About 85% of the world's mail is written in English and 90% of all information in the world's electronic retrieval system is stored in English.[1] The number of people who speak English as a second foreign language will exceed the number of native speakers in the near future. In all fields of society, especially in the fields of international business and technology, English is also the language that most people are expected to handle. From technological targets to famous name brands, catch phrases to song lyrics, English has permeated every society in the world today to such extent that most of the world's population will probably come across words or names in English on a daily basis. This is one of many other reasons why to learn languages. This puts enormous tasks before foreign language teachers and it is important to draw students' attention to this fact, show them, how are foreign language classes important.

Nowadays, as it is known to everybody unusual communicative competences based classes are becoming more and more popular than traditional ones in teaching foreign languages. Different authentic materials, internet sources, video and radio programmes are being used to make foreign language classes more interesting and effective. Technology plays an increasingly important role in teaching foreign languages. One of the most common technologies is a video in which teachers offer a

variety of materials for use in foreign language classes to improve the perception of listeners. It is important to mention that video is the most effective forms of materials which can improve students' not only listening skills but also speaking and writing skills, grammar as well as vocabulary and pronunciation.

As the effectiveness of using video in foreign language classes is very high let's discuss and get the answers to the questions why, when and how to use video in foreign language classes.

Why to use video?

First of all, it is a big motivation. Students become interested faster when experiencing the language in a lively and amusing way, i. e. through pictures, in this case moving pictures (films, documents, broadcasting etc.). In combination with sounds, video interprets the language in a comprehensive and realistic way.

Secondly, video often makes students more communicative in target language.

Thirdly, non-verbal aspects of communication are presented, too. According to Robert Merabian, the American psychologist that 80% of human communication is non-verbal. Our expressions, gestures, posture and clothing is equal to what we say. We can see those aspects in motion on a video. Moreover, the teacher can freeze any moment he wants to and discuss it with the students.

Finally, cross-cultural comparison is an indivisible feature of authentic materials. Observing differences in culture is essential for understanding other nations. Awareness of cultural background is



important in learning a language. Therefore it is essential to highlight cultural habits, too.

When to use video? The two experts on using video at the foreign languages lessons, Stempleski and Tomalin say that video can be used at any level. It can be used as a supplementary material time to time, e. g. one a week, or it can be a part of every lesson if the course is based on it. Because video is a highly motivating device, it is useful for beginners and elementary levels as the good motivation at the beginning is crucial. Usage of video depends, of course, on sources, technical equipment and amount of time, which can be devoted to it. [2]

What to focus on while using video in foreign language classes. There are some aspects that we should take into consider, they are the following:

**Active viewing-** The students should be actively involved when watching. They should know in advance what they are going to watch before they get some tasks connected with watching. Active watching is especially important in watching recipes.

**Vocabulary** - Revision of vocabulary – students' vocabulary can be exercised and reviewed; Building vocabulary – new vocabulary or lexical units can be introduced and acquired from a certain sequence;

**Grammar-** Revision of grammar – grammar already known to students can be toughen up; Grammar presentation – certain grammatical structures are presented;

**Pronunciation-** Sounds, stress and intonation exercises;

**Listening / speaking skills** -Viewing understanding – comprehension of visual component; Listening – focus on spoken utterances; Oral retelling – saying the story orally; Speaking – spoken presentation to the topic of the sequence;

Discussion – discussing the topic in a group;

**Reading and writing-** Reading – reading activities connected with the video sequence; Taking notes – taking notes during watching; Writing – summary writing or creative writing;

**Cross – cultural matters** - Cultural apprehension – cultural concerns, effects;

Cross – cultural comparison – comparing learner's native culture with culture of the country of which the language they are learning; As we use video to make our classes more interesting we should have testing of video sequence. Examination based on video sequence:

There are two types of video material – educative video and authentic video. Educative materials are CDs and DVDs which come together with textbook or which had been created for educative purposes. Authentic video is material primarily intended for native speakers, e. g. TV programmes, broadcasting, news, advertisements or films.

When using video in foreign language classes, it is worth paying attention to the suggestions for lesson planning given by Tomalin and Stempleski. According to Tomalin and Stempleski, it is important to prepare the lesson plan and the material thoroughly. It might be time – consuming, but once it is done, it can be used again next year in other class and other teachers can use it, too. The teacher should consider the needs of his students.

When selecting a sequence, the teacher should choose a suitable part, which the students will be interested in. They usually do not consider a video to be an educational material. It is rather entertainment for them. If it were a boring sequence for them, they would not be willing to learn through it.

The length should be adequate to the length of the lesson, to the level of the students and their age. The shortest sequence may be about thirty seconds long.

It should be possible to use the sequence for more than one activity. Otherwise it may be waste of time. The teacher has to consider his pupils' skills carefully. The level of language in the sequence should be neither too low nor too high for them. However, it is not a crucial parameter when choosing a sequence. The teacher can still provide the script and the video will provide the context, which is a basic clue to understand it.

Next a teacher should consider whether there are the relevant language items that he intends to present to the students. If his intention is a revision of vocabulary, it is necessary the sequence to contain it.

The teacher is recommended by the authors to use scripts with the video itself as well. He should use it not only in the lesson, but also during the preparation, because it will show him what language is used. The video itself will show behaviour and context. The video and the script complement each other.

Once the teacher has chosen a sequence, he may need to prepare some worksheets. He may need and overhead projector presentation, extra activities, transcripts of dialogues, commentaries etc. He should leave himself a lot of time, because it may be extremely time-consuming. [2]

There are some basic techniques for using video in the foreign language classes and we can suggest the following techniques:

### **1. Sound off / vision on (silent viewing)**

This technique can be used to imitate the language activity about happening on the screen or to concentrate on language production through guessing or prediction tasks.

### **2. Sound on / vision off**

The pupils can guess the characters, setting, conditions etc.



### 3. Pause / freeze – frame control

- With sound on, the teacher can pause the starting point of every exchange and ask the students to predict words or utterances.

- With sound on, the teacher can pause important moments in the plot and ask the students questions about the situation. They can comment on previous actions and predict following ones, too.

- The teacher can pause shots of characters' faces and the students can comment on their facial expressions, their feelings, thoughts etc.

### 4. Sound and vision on (listening and viewing comprehension)

- The students get worksheets beforehand and have to fill it in during viewing.

- The students get worksheet after the viewing and have to fill in the correct answers or answer questions etc.

- The students are looking for rhymes / something in a certain colour / something beginning with a certain letter in the sequence.

- The students are said what are they going to watch and are asked to guess what will they see / hear. After viewing, they can compare their guesses.

- The students are given the script and are asked to mark the direct speech.

### 5. Jumbling sequences

The students watch pieces of a sequence in jumbled order and should decide what is the correct order of the video.

### 6. Split viewing

One half of the students see the sequence without sound, the other half can only hear the sound without pictures. Various activities can follow. [2]

When using video in the classes how to read and use of film and TV:

In teacher's resource material *Penguin Readers Teacher's Guide to Using Film and TV* (1999) by Carolyn Walker, there are useful information about reading, using video in teaching and combining those two methods. The learners can experience the spoken language in action through watching video. They can see the settings as well as the movements, body language and the characters' appearances. They can watch the importance of gestures, facial expressions and eye contact in communication. It can be a good background to cross-cultural comparison, too. In comparison with pictures, that are very often use in language teaching, video has the main advantage in extensity of movement and time.

TV and films are not intended as teaching materials. It means that it is a good source of authentic material. However, it is important to remember that there might appear language difficulties. [3]

Students should be aware of active watching, i. e. they are not supposed to relax during watching, but

actively respond. There are a lot of activities that can be done before, during or after.

Video, in particular, is an invaluable educational tool that teachers often neglect to use or misuse. It is not uncommon for teachers to simply play a movie in class without challenging students or getting them involved. The most important thing is that you make your video lessons meaningful, fun, and interesting for your students. If possible, your lessons should integrate listening, speaking, reading and writing. I would also like to add culture as a fifth skill. Making your own videos about your country, family or friends is a good way to introduce your students to authentic English and your culture. Video helps to raise a learner's pragmatic awareness, that is, the importance of context in deciding the speaker's intention. Pragmatics also includes gestures, facial expressions and other non-verbal forms of communication that are culturally bound. Users prefer material that is especially beneficial for visual learners. The use of video with text is particularly efficient in enhancing levels of comprehension and, consequently, supersedes the power of text alone.

Video can increase input through arousing student interest in English. Images may help aid understanding and learning of concepts that are difficult to explain verbally. This is especially true for lower level learners. [4]

Actually most students are not so eager to learn grammar, because some of them think that it's a waste of time. Thus they try to learn more geographical terms, terms on their speciality and different expressions. But in my opinion it is good to learn English according to four main skills like reading, listening, writing and speaking.

Using different videos through discussion method is a pure CLT activity. The use of this method gives teacher an opportunity to see all students communicating with each other. Students are interacting with each other the task is authentic, it gives students reasons to talk to each other as it happens in real life. The task for students is to discuss what they have watched and make sure that everybody understands the purpose of the video. In order to do it students have to watch the video and discuss together, either by asking questions from each other or explaining to each other what they have understood from the video. Another principle of CLT which exists in the activity is no controlled practice of language. Students are free to communicate, there is a friendly atmosphere, and the trust is established for students so that they are not afraid of speaking and making mistakes. The role of a teacher is a facilitator and supporter for students, a teacher is motivating them to speak in any way, if there are questions, a teacher is an advisor. Besides a teacher support there is a peer support too. When students explain their piece of information, other students



listen and if there are some misunderstandings they ask for clarifications. Or if some words are not clear or a student lacks some vocabulary to speak, a peer is there to help and together they explain their information to the new group.

Another important thing that teachers should take into consider while using video is technical equipment. They should remember the following:

- The teacher should familiarize himself with the equipment. He should know how to use the controls.
- Before the class, the teacher should have enough time to set the equipment. He has to check whether everything is switched on and working correctly.
- He should play the cassette / DVD to check the sound and picture.
- Check whether the sound is audible at the back of the room.
- The teacher should ensure that everybody will be able to see the screen and that there are no lights reflecting on the screen.
- He should find a good place for himself – where he will be during watching so that he can control both video and students.

In conclusion, it is again important to mention that organizing classes by using modern pedagogical technologies as well as video can really help students to be motivated and to better their languages skills such as speaking, listening, writing, their vocabulary, grammar and pronunciation. So teachers should try to make their lessons more efficient and interesting by using video and other authentic materials, in such cases they can get objectives and learning outcomes that they have put before themselves when preparing lesson plans.

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# INNOVATIVE METHODS OF TEACHING A LANGUAGE

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## ANNOTATION

*This paper analyses the innovative and quite interesting methods we have in teaching English language.*

**KEY WORDS:** *traditional, provide, result, rules, interest, percept, meaning, dialect, structure, contain, effective, appeal, nature, unknown, usage.*

## DISCUSSION

In today's world English is taught in a very orthodox manner. The basic teaching is important. Teaching the alphabets and the formation of the words is essential and a must. But there is something that is even more significant. The children must be able to speak the words and understand their meaning before writing them down. The foundation to teach English can only be taught using the orthodox methods of teaching the alphabets and the words and the rules. But then teaching only the rules is found to be boring by most students and it is because of this that they lose interest in learning the language. Although there is no way other than the traditional one to teach the basics of the language these methods must be tweaked a bit so as to appeal to the students. When it comes to teaching English to students of higher classes who already know the basics the traditional methods generally tend to yield poorer results than innovative methods. This has already been proven by methods implemented like use of stories, poems, movies, books and newspapers etc. These methods help the students learn the language better without them actually realizing and also it keeps their interest. This paper will provide a few of such methods to teach English Language.

### 1. Conversations.

Conversations are by far the most useful ways of teaching the language. When a person learns his or her mother tongue it is by the conversations that takes place between them and others or by listening to the conversations made by the others. The learner is never taught the language but is still able to percept the meaning and learns it automatically to use it in day to day life. No one ever teaches the kid the characters of the language or how to make sentences

or the grammar of that language. The conversations alone teach the children. Let's imagine a new born baby he will speak and use suitable words and phrases when he grows up, even though nobody explains him the usage of words and grammar. Learning a language is the same situation we must feel ourselves like in an English family listening, all the time native every day conversations. Here we are able to acquire all skills, such as listening and understanding dialects, pronunciation of words, exact usage of phrases, correct grammar structure. Having learnt we can utilize them in our daily basis without any errors. Latest books which contain all skills have organized them in conversations, which are effective to enhance speaking, listening and so on.

### 2. Stories

Stories form a very integral part of teaching a language. These stories help teach the students about the formation of sentences and how to express their thoughts and a lot of other things and plus they help in keeping the students interest alive as the story's end is something that every student wants to know. It appeals to the inquisitive nature of the students. Any unfinished story always keeps the mind of the reader agitated. There are a number of literary texts that are appropriate to all levels. Teachers must select passages according to level of exact class, and then give as an assignment one text firstly to find out unknown words and translate them, secondly, to read and retell it in their own words. So, while reading they come across new words and understand their meaning and usage from the given text. Preparing a speech about the passage is also stage of improving a language skill which leads to stopping translating in their heads what to speak.



Moreover, during the speaking part of the lesson pictures can be used to describe or making stories combining all given pictures. By doing this activity students enhance not only their speaking or writing skills, however broad horizon and enlarge lexical resource. A story is supposed to appeal to the creative part of the brain. It helps us be more imaginative, by trying to visualize the things that are happening inside the story. It should not only teach them the language but it should also help them in extracting a lesson from the story. Keeping questions for evaluation kills the entire idea of imagination for the students look at the story as something that they need to learn for answers. There is a better way of using the stories to English using stories. The students can enact the stories or the plays. In this way the students are personally engaged with the stories. They can bring their own interpretation of the character to life. It is interesting for the students to understand the characters and put themselves in their positions. It engages their creativity by allowing them to create the entire set, assign the characters and play it out according to what they had imagined. It also helps them understand other people's interpretation of the story and helps them have a healthy conversation about it which again helps them in learning the language. It removes the dull aspects and makes the learning more colorful without jeopardizing the learning of the language. It may not be perfect but it will leave a deep impression on their mind. The story will help them learn the language as they will be enacting it by dialog which they will themselves extract from the stories and also modifications can be made to the plays to help the students be more interactive and creative. They can add more lines, characters, change the ending, bring in an interesting parts etc. The more creative the modification, more are the points awarded to the team. This also leads to trait development and helps them work as a team player and all the way the student was learning the language.

For instance, students opt for one short literary work by any native or Karakalpak writer, such as Tolepbergen Qayipbergenov, Amet Shamuratov, and dividing into characters translate speeches into English and play a role. In order to make a performance the students have to immerse themselves into the atmosphere of the story and they have to put them in their positions. This entire process has many benefits besides being a very effective method of teaching the language; it helps preserve the literature, which our culture. This method brings about the total learning experience that was meant to be provided by the story and in the end the student will definitely be able to answer questions without even preparing for it as an exam, besides the entire process is fun and not at all boring.

### 3. Games

This is a very interesting method of teaching. Students and children generally tend to like games and want to play them more and more. Traditional methods dictated for study and games to be separate but the fact remains that the students tend to be more interested in playing games rather than sitting down to study. Any logical reasoning would dictate us to combine the two aspects to solve the problem. The games part of learning would help the students keep their interest as the desire to win is very strong. It keeps us going and when included with different aspects of learning the learning process would continue almost throughout the day without the children getting tired or bored of studying. Human being is always wants to be a winner, so taking into consideration this personality method of using games is very productive.

-Games increase motivation and desire for self-improvement

-Games improve participants' ability to observe

-Games enhance critical thinking, imagination.

Another approval of using games in a foreign language classroom can be seen in the fact that learners provide a number of benefits via games. It was ensured by many experienced writers that games are educationally valuable. Some reasons are mentioned by Lee as in the following (Lee, 2000) games give a chance to escape from unusual routine, but they are very important in terms of motivation and challenges. Moreover, games provide encouragement to interact and communicate successfully for learners and create a context to use the language meaningfully, decrease anxiety, and allow students to study in a relaxed and enjoyable atmosphere. Learners involve in the games actively, so games are called learner-centered activities according to Crookall (2000). Through games learners' and teachers' roles are changed and teacher encourages learners to participate actively in their learning. As a result, games give a chance to learners to take responsibilities for their own learning. When their focus is on a game as an activity learners acquire the target language as they acquire their mother tongue, that is, without being aware of it.

### 4. Creative task

Up till now most of the techniques that we discussed required a greater amount of effort on the students' part. This method requires effort on the teacher's part. Assignments help the students learn something on their own and most of the times they have to research on something then write something up on it. This method although effective is most of the times very tedious. This method of approach is very appropriate for sciences and engineering although when it comes to languages the students should be given assignments in which they have to modify something that already exists. If the students are just given assignments like „write a story or a



poem or a report" then most of the students crack because not everyone can come up with a story or even if they come up with one they cannot write it down. In such case the students should be given the base knowledge and data and then ask them to modify the data for example the students can be given a base story and then ask them to modify a part of it. This engages their creativity and also helps them overcome their difficulty of writing. Above all it lifts the pressure of creating completely new. Invention is very difficult especially when we are being forced to do it. In this way the students are not forced to complete the assignment and then they can do it whole heartedly and hence complete the learning experience that can be gained from the assignment. (Kevin D. Besnoy)

### 5. Multimedia

Multimedia sources like songs, movies, TV series, magazines, newspapers play a very vital role improving our language. We do not even realize that they have helped us. We just wake up one fine day and realize that we are better than it than we were yesterday. Such sources can be used to help the students improve their language. But great precautions must be taken. This method should be used in the final stages of learning as that is the only place where there is no scope of damage as most of the movies and songs etc. use colloquial English most of the times which is grammatically wrong and it is very important that the students understand that fact so that they do not use that form of the language in their everyday usage. Apart from that this source is very helpful as it does not feel like education. This is something that the students will do in their spare time. The songs are the best way to communicate how to use a language to express our feelings. Movies are a very common past time but apart from that most of the times they are also very instructional and educational. Also this method appeals to the students as most of the times they are able to connect with the songs and the movies which help them understand the meaning of expressions, usage of tools of the language like comparisons, personifications etc. These sources help them understand why such tools are necessary and also help them understand their usage. Hence this method is again very effective in teaching the language. Traditional methods of reading newspapers and books, novels are also very good methods to teach the language. When the traditional methods are modified along with some innovative ideas the entire learning and the teaching process is enriched and guarantees a success in efficient learning. These are some of the innovative and creative ways of teaching the English Language.

The ways the languages are taught play a very vital role in a person's life. Since English is the official language of this world it is of utmost

importance that this language has to be taught in such a way that it will help us not just to speak and write and listen but to communicate. That is the purpose of the language and that is what it must be used for. Hence innovative methods help in bringing a change and most of the times for the better. It helps the students learn faster and in an efficient, interesting and an interactive manner and it is the teacher's responsibility to leave the traditional methods and make way for new and better methods for the students benefit.

### 6. Mobile apps

A mobile app, as a computer program, is designed to run on mobile phones, tablet computers (like iPad) and other mobile devices. The word "app" is a shortening of the term "application software". Apps are easily available through application distribution platform called App Market, and these apps are typically operated by the owner of the mobile operating system, such as the Apple App Store, Google Play, Windows Phone Store, and BlackBerry App World. There are two main app stores: Google Play for Android and Apple App Store for iOS. Google Play, known as Android Market, is an international online software store developed by Google for Android devices (Chu, 2009). Apple App Store for iOS is the first app market, which set the standard for app distribution services (Rao, 2011). Nowadays, in these mobile operating systems can be found a number of educational apps, which are helpful to acquire a language independently and easily. Let's have a look at one app that is appropriate to children to learn English. The app «ABC kids» where children are able to learn basic vocabulary in an interactive way, even without any assistance. It is divided into categories, for instance, family, animals and fruits. By entering the specific topic you come across pictures and words that are pronounced in English. In this way children are able to learn by repeating the words again and again. At the end of all topics there can be found quizzes, which are very effective method of reviewing all learnt words and assessing the learners' work. Examples of tasks may be matching words and colorful pictures, since most kids are not able to read, pronouncing and finding suitable units are very productive assignments. The can get presents or point to each correct answer and overall one mark. Using these kinds of apps attractive not only for children but you can still enjoy the magic of childhood to meet your language learning needs because language learning resources for kids are some of the best out there. Educational apps are appropriate not just for children but also their parents are able to use them to acquire a language.



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# THE USE OF MEDIA EDUCATION TECHNOLOGY IN THE SPIRITUAL EDUCATION OF PRIMARY SCHOOL PUPILS

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## ANNOTATION

*The article provides information about the teacher who uses slides as visual material in the electronic presentation-lesson in the educational process at school. There is a brief overview of the development of new pedagogical technologies in the primary education system, including information technology, the motivation to learn.*

**KEYWORDS:** *educational process, information and communication technologies, multimedia, electronic textbook, electronic presentation.*

## DISCUSSION

As the development of science and technology in our society is improving on a large scale, it is important to develop the consciousness and thinking of today's youth in line with the times. This is directly related to information and communication technologies. In modern education, learning activities are unimaginable without information technology. The use of information technology in the educational process not only increases the effectiveness of the lesson, but also develops the cognitive processes of students.

New pedagogical technologies in the primary education system, including information technology, greatly contribute to the development of knowledge-based motivation. Lessons organized on the basis of information technology should be adapted to the needs of the student in terms of organizational methods, teaching methods. Because such lessons are closer to the child's psyche. Achieving a goal based on arousing students' interest, desire, and desire to master the learning material is motivation, which is the inner rapprochement between teacher and students.

Information-communication technologies are methods and techniques that combine all the possibilities of presenting knowledge, evidence and laws. Any technology is information technology, the basis of which is the reception and processing of data.

An elementary school teacher, as a direct provider of learning technology, should make the teaching process fun. He must also be able to study didactic materials, textbooks, manuals and e-learning tools relevant to the class he is teaching, and be able to apply them in the classroom.

Primary school teachers must have the following skills to work with information technology tools:

- Development of working programs and technological maps;
- Preparation of lectures and assignments related to practical training;
- Development of guidelines and control questions;
- Analysis of the results of mastering.

The education system in our country is based on humanistic ideas, placing the child's personality at the center of the educational process, and its main goal is the physical and mental development, the formation of human qualities in it. To achieve this goal, every teacher must have knowledge of the laws of development of the child's personality, its characteristics and the correct organization of this process. The effective use of information technology in the teaching of primary school subjects in the education system of our country is a topical issue. It is information technology that is a universal means of education, not only allows students to form knowledge, skills and abilities, but also develops personal qualities, satisfies their interest in learning.



Many teachers believe that the use of information and communication technologies in their work, in particular, electronic textbooks and multimedia, can increase the effectiveness of education through the introduction of new technologies in the teaching process and have a number of important advantages. It is known that primary education is the foundation of the education system, the quality of teaching students depends on it, and this primary school becomes a "school of skills", or is seen as an educational stage in which the student must master basic skills such as reading, writing, and arithmetic in order to be educated. Nowadays, elementary school is imagined differently. Today, it should remain the first experience of a child in the education system - a place to test the power of learning. At this stage, it is important to develop activity, independence, maintain cognitive activity and create conditions for the child to enter the world of education, to strengthen his emotional qualities. Today, we are witnessing the development of these qualities of students through the introduction of ICT in the educational process.

The emotional impact of the use of information technology in the educational process allows students to focus on one place, that is, on the learning material that is planned to be studied, increases children's interest, allows them to learn. It evokes positive emotions. Research in the field of psychology and pedagogy has shown that the computer also contributes to the formation of children's creative thinking, as well as the development of a high level of comprehension, mastery and interpretation of educational materials. and effective use affects students' learning processes as follows:

- also strengthens the involuntary attention of students;
- provides a transition to the drawing of concepts and theoretical conclusions;
- gives the appearance of the image to the idea and logical elements;
- promotes creative thinking at the stage of mastering learning materials;
- Quickly and easily masters the learning material;
- Increases activity in the process of repetition and consolidation of the passed materials;
- arouses interest in learning materials through interactive interaction.

An elementary school teacher, as a direct provider of learning technology, should keep the teaching process interesting while keeping abreast of the latest developments. He must also be able to study didactic materials, textbooks, manuals and e-learning tools relevant to the class he is teaching, and be able to apply them in the classroom.

The use of information technology in the primary grades reflects students' moods, interests, lifestyles, worldviews, thinking, mental and professional skills. The introduction of Internet technologies will allow students to use information resources, increase the effectiveness of independent work, provide new opportunities for the acquisition and strengthening of creativity, skills and abilities, create conditions for the implementation of new forms and methods of education.

One of the main requirements of the National Training Program is the widespread application of information technology in the educational process, teaching students to learn independently, to think freely.

The use of multimedia in primary education allows the teacher:

- Modern modeling of the lesson;
- have additional information and knowledge to deepen knowledge;
- allows to prepare theoretical and independent work.

The use of multimedia in primary education allows students to:

- to arouse interest in science, to control and strengthen the knowledge;
- quick access to encyclopedic information;
- choose the speed and level of mastery that is convenient for him in the study of the subject;
- modern information - opportunities to engage in communication technologies, to master it and to form the need for its constant operation.

Multimedia is the presentation of objects and processes not in the form of traditional text, but through photography, video, drawing, animation, sound.

Multimedia lessons help to solve the following didactic problems:

- mastering basic knowledge of science;
- ensuring the consistency of acquired knowledge;
- formation of self-control skills;
- development of the need for knowledge;
- Providing educational and methodological assistance to students in their independent work on educational materials.

Teaching science in primary schools on the basis of multimedia technologies is very effective. To do this, lesson plans should be created for each topic of the lesson. On the basis of this development, an electronic presentation of theoretical and practical materials on all topics, which should be presented using information technology tools, is prepared. Presentation slides for lesson plans should be prepared and explained to students through video projectors. The fact that the multimedia presentation is not only textual and visual, but also sound,



animated will be of great importance in the perfect mastery of the topic by students.

The main purpose of the introduction of information and communication technologies in the educational process is to create new types of educational activities that are characteristic of the modern information environment.

In conclusion, our main goal in radically reforming the educational process is to ensure our future through the formation of a harmoniously developed person. The use of information and communication technologies in the teaching of primary school teaches students to select the necessary information, store it and use it in their subsequent work in the preparation and presentation of presentations or in the development and implementation of various projects. From the 2nd grade, students can complete assignments not only in the notebook, but also directly on the computer. Students acquire the first skills in working with a computer, constantly deepening their theoretical knowledge and improving their practical skills.

Indeed, educating the younger generation, who are the owners of our future, requires responsibility from us educators. Developing skills such as independent thinking, logical thinking, especially in the next generation, is the main task of today's teacher.

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# IMPROVING THE METHODOLOGY OF TEACHING FAMILY LAW IN HIGHER EDUCATION INSTITUTIONS

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## ABSTRACT

*In the context of deepening integration processes in the world, global changes in social relations have a significant impact on the institution of the family, its status, composition, structure, functions and activities. Today, in many countries, the breakdown of family traditions has led to an increase in divorces, declining birth rates, unconventional forms of marriage, an increasing number of children born out of wedlock and children deprived of parental care, and a drastic change in attitudes toward family relationships. It is becoming necessary to improve the institutional framework for security in a new context.*

**KEY WORDS:** *family law, family relationships, family traditions, methodology of teaching family law, pedagogical knowledge of parents, legal education.*

## DISCUSSION

In the developed countries of the world, research is being conducted to improve the mechanism of rules for strengthening the institution of the family set out in the Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights and dozens of other universal and regional international legal instruments. The family, as the natural basic unit of any society, is governed by applicable laws, customs and religious rules.

At the current stage of development, including for our country, a scientific analysis of the rules of Islamic law on family relations on the basis of strengthening the spirituality, religious and enlightenment literacy of the individual is a social necessity. After all, "... the task of strengthening a healthy environment in our families, neighborhoods, society as a whole, educating young people, preserving our peaceful life, the purity of our sacred religion is of great importance today" [1]. PF-5325 of the President of the Republic of Uzbekistan dated February 2, 2018 The Decree "On measures to radically improve the activities in the field of support

of women and strengthening the institution of the family" tasks such as the development and implementation of targeted proposals are more pressing than ever. This requires strengthening and improving the universal, national values in families in our country, the relationship between spouses, parents, children, the spiritual, moral and legal basis of the family.

The role of the family in building the rule of law is invaluable. This requires all our citizens to strengthen their families, to bring up each of its members, as well as our youth, in devotion to their homeland. The basis of any society is its citizens, its family. The power of the state is determined by the place of each citizen in society. The positive or negative qualities of the rising generation begin in the family. The family is a complex social group that arises as a result of a combination of biological, social, moral, ideological, and spiritual relationships. The family is not a narrow domestic concept, but it is a social community. That is why families come together and form a society. Just as changes in society affect the family, changes in the family also affect society. Since the family is the mainstay of the



state and society, society is interested in its stability, peace, prosperity and stability. Under the positive influence of existing traditions, customs, rituals and ceremonies in the family, young men and women gradually mature. Tradition and ritual become a powerful weapon of education. That our future will be like this depends on the things we bring up today. This law also depends on the family's educational activities. The complexity of family upbringing is that each family is a unique world, which also shows its own characteristics in the work of upbringing. A positive result can be achieved only if family upbringing is inextricably linked with social upbringing. Family upbringing depends on the level of pedagogical knowledge of parents.

Every parent should have a deep understanding of the duties and responsibilities of raising their children. In addition, a normal family environment, a proper daily plan, timely involvement of the child in reading and work are the key to success.

The cooperation of schools, vocational colleges and academic lyceums with the family is important in the development of children into full-fledged adults.

Therefore, educational institutions should provide pedagogical cooperation with parents in the field of education of students. The opinions expressed by parents in their meetings with teachers are especially valuable to parents. Because they learn more about their children through collaboration with the school's pedagogical team.

Therefore, every parent who understands the essence of child rearing seeks to strengthen the partnership between the family and the educational institution.

Until the child enters the educational institution and completes it, the educational institution should be in close contact with the parents, always be aware of their behavior, consult with teachers on educational issues, the class teacher and inform him about what he is doing after school.

In turn, the teacher should consult with parents about the child's education, mastery of subjects, etiquette, behavior, behavior in the educational institution, care for his development, if necessary, solve problems together. A parent whose child attends an educational institution becomes an educational institution, i.e. a member of that community. Therefore, parents must actively participate in the social life of the educational institution. The teacher should also establish a strong partnership with his or her student's family.

Legal education of young people in the family is the starting point of the education system. The family environment has a great influence on the upbringing of the child. His relationship with other people is determined by how he was brought up in

the family. The system of upbringing in which the interaction between parents is formed is an important factor in the formation of initial attitudes to law in children.

The great thinker of the Eastern Renaissance, the encyclopedist Abu Ali ibn Sina, in his book "The Address of the Message and Event", set very difficult and vital tasks for parents. If the head of the family is inexperienced, incompetent, he will not be able to bring up the family members well, and as a result, faith will result. "Faith in the family," says the scholar, "can have a negative effect not only on the family itself, but also on other families around it."

As in all areas of education, legal education must have regularity, succession. Legal education should be carried out from scratch, because it is characterized by the rapid formation of a person's worldview, self-awareness and understanding of values, the ability to independently evaluate moral, political, economic, legal and other ideals. That is why everyone should pay attention to the educational work carried out in the family, educational institutions, work communities.

Children should be able to respect the rules and regulations of life from the time they enter preschool. As the great thinker Abu Nasr al-Farabi said, whoever utters knowledge and wisdom, should start from his work, take care of his health, be moral and polite, keep his word, abstain from evil deeds, stay away from betrayal, deceit and deception, be religious and follow all the laws. let him know the rules, let him be knowledgeable and eloquent, let him respect the learned and the wise, let him not deprive science and his people of knowledge, let him acquire knowledge of all real material things.

The formation of a free democratic civil society, which has risen to the level of state policy, imposes this responsibility not only on government agencies, but also on the family and the general public. Ensuring the active participation of young people in non-governmental organizations, in turn, makes it necessary to constantly increase the level of their legal culture.

The need for legal education is very important in the process of forming civil society. This means that the role of the family, community, media, governmental and non-governmental organizations in raising the legal culture of young people is invaluable. Parents need to work with community activists and educational institutions in the field of education. These activities make a significant contribution to family upbringing.

In conclusion, in the current context of social and economic changes, the focus on family education is becoming more and more relevant. The children, who have seen the husband and wife pulling the so-called family cart, shoulder to shoulder with each other, their mutual manners, their mutual kindness,



follow their example and try to be like them. Because a child may forget the advice you give, but he will never forget what he saw.

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# THE LEGAL EDUCATION OF THE BASIS FOR STRENGTHENING MILITARY DISCIPLINE

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## ABSTRACT

*This article discusses the problems of legal education and strengthening the discipline of the military of the National Guard of the Republic of Uzbekistan as citizens of the rule of law. The role of law and its influence on the legal consciousness of military personnel is revealed. Features and specificity of the service of the military personnel of the National Guard of the Republic of Uzbekistan. The authors in the article will try to uncover the relationship of legal education and strengthening the discipline of military personnel. The role of the right to strengthen the charter knowledge of military personnel is revealed in detail.*

**KEY WORDS:** *members of the National Guard, military regulations, legal standards, legal education, military law, legal support, specific features, the formation of a legal culture, strengthening discipline.*

## INTRODUCTION

The military personnel of the National Guard of the Republic of Uzbekistan as citizens of the rule of law, under the influence of legal education, should perceive the requirements of military legal norms as their personal rules, strive for their strict observance in their behavior and professional activities, while showing zeal and reasonable initiative, be conscious about the activities commanders to strengthen the statutory, regulatory order, are implacable to violate military discipline. These requirements are directly related to the work to strengthen military discipline and maintain high combat readiness of units.

The Constitution of the Republic of Uzbekistan, establishing the requirements and principles of the organization of socio-political life, the activities of various state bodies [1], is not intended to cover detailed regulation regarding private parties of state policy, including the Armed Forces in particular.

## METHODS

Military Regulations are the legal basis of military order, the organization of activities and the overall functioning of the Armed Forces, as a specific military organization. The legal requirements of military activity, as well as the procedure for their implementation, the duties of servicemen arising from them, as well as the means of ensuring the requirements of laws in the Armed Forces of the Republic of Uzbekistan, are also determined by military legal norms. The statutory order in military units, which implies exemplary service and the fulfillment of the daily routine, combat and public-state training, maintenance and operation of equipment, military property, ensuring the right relations between military personnel, etc. is achieved only if the rules of military law are strictly observed.

## RESULTS AND DISCUSSIONS

In the National Guard of the Republic of Uzbekistan as a specific organization of the rule of law, law generally performs the same functions as in society. However, the impact of the right to relations

now arising in the National Guard of Uzbekistan has a number of features. These features are due to the specifics of the device. National Guard, the originality of their goals and objectives, legal status.

a) legal norms in the Armed Forces contain increased requirements for the conduct of servicemen in the process of fulfilling their duties in military service. This situation is determined by the nature of the activities of the Armed Forces, complexity and dynamism, which requires the highest degree of organization and discipline from military personnel.

b) the rules of military law regulate in more detail and detail the various aspects of the life and work of military personnel. In no other area of socio-political life, legal norms regulate interactions between people in such a detailed way as in a military organization.

c) the right establishes the increased responsibility of military personnel for violation of the procedure for performing military service. Thus, the National Guard provides for legal liability for acts that are not considered unlawful in civilian life. Strict measures of legal and disciplinary liability for similar offenses committed by civilians are applied to members of the National Guard. And finally, military personnel are legally responsible for such actions that can take place only when performing military service.

The impact of the right to life and activity of the National Guard is taking place in the same main areas as in society as a whole.

The law affects the relations taking shape in the Armed Forces by fixing them in the legal norms of the rights and obligations of their participants. So, constitutional norms establish the appointment of the Armed Forces, determine the powers of the highest organs of the state. The legislative bases also establish the organizational foundations of the Armed Forces, the order of their acquisition, material and technical supply, the legal status of military personnel and more.

The law ensures the proper organization and clear functioning of the relations of military personnel. On the basis of legal norms, primarily statutory, daily life and combat training of servicemen, the National Guard, and combat duty are built. In accordance with legal requirements, relationships are developed between superiors and subordinates, orders are given and executed. All this allows us to provide clear service in combat units and subunits.

The law and the charter contribute to the establishment of relations that meet the development needs of the Armed Forces, for example, the increasing educational and technical training of people of military age makes it possible by law to gradually reduce the duration of military service. Detente of international tension, reduction of the Armed Forces enable the state to exempt from military service at the call of students of higher educational institutions.

The law and the charter protect the combat effectiveness of the National Guard, the procedure for performing military service, the rights and legitimate interests of military personnel and their families. The protective effect of law in the Armed Forces is aimed at combating violation of discipline. It provides a high level of order and discipline in the National Guard. The protective function in the Armed Forces is carried out mainly through the norms contained in the military criminal and disciplinary legislation [2, p.84].

Law and charter have a significant educational impact on military personnel. It promotes the development of conscious military discipline, high organization, diligence, the necessary military and moral qualities. Regulating the diverse aspects of the service and activities of warriors. Law and charter educate them in the spirit of strict observance of laws, calls for respect for military law and order, military service.

Thus, law and charter are an important and necessary means of strengthening military discipline, increasing combat readiness and combat readiness of both military personnel and their families. It provides the culture with the vital functions of the units and the successful fulfillment of their tasks.

Legal education of military personnel in the spirit of strict observance of laws and military regulations, orders of commanders and commanders is important for strengthening military discipline and the constitutional order.

In this regard, it is necessary to take into account the specific features of legal education and regulation of relations arising in the process of military service. In particular, the legal education of military personnel should include, in addition to explaining the principle of priority of legislatively guaranteed guarantees of the rule of law, aimed at realizing the rights and freedoms of the individual, the need to follow a number of rights of citizens entering military service.

In the process of legal education of military personnel of the National Guard, special attention should be paid to the organization of the legal educational process, to inform military personnel about the specifics of military law of the military charter and the formation of appropriate legal awareness and high legal culture among military personnel.

The legal education of military personnel is understood as a system of measures to influence the consciousness of military personnel with the aim of forming and developing in them such ideas, beliefs, views, feelings and habits that would guarantee their conscious strict adherence to laws, military oath and military regulations.

Being inextricably linked with all components of a single educational process, the legal education of military personnel has many common features and largely coincides with other parties in

the formation of military personnel of the National Guard of the Republic of Uzbekistan.

At the same time, the legal education of military personnel has specific features that are manifested in its content, tasks and forms of implementation. In special literature and legislation, along with “legal education” are widely used, sometimes in the same sense, and other related terms, more often than not “strengthening discipline”. At the same time, the category of “legal education” is nevertheless the broadest and most accurate term that characterizes the issues of the formation of a conscious implementation of legal norms.

The legal education of military personnel and its tasks are necessary legal knowledge, the volume and content of which are differentiated from the educational needs and the characteristics of this category of military personnel. Strengthening discipline and legal education of military personnel is provided by means of legal propaganda as an integral part of the legal culture. The content of legal propaganda is larger in volume than legal education, since it is known that legal knowledge alone is not enough. There are frequent cases when a particular soldier, knowing well the requirements of the charter, for various reasons does not comply with them.

It is necessary to transform the acquired legal knowledge into the personal convictions of each soldier, into everyday law-abiding behavior that meets the requirements of laws, military oath, charters, orders of commanders. This task of a higher level is solved by legal education.

Legal educational work is the organizing activity of commanders and chiefs, other officials, aimed at the legally correct application of the rules of law, and the actual application of these legal norms in order to manage the military unit. Since the correct and accurate application of legal norms promotes both the dissemination of legal knowledge and the development of a belief in the need for their implementation, legal educational work is covered by the concepts of legal education and legal propaganda.

Certain features of the legal education of military personnel, especially those that are subordinate above all, ensure high combat readiness of military personnel, where the exact and strict implementation of legal norms is of particularly high importance, and their non-compliance can lead to grave consequences.

The legal education of military personnel is also subordinate to the task of preparing soldiers for combat activity, which requires special clarity and organization.

Legal education of military personnel is an integral part of the general educational and psychological training of soldiers.

Legal education is an integral part of the activities of commanders of leaders in fulfilling the tasks facing units and divisions. Accordingly, its goals and objectives, the main areas of activity are determined by the need to ensure the legally

normative correct behavior of military personnel. Legal education and strengthening discipline is only a word, but also a deed - the main condition for the effectiveness of legal education. We can conditionally distinguish the main areas of legal education of military personnel:

a) formation of responsibility for the protection of public order among the military personnel of the National Guard

b) a conscious and conscientious attitude to military duty, official duties. This is an internal culture of legal behavior in legally significant situations in everyday conditions.

c) ensuring the conscious implementation by military personnel of the National Guard of the norms, rights and requirements of military service.

These areas of legal education are embodied in certain areas of organizational and managerial activity.

Prevention of violations of legal norms by servicemen of the National Guard and ensuring the daily fulfillment of legal norms in the organization of daily service.

Analysis of the effectiveness of legal education and legal propaganda of the application of its forms and methods.

Strengthening discipline is the statutory duty of commanders. It is a combination of a system of interrelated legal measures of a moral, psychological, organizational, legal and social nature.

Legal education is intended to promote the education of high citizenship among soldiers, a sense of duty to the motherland. The main goal in this case is to neutralize actions in relation to the foster.

In preventive legal education work, it is important to take into account the characteristics of various categories of military personnel, their offenses.

When carrying out preventive legal and educational activities with military personnel serving on conscription, it is important to take into account the characteristics, age, education, mental development and other parameters. Differentiated should be the approach to the educated depending on the degree of knowledge of military law on military service. Young warriors, who have a weak, and often distorted, idea of the procedure for performing military service, require particularly careful attention to themselves. Young soldiers of the National Guard have difficulty adapting to the conditions of military service, as they were not accustomed to subordinating their personal interests to the public.

## CONCLUSION

In conclusion, we can say that the causes of the conditions conducive to the accomplishment of the military charter are often associated with official omissions of commanders and commanders. It is especially important to prevent legal nihilism, official connivance, impunity, concealment of offenses, mutual responsibility of interdependent officials.

Moreover, no less attention is required to prevent some of these negative phenomena from commanders and commanders.

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## **LABOUR LEGISLATION AND ISSUES OF IMPROVING OF LABOUR RELATIONS**

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### **ABSTRACT**

*This article analyses issues related to labour relations. In this, the author pays special attention to the regulation of the work of homeworkers, certain categories of workers, and also puts forward his proposals for improving legislation in this area.*

**KEY WORDS:** *labour relations, wage labour, work of homeworkers, domestic workers, legal regulation of labour of certain categories of workers.*

### **INTRODUCTION**

The right to work is one of the most important natural human rights. The fact that the right to work is guaranteed in practice plays a decisive role in the stability of the individual's position, not only in terms of his economic independence, but also in determining his social status in society.

The right and opportunity to work should be provided to everyone, for which the state and society should take appropriate organizational, legal, economic measures, create conditions for productive and quality work. At the same time, the state must recognize the rights of its citizens to work through its laws, create appropriate legal guarantees for their implementation and effective protection.

### **METHODS**

Labor relations in the Republic of Uzbekistan are legally regulated in accordance with the principles of democracy, humanity and justice, and meet modern requirements in the conditions of market relations. The Labor Code of the Republic of Uzbekistan is the main normative legal document regulating labor relations, which stipulates in Article

37 of the Constitution of the Republic of Uzbekistan that "everyone has the right to work, free choice of profession, fair working conditions and unemployment protection in accordance with the law" legal norms governing all relations aimed at the implementation of the rule.

### **RESULTS AND DISCUSSIONS**

It is known that labor legislation is adopted taking into account the interests of employees, employers and the state. This legislation is also important in that it is aimed at providing economic and social support to citizens and creating decent living conditions for them, which is one of the priorities of state policy.

Among the goals set in the Action Strategy for the five priority areas of development of the Republic of Uzbekistan for 2017-2021 are to increase employment, provide citizens with jobs and livelihoods, create the necessary conditions for them to live a prosperous and happy life using their human potential giving is a priority [1].

Due to the ongoing socio-economic reforms, market principles in labor relations have largely been resolved. Emphasis was placed on creating the



necessary conditions for citizens to freely choose their place of work, occupation and profession, to effectively use their physical and mental potential in the interests of themselves and their families, the state and society.

Reform of labor legislation should be associated with the effective functioning of the labor market, ensuring the harmony of individual-state-society interests in the production process, the well-being of citizens, protection from unemployment, the establishment of a clear mechanism for protecting their social labor rights. The importance of the current Labor Code of the Republic of Uzbekistan as a basic sectoral law is that it provides a unified approach to the legal regulation of labor and labor relations.

We all know that in the context of deepening democratization processes in our country, the gradual transformation of all spheres of our society, including the labor sphere, is being achieved through the improvement of national legislation.

The deepening of market relations and the consequent emergence of new realities, new views in the economic life of society, the richness of content and diversity of forms of labor-related social relations have created certain problems and gaps in the regulation of labor relations. It should be noted that the market relations are constantly deepening and improving, the private sector is a significant part of production, the private sector is the leader in GDP, a large part of the economically active population is engaged in this field. The fact that different features of the workforce are supported requires new approaches to labor and labor law. Although the current Labor Code and labor legislation today cover all aspects of the labor sector, a number of its norms and rules need to be improved in line with modern requirements [2].

Based on the principle that the interests of man are of the highest value and his rights and freedoms take precedence, we consider it expedient to reflect on some new problems in labor law and their scientific solutions. Bunda:

- First, the regulation of hired labor, including international achievements that represent and regulate the rights and interests of workers, as well as the interests of entrepreneurs, the use of the experience of advanced countries, the introduction and use of effective mechanisms in them;

- secondly, in the use of hired labor, civil law and labor law criteria should be defined, a strict boundary should be drawn between such relations, and scientific and theoretical developments should be carried out;

- Thirdly, in order to achieve further expansion and strengthening of the labor legal framework, measures should be taken to ratify

international instruments, in particular the conventions of the International Labor Organization, and to widely apply their methods and mechanisms;

Nowadays, many ILO Conventions have been ratified by advanced countries. In particular, 80 ILO Conventions have been ratified by the United Kingdom and 75 by Germany.

- Fourth, the work on improving our legislation should be further strengthened, making greater use of international experience in the stratified regulation of labor relations, especially in the field of legislation of independent states, which are our partners and allies in the CIS;

For example, the Labor Code of the Russian Federation introduces norms and rules that address the specifics of labor relations, which apply to different segments of employees in different sectors (education workers, transport workers, health workers, etc.). The principle of such stratification is more clearly reflected in the legislation of some other independent states.

- Fifth, it is necessary to conduct more scientific and theoretical research on issues such as the legal regulation of labor relations, the solution of new tasks and problems, the further strengthening of the rights of our citizens in the field of labor;

In the context of deepening and escalating market relations, the implementation and protection of labor rights of employees, the relationship between employees and employers, the lack of scientific research on the problems of social partnership not only worsens the situation of employees, but also affects the general legal status of the individual. It weakens the motivation to work honestly and productively. Widespread research in the field of labor law is an important factor in the development of jurisprudence, improving the legal system, thereby raising the legal awareness and culture of our citizens and the great goal of our country - building a democratic state and civil society.

## CONCLUSION

In short, the development of labor legislation in the Republic of Uzbekistan corresponds to the level of socio-economic development of the country and our achievements in building the rule of law, to promote the realization of labor rights of our citizens, to prevent violations in this area, to further increase economic activity, must serve.

After all, as the President of the Republic of Uzbekistan Sh.M.Mirziyoev noted [3]: "... the consistent continuation of the noble idea that the interests of man are paramount, will be another



great step on the path to further prosperity and well-being of our lives”.

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# THE ISSUES OF COMBATING RELIGIOUS EXTREMISM AND TERRORISM IN ISLAMIC SOURCES

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## ABSTRACT

*The article reveals religious-legislative aspects of combating against religious extremism and terrorism. Also, several verses of Koran and hadithes, views of foreign specialists on terrorism, the comparative analysis of countering is given from historical and modern national legislative aspects.*

**KEY WORDS:** *extremism, terrorism, religion, Koran, United Nations, legislation, conservation.*

## INTRODUCTION

The issue of terrorism has been of great concern to the international community over the end, especially in the last decade of the 20th century all over the world. Terrorism has become a major problem for the United Nations, the Organization for Security and Co-operation in Europe, many regional, international, non-governmental and public organizations, legislation, executive and law enforcement agencies as well as special services. Therefore, the causes and roots of terrorism are being studied by political and legal scientists, Islamic scholars as well as representatives of other spheres.

Conservation and strengthening of the atmosphere of tolerance, respect and kindness among the existing nations and citizens in our country should be the priority tasks for us. It is known that freedom of conscience and religion, rights of representatives of different nationalities are guaranteed, and religious tolerance is being strengthened in our country. At present, more than 130 nationalities are living in our country in harmony, and 16 religious organizations are functioning freely.

## METHODS

The further development of mutual friendship and harmony in our society, the provision of equal rights for all citizens, regardless of

nationality, religion or belief, will be in the center of our attention. In Uzbekistan, distribution of extremist and radical ideas that arise disagreements among them is absolutely forbidden.

Today, the increasingly bloody conflicts and controversies, the threat of terrorism and extremism occurring in some parts of the world, require us to be constantly informed and vigilant [1].

In ancient sources, details of assassinations - killing of geniuses and rulers, committing some kind of actions under a threat or forcing to abandon the crown are clearly described. Most of them can, based on modern thinking, be classified as terrorism and extremism. As example, we can list the killing of prince Hurzod, who fought against the Arab invaders and the assassination of Mirzo Ulugbek, the ruler of Movarounnahr. Mirzo Ulugbek's death grounded a good reason for the Shaybanid dynasty to come to power. Such terrible events have left their bloody traces not only in the Movarounnahr, but also in the East and Europe, and unfortunately, they still continue to grow in different ways up to the present to win the state.

In the last few years, groups of disbelievers have emerged wearing the mask of Islam. They use religion to pursue conflicts among believers, break the peace of mind among people, exacerbate negative attitudes such as corruption in society, and the pursuit of vicious aims. They claim to be and declare themselves "saviors protecting Islam and Muslims",



however, they are being reasons for the bloodshed of innocent civilians. The worst is that they are giving (their own) commentaries and interpretation to the Qur'an and the Hadith, which are sacred for every Muslim, attempting to justify their actions and to disseminate controversies among Muslims.

The Islamic religion does not permit to do extremist or terrorist acts, in any of the harsh conditions. According to its teachings, bloodshed is a grave sin, regardless of whose blood it is. Here is a reference to the holy sources: "...that whoever kills a person - unless it is for murder or corruption on earth - it is as if he killed the whole of mankind; and whoever saves a person, it is as if he saved the whole of mankind." [2].

Muslims are commanded to observe the principles of fairness, justice, and humanity, even when fighting against the enemy. Being conceited, aggression, and violence are strongly condemned. For example: "Allah hates the transgressors (aggressive people)." [3].

The end of the 20th century and present day has occupied a special place in the history of mankind carrying gravest practices and theories such as terrorism, religious extremism, being extremely addicted in religion, and fanaticism. It is totally wrong to attach terrorism to a single nation or religion. Indeed, no religion or no nation can justify terrorism. The person, who commits this crime, no matter on whose behalf he commits, must be punished accordingly.

In this respect, we found it appropriate to word the opinions of Dr. Muhammad Abdulmunim Abdulholiq, director of general law at Shariat and Law faculty at Azhar University in Cairo, from his monograph "Terrorist Crimes: Religious and Legal Approach" on religious extremism and terrorism, fanaticism. He says: "... murders, shedding innocent blood, ignoring or insulting those who oppose them are not considered a crime by these groups. They hide in the darkness and get prepared to attack the society in which they themselves are brought up. This is because they have a wrong opinion that the present society lives in the period of pre-Islamic Jahiliyyah, and residents of this society follow the laws of the disbelievers, both the leaders and those who follow them are wrong, they claim that they do not need Europe's developed science and culture. According to their beliefs, this society is governed by the material world, which is fed by the material items, the evil, and the so-called lustful desires. This belief allows them to commit conspiracies, develop greediness, making hidden wrongful plans, betrayal, and mischief in different places of the world.

Fanaticism does not mean terrorism. The difference is that fanaticism only implies goals that contravene society's religious and moral beliefs and

traditions, but are not part of a crime - that is, it does not violate the law. Because the law does not consider ideas and opinions a crime, unless they contradict certain criminal codes. The law does not impose any penalties on all moral conduct. Laws and morals are separated from each other and are incompatible with each other. Not all morally bad behaving can be punished by law. Fanaticism can be religious or criminal, depending on social, economic and political circumstances." [4, p.289].

Based on the above-quoted argument, we refer to some of the verses mentioned in the chapter on sectarianism that are considered sacred for all Muslims in order to look at the work of some current fanatics groups.

When we talk about the groups (sects) cited in the Holy Qur'an, there are several ayahs in which they are mentioned. "Whoever kills a believer deliberately, the penalty for him is Hell, where he will remain forever. And God will be angry with him, and will curse him, and will prepare for him a terrible punishment." (Surah al-Nisa 93).

This verse notes, first of all, in our opinion, a human must not intend to murder other human. No matter the circumstances, if one kills an innocent person, one shall be subject to inevitable eternal punishment in hell for what he did. Therefore, we see evidence that a person does not commit an act of intentional infliction on the sacred verse. Commenting on this verse, it is understood that the fundamental principle of the Republic of Uzbekistan is that the right to life, freedom and personal immunity are guaranteed in Article 24-25 of the Constitution (chapter on rights and liberties of individuals and citizens). And according to the Criminal Code, premeditated murder (intentional killing),

- shall be punished with imprisonment from ten to fifteen years.

Premeditated murder in aggravating circumstances, that is: a) (killing of) two or more persons; b) the person or his close relatives in connection with his official or civilian duty; c) in a manner dangerous to the lives of others; d) in the process of mass disorders; e) with severe cruelty; f) in the face of national or racial hatred; g) on the basis of religious affiliations; h) to conceal another crime or to facilitate its commission; i) by a group of persons or by an organized group member, or by the interests of that group

-shall be punished with imprisonment from fifteen to twenty five years in prison or with a life imprisonment.

"But seek, with what God has given you, the Home of the Hereafter, and do not neglect your share of this world. And be charitable, as God has been charitable to you. And do not seek corruption in the



*land. God does not like the seekers of corruption.” (Al-Qasas, 77)*

In this verse, it is ordered for the person in the first place to aspire for perfection, at the same time, the spiritual and material wealth left by his honest work, and the well-being of his children should be his legacy. Together with this, it is noted that a person shall be sentenced up to 20 years of imprisonment providing he violates the rules specified in articles 156, 159 (making conspiracy), of the Criminal Code of the Republic of Uzbekistan or commits crimes against the state and society specified in articles 216, 242, 244, and 246.

10. Among the people is he who says, “We have believed in God.” Yet when he is harmed on God’s account, he equates the people’s persecution with God’s retribution. And if help comes from your Lord, he says, “We were actually with you.” Is not God aware of what is inside the hearts of the people? 12. Those who disbelieve say to those who believe, “Follow our way, and we will carry your sins.” In no way can they carry any of their sins. They are liars. 13. They will carry their own loads, and other loads with their own. And they will be questioned on the Day of Resurrection concerning what they used to fabricate. (Surah al-Ankabut, 10: 12, 13).

If we look at these verses from a contemporary legal point of view, it is impossible to deny that the fanaticists (actors), first of all, are convinced that they are “believing in Allah” in order to justify their actions, consisting of corruption, conspiracy, and aggression in our country. When they are brought to justice, they try to hide their illusions in the way of Allâh, but that they can never escape responsibility for their actions in the Hereafter.

*“And He brought down from their strongholds those of the People of the Book who backed them, and He threw terror into their hearts. Some of them you killed, and others you took captive.” (Al-Ahzab: 26).* In this verse, (it is implied that) it is not a secret that the members of the corrupted organizations that violate the law as well as who helped them are subjected to prosecution by the law enforcement agencies on the basis of the current legislation (constitution, the law about freedom of conscience, criminal and administrative laws). This way, they would be searched, responsibility for their actions is inevitability for them. On the basis of court decision they would be subject to deprivation of liberty as a punishment and in some cases, they are liquidated in the crime scene.

*“Those who harm the believing men and the believing women, for acts they did not commit, bear the burden of perjury and a flagrant sin” (Al-Ahzab, 58).*

While the criminals are being held accountable for the crimes they committed, they are, with purpose of condemning the public, official imams and law enforcement officials, distributing various fiesques, as well as unjustified accusations such as the violation of human rights, freedom of conscience, and use of torture. It is evidenced that these slanders are indeed wrong, and those who arrange and support these slanderous cases will be brought to justice inevitably not only in this world, but also will have to answer the questions hereafter.

“If the hypocrites, and those with sickness in their hearts, and the rumor-mongers in the City (Madinah), do not desist, we will incite you against them; then they will not be your neighbors there except for a short while” (Surah al-Ahzab, 60). “They are cursed; wherever they are found, they should be captured and killed outright.” (Surah Al-Ahzab, 61). Despite the fact that this verse directly reflects the prophetic period, these attempts continue in our present days as well. For example, fanatic corrupts, disseminators of various rumors will be denied by the publicity for their actions, and we can not stand side by side with them for the crimes they have committed and, according to the current legislation, they will be prosecuted.

Say: “You will not be asked *about our misdeeds, nor will we be asked about what you do*” (Surah Saba, 25). Every sane human being is aware of the essence of his actions. According to the guaranteed rights in our Constitution, the punishment will be provided by the court for each person’s unlawful act committed. No one is allowed to be accused of unjustified accusations. The court will judge on the basis of the principles of justice, witness testimony and clear justified evidence. The validity of this judgment will be examined by supervisory procedures, by cassation and appellate procedures, by higher judicial authorities. In addition, no one (as well as the relatives) shall be liable (if they are not related to the offense) for the offense committed by another person and shall be exempted from liability.

The above-mentioned thoughts have been legally grounded, but we think if we do not illustrate the mentioned opinions in the light of the religious thought of the scholars of this direction, we would be judging unfairly with regard to the above-mentioned sacred words. *The condemnation of fanaticism and violence in sacred texts, fatwas and the works of leading scholars [5, p.96-99].*

Concepts such as fanaticism, terrorism, and extremism are described as “corruption”, “gulu - going deep”, “unf - violence” in the language of the Qur’an and Hadith. The verses of the Qur’an and hadiths describe the cited widely used concepts as violence, aggression, corruption, over-reacting.



Thus, the Islamic teachings have firm definitions in this respect. Leaving behind the principle of moderate behavior in religion is referred to as the apostasy in religion.

According to Muslim (narrator), the Prophet (peace be upon him) said three times that "They who abandon the middle (moderate) line shall be destroyed." [6].

"Allah desires ease for you and does not desire difficulty." [7].

"Of course, religion is easy. Whoever makes the religion difficult (for others), religion will become difficult for him. Make it easy, make it close, and give good news." [8].

"Do not go deep in religion. Those who went deep before you were lost in the religion." [9].

"It is not permissible for a Muslim to frighten his brother" [10].

*"Whosoever points on his brother with an ironlike item, the angels curse him."* [11].

In the days close to the Last Day, people with ignorant minds with new teeth (young people) will appear. They speak good words, read the Qur'an, but it (their reading) does not pass through their chests (that is, they just read, they do not comprehend). They go out of the religion just as if they were fired from the bow. Kill them wherever you see them. There is a reward on the Day of Resurrection for killing them.

Today, such concepts as violence and fanaticism are called terrorism and extremism. International Islamic organizations describe this phrase and indicate that the corruptions mentioned in the Qur'an are in line with this notion.

The Makkan declaration of the Islamic jurisprudence council of the Islamic world association describes terrorism as follows:

"Terrorism is the enmity to the religion, soul, consciousness, property and honor of the individuals, groups or state. Its scope includes the intimidation, harassment, threat, unjust suicide, and extortion of property, intimidation on the roads, bullying, violence, and the implementation of criminal plan with single or collective threats. The purpose of these actions is to put fear, danger, intimidation among people, or putting their life, freedom, and property at risk. This also includes causing environmental degradation, putting private or public ownership, domestic and natural resources at risk. All of this is a sinful act on the earth and Allah has forbidden Muslims from doing this in the Qur'an: "Do not desire mischief in the land. Verily, Allâh likes not mischief." [12].

According to the Egyptian Council for Islamic Studies, terrorism is "terrorizing innocent people, breaking down things that are necessary for their

lives, and destroying their possessions, their freedoms, and the honor of humanity."

Yusuf Qarzavi says: Islam prohibits the use of violence against innocent people, their property and honor. The Prophet (peace be upon him) made the announcement in the Farewell Sermon that the soul, property and honor of the people are inviolable. This applies not only to Muslims but also to other people. There is no principle in Islam that "the purpose justifies the means".

Sheikh Tantawi says: Terrorism and religious extremism are the intentions to kill the soul and property of people.

"Turn away from making innovations in religion, turn back from deep going, abstain from an overstatement, and relate to the ancient religion." [13].

As can be seen from the foregoing evidence, Islamic sources attach importance not to violence and disorder but to humanity, ease, and convenience. It is clear that it is the responsibility of men and women whether to go on the wrong way in understanding the values of Islam.

Fanaticism, corruption is not an actual issue which has emerged today. This problem, its negative consequences has been largely focused on by the great historians by giving legal and fictitious views on them. Our great ancestor, Usturshani Muhammad ibn Mahmud from Jizzakh, in his book *Fazil al-Fusul*, written in 1228 AD (Hijri 625), wrote extended ideas about the opponents (corrupted people) of the state and society.

*The bogiys (corrupted people) is a group of people who oppose the rightful ruler.*

When the Muslims are living peacefully and in tranquility under the reign of rightful ruler, those who have rebelled against (that rightful ruler) are the bogiys. In such circumstances, people should be on the king side and not help the corrupted individuals. This is because it is considered to be helping the oppression. They should not help those who oppose the king as well. It will be a form of resistance against the king. If the aggression of the corrupted people is not the result of oppression, but because they believe that they are in the right way, and the Ruler is not, that is why they want to seize the government, then men must take every opportunity to help the king against such a gang. For such a category has been cursed by our Prophet Muhammad (peace be upon him). He said that *fitnah* (conspiracy) is something sleeping. Whoever wakes it up, may he be cursed by the God.

If the bogiys (corrupted people) are accomplice in groups, according to the Molikiy, the Shafi'i and the Hanbaliy Madhab scholars, they will not be killed but they will be called to repentance after being captured. If he does not repent, he will be



killed. Some say that they will not be killed, but their morals will be corrected.

Hasan Basriy says: *“Every heart will be rusted like iron. It is the remembrance of Allah and His forgiveness which makes the rust go”*[14, p.13-14].

*“Every new day the dawn says: “O son of Adam, I have risen again, I am the witness of what you have done today, and take advantage of me, for I will never return until the Day of Judgment”*[15].

*“I did not leave today’s job for tomorrow. When it comes to softness, I showed politeness, I’ve taken strict measures when it’s time to use strictness. I have never hurried when there is no necessity and I have not delayed the urgent issues”*[16, p.8].

The President of our country Shavkat Mirziyoyev was right when he addressed the 72nd session of the United Nations General Assembly appealing to communicate the truly humanistic essence of Islam to a broad world community. “We cherish our sacred religion as the focus of the time-honored values. We strongly condemn and we will never reconcile with those who rank our great faith together with violence and bloodshed”, the President noted. “Islam calls us to kindness and peace, preservation of a genuine human beginning”, the Head of the state has added. The President of Uzbekistan addressed the session delegates with a proposal to adopt a special resolution of the General Assembly “Enlightenment and religious tolerance. The main goal of this document is to promote universal access to education, elimination of illiteracy and ignorance. This resolution is aimed at promoting tolerance and mutual respect, promoting religious freedom, protecting the rights of believers, and preventing discrimination against them.”[17].

## CONCLUSION

In conclusion, in view of these circumstances, all scholars of the Islamic world today consider it necessary that we need to intensify the efforts to safeguard the purity and originality of Islamic teachings and to further combat against the evil forces that are trying to distort its rules. And I believe that keeping peace and tranquility in our country is a must and duty for every one of us.

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## MANUSCRIPTS OF ABU KHAFFS NASAFI'S "AL-TAYSIR FI `ILM AL-TAFSIR" AT THE SULAYMANIYAH LIBRARY OF TURKEY

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### ANNOTATION

Over the centuries, the territory of what is now Uzbekistan has been one of the well-developed scientific, educational and spiritual centers of the world. Its history and thousands of manuscripts in the funds of the country confirm that it has produced many scholars on the one hand, and on the other hand, these scholars have paid special attention to science. A large part of manuscripts in the funds of the country is devoted to Islamic sciences such as Tafsir, Hadith, Fiqh, Kalam, Balagha, Logic and Arabic linguistics. One of these manuscripts is Abu Khafs Nasafi's (467-537/1074-1142) work "Al-Taysir fi `Ilm al-Tafsir". The manuscript is devoted to the Science of Tafsir and contains of five volumes. Seven manuscript copies of this work are stored in the Fund of the Institute of Oriental Studies named after Abu Rayhan Biruni under the Academy of Sciences of the Republic of Uzbekistan. A scientific analysis of these sources confirms that these copies were not fully saved. Manuscript copies of the work "al-Taysir fi `Ilm al-Tafsir" are stored not only in our country, but in other countries too. Particularly, there are 77 copies of this work in the libraries of Turkey. These manuscripts are well preserved than other copies of this work. The article gives information about manuscript copies of the work "al-Taysir fi `Ilm al-Tafsir" in the Sulaymaniyah library of Turkey.

**Калит сўзлар:** *Абу Ҳафс Умар Насафий, тафсири, ат-тайсири фи илмит-тафсири, оят, имон, ҳадис, замонасининг олими, усул, услуб.*

**Ключевые слова:** *Абу Хафс Умар Насафи, тафсири, ат-тайсири фи илмит-тафсири, аят, вера, хадис, ученый периода времени, метод, стиль.*

**KEY WORDS:** *Abu Khafs `Umar Nasafi, Tafsir, al-Taysir fi `Ilm al-Tafsir, verse, faith, hadith, scholar of his time, method.*

### DISCUSSION

Over the centuries, the territory of what is now Uzbekistan has been one of the well-developed scientific, educational and spiritual centers of the world. Its history and thousands of manuscripts in the funds of the country confirm that it has produced many scholars on the one hand, and on the other hand, these scholars have paid special attention to science. Scholars' attempts to get knowledge and to spread it around the world have left an indelible mark on the history. One of them is `Umar ibn Muhammad

ibn Ahmad ibn Ismail ibn Muhammad ibn `Ali ibn Luqman Hanafi (467-537/1074-1142). He is a famous scholar in Muslim world who was grown from Nasaf.

`Umar Nasafi has gained initial education in his own country. Then he has traveled to the scientific centers of Baghdad and Basrah in order to get knowledge. During his journey to these cities, he has got knowledge from Abulyusr Muhammad ibn Muhammad Pazdavi Nasafi, Abu Muhammad Hasan ibn Ahmad Samarqandi, `Ali ibn Hasan Maturidi,



Husain Qashghari, Abulqosim ibn Bayo and others (*Qurashiy, 1993:129*).

Abu Khafs Nasafi has continued to acquire knowledge from distinguished scholars of his time and has become a master of sciences such as Kalam, Hadith and Fiqh.

Besides getting knowledge from many teachers, `Umar Nasafi has educated a great number of pupils who were famous in the Muslim world, including Muhammad ibn Ibrahim Nurpushti, his own son Abu Layth Ahmad ibn `Umar ibn Muhammad Nasafi (died in 506/1112) who had a nickname "al-majd" (great) (*Laknaviy, 1906:285*), Burhanuddin Marghinani, `Umar ibn Muhammad `Uqayli, Abu Bakr ibn Ahmad ibn `Ali ibn `Abdulaziz Balkhi (died in 553/1158) known as "Zohir", Muhammad ibn `Abduljalil ibn `Abdulmalik ibn `Ali ibn Haydar Samarqandi, Muhammad ibn Hasan ibn Muhammad Burhanuddin Kasani. Musa ibn `Abdullah Aghmati arrived in Samarqand in 516/1122 and recorded a great number of hadiths from Nasafi (*Abdullayev, 2019:56*).

According to sources, he has transmitted hadiths from 550 sheikhs who were masters in the fields of Fiqh, Tafsir, Hadith, Literature, Linguistics and History (*Maxsudov, 2019:12*).

According to sources, `Umar Nasafi has written approximately one hundred books on Islamic sciences. Particularly, his work named as "al-Taysir fi `Ilm al-Tafsir" (Simplification of Information in the Science of Tafsir) was devoted to the Science of Tafsir. `Umar Nasafi finished it in 537/1142 in Samarqand (*Rahimjonov, 2019:7*). He has written it in Arabic and Persian languages. Although the book is considered as one of the important sources of Hanafi Madhhab, it has not been published as a full critical text from the point of view of Source Studies yet. There is a great number of works on Islamic culture and sciences in the Sulaymaniyah library of Turkey. Many of these books was written by our scholars. In the following passage, it will be information about copies of the work "al-Taysir fi `Ilm al-Tafsir" which are stored in the Sulaymaniyah library of Turkey.

One of these copies is stored as No. 10 in the Fund of Madrasah Musallah under the Sulaymaniyah library. The manuscript was copied in 1081 and given by `Ali Soati as vaqf. It was written in Persian and consists of 317 pages. Each page includes 26 lines (*Nasafiy U., №10*).

Another copy is stored in the Mahmud Poshho library as No. 57-58. It was decorated with patterns, with a red cover and well preserved. It consists of 529 pages, each page includes 27 lines. The manuscript is of medium thickness and written in ta'liq script on yellow paper. Verses of Qur'an are marked with black color, their explanation by scholars are given at the edges of pages. The

manuscript begins with Surah "Fatiha" and continues to the end of Surah "Hud".

Its second volume is similar with the second volume on paper, script and inner structure. It begins with Surah "Yusuf" and finishes with Surah "Nas". It was copied by `Abdulhaq ibn Bahauddin in 823/1453 (*Nasafiy U., №57-58*).

The next copy is stored in the Sulaymaniyah library as No. 93. It was written in a script of Naskh. Each page includes 31 lines. The manuscript consists of 517 pages. Its internal structure is good, a text itself was written on yellow thin paper without fligran. The edges of pages are light brown, the middle is dark brown, and its cover is made of leather. Titles were marked, names of Surahs were written with gold. The middle of the first page is given as a form of round of which edges with double strings. The name of the work and its author was written in the round form. The manuscript was copied in 523/1129. There is no given information about its copyist (*Xumayro O., 1995*).

Another copy of this work is stored as No. 88 in the library of the Nation named after Fayzullah Afandi. It begins with (bismillahir rohmanir rohim robbi sahhil va tammim alhamdu lillahil lazi anzalal Qur'an shifa'an... qolal abd `Umar ibn Muhammad ibn Ahmad al-Nasafi). The copy begins with an interpretation of Surah "Fatiha" and ends with Surah "Nas". The manuscript consists of 408 pages, each page includes of 45 lines. The manuscript is of medium thickness and written in ta'liq script on starchy paper. Its last pages were restored. There are explanations at the edges of the pages. Its cover was made of dark brown leather with purple embossed pattern. Contents of Surahs were given in the first page of the manuscripts. Verses were written with red ink. In addition, there is a stamp of Sheikh al-Islam Fayzullah Afandi's vaqf in the same page. The manuscripts was copied in 860 of Hijra. This copy ends with author's praise to Allah after an interpretation of Surah "Nas" (*Nasafiy U., №88*).

The manuscript copy No. 78-79 is stored in the library of Murad Mulla. Its first volume begins with (bismillahir rohmanir rohim robbi sahhil va tammim alhamdu lillahil lazi anzalal Qur'an shifa'an... qolal abd `Umar ibn Muhammad ibn Ahmad al-Nasafi). The manuscript begins with Surah "Fatiha" and ends with the last verse of Surah "A'raf". Each page includes 31 lines. The manuscript contains of 287 pages. Its internal structure is yellow, written in naskh script on thick paper, cover was made of dark red leather with embossed pattern. The verses were marked in red ink. There is given an explanation of the verses at the edges of pages (*Xumayro O., 1995*).

The second volume begins with Surah of "Nuh" and ends with Surah of "Nas". Each page includes 37 lines. The manuscript contains of 210



pages. It was written in naskh script on light brown thick paper. There are given explanations of the verses at the edges of pages.

There is a stamp of the minister Murad Mulla at the end of both volumes. Unlike the first volume, the second volume was copied in 865/1461 by Muhammad Abu Su'ud ibn al-Marhun Badriddin Hasan al-Banravi.

The next copy is stored No. 156-159 in the library of Otif Afandi. It has four volumes. The manuscript contains of 572 pages, each page includes 25 lines. The verses have diacritical marks. There is no any explanation at the edges of pages. The first volume begins with Surah of "Fatiha" and ends with Surah of "An'am".

The second volume also has special characters. Its each page includes 25 lines. It contains of 286 pages. It is similar with the first volume in its script and internal structure. The manuscript ends with an interpretation of Surah of "Ibrahim".

The third volume is also well preserved as the previous two volumes. The manuscript contains of 292 pages. Each page includes 25 lines. The internal structure of this manuscript is the same as the first one. The manuscript ends with Surah of "Hajj".

The fourth volume contains of 385 pages and each page includes 25 lines. Its script and internal structure is the same as other volumes. The manuscript begins with Surah of "Saba" and ends with Surah of "Nas". It was copied in 874/1469. In addition, there is information about the name of the book, volume's number and author's name in the beginning of each volume. There is a stamp of Otif Afandi's vaqf in ta'liq script with red ink in the beginning of the work (*Nasafiy U., No.156-159*).

Another copy is stored No. 140 in the department of Valiuddin Jarullah Afandi. The manuscript contains of 513 pages, each page includes 39 lines. The manuscript has a decorated with patterns internal structure. It was written in a thin ta'liq script. The verses were written in red ink, names of Surahs and "basmala" in golden ink. There are commentaries and explanations at the edges of pages. It is known that the manuscript was copied by Muhammad Abus Su'ud ibn Harb Ali in 875/1470. It ends with an interpretation of Surah "Nas" (*Xumayro O., 1995*).

There is a copy No. 3198 in the library of the University of Istanbul. Only 653 pages of the manuscript have been remained up to day. Each page includes 39 lines. The edges of the pages were decorated with patterns, and its cover was made of leather of dark red color. It was written in a thin naskh script which is easy for reading. Phrases in the beginning of the verses (qavluhu ta'ala) were marked with red ink. Titles were given in the special form. Names of the manuscript and its author were written in the beginning of the copy. Contents of Surahs were

given in the first page of the manuscript, an interpretation of verses was given in the next pages. It begins with Surah "Fatihah" and ends with "Nas". This manuscript was copied by Muhammad ibn Muhammad Abu Bakr al-Balbasi in 887/1482. The date in which the author had completed the book was given next to an interpretation of Surah "Nas". Its first page was stamped with a name of Ahmad and the second page with a name of Muhammad Bahri. In addition, there is a stamp which shows that the manuscript was stored in the Fund of Khalis Afandi before it was delivered to the library of the University of Istanbul (*Nasafiy U., No. A/3198*).

Another manuscript is stored No. 10-13 in the Fund of Khazrat Khalid and it contains of 4 volumes.

The first volume consists of 290 pages. Each page includes 25 lines. The internal structure of the manuscript is medium thin. It was written on dark yellow paper in a naskh script. The first page of the manuscript was lost, the second page begins with an interpretation of Surah "Baqarah" as "zalikal kitab" and ends with an interpretation of Surah "Oli Imron".

The second volume begins with Surah "Nisa" and ends with Surah "Yunus". The manuscript contains of 324 pages. Each page includes 25 lines while some has 27 lines. The second volume is similar to the first one in its cover and type of paper. It was shown in the last page of this manuscript that it was copied by Muhammad ibn Abdulaziz in 904/1498.

The third volume is also as the same as the first and second volumes. Only its script and explanations at the edges of pages differs it from them. Its cover is thin, paper is yellow, edges are decorated with patterns. The saved part of the manuscript contains of 338 pages. Each page includes 27 lines of text. This volume begins with Surah "Hud" and ends with Surah "Ankabut".

The fourth volume differs from the previous volumes in its cover and internal structure. The main differences are that its pages are decorated with very decorative patterns and paper is very good. The manuscript contains of 354 pages. Each page includes 27 lines of text. This copy begins with Surah "Ahzab" and ends with Surah "Nas". Contents of Surahs were given with black colour in the first page. The manuscript was stored in the library of Ayyub Jame first, then it was delivered to the Fund of Khazrat Khalid in the library of Ayyub Khusrav Posho. This manuscript was copied by Muhammad ibn Abdulaziz in 906/1500 (*Xumayro O., 1995*).

The next manuscript is stored in the department of Ayo Sofia No. 96-97. This copy consists of two volumes and written in a thin ta'liq script. The saved part of the manuscript contains of 396 pages. Each page has 31 lines of text. The first volume begins with Surah "Fatihah" and continues to the end of Surah "Yusuf". The internal structure of



the manuscript is well designed, of medium thin, written on light yellow paper, decorated with relief patterns. An internal structure of the manuscript is of medium thick, written on light yellow paper and decorated with relief patterns. The content and verses were written in red ink. There are two stamps of Sultan Mahmud's and prince Ahmad's vaqf in the first page of the first volume.

The second volume is similar to others in its script, paper and cover. The manuscript begins with Surah "Hud" and ends with Surah "Nas". It was copied in 973/1565. Its copyist is unknown (*Nasafiy U., №96-97*).

There is a copy No. 41-42 in the department of Raisul-Kuttab Mustafā Afandi. The manuscript contains of 592 pages. Each page includes 29 lines of text. The edges of the pages are decorated with patterns, there are addition explanations of verses in some pages. The manuscript was written on yellow thick paper with a naskh script. Its cover was made of brown leather, verses were marked with red color. It was copied by Ahmad ibn Rajab ibn Mahmud ibn Khusamuddin al-Naqshbandi in 1156/1743.

The second volume begins with an interpretation of Surah "Yusuf" and ends with Surah "Nas". The saved part of the manuscript contains of 619 pages. Each page has 29 lines of text. This copy is also as the same as the first volume in its paper type and internal structure. Its cover was made of dark red leather with decorative patterns. There is a right-angled stamp of Raisul-Kuttab Mustafā Afandi's vaqf in its first page. This stamp is observed in other pages of the manuscript too. There is a date in which the author had completed it and praise to Allah in its last page. This volume was also copied by Ahmad ibn Rajab ibn Mahmud Khusamuddin al-Naqshbandi in 1159/1746. This copy in two volumes is very useful for using in the Science of Tafsir. Scholars state that this copy was more well-preserved than other copies and it differs from other copies in few errors in it (*Nasafiy U., №41-42*).

Another copy is stored No. 63 in the department of Hamidia. It contains of 567 pages. Each page has 45 lines of text. There is a little cover among pages. It was written on thin paper in a naskh script. Verses were marked with red color. It was copied by Halil ibn Yusuf in 1167/1754. There is an interpretation of Surah "Nas" and information about a date of finishing of the book by the author in the end of the manuscript (*Nasafiy U., №156-159*).

A copy is stored No. 64 in the department of Hamidia. The manuscript consists of two volumes. The saved part of it contains of 944 pages. Each page includes 37 lines of text. Its internal structure is yellow, edges of pages were decorated with golden color patterns. It was written on thin paper in a naskh script which is easy for reading. Its cover was made of green leather. There is a stamp of Sultan

Abdulhamid's II and Ali Bakhchat Afandi's vaqf in the first page. It was copied by Ahmad ibn Hasan al-Naqshbandi in 1169/1746. It begins with Surah "Fatihah" and ends with "Nas". There is information about a date of finishing of the book by the author in the last page (*Nasafiy U., №64*).

There is a copy No. A/4972 in the library of the University of Istanbul. The manuscript contains of 801 pages. Each page has 39 lines of text. It was written on yellow paper with a thin and beautiful naskh script. Its cover was decorated with golden color patterns. Phrases (qavlulu) in the text and full stops in the end of sentences were marked with golden color (*Xumayro O., 1995*).

Another copy is stored No. 74/99 in the library of Koja Raghhib Posho. The saved part of the manuscript contains of 617 pages. Each page has 45 lines of text. The first and last pages were decorated with golden color. Names of Surahs were marked with a thick print, verses were marked with red color. The manuscript ends with Surah "Hud" (*Nasafiy U., №74/99*).

Another copy of the work is stored in the department of Damat Ibrahim Posho No. 118. The manuscript contains of 647 pages and each page has 27 lines of text. Its internal structure is yellow, verses were marked with black ink. The manuscript is light brown color, decorated with dark red patterns and its cover was made of decorative leather. There are red decorative patterns at the edges of the pages, free of any explanations. The manuscript begins with Surah "Fatihah" and ends with "Maida". There are two stamps belonged to Sultan Ahmad and Damat Ibrahim Posho in the first page of the manuscript (*Xumayro O., 1995*).

Another copy is stored in the library of Nurusmania No. 254. It was copied by Muhammad ibn al-Husain ibn Muhammad al-Qashghari in 644/1246. The manuscript contains of 436 pages. Each page includes 23 lines of text. An internal structure of it was decorated. The cover is brown and decorated. It was written in a naskh script. There are commentaries at the edges of pages and between lines. Verses were marked with red color. The color of it after the page 365 is yellow, written in a thin script, verses were written in red ink. It begins with Surah "Isra" and includes 27 lines of text in each page. There are explanations at the edges of the pages (*Nasafiy U., №254*).

Another copy is stored No. 157 in the department of Saraz. The manuscript contains of 287 pages, each page has 27 lines of text. Its internal structure is polished, written on yellow paper in a naskh script. Its cover was made of dark red leather with fillet patterns. It was not mentioned that from which Surah the manuscript had begun. But it ends with Surah "Nas". It was copied by Muhammad ibn Ahmad Umar ibn al-Karachuk in 646. Although there



is supposition that it is a continuation of the copy No. 156 in Saraz, but difference between their characters and date of copying shows that they are separate copies. Because the copy No. 156 in Saraz was copied in 665/1267, and the copy No. 157 was copied in 646/1248. That is why it is not acceptable to say that they are single (*Nasafiy U., No 157*).

Another copy is stored No. 156 in the department of Saraz. It was copied by Muhammad ibn Hasan ibn Abdussamad in 665/1267. The manuscript contains of 306 pages, each page has 30 lines of text while some includes 28 lines of text. Its internal structure is polished and cover was made of brown leather with decorative patterns. It begins with Surah "Fatihah" and ends with "Oli Imron". There are explanations at the edges of pages. It was written in a little script (*Nasafiy U., No 156*).

There is a copy No. 239 in the department of Fatih. It was copied by Ahmad ibn Umar ibn Abu Bakr Kirmani in 696/1297. It begins with Surah "Hud" and ends with Surah "Yasin". The manuscript contains of 340 pages and each page has 27 lines of text. Its internal structure is polished, written on dark yellow paper in a naskh script. The cover was made of brown leather with decorative patterns (*Xumayro O., 1995*).

Another copy is stored No. 125 in the department of Ravon in the library of the museum of Topqopi Saroy. The manuscript begins with Surah "An'am" and ends with "Kahf". The saved part of the manuscript contains of 261 pages. Each page includes 23 lines of text. Pages are yellow and polished. It was written on thick paper in a naskh script. There are interpretations of verses at the edges of pages. This manuscript was copied in 738/1338. It ends with an interpretation of the last verse of Surah "Kahf". There is a stamp of Sultan Mustafa II in the content of the book (*Xumayro O., 1995*).

Another copy is stored No. 329 in the state library of Boyazid. It was copied by Husain ibn Muborak ibn Muhammad al-Farjani in 818/1415. The manuscript contains of 220 pages and each page has 20 lines of text. This copy is not well preserved and very threadbare. That is why it is impossible to detect stamps in it and their inscriptions. The manuscript is of medium thick, polished and written on yellow paper in a ta'liq script. Pages were decorated with patterns, cover is made of brown leather and has some defects. Verses were marked with red color. Although its pages were restored, there are some pages which is not suitable for reading because of burning. It begins with Surah "Fatihah" and ends with Surah "Baqara" (*Nasafiy U., No 329*).

There is a copy No. 93 in the department of Jarullah. The manuscript was copied in 743/1342. The saved part of it contains of 269 pages. Each page has 31 lines of text. It begins with Surah "Yunus" and ends with "Qasas". The special feature of this

manuscript that differs it from other copies is that verses were marked with black color in it (*Nasafiy U., No 28*).

Another copy is stored No. 28 in the department of Jarullah Ali Posho. The manuscript contains of 266 pages and each page has 21 lines of text. It begins with Surah "Hud" and ends with "Sajda" (*Nasafiy U., No 27*).

Another copy is stored No. 27 in the department of Denizli. The manuscript has a stamp which shows that it was copied by Ahmad in 1153. The manuscript contains of 36 pages and each page has 31 lines of text. It begins with Surah "Rahman" and ends with "Muddassir". The special feature of it that differs it from other copies is that detailed information about its author's life and books was given in it. The manuscript was nearly full damaged. For example, its 8, 15, 49, 37 pages were lost (*Xumayro O., 1995*).

There is a copy No. 63 in the department of Hamidia. It was copied in 1167. There is no information about its copyist. The manuscript contains of 567 pages, each page has 45 lines of text. It begins with Surah "Fatihah" and ends with "Nas". The cover of the manuscript was made very beautiful and decorative. It was written in a naskh script. Praising about Abdulhamid ibn Mahmudkhan was given in the beginning of the copy. In addition, full fihrist was also given in the 3<sup>rd</sup> page of it (*Nasafiy U., No 144*).

Another copy is stored No. 144 in the department of Laleli. The saved part of the manuscript contains of 347 pages. Each page has 33 lines of text. It begins with Surah "Fatihah" and ends with "Kahf". Verses were marked with red color. Literal meanings of verses and examples from other Surahs were given at the edges of the pages. The main text of the manuscript was not damaged and well-preserved. There are round forms in some pages. But it is impossible to read a text inside of these forms because they were damaged (*Xumayro O., 1995*).

To draw a conclusion it can be said that there are other copies of the work "al-Taysir fi 'Ilm al-Tafsir" in the Sulaimaniya Fund of Turkey besides the above mentioned ones. But some of them was damaged. In spite of it, it is possible to analyze the existed copies of it and other copies in the Funds of the world comparatively from the point of view of Source Studies and to publish as a single book. Because this work is one of the important sources which is widely used in the Science of Tafsir, especially in Fiqh of Hanafi Madhhab and Maturidite teaching.

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## **AN OVERVIEW OF GOVERNMENT'S MEASURES TO INDIAN ECONOMY DUE TO CORONA VIRUS- 19**

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### **ABSTRACT**

*Coronavirus disease 2019 first identified in Wuhan, in China, in December 2019 and since then having spread globally, has been recognized as a pandemic by the World Health Organization (WHO) on 11 March 2020. India is widely affected by this pandemic. Taking into consideration its severe intensity, seen in the context of India having the highest rate of density population in the world, the Governments, both at Union and State levels, commenced necessary actions on war footing to prevent the spread of this pandemic. It was all the more so when it is known that this deadly disease has no medicinal cure. The effect of Corona virus is badly felt and noticed in the world's most developed countries India was bound to be affected not only because of its domestic slowdown but also because of international recession. Learning the lessons from other Countries India put all its machinery and material into motion to curb and/or prevent the disease. Prime Minister of India was declared to be under lockdown from the midnight of 24.03.2020, and the same continues to be so till now or at least till 31.05.2020, and lockdowns by some of the state governments. Resultantly, everything and every activity, barring the activities relating to essential supplies came to a complete grinding halt. Though the improvement in the environment due to such a lockdown was a silver lining, however the toll on economy due to this lockdown is too early to be estimated.*

### **INTRODUCTION**

Coronavirus disease 2019 first identified in Wuhan, in China, in December 2019 and since then having spread globally, has been recognized as a pandemic by the World Health Organization (WHO) on 11 March 2020. India is widely affected by this pandemic. Taking into consideration its severe intensity, seen in the context of India having the highest rate of density population in the world, the Governments, both at Union and State levels, commenced necessary actions on war footing to prevent the spread of this pandemic. It was all the more so when it is known that this deadly disease has no medicinal cure. The effect of Corona virus is badly felt and noticed in the world's most developed countries India was bound to be affected not only because of its domestic slowdown but also because of international recession. Learning the lessons from other Countries India put all its machinery and material into motion to curb and/or prevent the disease. Prime Minister of

India was declared to be under lockdown from the midnight of 24.03.2020, and the same continues to be so till now or at least till 31.05.2020, and lockdowns by some of the state governments. Resultantly, everything and every activity, barring the activities relating to essential supplies came to a complete grinding halt. Though the improvement in the environment due to such a lockdown was a silver lining, however the toll on economy due to this lockdown is too early to be estimated.

The slowdown in demand, closure of production activities, fall in the global price of crude oil, ban on foreign trade, price decrease in the different restrictions on the aviation industry as also on tourism, amongst others, are bound to exert downward pressure on the inflation, thus adversely affecting the economy Corona virus had its impact in the industry in general, which has seen, not only cutting the salaries but also laying off its employees. The hotels are vacant and airlines have closed their wings. The live events



industry has also estimated a loss of more than Rs. 3000 crores. The manufacturing, an important part of any economy, suffers from total lack of clarity. Lockdown has put great stress on the supply chains of essential commodities, and therefore, many of the Indian companies have focused on the production and supply of essential items only, thereby stopping all other production activities, thereby bringing down the production graph. Likewise, the other sectors like agriculture being the primary sector and the tertiary sector are also not free from its impact. There is hardly any manpower available for the agricultural purposes in different states. Lockdowns have manifestly made the farmers difficult to take their produce for sale to the markets. Informal sector of India, the backbone of its economy, will be hardest hit in view of economic activities coming to a total standstill. These lockdowns and restrictions on commercial activities and public gatherings are necessarily likely to strongly impact domestic growth..

To minimize the effect in the economy caused by the COVID -19 outbreak, the Union Finance & Corporate Affairs Minister, announced several important relief measures taken by the Government of India, especially on statutory and regulatory compliance matters related to several sectors. The Central Government, amongst others, announced much-needed relief measures in areas of Income Tax, GST, Customs & Central Excise, Corporate Affairs, Insolvency & Bankruptcy Code (IBC) Fisheries, Banking Sector and Commerce, intended to boost the economy.

### **MEASURES TAKEN BY THE INDIAN GOVERNMENT**

The Central Government, amongst others, has taken the following decisions in these directions:

1. The date for income tax returns for financial year 2018-2019 was Extended from 31.03.2020 to 30.06.2020.
2. The date for Aadhaar-PAN linking to be extended from 31.03.2020 to 30.06.2020.
3. GST/Indirect Tax -Those having aggregate annual turnover less than Rs. 5 Crore can file GSTR-3B due in March, April and May 2020 by the last week of June, 2020, without any interest, late fee, and penalty. Others can file their returns due in March, April and May 2020 by last week of June 2020 but the same would attract reduced rate of interest @9 % per annum from 15 days after due date. However, no late fee and penalty shall be

charged, if the compliance is made before 30.06.2020.

4. Date for filing GST annual returns of financial year 2018-2019, which is due on 31.03.2020 has been extended till the last week of June 2020.
5. Due date for issue of notice, notification, approval order, sanction order, filing of appeal, furnishing of return, statements, applications, reports, any other documents, time limit for any compliance under the GST laws where the time limit is expiring between 20.03.2020 to 29.06.2020 shall be extended to 30.06.2020.
6. Payment date under *Sabka Vishwas* Scheme shall be extended to 30.06.2020. Further no interest shall be charged if the payment is made by 30.06.2020
7. Relaxations have been provided for 3 months to the debit cardholders to withdraw cash for free from any other banks' ATM for 3 months, along with waiver of minimum balance fee, reduced bank charges for digital trade transactions for all trade finance consumers.
8. No additional fees shall be charged for late filing during a moratorium period from 01.04.2020 to 30.09.2020, in respect of any document, return, statement etc., required to be filed in the MCA-21 Registry, irrespective of its due date.
9. A company have not been able to hold even one meeting, the same shall not be viewed as a violation.
10. Requirement to create a Deposit reserve of 20% of deposits maturing during the financial year 2020-21 before 30.04.2020 shall be allowed to be complied with till 30.06.2020.
11. An additional time of 6 more months has been allowed to newly incorporated companies required to file a declaration for Commencement of Business within 6 months of incorporation.
12. Non-compliance of minimum residency in India for a period of at least 182 days by at least one director of every company, under Section 149 of the Companies Act, shall not be treated as a violation.
13. Due to the emerging financial distress faced by most companies on account of the large-scale economic distress caused



by COVID 19, it has been decided to raise the threshold of default under section 4 of the IBC 2016 to Rs 1 crore from the existing threshold of Rs 1 lakh.

### **RELIEF FOR POOR SECTOR**

The Indian Government, announced a Rs 1.7 lakh crore relief package aimed at providing a safety net for those hit the hardest by the Covid-19 lockdown, along with insurance cover for frontline medical personnel. About 800 million people are expected to get free cereals and cooking gas apart from cash through direct transfers for three months. The following are the measures-

1. Ujjwala beneficiaries to get free cooking gas (LPG) cylinders in next three months.
2. Collateral-free loan doubled to ₹20 lakh to 63 lakh women self-help groups.
3. Government will pay EPF contribution, both of employer and employee, for 3 months for all those establishments with less than 100 employees out of which 90% earn less than ₹15,000 per month.
4. Ex-gratia of Rs.1,000 shall be granted to 3 crore poor senior citizen, poor widows and poor disabled.
5. Every MNREGA worker to get hike of Rs. 2,000.
6. Health workers to get medical insurance cover of Rs. 50 lakhs.
7. On 09.04.2020, the Indian Government approved a COVID-19 package worth Rs 15,000 crore to build on health infrastructure till March 2024, to be given to state governments and Union Territories to develop COVID-19 hospitals, purchase of personal protective equipment, setting up of laboratories, procurement of essential medical supplies, medicines and consumables, and for strengthening health systems.

### **MEASURES TAKEN BY THE RESERVE BANK OF INDIA (RBI)**

The RBI, also announced a Regulatory package to mitigate the burden of debt servicing brought about by disruptions on account of COVID-19 pandemic and to ensure the continuity of viable businesses. These include the followings-

1. All commercial banks (including regional rural banks, small finance banks and local area banks), co-operative banks, all-India Financial Institutions, and NBFCs (including housing finance companies) ("lending institutions") are permitted to grant a moratorium of three

months on payment of all instalments falling due between 01.03.2020 and 31.05.2020. The repayment schedule for such loans as also the residual tenor, will be shifted across the board by three months after the moratorium period. Interest shall continue to accrue on the outstanding portion of the term loans during the moratorium period.

2. In respect of working capital facilities sanctioned in the form of cash credit/overdraft ("CC/OD"), lending institutions are permitted to defer the recovery of interest applied in respect of all such facilities during the period from 01.03.2020 upto 31.05.2020 ("deferment"). The accumulated accrued interest shall be recovered immediately after the completion of this period.
3. In respect of working capital facilities sanctioned in the form of CC/OD to borrowers facing stress on account of the economic fallout of the pandemic, lending institutions may recalculate the 'drawing power' by reducing the margins and/or by reassessing the working capital cycle.
4. Wherever the exposure of a lending institution to a borrower is Rs. 5 crore or above as on 01.03.2020, the bank shall develop an MIS on the reliefs provided to its borrowers which shall inter alia include borrower-wise and credit-facility wise information regarding the nature and amount of relief granted.
5. On 27.04.2020, RBI decided to open a special liquidity facility for mutual funds of Rs.50,000 crores which shall be used by banks exclusively for meeting the liquidity requirements of mutual funds by extending loans, and undertaking outright purchase of and/or repos against the collateral of investment grade corporate bonds, commercial papers (CPs), debentures and certificates of Deposit (CDs) held by mutual funds.
6. In view of the demands of the general public regarding opening of certain activities as also considering the condition of COVID-19 in particular areas and in order to improve the deteriorating condition of the economy, the Central Government and/or State Governments have announced certain relaxations from time to time in order to restart the economic operations, particularly relating to healthcare, agriculture and allied, as also small mohalla shops dealing with books and electric fans, services by electricians, plumbers or water purifiers etc.



## CONCLUSION

The Corona Virus pandemic may directly and indirectly impact on the Indian economy. The level of GDP may further fall, more so when India is not immune to the global recession. Infact, it is believed that India is more vulnerable, since its economy has already been ailing and in a deep-seated slowdown for several quarters, much before the COVID-19 outbreak became known. The Prime Minister of India has already spoken of setting up an Economic Task Force to devise policy measures to tackle the economic challenges arising from COVID 19, as also on the stability of Indian economy. However, the concrete plans would have to be kept in place to support the economy and its recovery. As the disruption from the virus progresses globally as well as within India, it is for us to forget, atleast for the time being, all talking only about economic recovery, and instead join hands whole heartedly to tackle the outcome of COVID-19.

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# THE STUDY OF THERMODYNAMIC COMPATIBILITY OF POLYMERS

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## ABSTRACT

*The article investigated the thermodynamic compatibility of various polymers with the aim of creating and developing technology for manufacturing the bottom of shoes for special purposes designed for use in dry and hot climates. The work carried out with polymer blends indicates a significant effect of their compatibility both on the processing process and on the properties of the resulting products. It is determined that, in the Flory-Huggins-Scott theory, only the upper critical temperature of dissolution was predicted to exist. The existence of compatible polymer mixtures, as well as the lower critical dissolution temperature, is confirmed, and theoretical boundaries are indicated.*

*It was determined that the higher the total concentration of the components in the mixture at which delamination occurs, the greater the mutual insolubility of the polymers. It was confirmed that the solution to the problem of compatibility of polymers is the introduction of combining agents that allow combining incompatible polymers and thereby obtain compositions with unique properties. similar to the action of an organic surfactant, as it is placed on the interface between two incompatible polymer phases, where it reduces surface tension and promotes adhesion between the phases.*

*Thus, the study of the thermodynamic compatibility of polymers made it possible to develop the scientific basis for creating new polymer compositions for the bottom of special-purpose shoes operated in dry and hot climates with a given set of properties.*

**KEYWORDS:** *Shoe sole materials, polymer composition, thermodynamic compatibility, polymer compatibility, compatibility theory,*

## INTRODUCTION

One of the ways of directionally changing the properties of polymer compositions is the process of combining several polymers. By changing the composition and ratio of components, mixtures, using the advantages and reducing the disadvantages of individual polymers, it is possible to widely change the properties of the polymer mixture. The values of the properties of the polymer mixture are not always adequate to the composition of the polymers and vary greatly depending on the degree of dispersion and the interaction between the components.

For a long time, the compatibility problems and the technology of manufacturing shoe sole materials have been solved on the basis of accumulated experience. The work carried out with polymer blends indicates a significant effect of their

compatibility both on the processing process and on the properties of the resulting products. It was believed that the condition for creating compositions with improved values of physical and mechanical properties is only their compatibility. At the same time, there are many examples that contradict this statement. This explains the great interest of researchers in the problems of polymer compatibility [1].

When considering from a new point of view the issue of improving the quality of polymer materials, it becomes clear the need to create multicomponent polymer systems formed by more than two polymers.

The main problem in the manufacture of polymer blends is the compatibility problem of different types of polymers [2,3].



For many years, the incompatibility of most polymers has prevented the creation of useful poly-alloys. The collected experimental material on compatibility formed the basis for the theory of compatibility developed by Flory Huggins and Scott [4].

The Flory-Huggins-Scott theory predicted the existence of only the upper critical temperature of dissolution. Subsequently, the existence of compatible polymer mixtures was confirmed, as well as the lower critical temperature of dissolution, and theoretical boundaries were indicated [5].

Compatibility theory determines that the solubility parameter [6] is the dominant quantity. A comparison of the solubility parameters of the polymers allows the selection of compatible polymer pairs and provides the development of the scientific basis for the creation of new polymer compositions for the bottom of special-purpose shoes operated in a dry and hot climate with a given set of properties.

## MATERIALS AND METHODS

When performing the work, suspension polyvinyl chloride of various brands and copolymers of ethylene with vinyl acetate of various percent vinyl acetate and other chemical materials were used.

The choice of these polymers as the main object of study is due to a set of valuable properties,

the possibility of obtaining a thermoplastic polymer composition based on them using dynamic vulcanization and processing into products using high-performance injection molding units, a stable raw material base and the relatively low cost of these polymers.

To assess the qualitative and quantitative indicators of the properties of polymer compositions at various stages of the experiment, standard and original research methods using modern equipment and instruments were used.

The main characteristics of these polymers are shown in table 1.

The tensile strength, elongation and residual elongation at break were determined according to GOST 7762-84 on an Instron-1022 tensile testing machine.

The rheological properties of the studied polymer compositions were judged by the effective melt viscosity.

The effective melt viscosity was determined by the torque on the shaft of the plastic screen at a given temperature and rotor speed.

The studies were carried out on a traditional PLV-651 rheometer (Brabender, Germany) equipped with a special prefix with a volume of the mixing chamber N60H.

**Table 1**

No	The name of indicators	SEVA (VA-14%)	SEVA (VA-19%)	SEVA (VA-29%)	PVC -S - 4700 (SG3)	PVC-S-6346-M (SG5)	PVC-S-6346-M (SG6)
1	Appearance	granules	granules	granules	powder	powder	powder
2	GOST or TU	11407-027	11507-070	11708-210	14332-88	14332-88	14332-88
3	Molecular mass, thousand	30-500	30-500	30-500	10-150	10-150	10-150
4	Solubility parameters, (cal/cm <sup>3</sup> ) <sup>1/2</sup>	9,4	9,4	9,4	9,4	9,4	9,4
5	Melt index (MFR), g/10 min	2-10	7-12	15-27	12-19	12-17	12-15
6	Density, kg / m <sup>3</sup>	0,934	0,944	0,950	1,34	1,34	1,34
7	Tensile strength, MPa (not less)	9,8	8,0	5,9	25	25	25
8	Elongation at break, %	800-600	800-700	600-500	50	50	50
9	Residual elongation at break, %	More than 100	More than 100	More than 100	10	10	10
10	Wick heat resistance, °C	100	100	100	150	150	150
11	Thermal conductivity, W/m.k.				0,43	0,43	0,43
12	Shore hardness, con.unit	90	85	76	85	85	85
13	Melting point, °C	125	125	125	150-220	150-220	150-220
14	Glass transition temperature, °S	-80	-80	-80	105	105	105
15	Degree of crystallinity, %	-	-	-	10	10	10
16	Adhesive strength, not less (kgf / cm)	2,1	2,7	3,92	2,7	2,7	2,7

**The main characteristics of the studied polymers**

The effective viscosity of the polymer composition was calculated by the formula:

$$\eta_{ef} = \tau / \dot{\gamma}, \text{ Pa}\cdot\text{s} \quad (1)$$

from here:

$$\tau = M_{tor} / V_{load}; \quad (2)$$

$$\dot{\gamma} = \pi \cdot n / 30; \quad (3)$$

Substituting the values of  $\tau$  and  $\dot{\gamma}$  from formulas (2) and (3) into formula (1), we obtain

$$\eta_{ef} = M_{tor} \cdot 30 / \pi \cdot n \cdot V_{load}, \text{ Pa}\cdot\text{s}$$

Where:

$\eta_{ef}$  – effective viscosity, Pa·s;

$\tau$  – shear stress, H/m<sup>2</sup>, Pa;

$\dot{\gamma}$  – shear stress, s<sup>-1</sup>;

$M_{tor}$  – torque on the plastikorder shaft,

H·m;

$V_{load}$  – volume of the composition in the mixing chamber, m<sup>3</sup>;

$n$  – rotor speed, rev/min.

*Assessment of polymer compatibility.* The change in enthalpy during polymer mixing was mainly determined by the solubility parameter ( $\delta$ ).

Comparing the solubility parameters of the polymers, we obtained a quantitative assessment of their ability to combine (provided that the entropy of mixing was close for all compared pairs).

At a known heat of vaporization of a substance, its solubility parameter was calculated by the formula:

$$\delta = \sqrt{(\Delta H_T - RT) \cdot V^{-1}}$$

Where:

$T$  – experience temperature;

$\Delta H_T$  - molar volume;

$R$  – gas constant.

Polymers do not dissolve, therefore, for them, the solubility parameter is determined by various indirect methods.

Small [6] proposed to calculate the solubility parameter from conventional values of the interaction energies of various groups of atoms that make up the main link of the polymer molecular chain in accordance with the equation:

$$\delta = \rho \Sigma FM^{-1}$$

Where:

$\rho$  – polymer density;

$F$  – interaction energy of a certain group of atoms;

$M$  – repeating molecular weight.

The Small formula calculates the solubility parameter of various linear polymers.

Hoi [7] received a set of similar group contributions, slightly different from Small's data.

Polymer compositions based on polymer mixtures were obtained by the method of “dynamic” vulcanization under certain conditions in the mixing

chamber of a plastic trader manufactured by Brabender (Germany) model PLV-651. Specifications plastikorder:

Loading volume

60-600 sm<sup>3</sup>

Front rotor speed

20-180 rev/min

Mixing chamber temperature

18-300 °C.

The plastic recorder is equipped with a device for recording and recording torque on the shaft.

The technological process and the parameters for producing a thermoplastic polymer composition by the method of “dynamic” vulcanization is the know-how of manufacturers, therefore, at the stage of the intelligence experiment, the technology for producing polymer mixtures was determined, which consists of the following operations:

1. Preparation of raw materials and ingredients.

1.1. Drying polymers.

1.2. Grinding crumpled ingredients.

2. Mixing components.

2.1. Thermoplastic melting - carried out in a mixing chamber of a plastic scaler with constant vigorous stirring at a temperature of 10–40 °C above the melting temperature of the thermoplastic.

2.2. Mixing a thermoplastic with an elastomer - was carried out in a mixing chamber of a plastic screen with constant vigorous stirring for 2-6 minutes.

3. Cooling and granulation.

3.1. The resulting homogeneous thermoplastic elastomer mixture was cooled on cold rollers.

4. Recycling. To increase the homogeneity of the mixture, the composition was re-melted, cooled and granulated.

5. Samples for testing were obtained by pressing on vulcanizing presses and by injection molding on a machine-gun of the company “Marris” (Italy). The size of the test specimens is 250x130x8 mm.

**RESULTS AND DISCUSSION**

The main factor determining the technological and operational properties of the polymer mixture is their compatibility [1].

Smol P.A. [6] published a table of molecular voltage constants, with the help of which it is possible to estimate the solubility parameter only by the structural formula of this compound and its density. Molecular voltage constants are additive, i.e. the values of the quantities corresponding to the whole object are equal to the sums of the values of the quantities corresponding to its parts. Using the additivity method, it is possible to calculate the



solubility parameter of the compositions [ $\delta^*$ ] for a mixture of polymers and plasticizers (DOP, DOS, DBP).

Hoi K.L. [7] received a set of similar group contributions, slightly different from the data of Small P.A. We calculate the solubility parameter of the composition  $\delta^*$  when conducting various amounts of plasticizer in the SEVA and PVC. The results are presented in tables 2 and 3.

The solubility parameters of SEVA and PVC were calculated to theoretically evaluate the compatibility of the SEVA / PVC polymer pairs.

For the process of mixing polymers and obtaining a homogeneous structure, it is necessary

that the value  $\beta = (\delta_1 - \delta_2)^2$  is minimal, in the extreme case it is 0, which can provide high values of the mechanical properties of the polymer composition.

We calculate  $\beta$  as the difference  $(\delta_1 - \delta_2)^2$ , where  $\delta_1$  is the solubility parameter of SEVA;  $\delta_2$  is the solubility parameter of PVC;

The values of the solubility parameter for the mixture SEVA / PVC and various types of plasticizers are presented in table 2.

The composition of polymers based on SEVA and PVC has the best compatibility with the introduction of DBP ( $\beta$  value is minimal).

**Table 2**  
**The values of the parameter  $\beta$**

Nº	Composition	Parameter $\beta$ , J/sm <sup>3</sup>
1	2	3
1	SEVA / PVC + DOP (according to Small)	0,49
2	SEVA / PVC + DBP (according to Small)	0,22
3	SEVA / PVC + DOS (according to Small)	0,70
4	SEVA / PVC + DOP (according to Hoy)	0,95
5	SEVA / PVC + DBP (according to Hoy)	0,51
5	SEVA / PVC + DOS (according to Hoy)	0,77

Having the results of calculating the solubility parameter (Tables 2 and 3), we can find the best compatibility region for these polymers. Graphically, this region is shown in Fig. 1 as a hatched quadrilateral (the region of the best solubility of polymers). Having obtained the solubility region, according to the graph, it is possible to determine the numerical value of the amount of plasticizer necessary for introducing into the mixture SEVA and

PVC. This area is in the range of 60 ÷ 80 parts by weight. plasticizer.

Determination of the best polymer compatibility region has shown the feasibility of calculating the solubility parameters of other plastics. This is necessary in order to assess the possibility of the mutual dissolution of the polymers, and, consequently, the production of new shoe sole materials.

**Table 3**  
**The solubility parameter of the composition based on a copolymer of ethylene with vinyl acetate and various plasticizers**

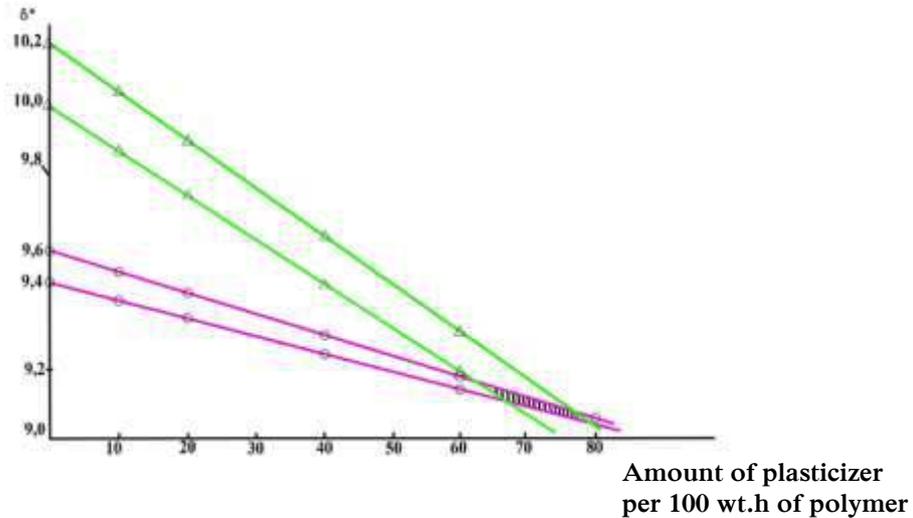
Nº II/II	Plasticizer	Amount CEVA, mass.hour	The amount of plasticizer, m.h.	Solubility parameter, $\delta^*$
1	2	3	4	5
1	DOP (Small)	98 96 94 92	2 4 6 8	9.958 9.936 9.914 9.892
2	DBP (Small)	98 96 94 92	2 4 6 8	9.936 9.956 9.944 9.932
3	DOS (Small)	98 96 94 92	2 4 6 8	9.954 9.928 9.902 9.876
4	DOP	98	2	10.174



	(Hoy)	96	4	10.148
		94	6	10.122
		92	8	10.096
5	DBP (Hoy)	98	2	10.184
		96	4	10.168
		94	6	10.152
		92	8	10.136
6	DOS (Hoy)	98	2	10.17
		96	4	10.14
		94	6	10.11
		92	8	10.08

**Table 4**  
**The solubility parameter of the plasticized composition**  
**PVC based**

Nº	Plasticizer	Amount PVC, mass.hour	The amount of plasticizer, m.h.	Solubility parameter, $\delta^*$
1	2	3	4	5
1	DOP (Small)	90	10	9.485
		80	20	9.42
		60	40	9.29
		40	60	9.16
2	DBP (Small)	90	10	9.535
		80	20	9.52
		60	40	9.49
		40	60	9.46
3	DOS (Small)	90	10	9.465
		80	20	9.38
		60	40	9.21
		40	60	9.04
4	DOP (Hoy)	90	10	9.395
		80	20	9.34
		60	40	9.27
		40	60	9.12
5	DBP (Hoy)	90	10	9.445
		80	20	9.44
		60	40	9.43
		40	60	9.42
6	DOS (Hoy)	90	10	9.375
		80	20	9.3
		60	40	9.15
		40	60	9.0



**Figure 1.** The compatibility region of the PVC / SEVA mixture at different contents.

DOP: 1 - solubility parameter of a mixture of PVC + DOP according to Hoy;

2 - Small solubility parameter;

3-parameter solubility of a mixture of PVC + DOP according to Small;

4-parameter solubility according to Hoy.

After calculating the solubility parameters of polyamide, polypropylene, polystyrene, we plotted graphically the amount of plasticizer introduced (Fig. 2-5).

The calculated values of the solubility parameters of the above plastics were obtained using the values of group contributions according to Small.

Analyzing the graphical dependencies (Fig. 2-5), we can draw the following conclusions:

- assessment of the compatibility of the main components of the polymer mixture (elastomer

and plastics) with various plasticizers has proved that they are all well compatible. Therefore, all the studied plasticizers (DOP, DOS, DBP) can be used to obtain plantar compositions;

- evaluating the effect of the amount of plasticizer on the value of the solubility parameter, according to the degree of preference, plasticizers are arranged in the following sequence: DBP, DOP, DOS;

- Considering the great volatility of DBP during processing and the high cost compared to DOP, we give preference to the production of polymer compositions DOP;

- all the studied plastics can be used to a greater or lesser extent for producing plantar materials, but PVC is closest to the SEVA, and PP is the most "doubtful" one.

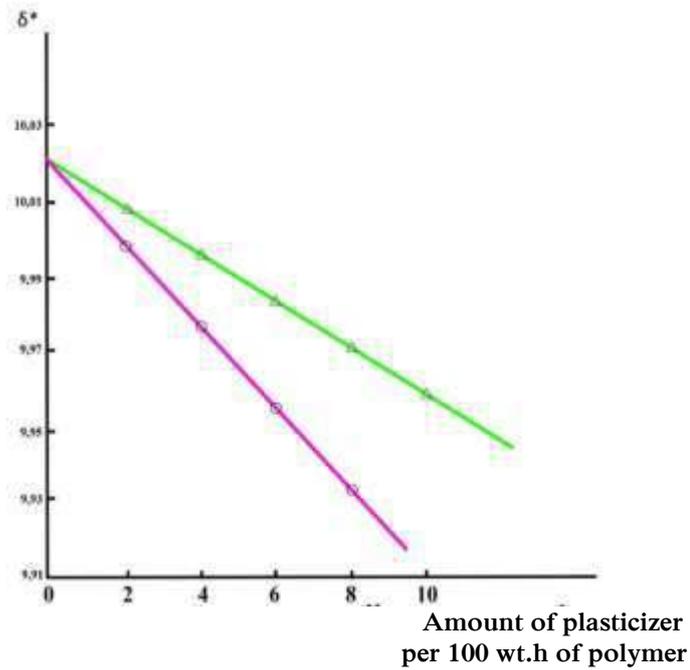


Figure 2. Change in the solubility parameter of the mixture:  
1-PA + DOP; 2-PA + DBP.

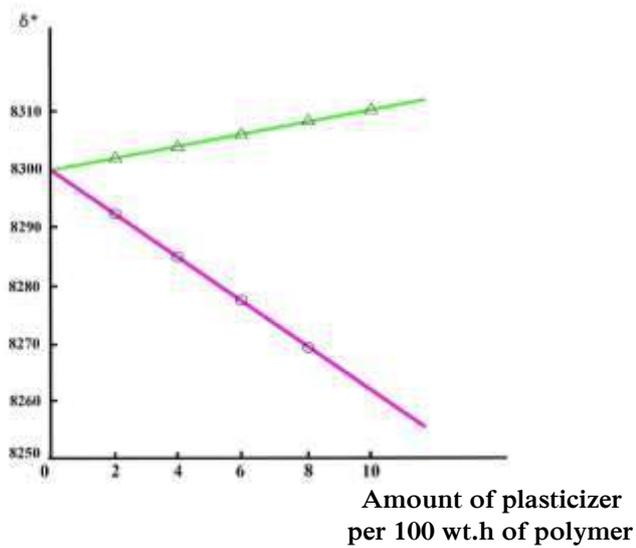
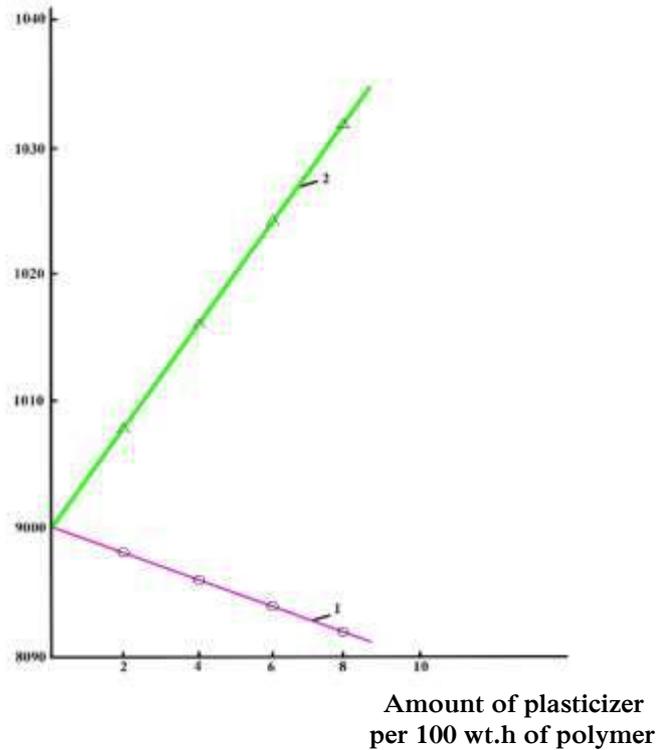
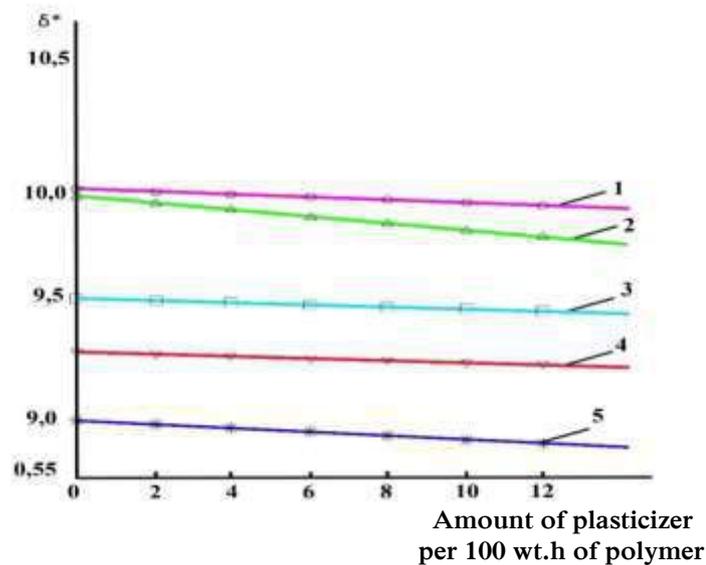


Figure 3. Changing the values of the solubility parameter of the mixture:  
1-PP + DOP; 2-PP + DBF.



**Figure 4.** Change in the solubility parameter of the mixture:  
1-PS + DOP; 2-PS + DBF.



**Figure 5.** Change in the solubility parameter of polymer compositions on the amount of plasticizer:  
1-PA + DOP; 2-SEVA + DOP; 3-PVC + DOP; 4-PS + DOP; 5-PP + DOP.

The mutual solubility of the polymers does not change with decreasing molecular weight up to values corresponding to oligomers and usually

increases (although not very much) with increasing temperature. When determining the mutual solubility of polymers, the number of phases in the mixture and



the composition boundaries between single-phase systems (solutions) and two-phase are found in any way. Qualitatively, the mutual affinity of polymers is sometimes evaluated by the stability of a mixture of their solutions in a common solvent. If the mixture is cloudy or, especially, stratified, the polymers are mutually insoluble. However, the transparency of the mixture of solutions cannot yet serve as an indication of the compatibility of the polymers themselves: delamination at a given temperature can occur both with an increase in the total concentration of polymers in the mixture of their solutions, and with a change in the ratio of components. Sometimes there is micro-delamination of a mixture of polymer solutions into separate solutions, which, however, does not go over and macro-delamination due to the high viscosity of the system. If the refractive indices of the initial solutions are close, their mixture remains transparent, and it is sometimes difficult to distinguish a fine-meshed structure in it.

In general, the higher the total concentration of the components in the mixture at which delamination occurs, the greater the solubility of the polymers.

It is known that in tensile strength single-phase mixtures enter biphasic of the same composition. Some of the mechanical properties of polymer blends change dramatically during the transition from single-phase to two-phase systems, i.e. at the time of delamination of the mixtures.

In the absence of thermodynamic compatibility, local diffusion occurs. Local diffusion of polymer molecules from one phase to another significantly reduces the surface tension in the contact zone. If the polymers of both phases have the same mobility or are formed from a solution, then interdiffusion of the segments occurs.

With different mobility of the segments of the molecules of the mixed compositions in the contact zone, one-sided diffusion is observed. Thus, in any mixture of polymers, the components are simultaneously in three stages:

- In the form of particles of various sizes, representing a separate phase;
- Like a true solution;
- In the form of a transition layer formed due to segmental solubility [8].

The nature of the dependence of the properties of polymer mixtures in the field of low dosages of components is explained by specific interactions at the interfaces between the polymer groups of the components of the mixture.

The solution to the problem of compatibility of polymers is the introduction of combining agents that allow you to combine incompatible polymers and thereby obtain compositions with unique properties.

There is a definition that two polymers become compatible if they possess at least one of 3 characteristics:

- Structural identity of segments;
- The difference in solubility parameters is less than 1.0;
- Functional groups capable of interaction.

The effect of the combining agent is similar to the action of an organic surfactant, as it is placed on the interface between two incompatible polymer phases, where it reduces surface tension and promotes adhesion between the phases. It also promotes the formation and control of the particle size of the dispersed phase in the mixture obtained through the melt.

The formation of a compatibilizing agent at the interface of two incompatible polymers leads to adhesive bonding between the layers formed by extrusion separation.

The use of an adhesive layer or bonded coating allows the production of multilayer laminated plastics having the required properties of several incompatible polymers.

The compatibility of macromolecular compounds has a significant effect on the change in the indicators of physic-mechanical and other properties of the compositions.

The physical and mechanical properties of two-phase mixtures are determined mainly by the content of the dispersed phase, as well as the size and shape of its particles, the values of the mechanical properties of the dispersed and continuous phases, and the bond strength at the phase boundary. In the general case, the dependence of the physic-mechanical properties of the mixture on the content of the components and their compatibility are analyzed using the composition-property curves. The straightforwardness of these curves indicates that the properties of the mixture are additively determined by the properties of the components, however, most often, when mixing polymers, the additivity rule is not observed. As a rule, it is impossible to determine from a composition-property curve whether a mixture is single-phase or two-phase, i.e. it cannot serve as an independent characteristic of the thermodynamic compatibility of polymers.

Polymer compatibility mainly affects the fatigue and rheological properties, as well as the tangent of the angle of mechanical loss.

The tangent of the angle of mechanical losses varies almost in proportion to the composition of the mixture. Its dependence on temperature is a curve with two main maxima corresponding to the glass transition or melting temperatures of the starting materials.

The shift of the maximum along the temperature axis indicates a partial mutual



dissolution of the components, a change in the intermolecular structure of each phase, or the presence of large shrink stresses due to the difference in the coefficients of thermal expansion of the phases and affecting the glass transition temperature. The appearance of additional maxima or broadening of the main ones is associated with segmental dissolution of the components at the phase boundary [5, 9].

The rheological properties of the mixture, in particular viscosity, are largely determined by the properties of the continuous phase. So, the viscosity of the polymer melt, when added to it is 20-40% more viscous polymer, almost does not change, while 5-10% the addition of a less viscous polymer sharply reduces the viscosity, because such a polymer has great deformability and more easily forms a continuous phase [10]. In addition to composition and temperature, the character and strength of the bond at the phase boundary influence the values of the physic-mechanical properties of the mixture. For example, a copolymer of ethylene with vinyl acetate (SEVA) with a high content of VA units is more efficiently reinforced by PVC than polystyrene, i.e. the depth of the layer of segmental solubility, and hence the adhesion in the first case, is higher than in the second.

The formation of strong chemical bonds at the phase boundary has a favorable effect on the properties of the mixture. Physic-mechanical properties of each of the phases in the mixture may differ from the properties of the starting components. The reasons for this may be: a true partial dissolution of one polymer in another and an increase in the degree of association of macromolecules in the sputum of one polymer in the presence of the second, which can be considered a poor solvent of the first.

## CONCLUSION

It was said above how the compatibility of polymers affects the properties of compositions, in addition, a number of parameters affect the compatibility of polymers.

The most important of these parameters is the change in the molecular weight of the mixed polymers. Molecules of thermodynamically compatible polymers diffuse to complete dissolution and the formation of a single-phase thermodynamically stable solution. The mutual solubility of the polymers does not change with decreasing molecular weight, up to values corresponding to oligomers and usually increases with increasing temperature. Quantitative data on the temperature dependence of the solubility of high molecular weight polymers are not available.

The content of a large number of VA units increases the compatibility of SEVA with other

polymers and promotes the absorption of fillers, facilitates chemical and radiation cross linking. However, the tensile strength, softening temperature, and chemical resistance of SEVA are reduced. Density, elongation at break, elasticity, adhesive characteristics, oil resistance, resistance to various solvents, ozone resistance and heat resistance increase. Thus, the study of the thermodynamic compatibility of polymers allows us to develop the scientific basis for the creation of new polymer compositions for the bottom of special-purpose shoes operated in a dry and hot climate with a given set of properties.

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# INVESTIGATING COMMUNICATIVE-PRAGMATIC FUNCTIONS OF GRADATION

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## ABSTRACT

*In this article has been illuminated the communicative-pragmatic functions of gradation in English and Uzbek languages. In the scientific literature, cognitive linguistics is also described as "connected semantics" because it deals mainly with semantics. While linguistic units serve to express objects that exist in the world and the actions that take place, semantics connect the interactions between linguistic units in a real or imaginary world. These relations are studied by linguistic semantics as a separate object of study. One of the important features of cognitive linguistics is that it allows us to see the language in relation to a person, that is, his consciousness, knowledge, processes of thinking and understanding, paying particular attention to how language forms and any language phenomena are associated with human knowledge and experience and how they relate to the human mind how to describe.*

**KEY WORDS:** *English language, Uzbek language, gradation, communicative-pragmatic functions, structural linguistics, cognitive linguistics, semantics, pragmatic influence.*

## INTRODUCTION

The object of linguistics is language, which has been studied in different periods, that is, the nature and functions of language from different perspectives. In the last decade, as a result of a new methodological direction of cognition, ie the expansion of research based on the cognitive approach, cognitive linguistics has become one of the fastest growing areas of linguistics.

The emergence of cognitive linguistics is related to the work of American scholars who existed in the second half of the 1970s (Lakoff; Paivio; Taylor et al.). Russian linguists are also successfully working in this field and make a significant contribution to the development of some of his theories (E. Kubryakova; O. Kolosova; A. Baranov; R. Frumkina and others).

## METHODS

Numerous works on the interdependence of language and cognition are finding their place in Uzbek linguistics as a new field (D.U. Ashurova, Sh. Safarov, O. Yusupov). Indeed, cognitive linguistics has justified itself as a science.

It is well known that cognitive linguistics deals mainly with semantics, so it is probably also described as "coherent semantics". While language units serve to express the objects that exist in the world and the actions that take place, semantics connects the interactions between language units in the real or imaginary world. These relationships are studied by linguistic semantics. As a branch of semantics, the answer to the question of how an individual can convey a variety of information using words and grammatical rules, the focus of cognitive linguistics is not only the "unity of language form and substance" but more importantly the "unity of language and man" [4, p.35], this is also its difference from structural linguistics. Accordingly, cognitive linguistics is closely related to communicative pragmatics and discourse theory.

## RESULTS AND DISCUSSIONS

Cognitive science is also described as a science that studies the processes of consciousness and higher cognition based on the application of theoretical information models [3, p.264]. One of the important features of cognitive linguistics is that it allows us to see language in relation to man, i.e. his



consciousness, knowledge, thinking and comprehension processes [1, p.81], where the main focus is on language forms and any linguistic phenomena human knowledge and experience focuses on how they are associated with and how they are portrayed in the human mind. Accordingly, it is no exaggeration to say that cognitive linguistics continues the history of the relationship between the science of language and the science of the human psyche (A.A. Potebnya, G. Steinthal, V. Vundt). Because although the sciences of linguistics and psychology are two different social sciences that differ drastically in their methodology, the formation of language is based on certain psychological mechanisms.

While the cognitive approach is one way of interpreting language events using the theory of cognition, it can be said that cognitive linguistics is closely related to psycholinguistics. Because “psycholinguistics as a science is a psychological substantiation of linguistic hypotheses (or in other words, the application of psychological methodology to linguistic theory), while cognitive linguistics is a linguistic substantiation of psychological hypotheses” [5, p. 7].

U.Yusupov defines the tasks of cognitive linguistics as follows: 1) to determine the role of language in the emergence of human knowledge; 2) to understand the processes of categorization of the universe and its objects (forming concepts and dividing them into species), conceptualization (creation of concepts) and naming (nomination); 3) determine the relationship between the conceptual system and the language system; 4) to solve problems related to linguistic and cognitive (conceptual) images of the world. Communicative linguistics is a generalized, infinite science, one of the main tasks of which is to fully describe all the systems of language in the communicative aspect, ie its sound system, grammatical structure [3, p.51-62]. This description is also pragmatic, since the speaker, as the subject who creates the text, conveys to the listener that he understands the world, objects and events, their essence and interaction, in order to achieve the expected pragmatic effect (ie, speech or action by the listener). works. “Pragmatic meaning is not only a description of the subject and its properties, but also a means of expressing the feelings and thoughts that take place in the inner and outer world of the speaker (aimed at the listener). In other words, pragmatic meaning is a set of speech and language units that deliver emotional and intellectual capabilities to the listener, depending on the social and psychological state of the speaker. Pragmatic meaning is always focused on the listener and has a positive or negative effect on the listener's behavior and personality. ”

Accordingly, A.M. Emirova describes the pragmatic meaning as a "speaker-listener" relationship.

As S. Levinson describes: “Pragmatics is a field that looks at the linguistic structure and studies the grammatical (coded) interactions between language and context, ... pragmatics is the study of all hidden aspects of meaning that semantic theory does not cover, ... analyzes the ability to select sentences appropriately to form a context ”[6, P.9-24]. It is clear from these definitions that pragmatics is a broad field; this field includes the analysis of concepts such as dexterity, communicative explicaturia and implicature, proposition, intention, presupposition, infertility, speech act, discourse. Zero “Linguopragmatics (or pragmatics) is a branch of linguistics and semiotics that studies the situations and ways in which context influences meaning. Pragmatics includes the theory of speech act, the process of engaging in communication, interaction in conversation, and other features related to language in speech mode. In addition to linguistics and semiotics, this field is also related to philosophy, sociology and anthropology ”[3, P.148].

Sh.Safarov clearly showed the role of pragmatics in linguistics and described the field of pragmatics as follows: “Pragmatism is a separate branch of linguistics, the study of the selection of linguistic units, their use and the impact of these units on the participants of communication. ... The main idea of linguistic analysis is also to determine the nature of language in relation to its application in practical activities, or in other words, in the context of the function it performs. The concept of task (function) is the basis of a pragmalinguistic approach to language analysis ... ”[4, P.78]. Thus, the context in the process of communication, such as discourse, speech act theory, deixis, which is defined as the activation of language in a specific time (time interval), can be justified in the study of pragmalinguistics.

According to D. Kim, “It is linguistic pragmatics that solves the problem of hesitation of the speaker in the choice of language units in his speech and shows the semantic effect of state, place, time and other factors in the context” [5, P.328-332].

At the heart of linguopragmatics lies the concept of speech act. This notion is primarily related to the speaker's specific intention (goal) that arises in the speech process. In any communication process, linguistic units have a tag meaning in addition to their lexical meaning, i.e., linguistic units represent the ability to express meanings in speech such as please, command, confirm, report, mention, warn, promise. “A speech act is a linguistic appeal of a speaker to a listener in a certain environment, for a specific purpose, the pronunciation of a certain



sentence in a specific communication environment” [6, p.80-81].

The term pragmatics was introduced to linguistics in the 60s and 70s of the twentieth century by linguists such as Ch. Pierce, R. Carnap, Ch. Morris, L. Wittgenstein, and was interpreted as a specific branch of linguistics.

Any communication (verbal communication) sent by the subject of speech always assumes a certain effect on the addressee, his consciousness and behavior. The effectiveness and degree of speech effect largely depends on the choice of linguistic means by which the speaker exerts this effect. Such tools include graduality indicators. Accordingly, it is necessary to determine the impact of linguistic gradation and to determine the indicators of graduality that perform this communicative-pragmatic function.

The following types of speech effects using graduality indicators were identified: influencing the addressee in order to form a figurative image of a particular event, object, sign, etc., persuading the addressee (accuracy of information, in performing a particular action, etc.).

As noted above, persuasion of the addressee can be accomplished by presenting a rational assessment or reasoning through a direct appeal to the mind (reason). Here is an example of the authenticity of the reported information:

1. I wouldn't stay with you, though, if you didn't marry me," Carrie added reflectively. "I don't want you to," he said tenderly, taking her hand. She was extremely happy now that she understood. She loved him the more for thinking that he would rescue her so. As for him, the marriage clause did not dwell in his mind. He was thinking that with such affection there could be no bar to his eventual happiness. (Theodore Dreiser, *Sister Carrie*)

2. How could she deny that credit to his assertions in one instance, which she had been obliged to give in the other? He declared himself to be totally unsuspecting of her sister's attachment; and she could not help remembering what Charlotte's opinion had always been. (Jane Austen, *Pride and Prejudice*)

'There is no giving any more.' In some bedrooms where intercourse had not been wholly discontinued prophylactics had appeared for the first time, variously explained by a trivial infection or a sudden sensitivity, but in all cases made out to the unknowing partner as just a minor precaution not the membrane between life and death. (Bennet Alan, *The Laying on of Hands*)

## CONCLUSION

For comparison, we give an example in which the level of the sign represented by the revolutionary lexeme is increased. Here, too, persuasion is intended, but the means is different - the highest level of the character is realized by means of an expressive indicator, by acting on the emotional sphere of the addressee (forming awe).

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## FROM THE HISTORY OF TOLERANCE PRINCIPLE IN UZBEKISTAN

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### ABSTRACT

*The given article analyzes religious tolerance and the revival of Islamic traditions in Uzbekistan using regulatory and scientific literatures and sources as well. It has also analyzed that in our independent republic the issue of harmony, peace and harmony among nations is of great importance, and tolerance has always been a behavioral goal in all historical periods.*

**KEY WORDS:** *Uzbekistan, religious tolerance, spiritual values, confession, interethnic consent, religious organization, constitution, freedom of conscience.*

### INTRODUCTION

To begin with since Uzbekistan gained independence, the concept of interethnic harmony and religious tolerance has played an important role in the life of society. In particular, on the initiative of the President of the Republic of Uzbekistan Sh.Mirziyoev Strategy of Action on five priority directions of development of the Republic of Uzbekistan for 2017-2021 is developed. Its fifth focus is on "Ensuring security, interethnic harmony and religious tolerance, as well as priority areas in a well thought out, mutually beneficial and practical foreign policy" [1, p.45]. In our independent republic, the issue of harmony, peace and harmony among nations has played an important role. It is well known that, in all historical periods, tolerance has always been a behavioral goal. At the same time, the deep social changes taking place in the context of independent development in our country have accelerated the process of building a new national statehood in the mentality of Uzbeks. Not only that, tolerance, which is one of the most basic democratic principles, is growing not only at the state level, but also at the level of individuals and groups. Tolerance also means respect for the lifestyle, character, feelings, ideas, ideas and religious views of people of different ethnic groups. The aim of the study of the formation of a new system of interethnic relations is to provide a holistic and complete picture of the state

of such relations among all social groups, especially young people.

### METHODS

The concept of "tolerance" is used in various fields of scientific activity and social life, including political and political science, sociology, philosophy, theology, social ethics, comparative theology [2, p.25]. It is clear that the importance of tolerance is given to the fact that many international events have been launched to draw the attention of the world community to this vital issue, including the United Nations in 1995 devoted direct tolerance. These activities seek to create conditions conducive to the development of tolerance, with efforts to address the factors that hinder the solution. One of such factors is the globalization of the modern world.

The essence of the process of globalization is that the interconnectedness and interdependence of both people and states is greatly enhanced and complicated. There is a global information market, a global market of capital, goods and labor forces, and the problem of anthropogenic impact on the environment, interethnic and interreligious conflicts, and global security. The process of globalization of the modern world reminds mankind that the world is diverse and at the same time unique. Because of the diversity of cultures, approaches to the same processes are different, but this can be a threat to certain social entities and the world at large [3, p.18].



In this process, the interconnectedness of the human being is strengthened, and the responsibility for its future destiny is undoubtedly the key to the formation of a culture of tolerance. Economic interdependence, globalization of information and interdependence in terms of security are the hallmarks of today's globalization. Tolerance - not passive dependence on the opinions, opinions and actions of others; it is an active spiritual position, not an obedient patience; mental readiness for tolerance for interethnic, social, or positive interactions with people of other cultural, national, religious, or social environments [3, p.20].

## RESULTS AND DISCUSSIONS

Article II of the Constitution of the Republic of Uzbekistan states that "all citizens of the Republic of Uzbekistan, regardless of their nationality, are the citizens of the Republic of Uzbekistan" Article V states: "All citizens of the Republic of Uzbekistan have the same rights and freedoms, sex, race, nationality, language are equal before the law, irrespective of their religion, social origin, beliefs, personality or social status. Privileges should be established only by law and must conform to the principles of social justice"[4, p.16].

The principle of national equality of Uzbek citizens fully complies with all international human rights instruments, including the Paris Charter for New Europe, signed by the President on behalf of the Republic of Uzbekistan [5]. This principle serves as a legal guarantee of peace, political stability and interethnic harmony in our country.

The history of independent development of Uzbekistan coincides with the new century, with the end of the century, when the interethnic and interreligious enmity in the world has grown. In our eyes, all countries are destroyed because of the conflict of national interests in those countries. That is why when we say that Uzbekistan's greatest achievement is interethnic harmony and harmony, peace and stability, this is not only a well-known fact, but also a great success of the current turbulent republic. There are many causes of ethnic conflict in the world, and many of these are caused by three major problems:

1. Globalization expands peoples' cooperation, enables all societies to enjoy the latest technological advances, radically transforms economic structures, makes the world a unified communication system, while losing many of its historical roots - national identity, language, cultural and religious traditions. There is a natural concern about these feelings, which sometimes provokes opposition to other ethnic and religious values.

2. As a result of globalization, internal tensions in some national states are exacerbated, state boundaries are vanishing, and through these borders

not only the benefits of civilization, but also many global threats [3, p.22].

Tolerance, that is, tolerance, plays an important role in the conscious life of the person and in the mentality of the society, creating new consciousness and awareness. The modern concept of tolerance has recently emerged, and UNESCO has put much effort into developing this concept. In particular, in the "Declaration of Tolerance Principles" adopted by this organization in 1995, tolerance was defined as the value and social norm of civil society [3, p.19].

Taking into account the experience gained over the years, in 2000 a permanent seminar on "Solidarity and Tolerance - a Guarantee of Development" was opened. This workshop is dedicated to the efforts of all nationalities and ethnic groups living in the Republic to work together to build a more prosperous and prosperous society. As part of the seminar, scientific and cultural conferences and other events dedicated to the 559<sup>th</sup> birthday of Alisher Navoi were held in Tashkent. Travel seminars were also held in Khorezm, Andizhan regions and the Republic of Karakalpakstan [6].

In independent Uzbekistan, the heads of state bodies and religious organizations have established mutual understanding and goodwill. On July 14, 1991, the Law on Freedom of Conscience and Religious Organizations was adopted for the first time in Uzbekistan's legal practice. After the adoption of the Constitution of the Republic of Uzbekistan freedom of conscience, relations between the state and religion are regulated by constitutional principles. On May 1, 1998 a new version of the Law on Freedom of Conscience and Religious Organizations was adopted.

March 27, 1992 The Decree of the President of the Republic of Uzbekistan "On the announcement of the first days of fasting and Eid al-Adha as a day of rest" was signed. In accordance with the Decree of the President of Uzbekistan dated June 2, 1990 "Muslims to Haj in Saudi Arabia", for the first time in the history of the people of Uzbekistan, the government has the opportunity to perform Haj and Umrah directly under the auspices of the government. During the years of independence, more than 32,000 Uzbeks traveled to Mecca and Medina. Hundreds of mosques were returned to Muslims and new ones were built. The Islamic Nuri newspaper is published. These events are not just a blessing for the believers, they are a revival of the ancient customs of our people - customs and traditions, values, revival of ancestral spirit.

As stated in our Basic Law, "Freedom of conscience is guaranteed to all. Everyone shall have the right to profess or not to profess any religion. No compulsory imposition of religion shall be permitted"



[4, p.8]. It also states in the Law on Freedom of Conscience and Religious Organizations that citizens of Uzbekistan are equal before the law, regardless of religion” [7, p.225]. These laws are up to date and guarantee the right of citizens to practice their religion freely and to practice religious customs.

## CONCLUSION

During the brief but honorable years of independence a number of reforms have been implemented in the judicial system of the country. Of course, every existing law is aimed at protecting human rights and the rights of all citizens. During the years of independence, the Constitution of the Republic of Uzbekistan and the Law on Freedom of Conscience and Religious Organizations have been adopted, guaranteeing the freedom of conscience of all citizens residing in the country.

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## ON POETESSES MENTIONED IN THE MEMOIR 'RUZE RAVSHAN' BY MUHAMMAD MUZAFFAR HUSSEIN

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### ABSTRACT

*The study examines the textual aspects of the lithograph of Ruzi Ravshan (روزن روز) by Muhammad Muzaffar Husayn kept under the number №3700 at the Institute of Oriental Studies named after Abu Rayhan Beruni, Uzbekistan Sciences Academy, and information about the women whose names are mentioned in it is studied. Similarly, the image of women given in Fakhry Hiravy's first memoir dedicated to women, "Javohir ul-ajoyib", is compared to that of "Ruze Ravshan" through poetic pieces peculiar to women to compare types of fine arts. This, in turn, plays an important role in restoring the creativity of poetesses and in defining their place in socio-cultural life.*

**KEYWORDS:** "Ruze Ravshan", "Javohir ul-ajoyib", Saida Begim, Hijabiy, Fatima Hotun, memoir, verse, divine love, pain, separation.

### INTRODUCTION

Memoir as a genre has been formed since ancient times and is very common in the literature of the peoples of the East. In the words of the famous writer Khurshid Davron, memoir "serves as a unique genre of literary criticism in the creation of the history of national and interrelated literature, the study of the literary environment of a particular period, the study of individual literary figures and works." The term "tazkira" (translated as memoir) is derived from the Arabic word "ziki", which means "notebook", "to remember", "to keep in mind", "memoir". Before the Safavid period (1502-1736), the word tazkira was used in all Persian literary sources, meaning "monument", "remembrance", "memorization". Gradually, the word tazkira was used in the sense of "Shoirlar Tazkirasi" (The memoir of poets), which contains information about the origin of poets, examples of their creative work, and is still preserved in this sense today. [6: 2] Tazkira is a literary source that provides information about the biographies and works of poets, and sometimes memoir writers may also criticize the poets and their works cited in the work [6: 2].

There are also memoirs in which women's names are mentioned. While the names of some

female artists appear in general memoirs, some are included in special memoirs dedicated only to women. Through these memoirs, we gain a brief account of the fate of women artists and their work.

One of the oldest memoirs, Muhammad Avfiy's "Lubob ul-albob", mentions the names of two poetesses, Robiya bint-Ka'b and the daughter of Kashgari, along with men. In it, the Persian poetess Robiya's skill in ghazalism is discussed. Robiya is said to have been a ghazal writer and to have sacrificed her life as she was in love with her slave [8:1]. Robiya was from a well-off family. Since her father was the governor of Balkh and Kandahar, she had no match in reading and writing. Robiya, who had a special love for poetry, wrote poems in Persian and Dari. Robiya's brother realizes her love towards a slave through a poem she wrote, and executes her [9]

In the work "Tazkirat ush-shuaro" written by Davlatshoh Samarkandy in 892, among hundreds of poets Dilorom Changi, Pari, Mahastiy, and Jahan Khotuns are mentioned as people of poetry and literature.

Dr. Ruhangiz Karochi, while studying the women in Alisher Navoi's "Majolis un-nafois", finds that the work also gives a brief account of three poetesses among 459 poets. Among these, the



mention of Mehriy Hiratiy by Mawlana Sulaymaniy is in fact that of doctor Mawlana Hakim's wife Mehrini [2:13], and the second, in the mention of Shahzoda Ansariy by Navoi, notes that her mother was Bediliy [2:75] and on Biche (Bibicha) Munajjima [2:90], among other things, he proves in the chapter of Hoja Alouddin as she was his sister.

Bediliy is a contemporary of Alisher Navoi, whose name first appears in the Navoi's memoir, but not as a poetess, as noted above, but as the mother of a poet named Shahzoda Ansari, the son of Sheikh Abdullah Devona. "It seems that his mother is also women of high virtues and calls herself as Bediliy. And this verse belongs to her:

Ravam ba bog'u zi Nargis du dida vom kunam

Ki to nazaram on sarvi xushixorot kunam." [2:75]

As for Mehriy, Hakim described her as Tabibi's wife and a bad-tempered woman. Mehriy is one of the most famous poetesses of the time of Hirotiy and Bediliy, and Alisher Navoi was the first to write a description of these poetesses in the golden pages of history. However, as time went on and worldviews changed, the translators of the "Majolis un-nafois" took a different approach to the issue, trying to rectify this shortcoming of the memoir as much as possible and adding information about women poetesses in their translations. The first Persian translation of "Majolis un-nafois", in Fakhri Hiraviy's "Latoyifnoma", included the ninth session, including the mention of Ofaq Begim Jaloir.

### Main part.

Muhammad Muzaffar Hussein's memoir "Ruzi Ravshan" (روشن روز) was written in 1879, size 24x16, and stored at the Institute of Oriental Studies of the Uzbekistan Academy of Sciences under the number №3700 inv. The work contains 868 verses.

Muzaffar Hussein was brought up well in a famous family. He had no match in the calligraphy and was a profound scholar of Persian poetry.

Muzaffar Hussein's memoir "Ruzi ravshan" was created under the influence of "Sham'i anjuman",

"Negariston", "Subhi Gulshan". The poet was 17 years old when he wrote memoir "Ruze Ravshan". In the memoir, the poet gave information about 2411 Persian-speaking Indians, Persians, Turkestanians, Afghans and Tajiks who lived before and at his time. In the memoir, the names are arranged in alphabetical order, each chapter consisting of special letters, beginning with Obi Termezi and ending with Yunas Abkhari. Muzaffar Hussein begins his memoir by saying that he decided to create this memoir to include the names of poets who were not present in the memoirs of "Sham'e Anjuman", "Subhi Gulshan", and "Negariston" [4:12]. He singled out the letters "shin (ش)", "sod (ص)" and "nun(ن)" as symbols of memoirs. Due to the lack of information about the Persian-speaking Indians in these three memoirs, Muhammad Husayn enriched his memoir with the Indians. The Tazkira was first written in Nasta'liq script on kukhi paper and printed in lithography in Buhapol, and later a copy from the first edition was taken and published in Tehran [3: 640-644]. Since this memoir came in alphabetical order, the memory of 35 women came among the memory of men.

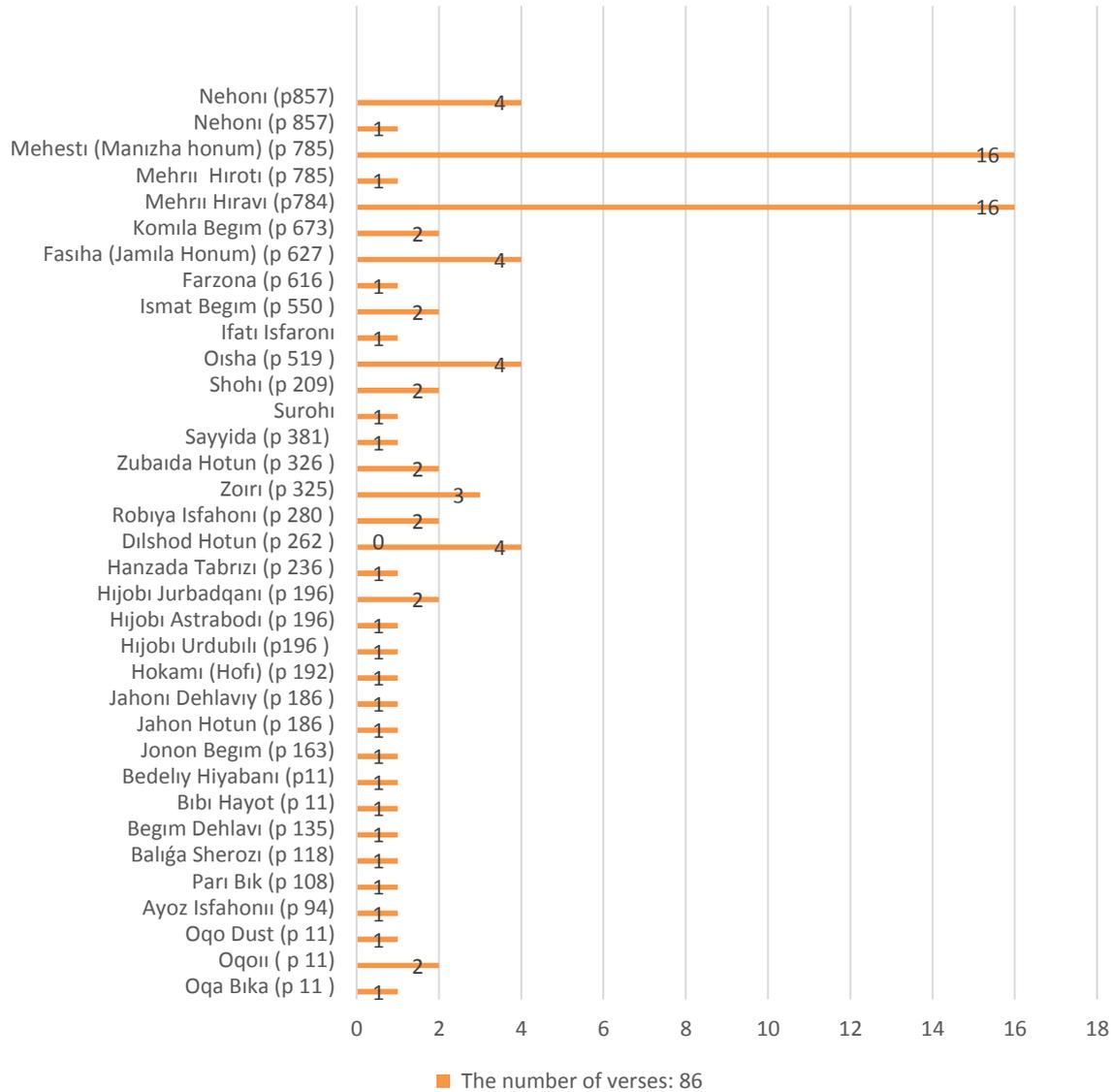
4 women in "Alif", 1 woman in "Pe", 3 women in "Be", 3 women in "Jim", 5 women in "He", 1 woman in "Dol", 2 women in "Re and Ze", "Sin" 1, "Shin" 1, "Sod" 1, "Ayn" 3, "Fe" 2, "Kof" 1, "Mim" 3 and "Nun" 2 women were mentioned respectively. These women are of Indian, Turkmen, Tajik, Afghan, and Persian origins. It is also mentioned not only by the poetesses but also by the woman who was acquainted with the poetry, but who was a perverted woman or a dancer like Shahi. Bediliy Hiyabaniy (in the sense of a street) was a prostitute, from whom:

That is: The full-blooded eye and the raw imagination are in this babe, a fiery furnace filled with fire, and a bunch of conspiracy is in her [4: 132].

The name Bediliy is also mentioned in the memoir of Akhtartabon [1: 8], but it is not found in other memoirs.



*Table of women in "Ruze ravshan"*





The above table is based on the lithograph stored at the Institute of Oriental Studies named after Abu Rayhan Beruni of Uzbekistan Academy of Sciences under inventory number №3700. The table shows that the memoir "Ruze Ravshan" contains the names of 35 women and the number of verses of their poems is 86.

Muhammad Husayn also used the first memoir dedicated to women, "Javahir ul-ajoyib". We compare the data on women mentioned in both memoirs.

هر که کفر زلف او بیند زایمان بگذرد.  
هر که دامن کیرد این دردش ز درمان بگذرد.  
زانکه عاشق ترک سر کوید ز سامان بگذرد.  
گریه زارش چو بیند یار گریان بگذرد.

*Prose translation of verses:*

Wherever this absent minded goes,  
Whoever sees his blasphemy let him believe.  
O Mahbon! It's a wonderful pain, the pain of love,  
Whoever embraces this pain let him leave the medicine.  
Do not seek wealth and riches from anyone who is in love,  
Because the lover loses his head, loses his wealth.  
In your flame, Dustiy is burnt like a cloud of early spring,  
Let the mourners weep bitterly as friends are in vision.

The verses of the ghazal describe the difficulty of the pain of love, the motif of the loss of consciousness of every person in love. In this ghazal, mystical meanings are expressed through the words mind, blasphemy, to believe, and mahban. The verses undoubtedly have a mystical meaning. It does not mean to leave religion out of faith and replace religion with disbelief, but rather a hidden meaning is expressed. True Love and admiration is the love of God, and it is a sign that a person who enters this path will renounce all worldly desires.

The name of Fatima Hotun Dusti is given in "Tazkirat ul-Khawatin", and the name is given as Dustiy in "Tazkirat ul-neso", the name is given as Ogo Dust in "Akhtartabon" and "Pardaneshinone suhanguy", and her name is given as Mussamateye

چگویم! پیش بیدردان ز درد بیزار خود.  
چو یاد ارم من سر کشته از یار و دیار خود.  
که میبینم چو زلف او پریشان روزگار خود.  
چو غنچه گرچه خون دیدم دل امیدوار خود.  
اگر درپیش او صد بار گویم حال زار خود.  
سروسامان نمیبینم من مسکین بکار خود.  
بخواهم سوخت اخر ای (ملک) لوح مزار خود.

*Prose translation of verses:*

I have instability and pain in my heart,  
What about my unstable pain in the face of awakening?  
If friends and land are reminded of,  
The noble heart bleeds in pain.  
The world is as connected to him as kibbutz,  
I see his ringlet in my desolation.  
I did not pick flowers from the garden to see him,  
Because in the bud, I saw blood like a hopeful heart.

***Fatima Hotun Dustiy*** - Musamateyi

Fatima Hotun Darveshzoda is the daughter of Pir Darvesh Qiyom Sabzevori. She was a very cheerful and good poet reader. Her pen-name was Dustiy. This ghazal is hers [5: 129]: In "Ruze Ravshan" it is written that she was the daughter of Ogo Dust Darvesh Qiyom Sabzevori and only the first verse of the following ghazal is quoted [4:11]. This ghazal is quoted in with more detail in "Javahir ul-ajoyib":

هر کجا آن مه بان زلف پریشان بگذرد  
ای محبان! بوالعجب دردی است درد عاشقی  
هر که عاشق شد از او دیگر سروسامان مجوی  
در فراقت دوستی کرید چو ابر نوبهار

Ogana Dust (Ogo Dust) in "Mirot ul-hayol" and the poem in the memoir "Javohir ul-ajoyib" is given exactly.

***Shokh Malak Sayyid Begim.*** Sayyid

Begim, described as humble and pious, is the daughter of Sayyid Hassan Korkiyon, who was famous in Astrabad and was considered one of the most powerful nobles of the Jorjan region. Her real name is Shah Malak, and her style of poetry is very gentle and delicate. She got the pen-name Malak because her name was Malak, and at that time she herself was from the category of Royals. Here in this land the poetess is described as poetess Begim, I have seen a really good work by her. She might have written this ghazal about herself [5: 126]:

مرا درد است در دل بیقرار از هجر یار خود  
بدر دل چنان کریم که خون گردد دل هارا  
از آن پیوسته در عالم چنین سرگشته میکردم  
گلی از باغ وصل او نجیدم بر مراد دل  
زاستغنا ندار کوش یک بار آن جفا پیشه  
بکار خویش حیرانم که از عشق بتوان هرکز  
ازین سوزی که من دارم ز عشق او پس از مردن



Even if I informed of myself before him,  
I have never been pleased of that sufferer.  
I am always amazed at the work of love,  
I can't find a place to hide from poverty and idleness.  
Even after death, I burn in his love,  
O Malak, I also want to burn even in my grave.

In this ghazal, the groans of the heart and the anguish of the heart are sung. Lyrical experiences are described in verses with both philosophical and literary meanings. The lover sings from the pain of the martyr that she cannot find a place to go, even if she enters the grave. In Maqta, the torment of romantic separation is equated with the torment of the grave. The image of the lover's anguished state of separation intensifies as it goes from verse to verse in the ghazal, reaches its climax, and even ends with a scene that leads to death. In describing the emotional state of the lover in the ghazal, the poet makes appropriate use of such artistic arts as *husni talil* (beautiful proof) (3,4 verses), *tashbeh* (immitation), *tashhis* (animation) (6 verse), and *exaggeration* (6,7 verses).

In "Ruzi Ravshan", Saida's pen-name is Saidabegim Jurjani, the daughter of Said Nasir Jurjani, and the first verse of the above ghazal is quoted [4: 381]; In "Akhtartabon" seven verses of the above ghazal are given; In the memoir "Pardaneshinone Suhanguy", Shah Malak's name is Saida Begim Alaviya, and in the "Tazkirat ul-Nesa", which contains all seven verses of the above ghazal and two ghazals of seven more verses, the ghazal in the "Javahir ul-ajoyib" is mentioned under the name of Malika.

*Hijabiy* is the daughter of the bright Kubak in generosity, that is, the daughter of Mavlana Badriddin Hilaliy, who did not need to be defined. The subtlety of Hijabiy can also be felt through her poetry. It has been said that this rhyme is her ghazal [5: 128]:

بهار و سبزه و گل خوش بروی باران است و گرنه هر یک از این جمله آفت جان است.  
بغچه هر چه بندد ز گل چه بکشاید دلی که خون شده از خار خار هجران است.  
هران بخواریم ای باغبان! ز گلشن خویش که پنج روز دیگر گل بخاک یکسان است.  
حدیث زلف دلاویز ان نگار امشب زمن میرس که بس خاطر پریشان است.  
مگوی شعر (حجابی) که نزد سیمبران هزار بیت و غزل پیش جو حیران است.

#### *Prose translation of verses:*

Spring, blossom, flowers, is the beauty of the friends,  
And each of these words is soul pleasing.  
If everything loads into a bud, what opens from a flower,  
The heart full of blood is in pain from thorns.  
O gardener! Every moment we enjoy the spring,  
Five days later the flower is uprooted in the soil.  
Tonight he saw darling's hesitant look through hair,  
Don't ask me, my memory is broken.  
Do not recite, Hijabiy, poetry in the presence of charms,  
A thousand verses of ghazals are amazed before them.

In this poem, the image of spring and the poet's philosophical observation of life are expressed through a beautiful metaphor. Allah can be known through the beauties He has created. Spring, no matter how beautiful the flowers are, is temporary and ultimately the final destination of them is pointed to be the soil. For the flower-nature is a symbol of the creature by Allah, and the hair has several meanings that cover the face in mysticism. In the fourth verse and maqta', Hijabiy tried to describe her state in the hereafter. The formation and appropriate use of words by the poet introduced the art of *tanosub* (use of hyponyms) through the words spring, flower, gardener, thorn, bud, soil, which ensured the logical integrity of the ghazal.

In the memoir of "Ruze Ravshan", the name of Hijabiy is given as Hijabiy the daughter of Astrabadiy Hilaliy, and 3 verses of the above ghazal are given.

In the memoir "Pardaneshinone suhanguy" it is written that Haji Hodi Astrabodiy's daughter has no match in beauty, the sun that illuminates the world, is hidden from the jealousy of her, and the moon of the world is curbed before her beauty. The poetess did not remove the hijab from her face because she was too pious, and for this reason she took the pen-name Hijabiy, the following verse is about her:

Your beauty and the sun are both one,  
Both your pain and your challenge are the same.



In "Akhtartabon", she is said to be the daughter of Mullo Hilaliy.

The memoir of "Mirat ul-Khayyal" contains the same information as in "Pardaneshinone suhanguy".

## CONCLUSION

The three poetesses whose names are mentioned in the memoirs, Fatima Hotun Dustiy, Shah Malak Sayyid Begim, and Hijabiy, all have motifs of divine love, pain and separation. But this motif is embodied in each poet's own poetic style. They all have a feminine charm.

In "Javohir ul-ajoyib", Fakhri Hiraviy not only preserved the names of women poets, information about them, but also their place in the art of poetry, citing examples from their poetic works. For this reason, the memoir of "Javohir ul-ajoyib" became famous during Fakhri's lifetime and paved the way for later memoir writers. It is for this reason that the names of many women poetesses have survived to our time. In particular, Muhammad Muzaffar Hussain also used Fakhri's method in describing women, giving verses, and increasing their number in accordance with his time.

Since Muhammad Muzaffar Husayn wrote the memoir "Ruze Ravshan" under the influence of the father and sons' works "Subhe Gulshan", "Sha'me Anjuman" and "Negaristone Sukhan", we can see that in addition to the women in these three tazkirs, he also included several other women. In particular, we can see the names of 21 women in "Subhe Gulshan", 16 women's commentaries in "Sham'e Anjuman" and 7 women's names in "Negaristone Sukhan". Muhammad Muzaffar Hussain, taking a special approach to the commentaries of Mehriy Hiraviy and Mehestiy (Manija Khanum), used the memoirs that survived up to his time and quoted their 16-verse poems. This serves to continue the information about Mehriy and Mehestiy, even though they lived centuries before the author.

As Muhammad Muzaffar Hussain enumerated the names of women in the work and tried to interpret them beautifully and to preserve the recognition of these women with respect throughout the course of history, in addition, the poetic passages from the women's commentary are invaluable in the study of the history of literature, the history of literary relations.

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## INTERTEXTUALITY IN SCIENTIFIC TEXTS

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### ABSTRACT

*The article reveals the concept of intertextuality as a prerequisite for new knowledge in a scientific text. Different forms of intertextuality are considered depending on the functions and goals of intertextuals in a scientific text. The mechanism of scientific intertextuality covers not only the process of generating a text (discourse), but also its perception, understanding and awareness by the addressee.*

**KEY WORDS:** *intertextuality; intertext; functions and goals of intertext in a scientific text; mechanism of scientific intertextuality.*

### DISCUSSION

Intertextuality is a property of the text, which, on the one hand, correlates with the premise of obtaining new knowledge on the basis of already known, verified knowledge, and on the other, with the result of the scientist's cognitive and creative activity. A number of notations of intertextual phenomena are used in linguistics: intertexts, metatext formations, secondary representation of content, secondary text, etc. These textual phenomena are actively studied today in connection with the manifestation of the main law of the development of language and thinking, which assumes "the accumulation of knowledge and the acquisition of new knowledge based on them" [Polubichenko 1991: 43]. Intertext is a product of secondary textual activity as a result of processes of secondary categorization of information, its new conceptualization and new representation.

Intertextuality means the interaction of texts (or their fragments) not only in terms of content, but also in terms of expression. It is a means by which "one text actualizes another in its internal space" [Chernyavskaya 2004: 49]. In this regard, intertextuality in a scientific text can be considered a special form of scientific knowledge that structures dialogue / polylogue with a certain semantic position. Intertextuality explains the fact that a scientific work in a "radial way" (term of V.E. Cherniavsky) - retrospectively and prospectively - is associated with

other studies and acts as a kind of microtext in general scientific macrotext.

Intertext interaction is themed using a complex of specific signals, or markers, capable of identifying a scientific text in a new host context. Since all references to other people's ideas are usually clearly marked, and the boundaries of "one's own" and "another's" knowledge are clearly delineated, it can be stated that explicit markers of intertextuality are widely represented in the language of science: quotes, background links, indirect speech, footnotes, notes.

For different forms of intertextuality that reproduce a particular piece of knowledge, the modified / unmodified nature of borrowing is essential [Chernyavskaya 2004: 51]. Otherwise, it can be formulated as a problem of literal / non-verbal reproduction of someone else's speech. The concept of "literacy" is relative and determined by the creative nature of textual activity and the creativity of the scientist's consciousness, which correlates with the interpretation of primary knowledge.

In our opinion, intertextuality can be considered taking into account the transformation of text forms, the transformation of content (presence / absence of new content components), and also taking into account the function of the text (its genus-species transformations).

The study of a special type of texts - "compact texts", "compressed dense scientific texts" - has led



to the possibility of curtailing (condensing) content as a fundamental property of a scientific text.

This property was identified and theoretically presented in the research of L.S. Vygotsky, A.R. Luria, A.A. Leont'ev and continues to be developed in works on theoretical linguistics [Kobkov 1975, Alekseeva 1982, Novikov 2002 and others], functional style [Kotyurova 2003, Danilevskaya 2006, Girenko 2006, etc.]. From the arguments of A.A. Leont'ev, it is clear that the unity of the text lies in the ability of both the author and the reader to collapse and expand the content of the text, moreover, "when moving from one consecutive step to another, deeper", the text "each time preserves semantic identity for the recipient" according to the main semantic components, "Losing the marginal, optional, less important components" [Leontyev 1979: 47]. In turn, A.I. Novikova considers compressed stereotypic text units in connection with the study of mental formations that arise in the author's thinking as a result of awareness and serve as the starting point for the generation of new texts [Novikov 1998: 8]. Speaking about the compaction of a scientific text, we found it possible to differentiate the mechanism of compaction of the content of a scientific text and talk about three main stages of the cognitive process: 1) the attraction of entities (relatively stable characteristics) in accordance with the author's intention; 2) strengthening selected entities (terminated concepts), which is carried out through the establishment and explication of logical and semantic relations between them; 3) the connection (condensation) of binder filaments with "spasmodic" thinking, when between the concepts there are "wells", "gaps" that are overcome by the reflection of the author. To determine the density of scientific knowledge in a text means to develop it, to include it in the dynamics of conceptual transformations.

The appeal to intertextuality allowed us to consider this property as one of the forms of reformulation, or reinterpretation. This term arose and is actively used in French-language studies of the last decades: thus, paying tribute to cognitive science, N. Coco [Soso 2000] defines reformulation as the generation of a new utterance within the framework of a general scenario (frame). At the same time, the researcher emphasizes that, if we take the most generalized scenario as a basis, any statement can turn out to be a reformulation of all its predecessors, because all statements reflect the world and convey our idea of it. Therefore, in practical terms, in an effort to establish any formally objective markers of reformulation, scientists turn primarily to pragmatic signals (with the goal of concluding a "target agreement" with the addressee, or co-author), as well as to various citation indicators.

In the aspect of the problems we are considering, it is of interest to determine two axes of intertextual action: syntagmatic and paradigmatic [Ionova 2005]. The syntagmatic axis of intertextuality is formed by linear connections of works of a single text space and "consists either in appealing to ready-made verbal samples, or in including in the fabric of a new work such intexts (the term of S.V. Ionova), such as allusions, precedent statements, quotes, etc. ., or in conjunction with other texts, relations of juxtaposition, juxtaposition (as a result of which supertext formations are created: collections of texts, cycles, etc.). The paradigmatic axis of intertextuality combines texts related to relations of productivity; these texts, which should be considered secondary texts, are based on the processes of secondary categorization and secondary conceptualization of the content of the source text [Ionova 2005: 8-9].

In our opinion, the concept of intertext is not identical to the concept of context - text "introductions" of various types. Intertexts and intexts can be contrasted as phenomena related to different aspects of the study of the text - paradigmatic and syntagmatic. Intext formations are placed in the fabric of another text, where they do not have the status of an independent structural unit, representing reduced forms of fragments of other texts:

The Internet develops the quality of an instructor in people. Moreover, this is characteristic not only for Russians, but also for Americans who are used to service, and for dominant Koreans, and for solid Chinese. So "both the proud son of the Slavs, the Finn, and now the wild Tungus, and a friend of the Kalmyk steppes" - all now find expression in the International Network [Orudzhev 2006: 22].

Unlike intertexts, intexts, even in a compressed form, are independent works, while remaining derivatives of the source text, members of its "paradigm". See, for example, the text of the annotation of any scientific work.

Thus, studies by modern scholars show that the phenomenon of intertextuality is more complex than just the stylistic method of referring to someone else's word. In the concepts of intertextuality, all types of intertextual relations are considered (inclusion, conjugation, juxtaposition, productivity, etc.). In our study, we will analyze intertext formations in accordance with a certain intention of the author. The combination of individual texts into a single speech product is carried out using a new concept set by the author. Reformulation in a scientific text can be aimed at strengthening, explaining, correcting the source text (discourse), etc. The connection between the two statements is established by the reformulating one to realize his



communicative intention. In this case, a new concept of the text is consciously formed and a new textual and conscious formation appears. The intertextual space, in which the intersection of the general, objective, and individual, subjectively realized, becomes a new reference point in the study of various functions of scientific intertextuality.

Various kinds of assessments presented in fragments of texts are carried out as the author's assessment of a fact (thought, idea, judgment) in order to confirm knowledge or, conversely, conflict with it. It is obvious that evaluation in the cognitive process of a scientist "polishes" an integral scientific concept.

Thus, our observations on the phenomena of intertextual interactions of various types allow us to conclude that the intertextual relations into which scientific texts enter have a different nature and form different systemic connections. Given the functions and goals of intertext in a scientific text, the author follows certain guidelines that allow him to abstract from secondary (background) knowledge and focus on the most essential. So, putting off in vocabulary, semantics of a conceptual form, this main thing becomes the property of the individual consciousness of the scientist as he assimilates knowledge and uses it as a means of thinking and communication.

From the above examples, it should be emphasized that transformations with a minimum degree of distortion of the primary text are formed mainly by means of the language extracted from the source text. Distortions of the highest degree are accompanied by a categorization of the text content of an extremely high level of abstraction. In this case, the author of the new text takes a metaposition with respect to the primary text and considers its content in terms of a wider structure (intertextual space, cultural space). The author leaves the limits of the source text, and the result of such a transition to the intertext space is the formation of exodiscursive texts (in V. Kokh's terminology) - text formations that cannot be obtained from the source text [Koch 1988: 163]. The metaposition occupied by the author of the new text in relation to the source text allows him to establish the place of the analyzed scientific work in the system of textual, social, cultural and scientific knowledge. This information forms the basis of "responsive" texts and defines them as new, original works that are not derivatives, secondary formations.

Thus, scientific intertexts are special texts: a) characterized by the interaction of scientific works of one textual paradigm; b) formed as a result of in-text and mental transformations of different types (secondary categorization and secondary conceptualization); c) the means of representation of which is vocabulary extracted from the source text (as a designation of thematic "nodes" of the new text).

The indisputable advantage of scientific intertexts is their communicative, interactive basis - the need to transform the source text in order to integrate it into one's own speech activity or activity of a different kind (educational, informational). Thus, the pragmatic aspects of the intertextuals fall into the scope of study [Tunitskaya 2008: 102]: referential-deixic (correlation of the original and rephrasing texts in the coordinates "I am here now"), illocutionary (goals of the rephrasing one), cultural and emotional-evaluative the distance of the rephrase and phrase. The latter is especially significant given the possibilities of self-paraphrasing. That is why paraphrasing should be considered not only textual, but primarily a discursive phenomenon, if the text is considered as a carrier of information, and discourse as an instrument of influence on the addressee.

The mechanism of scientific intertextuality should probably take into account the semantic layering of the source text and the variability of its interpretations. It covers not only the process of generation, but also the perception, understanding and comprehension of the text by the addressee. Indeed, as the researchers of cognitive science rightly note [Gureev 2005], to the extent that peripheralization is purposeful, its author models the perception of the discourse by the addressee, more often than not, while in reality the uniqueness of decoding the discourse is not so obvious to the perceivers, not to mention given multidimensionality, or density, characteristic of scientific texts. It should be clarified that the ordinary reader unconsciously interprets the text unambiguously in accordance with the "script" proposed by the author, while the researcher consciously proceeds from the potential ambiguity of the discourse, offering various reading scenarios and comparing them. Thus, the researcher accepts the very possibility of paraphrasing and creating variants of one invariant text.

In the mechanism of the dialogic form of paraphrasing (replica of the interlocutor in the dialogue), first of all, the deixic component changes in the coordinates of "I - here - now." Accordingly, the cultural-cognitive and illocutionary components are modified, and the purpose of rephrasing requires a clear authorial attitude.

Thus, the formation of new knowledge in the text involves a "bilateral act of cognition-penetration," which means "the presence of a knowing subject and something knowable, which is not a mute thing, but another subject or the result of the activity of another subject" [Bakhtin 1974: 206]. It should be agreed with the scientist that "the text lives only in contact with another text ... Any understanding is the correlation of this text with other texts and rethinking in a new context. The stages of this movement of understanding: the starting point is



the given text, the movement back is past contexts, the movement forward is anticipation (and the beginning) of the future context" [Bakhtin 1974: 207]. The text always requires consideration of intertextuality, which evokes in the minds of both the scientist and the reader additional semantic associations that contribute to the expansion and deepening of the semantic boundaries of the scientific text.

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# TECHNOLOGIES FOR IMPROVING HEALTHY LIFESTYLES AND CULTURAL AND HYGIENIC SKILLS IN FUTURE EDUCATORS

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## ABSTRACT

*The process of forming a healthy lifestyle in future educators needs to be integrated into the educational process on the basis of special curricula. To this end, the article offers plans, forms, methods and tools for extracurricular activities to form a culture of healthy living in future educators, developed lesson plans for optional classes.*

**KEY WORDS:** *healthy lifestyle, cultural and hygienic skills, future educators, physical education and sports, rules of personal hygiene.*

## DISCUSSION

Human health is the greatest social wealth. The health of the nation is naturally addressed through a culture of healthy living. Ensuring interdisciplinary integration is of great importance in shaping the culture of healthy living of future educators. Biology, physical education, geography, chemistry, computer science, mathematics, language and literature, the idea of national independence, history, ethics, aesthetics, philosophy, the basics of constitutional law, etc. it is expedient to assimilate the relevant knowledge. It is advisable to provide students with an understanding of the culture of healthy living in extracurricular activities, in particular, in the hours of communication, parent meetings, club activities, public events, Saturdays, etc.

According to the sources, the organization of the educational process in a differentiated group form facilitates the work of teachers and allows students to understand and comprehend theoretical knowledge.

In accordance with the requirements of the National Program of Personnel Training, to raise the level of educational work in the system of continuing education to the level of modern requirements, to increase the efficiency of educational work, along with the leading specialists in higher education. One of the main tasks of the higher education system is to bring up morally mature people.

During the years of independence, to improve the spiritual and moral qualities of students studying

in higher educational institutions of the republic, to further enhance the culture of daily life and strengthen discipline among them, in particular, to raise awareness of their own health and the health of others. The main attention is paid to the formation of a responsible attitude, the formation and improvement of a culture of healthy living among students with the participation of school leaders, teachers and coaches.

In this regard, the adoption of a number of other orders of the Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan "On the tasks of strengthening discipline in the educational institution and improving the culture of everyday life of students" is proof of our opinion.

Higher education institutions have a great responsibility to form a culture of healthy living in the process of training future educators. Because a large part of the country's youth is students. In addition to gaining scientific and theoretical knowledge, practical skills and abilities in the chosen areas of higher education, students strive for spiritual and moral education and perfection. Along with the intellectual, moral, aesthetic, physical, economic, religious, medical, environmental, civic, pedagogical and other aspects of spiritual culture, they need to form a culture of healthy living. After all, it is impossible to form a professional culture in future educators without forming a culture of healthy living.

The formation of a culture of healthy living in the training of future educators is an important



component of the pedagogical process in pedagogical higher education. The following tasks are envisaged in the preparation of students for the profession on the basis of the formation of a culture of healthy living:

- To provide future educators with scientific, theoretical knowledge, practical skills and competencies about the culture of healthy living;

- To inculcate in future educators the belief in national and universal traditions and the desire to live a healthy life;

- To study the interpretation of the culture of healthy living in religious sources (Avesto, Qur'an, Hadith) and to determine its role in the formation of a culture of healthy living;

- To study the way of life, family traditions, customs and traditions of the peoples of the East and the West, their place in modern life;

- The study of the primary sources and writings that provide information about the history of the people's way of life, the rules and regulations of the future dreams, to determine its importance in the formation of a culture of healthy living;

- Achieving the use of folk pedagogy, folk crafts, applied arts, music and theater in the formation of a culture of healthy living in future educators;

- Identification of effective forms, methods and tools for the formation of a culture of healthy living in the preparation of students for the profession in higher education;

- The formation of a culture of healthy living and professional development of future educators through classroom activities and extracurricular activities;

- Strengthening the activities of public organizations in higher education in the formation of a culture of healthy living in the training of future educators;

- Ensuring the cooperation of family, community and community in the formation of a healthy mindset, a culture of healthy living in future educators, increasing the responsibility of state and public organizations.

The use of the following forms of education in ensuring the implementation of these tasks leads to effective results:

- To provide scientific and theoretical knowledge about the culture of healthy living through classroom classes taught at the university;

- Additional subjects included in the curriculum on the basis of state programs: ensuring quality teaching of valeology and health;

- Organization of special courses, special seminars and optional classes on the basics of a healthy lifestyle;

- Achieve the establishment of societies, associations, centers, clubs and circles for the

formation of a culture of healthy living in future educators;

- To use the opportunities of various events, meetings, conferences, seminars, discussions, seminars-trainings, round tables, debates, independent work, role-playing games outside the classroom in the formation of a culture of healthy living in future educators;

- The effective use of pedagogical and information technologies in the formation of a culture of healthy living in future educators in the educational process;

- Strengthening the role of physical culture and sports in the formation of a culture of healthy living in future educators in higher education;

- Strengthening the cooperation of the educational institution with families, communities and public organizations in the formation of a culture of healthy living in future educators.

The role of the humanities and socio-economic, mathematical and natural sciences, general professional, specialty disciplines taught at the university is of special importance in the formation of a culture of healthy living in future educators.

The formation of a culture of healthy living in future educators creates the basis for the following:

- have theoretical knowledge about the factors that negatively affect the life and health of the individual;

- Achieving theoretical knowledge and practical skills to eliminate the factors that negatively affect the life and health of the individual;

- fight against bad habits (smoking, drug and alcohol abuse);

- adherence to the agenda;

- organization of regular physical activity and achieving regular participation in sports;

- mastering detailed information about the essence and importance of the rules of proper nutrition and their use in practice;

- establishing responsibility for the protection and maintenance of personal health;

- Carrying out public awareness campaigns on health care and protection;

- ability to prevent various injuries;

- Proper sex education, awareness of the rules of personal hygiene and adherence to them;

- organization of theoretical and practical activities for the development of high moral qualities, strong will, as well as the ability to fight for the formation of immunity against beliefs that contradict the idea of national independence and ideological principles. are prepared to promote. They form a culture of healthy living in the process of preparation for the profession. The teaching of these disciplines requires the use of effective forms



and methods of education, revision of the content of science programs, the development of technology for the formation of a culture of healthy living in the preparation of students for the profession.

In the educational process, the principles of systematization, purposefulness, consistency should be followed in the formation of a culture of healthy living in future educators. The knowledge of healthy living in the classroom helps them to consciously integrate the culture of healthy living.

In the process of teaching in pedagogical universities, future educators will have the following:

- Students are equipped with in-depth knowledge, skills and competencies in the culture of healthy living;
- A healthy relationship is established between students;
- A healthy spiritual environment is created in the community;
- Students learn to incorporate a culture of healthy living into their lifestyle, to apply it in everyday life;
- Future educators will be able to follow the rules of personal hygiene;
- On the basis of folk pedagogy and national values, a culture of healthy living is formed in future educators;
- have scientific and theoretical knowledge of the medical and biological foundations of a culture of healthy living;
- On the basis of the idea of national independence, a culture of healthy living will be formed in future educators;
- Understand the role and importance of physical culture and sports in the formation of a culture of healthy living.

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# RELAXATION EFFECTS IN SILICON DOPED WITH GOLD AT PULSE HYDROSTATIC PRESSURE

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## ABSTRACT

*This study examines the mechanisms of relaxation effects of silicon doped with gold at pulse hydrostatic pressure. It is shown that the pulse pressure in the samples the process of redistribution of the primary spatial heterogeneity of impurities was occurred. Thus, the electron-hole relaxation after stress was appeared in new potential relief.*

**KEY WORDS:** deformation, strain resistance, silicon, alloying, pressure.

## 1. INTRODUCTION

The impact of external factors (temperature, pressure, light, electric and magnetic fields) changes not only to the electronic structure of defects in the crystal lattice, but also significantly alters the conditions of interaction of defects and carriers. Therefore, impurity atoms with deep levels under these conditions are not fixed in the lattice state, as it usually occurs in an uncompensated semiconductor, and to constantly readjust with changing external factors [1-4]. The influence of high pressure is one of the effective processes of identification, especially, pulse pressure.

It is known [5] that in semiconductors with deep levels under pulsed pressure changes  $\frac{\partial P}{\partial t} = 2 \cdot 10^8 \frac{\Pi a}{\text{сек}}$  at temperature of the sample increased up to 7-10°C that lead to a noticeable change in the concentration of charge carriers in expanded zones which, in addition to the sample temperature change also stimulates the emergence and relaxation effects.

## 2. EXPERIMENTAL PROCEDURE

To investigate the effects of contact tenzo-electrical Si samples were prepared, with varying degrees of compensation and conductivity type. Samples Si:Au compensated gold have been obtained on the basis of single-crystal silicon brand SDP

(Silicon Doped with Phosphorus) and SDP (Silicon Doped with Boron) with resistivity  $\rho \sim 20-80 \text{ Om}\cdot\text{cm}$ , Grown by Zhohralski method and the floating zone melting. For studies were made crystal size and  $6 \times 3 \times 3 \text{ mm}^3$ , with the directions of the crystallographic axes [100], [110], [111] along the edges of a large, crystallographic directions were determined by X-ray analysis.

After Si single crystal cutting, the samples were grinded with diamond micropowders M-14 and M-4 by providing specific flatness lapping opposite edges up to (2-3) micron. In order to remove the surface layer is impaired and degreased, the samples were chemically etched in a solution of HF: HNO<sub>3</sub> = 3: 5.

The process of gold doping of silicon single crystals carried out diffusing layer deposited on a silicon surface by vacuum deposition on the installation VUP-5. The diffusion furnace was carried out in a horizontal-type SOUL-4 in the temperature range of  $T = 900 \div 1200^\circ\text{C}$  for two hours. The temperature in the furnace was controlled by thermocouple platinum –Platinum-Radii and maintained to within  $\pm 3^\circ\text{C}$ . As used Au diffusing high purity (99.999%). After diffusion annealing, to remove the surface layer on each side of the samples ground off layers 50-60 microns using lapping, under the conditions preserve flatness of opposite faces, and then re-samples were subjected to chemical treatment.



The electrical parameters of the samples (conductivity, concentration and mobility of charge carriers) were determined on the installation measurements of the Hall effect.

The sample was placed between the poles of the permanent magnet with the magnetic field  $H = 3000$  Oersted the magnetic field direction is changed by turning the magnet  $180^\circ$ .

Resistivity measurement sample was calculated according to the formula:

$$\rho = \frac{u}{I} \frac{db}{l}$$

where  $I$  - current through the sample,  $u$  - voltage between the potential contacts,  $b$  - width,  $d$  - thickness,  $l$  - length of the sample.

The Hall coefficient is calculated as follows:

$$R_x = \frac{U \cdot d}{J \cdot B} 10^8 \left[ \frac{sm^3}{Kl} \right]$$

where the  $U$  - Hall Electrical driving forces,  $B$  - magnetic induction.

The Hall mobility was calculated by the formula:

$$\mu = \frac{R_x}{\rho} \left[ \frac{sm^2}{V \cdot s} \right]$$

Electric parameters of investigated samples are resulted in table 1.

**Table 1.**

No	Samples	Type Conductivity	Specific resistance $\rho, \text{Om} \cdot \text{sm}$	the concentration of charge carriers $\text{sm}^{-3}$	charge carrier mobility $\text{sm}^2/\text{V} \cdot \text{s}$
1	Si :Au	n	$1.5 \cdot 10^2$	$3.96 \cdot 10^{13}$	1219
2	Si :Au	p	$2.1 \cdot 10^2$	$3.15 \cdot 10^{14}$	500
3	Si :Au	n	$2.88 \cdot 10^5$	$1.78 \cdot 10^{10}$	1214
4	Si :Au	n	$4.7 \cdot 10^4$	$1.15 \cdot 10^{10}$	1205
5	Si :Au	n	$2.98 \cdot 10^5$	$1.96 \cdot 10^{10}$	1091
6	Si :Au	p	$5.8 \cdot 10^4$	$4.39 \cdot 10^{11}$	254
7	Si :Au	p	$1.2 \cdot 10^5$	$1.82 \cdot 10^{11}$	343
8	Si :Au	n	$3.2 \cdot 10^5$	$1.67 \cdot 10^{10}$	1208
9	Si :Au	n	$1.95 \cdot 10^5$	$2.7 \cdot 10^{10}$	1220
10	Si :Au	n	$2.2 \cdot 10^3$	$2.66 \cdot 10^{12}$	1073

To control the temperature in the measurement samples was attached to the alloyed copper thermocouple. To protect the electrical contacts of the samples were coated with epoxy resin. Prepared in this way the samples were mounted on the holder and placed in a chamber in which a high hydrostatic pressure created. Also, a heater has been installed on the holder for changing the temperature of the sample.

To investigate strain properties of compensated samples under uniform hydrostatic compression installation hydrostatic pressure is used as described in [6].

### 3. RESULTS AND DISCUSSION

Figure 1 shows the kinetics of the current flowing through the samples of n- and p-type Si:Au under the influence of pulse pressure and a change in temperature by a heater.

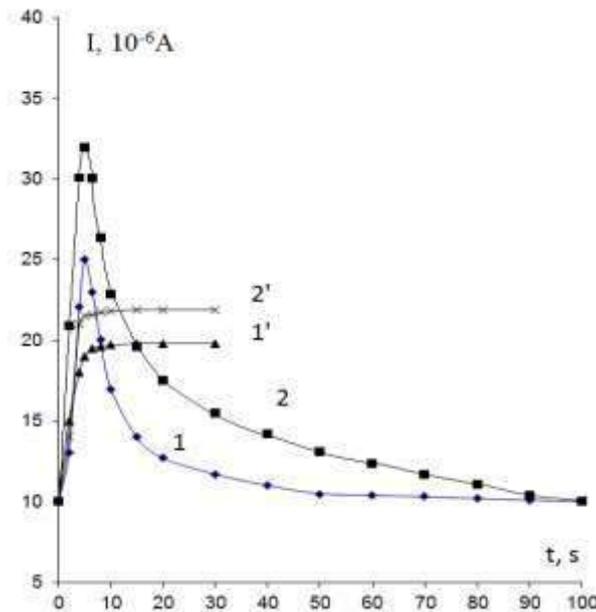


Fig. 1. Kinetics of dependences of a current in samples n-type Si:Au (1,1') with specific resistance  $1,1 \cdot 10^5 \text{Om}\cdot\text{sm}$  and p-type Si:Au (2,2') with specific resistance  $1,3 \cdot 10^5 \text{Om}\cdot\text{sm}$

Samples n- or p-type Si:Au or with increasing of port - hydrostatic pressure current is increased within 5-6 seconds, reached a maximum value and then decreases. The process of static strain conductivity Si:Au samples is not observed (Figure 1) at pulse hydrostatic pressure. When the pressure is changed to  $5 \cdot 10^8 \text{ Pa}$  at a rate of temperature of the sample is changed to  $10^0\text{C}$ .

When the sample temperature is changed by a heater at  $100^0\text{C}$ . Current varies by almost 40-45% compared to the initial value. This suggests that the hydrostatic pressure pulse of magnitude of 40-45% of the observed effects are due to the temperature, and the rest through relaxation processes. From the Fig. 1 it shown that as the specific resistance of the sample is larger, so the percentage of relaxation effects is greater.

The measurement results show that the kinetics of changes in conductivity in the samples n- or p-type Si:Au when exposed to hydrostatic pressure pulse has the characteristic features associated with

the relaxation current changes, and in the control samples under the same conditions, a substantial change in conductivity is observed.

From the analysis of the results it can be concluded that the relaxation effects are more pronounced in n-type samples than in the p-type samples. At the same time changing the charge carrier mobility, in spite of the quantitative differences of mobility, obeys to the general laws.

Figure 2 shows the dependence of the relaxation effects on the resistivity of n or p-type Si:Au samples. The figure shows that in the n-type Si:Au samples values of relaxation effects to overcompensation greater than after the change in conductivity type. This suggests that the compensated n-type samples, the relaxation effects are more pronounced than in the p-type samples. This is possible due to the fact that due to the relatively high mobility of the electrons easier to relax than a hole under the influence of pulse pressure.

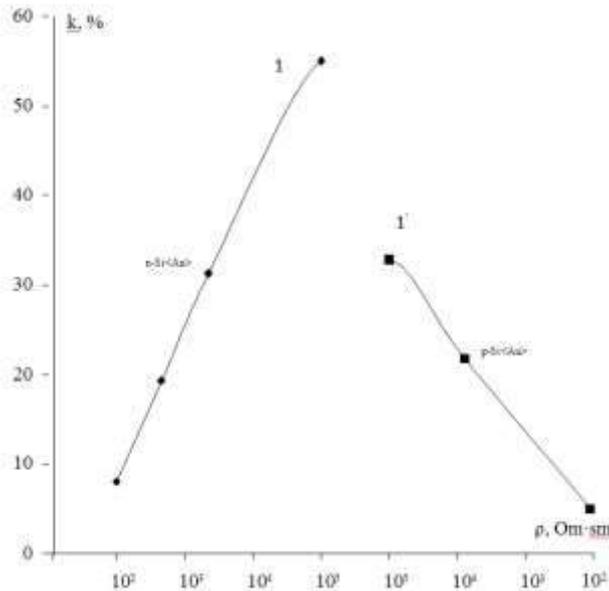


Fig. 2. Dependence of a share relaxation effects from specific resistance in samples n-type Si:Au (1) and p-type Si:Au (1').

Thus, the pulse strain conductivity connected not only with the temperature, but also with relaxation effects. Current varies mainly due to the temperature, and with increasing pressure amplitude value share relaxation effects increases at lower pressures. With the increase in the degree of compensation n-type Si:Au share relaxation effects increases, reaches its maximum value when, and then when you change the type of conductivity with increasing concentration of deep impurities, the percentage of relaxation effects reduced. This is probably due to the mobility of charge carriers as in n-type electron mobility samples of more than 1200 cm<sup>2</sup>/V·s carrier mobility, and pulsed pressure more additional electron relaxes to the conduction band, compared to less mobile holes in the valence zone.

In [7] the change in the current flowing through the silicon samples with deep impurity levels were considered, and it had been shown that the effects occur due not only to a change in temperature, but associated with relaxation effects.

It is known [8] that in compensated silicon samples changing the mobility of the charge carriers,

the static pressure insignificantly. In this case, compensated samples of silicon n-type charge carrier mobility increases, and p-type samples is reduced.

In this regard, we have conducted a study tensor Hall effect in Si samples doped with gold.

It is known that when a pressure pulse is applied, the sample temperature is changed, thus, increasing the temperature may vary the carrier mobility.

The redistribution of carriers between the level shift in the deformed semiconductor shift of the energy level of impurity centers, which are the recombination centers and lead to a change in carrier mobility [9].

It is known that the hydrostatic pressure at the pulsed sample temperature changes. It can be assumed that the change in the mobility of charge carriers at the pulse hydrostatic pressure due to the temperature change, stimulated by a pulsed pressure. But, as can be seen from figure 3, when the temperature increase to 10°C by a heater mobility is only slightly reduced.

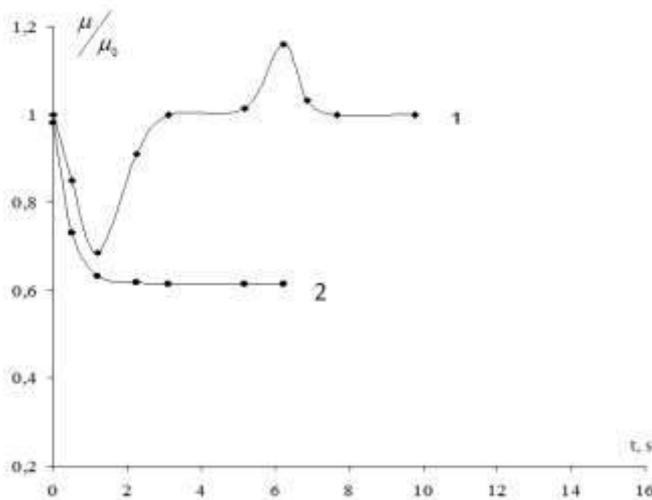


Fig. 3. Mobility kinetics of carriers of a charge in samples n-type Si:Au with specific resistance  $10^5 \text{Om} \cdot \text{sm}$  at pulse hydrostatic pressure and change temperatures

This suggests that the momentum hydrostatic pressure increasing of mobility of charge carriers in the n-type Si:Au samples is connected with the relaxation effects and increasing the temperature of the sample at a pressure reduces the growth of mobility of the charge carriers by relaxation effect.

#### 4. CONCLUSION

Thus, when the pulse pressure is a redistribution of the samples are primary spatial inhomogeneities of impurities so that the electron-hole relaxation after stress relief will already take place in the new potential relief. Moreover, for both types of conductivities of the carrier mobility decreases, and in both cases this reduction only occurs due to changes in temperature.

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## HOW GRAMMAR COMMUNICATIVE METHOD WORKS IN ESP SETTING

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### ABSTRACT

*Effective language teaching methods have been becoming the hot issues of many linguists and the researchers in the field for many years and still now; this controversial matter is getting huge interest of teachers and methodologists with its importance and need in the sphere. Unlike most ESL( English second language) or EFL (English foreign language) learners ESP( English for Specific Purpose) ones have less language learning abilities or desires as they just acquire it for the demand of their work, study or getting a good promotion by the companies. In other word, they are extrinsically motivated who are stimulated by others mostly. So, in this case learners need much more communicative methods even in learning grammar like Grammar Communicative Method which this article is going to emphasize in its content. Below, it is analyzed and discussed that how this method is resulting in the target branch and why it should be chosen as an effective tool and survey results will be added.*

**KEY WORDS:** Grammar, grammar communicative method, grammar in context,

### INTRODUCTION

It is scientifically proved that, grammar is the base of any kind of language. Volunteers, who are eager to learn it, have to acquire its grammar in order to be fluent and accurate with it. During the years, Grammar has been thought via various ways but considered by learners as very dull and sometimes so tricky and challenging. Even though a number of learners are rather good at grammar rules word by word, they have enough problems to use the language itself in real settings. Therefore, the sphere needs modern approaches to motivate and stimulate learners to be active during the language learning acquisition. That is the matter which Grammar Communicative Method is going to assume. Moreover, this approach tries to provide wide interaction of learners' participation.

### MATERIALS AND METHODS

*What is Grammar communicative method?*

According to the article, Teachers' Corner "Teaching grammar communicatively" means that grammar instruction and lessons are not limited to introducing a grammar item or items, having learners do controlled exercises and then later assessing students on their ability to understand grammar items. It means designing grammar lessons to include a communicative task or activity. A

communicative grammar lesson might start in very much the same way as a traditional approach with presentation of a grammar item and examples, followed by controlled exercises to practice the grammar item. Furthermore, communicative methods can be great simulation for learners to speak in the target language.

Nowadays, creating effective language teaching atmosphere is the demand of current language teaching system and learners need as well. That is the reason why I am dealing with the theme in my article. I have English lessons with Natural science faculty students who consider learning English is so difficult and boring. After having some lessons, I found out that during the years they had been thought by Grammar translation method which pays attention to form a lot (teaching grammar rules, doing exercises). Consequently, I have decided to change my style of teaching and started to look for modern methods to conduct successful grammar lessons. One of them is Teaching grammar communicatively. Languages are also learned for communicating with owners of the target language. But, I noticed that even though my learners know grammar rules well, do exercises for five mark, they are not able to use the language in action at all. Having this in mind, I feel that my students need to be thought more effective methods.

Now, let's look through what other scientists say and state about this method and share with their



findings. According to Nassaji 's research grammar can be learned well enough through communication methods rather than mechanical presentation of grammatical forms. The communicative approaches have disregarded the explicit use of grammar rules in teaching grammar. This has led to a shift from form-focused instruction to meaning-focused instruction (Nassaji&Fotos, 2011). The exclusive focus on grammar instruction has been found to be inadequate to develop learners' ability to perform in oral communication.

#### Teaching grammar in context

To the matter Teachers' Corner authors prove their ideas like this" Teaching grammar in context means that providing a context is a part of the lesson, but it does not mean that it is the whole lesson. Depending on your students' level of proficiency, a full or partial explanation of the grammar form and a certain amount of practice with the target grammar item will still be needed.

Teaching in context does not mean that you have to use an authentic text (any text, spoken or written, not made for the purpose of language teaching or learning). When teaching grammar in context, it's important to consider students' proficiency levels as well as their previous experience with the target grammar item. Higher-level students can often benefit from using authentic texts, but lower-proficiency students will often need a text specifically prepared for the purpose of language learning. Many great examples of grammar in context come from textbooks"

From my own experience, I also tried to use grammar in context a lot. As a result, my learners felt considerable development in their language learning acquisition. How? Let's look through one example from my lessons which already done with students. One of my lessons was "Conditional type 2".

After beginning the lesson First of all, I showed a short video sample which was about two friends who did fight with each other because of love a girl and as a result were in prison. They were asked try to answer to the following questions:

- What would you do if you were Edison?
- What would you do if you were George?
- Who would you choose if you were Pamela (for girls)?
- What solution would you give if you were author of the story and so forth?

Students began to answer automatically with using "would" and "if" (I were him, I would... ) unconsciously in their speech. Then, later I explained the rule and usage of Conditional type 2. At the end, students' participation and interaction stated that the method worked well with this sort of learners for its huge positive result.

## CONCLUSION

To conclude briefly, we have discussed how grammar communicative method can be useful for ESP learners in this article and tried to answer to the question why currently it is being emphasized by most language teachers all over the world.

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# THE HARMONY OF SCIENTIFIC FICTION AND MAGICAL REALISM

(In the example of creativity of Mikhail Bulgakov and Gabriel Marquez)

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## ANNOTATION

*Despite its scale in terms of application, magical realism has reached its literal peak in the direction of fiction. The magical and fantastic elements are absorbed into the work, into the psyche of the heroes of the work, the frequent reference to the symbols, the presence of elements of folklore and their impact on human passions.*

**KEYWORDS:** *fiction, magical realism, science fiction, heroic psyche, scope of meaning, "spiritual geometry", belief.*

## INTRODUCTION

It is no secret that the twentieth century was rich in various socio-political upheavals and changes. Under such conditions, when the creator is forbidden or restricted from pouring out the existing truth about the society, magical realism, which is considered a wave of realism, is emerged. This phenomenon, which has become a general aesthetic concept today, was first mentioned by the German critic Franz Roch (1890-1965) under the same name. In 1925, a well-known art critic described a group of young avant-garde artists as "magical realists". Because the main image object in the work of these artists was the changing reality.

Soon, the meaning of the term "magical realism" increased. Now it has not only become a term to describe the current of post-expressionism in German painting, but has also penetrated other forms of art. Already in 1927, the Italian writer and literary critic Massimo Bontempelli (1878-1960) began to apply "magical realism" to fiction works, and famous film directors as Akira Kurosava and Emir Kustiritsa have made significant contributions to the development of cinematography with such films as "Dreams" and "Arizona Dream".

Despite its scale of application, magical realism has reached its literal peak in the direction of fiction.

The magical and fantastic elements are absorbed into the work, the psyche of the protagonists, frequent reference to symbols, the presence of elements of folklore, detailed coverage of human passions, the open final of the work allows the

reader to assess what is true and appropriate in the construction of fantasy or ordinary world, the physical being is in conflict with the mystical being, the occurrence of events from an alternative perspective, i.e., the narrator's voice from the third person transfers to the first person, the exchange of cause and effect ...

These features bring success to many writers as to the great Russian writer Mikhail Bulgakov in Europe, to Serbian writer Goran Petrovich, and in Latin America to Cuban writer Alexo Carpenter, Guatemalan Miguel Angel Asturias, to Julio Cortasar from Argentina, Mexican Juan Rulfo, Carlos Fuentes, and of course to Gabriel Garcia Marquez from Columbia. In Bontempelli's language, their work reflects that human world consists of two realities - internal and external reality, in which the "real world" and the "imaginary world" are intertwined. It was impossible to "draw" the image of the twin worlds of this twentieth century without the creation of new myths and legends (more precisely, the artistic reworking of old legends) without the image of mysterious riddles, adventures.

Such examples of literature, which play an important role in revealing the idea of the work of events related to magic and science fiction, have a significant place in the work of the great writer Mikhail Bulgakov. The story of "The Fatal Eggs", which depicts the real picture of Soviet Russia in the 1920s, is noteworthy in this regard.

It was not long before power passed into the hands of the Bolsheviks, who claimed to change the world completely...



Famine on the one hand, political oppression, violence on the other...

So, it is a bitter picture of real life. On one side, the common people are preoccupied with their own life worries, and on the other one, Professor Persikov, who, in experimentation with eggs imported from abroad, discovers a red ray that accelerates growth in living organisms. Coincidentally, these eggs were exchanged to ordinary eggs and were brought to a state farm in the Smolensk province.

Rock, a civil servant in order to provide the whole country with chicken (meat), opened the eggs in an unnatural way using the same ray that Persikov invented.

As a result, not the chickens, but giant and terrifying snakes, ostriches, and crocodiles burst from the eggs and amaze people and swallow them without licking. The news of this tragedy spread like wildfire, disrupting normal life in Moscow. Even the fighting army was powerless to fight and to destroy with the terrible mutants...

Only the early frosts put an end to the vicious movement and proliferation of cold tropical creatures. For sure it is interesting to the readers to know what Bulgakov's purpose in depicting this fantastic event was.

If we pay close attention to history, we will see that the path of disasters and catastrophes that covered the Russian land was blocked by frost, or rather, the forces of nature. It is true that this factor played a significant role in repelling both the invasion of Napoleon in 1812 and Hitler (hitlerites) during World War II.

"The Fatal Eggs" is a magical version of similar events. This means that Mother Nature corrects the mistakes made by human beings unknowingly. The Creator Himself removes the pain and suffering of His servants.

But it's not the main contribution that comes out of the story. The point is that the ideas that emerged in the West against human freedom, as Marxist, communist worldview - were tested in practice in the East and in Russia.

The "export" of Marxism to Russia, which lags far behind the West in the development, is skillfully embodied by the great writer through the image of the fatal eggs brought from abroad.

It is not a secret that even today, there are attempts transfer artificial "democracy" to various parts of the world. And as result in new hotspots are appearing on the Earth. From this point of view, it is noteworthy that Bulgakov, who, like all great word artists, had the ability to predict the reality of today's XXI century, living in the first half of the last century. It is worth to mention about it.

The fact that this awareness is expressed through Slavonic mythology and fiction, and the symbolic image of "eggs" allows us to understand a number of

features of magical realism. Because in the conditions of the authoritarian dictatorship, the revelation of the realities of life could be achieved only through symbolism. In another of his work, "Heart of a dog", the intricacies of Soviet society were exposed through the veil of magic and fiction. Scientist Preobrazhensky transplanted a human brain into a dog, and the animal became a half-dog, later called Sharikov, and a half-man became a conscious but sharp creature, resulting in all manner of chaos. This image, created with great irony, is in fact a symbol of the "genius" of the Bolsheviks. At the same time, it is clear from this story that various "zombies and mutants" could emerge as a result of "scientific advances" that pose a particular threat to the modern world - various animals through artificial insemination, and even attempts to create a human clone.

Imagine that Sharikovs will enter our lives, that they will become a toy in the hands of various political forces that seek to deceive, like the excursions described in Chingiz Aitmatov's "Cassandra's Brand", and will serve in the way of destructive ideas! Yes, Sharikovs, fatal eggs are still an internal reality (magic). But tomorrow they may become an external reality!

In general, the experience of magical realism confirms that the forces of the unseen will once again return to the places where magic and miracles have been abandoned, belief in the Creator, His power, faith. Only in this case it is observed that the magical forces of a negative appearance fall into the environment of the overturn and its aura. Among them, there is no doubt that the "Professor Woland" in the novel "The Master and Margarita" and his companions such as Koroviev, Azazello, Behemoth have a special place. These magical heroes came to the land of atheists and suddenly turned everything upside down - predicting that one person would fall under the tram and the other would go to the insane asylum by staging a show he had shown the whole of Moscow how low the people and that society in general were.

It should be noted that although Woland is a devil, he is not a negative character. Even the devil, who is often understood as a creature in opposition to the Creator, is astonished by the words of the "scholar" Berlioz, who worked in Massolit, that many people in this country disbelieved in God:"... that's why he looked around the houses in fear. He was worried about seeing one atheist in each window."

This episode itself is a physical example of a timeless mystical being with Woland, a soulless, dry body in the present (i.e., at the time of the work's events) (as mentioned above, this view of contrast is one of the hallmarks of magical realism).



But Woland was able to find people within this unbelieving community who had not lost their image of humanity. These were the master and his lover Margarita, who had been imprisoned by idiots like the "literary" Latunisky for writing a novel about Pontius Pilate.

In general, there are a number of episodes in this novel full of mysticism and magic, the transformation of one of the protagonists Margarita into a witch from grief and misery, flying with a brush like a lizard flying in a broom in Russian mythology, passing from the real world to the imaginary world. And similar bizarre adventures are signs of realism in the magic shell.

Throughout the work, Bulgakov's "Master" and Margarita, through Woland, gradually "bring" them closer to the magical world, in other words, "bring them back" to the real spiritual world, once again demonstrates the magical power of Magrealism. Bontempelli, a theorist of magical realism, did not say in vain that the main task of modern art is to create a kind of "spiritual geometry" and return man to his spiritual homeland.

The protagonists of Latin American Magrealist literature are people with a very strong passion as animal beings, prone to animalistic tendencies

(For this, Colonel Aureliano Buendiani, who had seventeen sons out of seventeen women, described the attitude of the volcanoist Jose Arcadio to his step-sister Rebecca, The four men who perished because of the miraculous beauty of the beautiful Remedios, or a pig-tailed child Suffice it to recall Aureliano Amaranta Ursula, the drunkard who gave birth to the last generation.

This is one of the reasons why the imperfect imagination of all Macondonians, who are enslaved to passions, is unable to comprehend such ideas. As it has already been pointed out, only Aureliano was able to do that. But it was too late ... Santiago Nasari, who was stabbed in the body by the Vicario brothers in The Tale of the Murder, understood the essence and consequences of these events - ignorance and drowsiness. But time has already passed ...

In fact, such an interpretation of loneliness, of limitation, is unique to Latin American prose. Because, unlike European prose, in the novels of this region, mythological thinking has gained vitality and modernity. Its expression is not just an "appeal to myth". In The Hundred Years of Solitude, Melchizedek died and was resurrected several times. The ghost of Prudeieno Aguilar, who was stabbed to death by Jose Arcadio Buendia, did not give peace to him and his wife, Beautiful Remedios, described as "not a woman of this world," a girl who is always striving for freedom brings death to men and then flies to the sky and disappears into a bottomless

space, eventually the storm sweeps Macondo off the face of the Earth.

The mythological worldview of this chain of episodes is a clear evidence of the fact that it takes place in everyday life in Latin American prose

If in European magrealism it is reflected as an external, dry realism, separate and even alien world (in "Master and Margarita" most characters, in general, the whole environment does not believe in the world of Woland, Pontius Pilates, in other words, magical reality is not for everyday reality) , the opposite of that behind the ocean.

The reason for this discrepancy is that the author emphasizes the Caribbean color, which is described in this novel in vivid detail. In particular, for Marquez, the region is a place of "fantastic reality" where all sorts of strange things can happen.

The reason for the uniqueness of Latin American magrealism is also indicated by the following thoughts of the Colombian word artist:

"I believe in real life magic. I think Carpenter (referring to Alexo Carpenter, the Cuban writer who first used the term "lo real maraviloso" – "magical reality" – from author.) called a miracle as "magicalrealism" that took place in reality and in Latin America, especially in the Caribbean. It's magical.

It is clear from this statement that the writer himself lives in a world of magic. In particular, in response to the unbelieving Soviet society, Marquez Bulgakov, who created a gruesome and gloomy image of a town in the royal work with the help of magical paints and realistic imagery, brought his lonely Macondos to the geography of world literature. And in doing so, he demonstrated to everyone the miraculous power of Latin American magrealism.

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## ABOUT INTERPRETATIONS OF THE CONCEPT OF CRITICAL THINKING

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### ABSTRACT

*The concept of "critical thinking" is not a discovery of recent years. This concept has been studied and researched by many foreign and domestic scientists. This article discusses the interpretations of the concept of "critical thinking" provided by current scholars. .*

**KEYWORDS:** *in the field of pedagogy, psychology, philosophy, "critical thinking", "analytical thinking", "creative thinking", different views, opinions, negative situation, result, process, directions, goals, innovative technologies.*

### INTRODUCTION

The study of critical thinking as the basis of educational technologies of the XXI century is recognized as one of the priorities in the field of pedagogy, psychology, philosophy.

There are different views, interpretations and opinions about the concept of "critical thinking". In some studies, this concept is equated with a negative situation because it requires evaluation, in other studies, this concept is interpreted as "critical thinking", "analytical thinking", "creative thinking".

Although the term "critical thinking" has been investigated by psychologists L.S. Vygotskiy [1], J. Piaget [2], there are now ideas that interpret critical thinking based on everyday life perceptions as a negative thing, a rejection, a tendency to put everything in opposition. However, M.V. Clarin [3] studies have shown that the development of critical thinking has become one of the main goals of education in the United States since the 1980s and in European countries since the 1990s. E. Glasser has developed a critical thinking program that includes tests to think, draw conclusions, recognize assumptions, and evaluate the conclusion and validity of evidence. Critical thinking, according to E. Glasser, is the ability to assess the validity of judgments, the description of actions and the degree of their reasonableness (reasonable), to find the limits of application.

### MATERIALS AND METHODS

Critical thinking is a process, not just a result, but a constant effort to "determine assumptions".

"When we try to understand someone's idea, our critical thinking becomes passive: we only perceive ideas created by someone before us. Critical thinking only begins when new, already understood ideas are tested, evaluated, and developed. In that case, you never reach the final stage of critical thinking. This is a lack of confidence in the general truth." [4] The result of critical thinking can be a new approach to decision-making, perspective, suggestion, and the solution of an important problem. In addition, not only old problems but also new problems can be solved using critical thinking.

Critical thinking is interpreted by Richard Paul and Linda Elder of the California Center for Critical Thinking as "the ability to think in a way that recognizes the strengths and weaknesses of thinking and consequently the ability to shape thinking in a new way" [5]. "Such thinking is the ability to comprehend the basic elements of thinking (purpose, question, information, conjecture, interpretation, understanding, perspective) and evaluate these elements using intellectual criteria and standards: (acceptability, accuracy, relevance, depth, breadth, and logic). includes".

"Critical thinking," writes C. Wade, "is the ability and desire to make an objective assessment based on well-proven reasons. Such an ability is to see shortcomings in the fundamentals and to resist those who do not have clear evidence. In any case, critical thinking is not just negative thinking, but enhances the ability to be creative and constructive to create possible explanations for findings, to think



about additions, to add new knowledge to a wide range of social and personal problems.”. [6]

Emotions, creative imagination, value relationships are an integral part of critical thinking [6]. Clearly, critical thinking involves factors that lead the thinking process to the conclusions we make or are taken into account in decision making. It covers factors such as balance, logic, attention and control. Critical thinkers develop the ability to understand their own thought process.

The definition of critical thinking is also contained in an abstract prepared by Michael Skriften and Richard Paul for the National Council for Critical Thinking Teaching (USA): “Critical thinking is an intellectually disciplined process of active, skillful application of analysis, generalization, and evaluation. Review (literature) , constitutes the guiding principle of the views and behaviors accumulated or acquired as a result of experience, thinking, explanation or communication. ”

The American National Council on Critical Thinking describes critical thinking as an intellectual process, understanding, applying principles and concepts, interpreting information gained through experience, reflection, or communication as a guide to action or belief. Critical thinking is rational, reflective thinking that seeks to decide what to believe or how to act. The American National Council for Critical Thinking teaches critical thinking to universal requirements (standards) of intellectual ability such as accuracy, validity, relevance, depth, objectivity, logic, and objectivity. thinks he has to answer. The mechanism of critical thinking includes mental operations that determine the process of thinking and proving: setting goals, identifying problems, making hypotheses, presenting evidence, substantiating them, predicting consequences, accepting or rejecting an alternative point of view. Critical thinking means evaluation, reflective thinking.

It is difficult to draw a clear line between critical and creative thinking. We can say that critical thinking is the starting point for the development of creative thinking, moreover, critical and creative thinking develops in close interdependence.

In 1990, a two-year Delphi [8] project led by the American Philosophical Association was completed, resulting in a clear definition of critical thinking. According to the Delphi project, critical thinking is a goal-oriented, self-controlling decision, a human intellectual process.

Critical thinking is necessary as a research tool. It is therefore a source of education and a powerful source in everyone’s life and community life. According to Delphi, a critical thinker is a person who is curious, knowledgeable, persuasive, open-minded, flexible, fair-minded, ready to consider

harmless, wise decision-makers, diligent in finding the information he needs, eager to research, and determined to achieve results. Therefore, the goal of teaching critical thinking is to approach perfection, the ideal. The educational process combines the development of critical thinking skills and attitudes that are the foundation of a democratic society. The team of experts found that no one can have all the skills and competencies that are the basis of critical thinking.

Critical thinking involves the structure of skills and tendencies. It consists of the following cognitive skills: interpretation, analysis, evaluation, conclusion, explanation, and self-management that define its essence. Experts do not consider critical thinking to be a separate topic for study. Critical thinking is applied in all areas of life and education. In addition to reading and writing, guidelines for the application of critical thinking can be used in programs enriched with specific science content or as a basis for the development of personal critical thinking. The analysis of critical thinking skills is based on the following: critical thinking skills go beyond the boundaries of a particular subject, successful teaching requires certain knowledge, and includes specific methods and techniques of decision making.

## RESULTS AND DISCUSSIONS

P. Facion’s definition is of particular importance: critical thinking is a self-regulating, goal-oriented, regulated thought, the results of which are interpretation, analysis, evaluation, explanation of clear, conceptual, methodological, criteria, and structural factors on which it is based. [8]

By putting all the existing approaches to the problem of critical thinking into a specific system, three directions can be distinguished in its interpretation:

In the first direction, criticality is interpreted as an individual trait that affects the nature of mental activity. L.S. Vygotskiy, Yu.A. Samarin, B.M. Teplov argues that the criticality of thinking influences the course of mental processes as a generalization of human experience. The study of mental qualities as individual parameters of mental activity A.I. Conducted in Lipkina's research. According to the author's approach, a person's mental activity is determined not only by the objective content, but also by certain parameters that characterize the stable factors that regulate the subject's thinking process.

In the second direction, critical thinking is interpreted as a constitutional education of the effectiveness of external influences. In the study of B.V. Zegarnik, critical thinking is considered as a means of regulating behavior, an indicator of the



safety of the personal motivational sphere [9, p. 82]. He believed that the critique of consciousness is a manifestation of the control function of thinking, which consists in the ability of an individual to examine and correct his actions in accordance with objective conditions.

In the third direction, critical thinking is presented as an ability, a skill of mental activity. Critical thinking is “the ability to carefully test all the evidence for and against emerging hypotheses and to test these hypotheses comprehensively” [10, 78], “the ability not to succumb to the persuasive influence of other people’s opinions ...” [11; Page 177]; the ability to identify the pros and cons of the work and formulate suggestions for correcting errors [p. 12.8].

Despite the diversity of interpretations of critical thinking, its goals, structure, strategy, functions, and conditions of development are not clearly and completely defined. Nevertheless, the scientific research of the above researchers highlights the following goals of critical thinking:

- 1) Studying the problem of using the situation, information or hypothesis;
- 2) evaluating of the sufficiency and effectiveness of the stages and results of mental activity;
- 3) Determine the validity of possible options;
- 4) Identifying of advantages, identification and correction of shortcomings;
- 5) Knowing of conflicts and errors that arise in the course of activities and their disclosure and elimination;
- 6) Selection of additional materials to refute or confirm the hypotheses;
- 7) Controlling over the activities carried out;
- 8) Finding alternatives to problem solving;
- 9) Elimination of stereotypes of common thinking, generally accepted views;
- 10) Encouraging the promotion of new ideas;
- 11) Identifying of a new information search area to solve the problem faster and more efficiently;
- 12) Development of organizational and communication skills of the person;
- 13) Search for the most effective ways to acquire knowledge and solve problems;
- 14) Verification of the correctness, validity of the verdicts, ie approach to the truth;

Based on incomplete interpretations of critical thinking technology, it should be noted that the application of such technology provides an opportunity to perform a number of educational, developmental and pedagogical tasks. Such tasks include: “critical thinking” [13], solving complex problems based on information analysis, analyzing alternative ideas, identifying cause-and-effect relationships, comparing and drawing conclusions, and engaging in communication with others.

## CONCLUSION

Critical thinking is the ability to logically analyze information, make informed judgments and decisions, and apply the results obtained to standard and non-standard situations and problems.

Critical thinking forms new types of thinking, aimed at a more complete and in-depth study of topics, the use of which allows to clarify situations with a high level of uncertainty, creates a basis for new types of personal activities.

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## **THE RESEARCH OF EARTHWORMS' FOOD PREFERENCES IN RELATION TO SUBSTRATES FROM THE SOLID WASTE**

### **ИССЛЕДОВАНИЕ ПИЩЕВОГО ПРЕДПОЧТЕНИЯ ДОЖДЕВЫХ ЧЕРВЕЙ ПО ОТНОШЕНИЮ К СУБСТРАТАМ ИЗ ТВЕРДЫХ БЫТОВЫХ ОТХОДОВ**

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#### **Аннотация**

Приводятся экспериментальные данные о пищевом предпочтении-субстратой преференциации дождевых червей к компонентам в твердых бытовых отходов. Что служит повышению плодородия почв вермикомпостом, полученным путем ресурсосберегающей утилизацией твердых бытовых отходов, используя современный биотехнологический метод- культивацию дождевых компостных червей местных популяций.

**Ключевые слова:** дождевые черви, вермикомпостирование, твердые бытовые отходы (ТБО), пищеварение, желудочно-кишечный тракт, физиология, вермикомпост, плодородие почв, ресурсосберегающие биотехнологии, органическое земледелие.

#### **ANNOTATION**

Experimental data on the earthworms food preferences- substrate preferentation to the components in the solid waste. That will increase soil fertility by vermicompost which is obtained by environmentally safe recycling- utilization of municipal solid waste (MSW) using modern biotechnological method- cultivation earthworm of local populations.

**KEYWORDS:** earthworms, municipal solid waste (MSW), digestion, gastrointestinal tract, physiology, vermicomposting, vermicompost, soil fertility, environmentally safe recycling, organic biotechnology.

#### **DISCUSSION**

The problem of waste is one of the global environmental problems in the majority of both developed as well as developing countries. This problem is also relevant for Uzbekistan. [1]

Municipal solid waste - unusable food and household items or goods that already have lost consumer properties. [2]

Due to the presence of organic substances in the MSW they rot quickly resultng in formation of



various toxic gases (phenol, indole, skatole, mercaptan, hydrogen sulfide, ammonia, methane). Flushing precipitation, they pollute the waterways and groundwater seeping. Biogenic effects of MSW are expressed in the fact that food scraps attract insects, birds, rodents, and other large animals, whose corpses become a source of bacteria and viruses pathogenic fungi's.

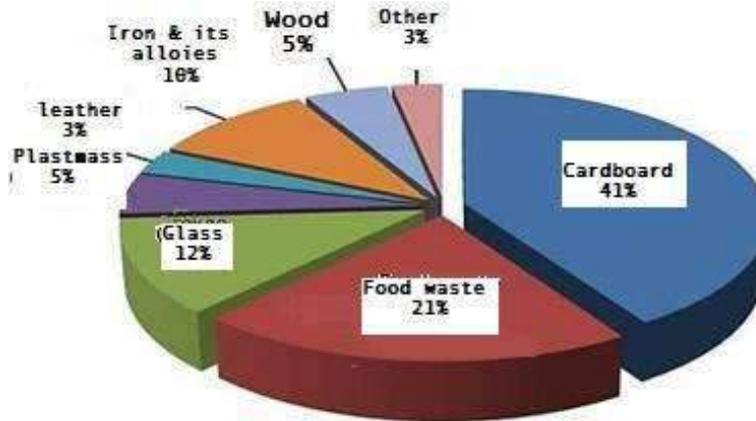
Moreover the waste is favorable for animals', microorganisms' breeding, whereas insects and birds become the carriers of dangerous diseases' agents, namely: typhoid fever, brucellosis, tuberculosis,

hepatitis, dysentery to long distances evoking possible epidemics outbreaks. .

Precipitation, solar radiation, heat, fire contribute to the flow of unpredictable physico-chemical and biochemical processes on MSW landfills, in the result new toxic chemicals and environmentally hazardous substances appear, presenting a threat to the human environment by ways of penetrating into the biosphere,.

It is estimated that the rate of household waste accumulation is 10 times higher the rate of all other types of waste.[4]

**The average percentage of components of MSW**



The composition of MSW cities includes the following components:

Cardboard (41%); Food waste (21%); Wood (5%); Leather, rubber (3%); textiles (5.4%) ; The artificial materials mostly, polyethylene (5.2%); Bones (1.1%); Metals (10%) ; Glass (12%); Stones, ceramics (0.8%); Other fractions (leaf litter, etc.) (9.7%).

The process of beneficial utilization of waste as well as the creation of secondary material resources on their basis has a special economic value. Also recycling of waste can eventually solve the problem of environmental safety.

This is achieved by building biofactories on processing and production of valuable materials for industry, agriculture which in its turn will lead to the reduction and total elimination of sites for their storage and bury. [4]

One solution to the problem may be the vermicomposting process. Vermicomposting - is environmentally safe recycling of different origin organic waste with the help of artificially recreated natural complex of heterotrophic organisms. These include meso-fauna, namely rain compost worms, and associated representatives of microscopic invertebrates and microbial communities. [2]

Vermicomposting allows people to:

- get disposed of organic human activity waste
- support and eventually improve soil fertility (due to entry of vermicomposts into it). [1]

**The methodology of the research.**

Identification of rain compost worms, collected by us in nature and the breeding of them have been conducted at National University of Uzbekistan named after M. Ulugbek, at Research Center "Ecobiotechnology" of department of Biology and Soil Science. The foundation of the experiments was based on the method of N.F. Protopopov (1998) to determine the degree of earthworms' substrate preferences [3].

This method has been however partially modified as to suit the local environmental factors and conditions. It is known that one of the main seasonal components of MSW of cities is the leaf



litter, which was selected as the subject of our research.

"Substrate preferendum" includes determining worms' substrates preferences as the source of food and the environment habitant (preferendum of humidity, pH environment, structure, physical properties, etc.), i.e. assessment is an integral number of preferendum.

In accordance with the method portions of substrates, different in quality, but of the same volume (e.g., 100 g), are packed in mesh bags with holes allowing the worms to move, are placed into vegetative vessels, segmented by radial symmetry. In the course the test substrates are placed at the edges of each segment, whereas the centre is occupied by the worms, (depending on the number and volume of

test substrates 10 - 30 copies). [3]. The number of worms accumulated by certain food types was counted in 12-16 hours, and according to them the highest percentage of the concentration and accumulation by the most preferred food in our study were the willow leaves.

Therefore we took other 8- species of leaf litter as 100% for our research. In fact the substrates of MSW were preliminarily pre-pretreated (fermented) by ways of direct soaking for 72 hours in normal water or in infusion of manure of small horned cattle before the experiments.[2]

**The results of the research.** Results from the studies are presented in the table below.

**Table**

**The number of earthworms fed by the total leaf litter in percentage relation to the value of their accumulation in willow (tal) leaves**

Type of the feed	Soaked in normal water	Soaked in infusion of manure
Willow (Tal)	100	100
Ash	72,3	79,6
Chestnut	71,6	79,4
Maple	66,7	73,2
Poplar	56,2	63,7
Lipa	32,8	48,1
Oak	11,2	17,8
Chinare (sycamore)	3,6	9,2

In experiments with MSW fractions of the city leaf ornamental trees in fall, there is a clear preference for the ones and indifference to other types of substrates presented by us in the table on the degree of reduction of worms' food preferences.

To summarize, the most preferred substrates were made from willow (tal) ash and chestnut leaves. In contrast the least preferred ones were considered to be the oak as well as plane leaves. (sycamore leaves).

To sum up, the data obtained in this series of experiments allow us to conclude that the rain compost worms have a need for nitrogen-containing organic substance, which can be vividly seen in the percentage increase of food pretreated with infusion of manure. Apparently, the pre-processing of the different types of substrates with infusion of small horned cattle manure has significantly increased not only the micro - fauna and micro -flora of substrates, but also enriched their nitrogenous substances, increasing the latter's food preferences accordingly.

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## FORMATION OF FOLK GAMES

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### ANNOTATION

*This article discusses the process of formation of folk games in the primitive period.*

**KEYWORDS:** elementary, folk games, labor, education.

### DISCUSSION

Folk games have a very ancient and rich history. Their roots go back to the primitive times in which humanity began to emerge. The genetic basis of folk games goes back to very ancient times as an integral part of primitive rituals and ceremonies, which are one of the most ancient elements of the thinking of our ancestors. Over time, games in such ceremonies lost their ritual character and became a simple spectacle element or means of entertainment. From time immemorial, primitive people have invented various games by imitating the state and behavior of various animals.

The hunting games that took place during this period were usually associated with totemistic and animistic views. Originally as an integral part of primitive ceremonies, it became a work of totemistic dance and play, and later a work of truthful play and spectacle. Therefore, the study of Uzbek folk dances opens up a wide range of opportunities to study the worldview of our ancestors who lived in ancient times. The games of animals and humans have long been of interest to educators and psychologists, but the psychological scientific work on the subject was only created by Groos in the late 19th century. Before Groos, the Italian scientist D. A. Kolotstsa tried to put children's games into one system. He sought to reveal the psychological and pedagogical significance of children's play. The psychological sections of the book shed light on the classification of games based on mental processes.

Our primitive ancestors lived on the basis of assimilating the blessings of nature in times when they were still unaware of the productive economy. For this reason, hunting and related games played an important role in their lives. Some sources state that the games were held before the hunt, while others state opinions about the games after the hunt. Pre-hunting games served as pre-hunting exercises, ie

checking the readiness for the hunt, mental and physical preparation for the hunt. The preparation was organized in the form of a serious, unique ceremony. In the course of these games, primitive people prepared to capture prey more easily. In the process, they prayed to God for the fruit of their future hunting.

Wearing a mask to approach the prey unnoticed or unafraid, they practiced the appearance of a beast, the behavior of the animals, and the making of sounds. In the course of such games, young people were also taught hunting techniques. For this reason, these games served as a kind of school of experience, on the one hand, helped to develop the skills of hunters, on the other hand, developed in them the mental ability. The first forms of games - fruit picking competitions, educational games, captains' fights, pantomime games and dances - began to take shape during the period of human training. When people start hunting, when their hunt ends effectively - they are full, if the hunt is fruitless, they are hungry and miserable. The hunters, returning from the hunt with the bait, rejoiced and tried to repeat the hunting process in the form of gestures, special actions, and games. As a result, there is a cultural event called "Hunting Games", which has an important place in history.

Evidence that hunting games also existed in the lives of primitive people in the Central Asian region can be traced back to the Paleolithic images depicted on the stones of Zarat Karamsoy in Sherabad; We can find it in murals and other archeological finds in the Saymalitosh caves in the Fergana Valley in the II-I millennium BC. They depict not only the worship of totems, but also the hunting process, post-hunting joy, animal masks, and hunter-gatherer games. When some of them are carefully studied, one can feel the festive elements in the happy and joyful appearance of the hunters.



We can assume that the post-hunt games were organized only if the hunt was successful. Because only the return from the hunt with the bait created an opportunity for joy, a feast. After each successful hunt, the tradition of such games began to form in our ancestors special ceremonies in a festive mood. In primitive society, the ritual of initiating young people into adults is common. The ceremony was held according to strict rules, and only physically strong, agile, resilient, well-armed and mentally active young people were included in the ranks of adults. Dozens of test conditions were performed, including various physical tests: starvation, skin peeling, tearing of the eardrum, tooth breakage, and tooth extraction. At the initiation, the adolescent undergoes tests such as grinding his teeth, piercing his body. Such trials harden young people and teach them to be courageous, to overcome failure and grief. Those who did not pass the specific "exam" remained in the group of children, despite their advanced age. They were considered members of the family, not society. It was the initiation ceremony that played an important role in the formation of the first sports in the history of mankind, such as wrestling, running, archery, javelin throwing. The collection and promotion of folk games is an important step towards the restoration of the ancient traditions of our ancestors in the harmonious upbringing of the younger generation. There are a lot of children's games involving the image of animals. In the game "Wolf has come", children pretend to be drinking water and suddenly a wolf is thrown at them. The wolf takes whatever child it catches. If she catches all the children, she becomes a mother, and the child who is a mother becomes a wolf and takes turns. In the game, the verdicts that the human character turns into a wolf character, that they are intertwined, are in fact totemistic notions about the wolf, the belief that when a person dies, his soul returns to the animal he considered a totem. It can be observed that some games are named after cult-listed animals. In them, various animals that are considered cult are interpreted as the main characters. Children lovingly play by imitating him.

Examples of such games are "Bear wrestler", "Bear wrestler in the garden", "Catch the snake by the tail", "Birds", "Lame crane", "Camel and bush". In these games, children try to create the image of cult animals. The game served not only as a lesson of agility, a lesson of courage, but also as a school for educating people of their time. Most of the games about animals are action games in which the idea of fighting for life is primary. Traces of the desire to know the forces of nature or the motives of seeking measures to combat them are well preserved in folk games. For example, in the games of the series "My Geese" the motive is to win over animals that harm animals. Such games emerged during the hunting phase of social development, in which the

wolf is interpreted not as a totem animal, but as an enemy of the breeder, a wild animal. At the same time, such games take on a figurative meaning. Although the main event in this game takes place between a wolf and a goose, in fact, the butcher wolf is a generalized image of savages and tyrants, and the goose is a generalized image of innocent, simple, helpless people. From the earliest times in human life began to form games and dances, along with labor practices related to harvesting, hunting, animal husbandry, agriculture. Different games emerge based on conscious work and experience. In turn, these games play an important role in the development of labor, as well as in human development. Because the games provided an opportunity to make effective use of the experience of others, advanced achievements, the example of the elderly, the heritage of generations.

Folk games have been combined with entertaining habits. Like all traditions, customs and games are transformed and revived to a certain extent. Games are more about childhood. However, watching, entertaining parties are more common among adults, in fact they are also of playful importance. Games have also served as a preparation for life, no matter what form, content, or detail they are based on. Hence, games are shaped as a natural and historical need of the people; The life of ancestors is an important factor that reflects the labor, experience, struggle, achievements, the most ancient forms of human culture, the source of many spiritual spheres, the means of education that forms a healthy generation and the physical, mental and intellectual development of our contemporaries.

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# AXIOLOGICAL CONTENT AND UNIVERSAL SIGNIFICANCE OF THE PRINCIPLES OF DEVELOPMENT OF GLOBAL ECOLOGY

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## ABSTRACT

*The article is devoted to the analysis of the problems of modernization and transformation of universal spiritual and moral values of modern environmental education in the context of globalization of social relations. According to the author, the values of global eco-ethics are based on universal moral and legal norms, modern pedagogical and didactic principles, the use of new progressive pedagogical and didactic technologies in the transformation, the functional integration of institutions responsible for informatization of society. The article reveals the prerequisites for the transformation of the individual's ecological culture; the content of ethical principles' universals for rethinking the ecological culture of the individual is established; on the basis of the results of the study the structure and content of axiological, cognitive, procedural, orientation components of the innovative model of individual's ecological culture is justified and the practical importance in the implementation of ethical principles' universals of the model is proved.*

**KEYWORDS:** *environmental education, environmental education, environmental ethics, global eco-ethics, environmental axiology, global civilization.*

## 1. INTRODUCTION

The peculiarity of the present historical period is that the ecological situation is deteriorating on a global scale and is in harmony with other global problems. This, rightly, confuses and endangers the world community. The scale of these processes remains one of the main conditions for preserving the future of global civilization - the elimination of the causes of further expansion, socio-ecological consequences.

Therefore, the threat of globalization and exacerbation of the ecological crisis threatens the prospects of civilization, the creation of effective adequate methods and tools to address this threat, differential approach to the problem and the development of alternative conceptual doctrines, strategies and tactics. However, on the one hand, the discreteness and fragmentation of efforts to prevent the escalation of environmental disasters caused by anthropo-technogenic impact on nature, on the other hand, the lack of theoretical-methodological and legal-legal, spiritual-ethical and ideological-ideological foundations, functional fragmentation of

the institutional system and declarative nature has not yet yielded the expected results.

It is known that at any stage of the historical development of mankind, the establishment of the education system on the basis of ecological axiological values determines its humanistic-democratic content and demonstrates its essence. However, the axiological content of eccentric views requires, first of all, the ecologicalization of the system of forms of social consciousness in general, and of the moral phenomenon in particular. This cannot be done without directing the educational process to the global environmental goal and integrating its various areas.

## 2. PART

Indeed, the global environmentally sustainable development strategy requires, on the one hand, the integration of state and civic institutions responsible for ensuring the continuity of environmental education, and, on the other hand, the continuous improvement of its methods and "technology". Because the differentiation and specialization of educational directions in the prevention of anti-



ecological deviant behavior in society, integrative complex-systematic, optimal combination of its horizontal and vertical directions, serves to form a holistic ecological worldview, strengthen the value status of global eco-ethics.

### 3. METHODOLOGY

Universal-global character of the value status of the moral attitude to nature - (ontological basis), axiological content (epistemological basis) and social essence (social basis) does not exclude its individual-mental features. On the contrary, the socio-ecological space concretizes in the context of the historical-ecological epoch. That is, the axiological-functional analysis of the protection of the natural environment shows both its individuality and generality in the status of its moral value in the following areas, in particular:

- 1) The main objective condition for the existence of living organisms on the planet Earth - the value of the ecological balance of the biosphere;
- 2) Human economic activity, use of natural resources for life - eco-economic value;
- 3) Biodiversity and preservation of nature's potential for natural regeneration - the value of nature's sustainable development;
- 4) The existence of nature as a source of theoretical knowledge and science as an experimental "workshop" - epistemological and PR axiological value;
- 5) Aesthetic-emotional and spiritual-spiritual enjoyment of man from the beauty of nature - eudemonistic and hedonistic value;
- 6) Deification and belief in the origin, elements and phenomena of nature - the theological value;
- 7) The formation of skills and abilities in the field of nature protection in the process of continuous education - a separate analysis in the areas of pedagogical and dialectical value, has important theoretical, methodological and practical significance.

However, even the integrative nature of these values does not allow to completely eliminate the problems that arise in the relationship between "nature-society-man". The main task here is to justify which value is the dominant priority when. Because in the above system of values, a certain value can play the role of the main determinant, depending on the specificity of the environmental goal and need, the need (in a certain historical time, in the socio-ecological space.

It led to increases in our population size, our capacity for consuming and depleting environmental resources, and our geographical mobility. It also changed our understanding of the links between human health and the environment, ecological relationships, and human origins and uniqueness. In

North America, for example, thinkers such as Henry David Thoreau, John Muir, Theodore Roosevelt, and Gifford Pinchot began to write of the need for restraint in our use and treatment of nature as it became clear that Earth was not in fact a boundless resource. These early environmental sentiments were amplified in the period following World War II by a number of factors ranging from the potential for nuclear environmental destruction to images of a finite Earth from space, the emergence of modern ecology (and the publication of Aldo Leopold's *A Sand County Almanac*), and accumulating evidence of the detrimental ecological and human health effects of many of the rapidly proliferating pesticides and chemicals (e.g., as described in Rachel Carson's *Silent Spring*). By the late 1960s and early 1970s, there was a robust environmental movement that was pushing for, and often succeeding in establishing, conservationist, preservationist, and pollution prevention policies and regulations. Early environmental ethicists were interested in identifying and assessing possible conceptual and value underpinnings of this environmental awakening. They were also interested in whether traditional evaluative and normative frameworks were adequate for characterizing and providing guidance regarding society's scientifically and technologically transformed relationship with the natural environment. As a result, many (e.g., Richard Routley and Holmes Rolston, III) advocated for and began to develop new ethical concepts, norms, and principles for our new ecological situation. They also began reconsidering the moral status of nonhumans, exploring the possibility of human-independent values in nature, and developing ethics capable of handling nonlocal, non-immediate, impersonal collective action problems. These features are characteristic of many environmental problems, such as global warming and pollution, but were not much addressed within Western ethical traditions that focused instead on individual, personal, immediate, and interpersonal interactions and relationships. Not all early environmental ethicists agreed that a new ethical or conceptual framework was needed. Some (e.g., John Passmore) argued that traditional ethical frameworks could be adequately extended or modified. However, there was consensus that, at a minimum, the conception of nature as a boundless resource for human use needed revision, and that a full accounting of environmental values, as well as sorting out what those values imply for how we should live, was required.<sup>1</sup>

<sup>1</sup> Environmental Ethics, Overview R Sandler, Northeastern University, Boston, MA, USA <sup>a</sup> 2012 Elsevier Inc. All rights reserved.



The basic principles and responsibilities of adherence to global eco-ethical norms are reflected in the following axiological values, namely:

1. The symbiosis of universal ecological moral norms is a holistic system, which, although it consists of a synthesis of national ecological moral values, is essentially a common goal and theoretical and methodological basis for their development.

2. Although everyone has mastered nature at the individual level in their socio-economic activities, they must understand their responsibility for their actions, understanding the impact of its consequences on the state of the global ecological environment, the ecological landscape of the world.

3. The need to identify environmental problems that are likely to arise in the future, to predict the ways and means of solving them, arises from the needs of generations and is in line with their goals and interests.

3. Recognition of the complexity of the laws of the system "Nature-Society-Man", the alternatives of directions of knowledge, the basis and paradigms of pluralism of environmental doctrines determine its status as a global moral axiological value.

4. The axiological function of global ethics in the protection of the planetary natural environment: the collection, generalization, selection and transformation of information is a key principle in the strategy of global sustainable development and the preservation of civilization.

In general, the axiological role of these global ecological principles and requirements, the greening of the activities of specific human and economic entities is important in increasing the effectiveness of spiritual mechanisms.

We see the axiomatic reality that environmental education in secondary schools is based on these rules of global environmental ethics. In this regard (How to study ecology), I.T. Suravegina<sup>2</sup> commented on ".development of students' understanding of personal responsibility in the formation of ecological worldview." [6], the synergistic importance and consequences for everyone 's efforts in the macro - social process, even if the individual' s environmental responsibility is in line with the principles of global environmental ethics g showed that most did not cover global eco-ethics issues.

The study of the function of forming the axiological base of global environmental ethics in the system of educational institutions in two directions is of great epistemological and PR axiological significance. That is, according to the Russian

scientist A.D. Ursul,<sup>3</sup> Eco axiology should be considered in relation to man and the bioenvironmental. The main issue is the development of a socio-natural system capable of resolving the system of environmental conflicts that is manifesting itself today. Because only modern education aimed at the formation of an ecological "Responsible Man" can claim to create a system of spiritual views within the framework of practical strategies of global ethics.

Therefore, the formation of eco-ethical values in any modern educational model is on the agenda as the main task of ecological axiology. This can be done only through the integration of the activities of institutions responsible for continuous environmental education, rationally organized and managed in accordance with the scientific pedagogical and didactic principles of mankind.

Indeed, in order to give young people a holistic view of the "nature-society-human" relationship: the objective conditions and subjective factors of the formation of moral values that ensure the ecological security of human and living organisms, economic activity, the future of civilization, interdisciplinary complex system, an integrated approach, so far, is necessary to form an alternative - universal way (i.e., to create an axiological basis) movement.

#### 4. CONCLUSION

The results of the study confirm the theoretical and practical significance of the research problem as a necessary condition for clarifying the ethical principles of human ecological culture in the current global crisis circumstances. The search for new ideas of civilization's way out of the growing ecological crisis, which is becoming global in nature, has caused the interest of specialists in the ethical component of ecological culture, which recognizes not only the unity of man and the environment, but also the right of all kinds of wildlife to equal with man the value of life on Earth. This strategy determines the need for scientific substantiation of the theoretical and methodical approach to rethinking the principles of interaction between man and the environment, providing for the formation of a system of values, value orientations, interests, needs, attitudes, experience of the individual in making new, environmentally-oriented decisions and norms of behavior in relation to the natural environment. In this regard, the study developed and experimentally

<sup>3</sup> See Ursul A.D. Na puti k ustoychivomu budushchemu // Ustoychivoe razvitiye. Science and Practice. 2002. №1 [Electronic resource] Mode available: <http://www.apocalyptism.ru/Global-Ethics.htm> - Zagl. s screen. - Rus.

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tested the structure and content of the universals of ethical principles of the individual's ecological culture innovative model, elevating to the rank of law the equal coexistence of man and nature and the development of sustainable interaction of ecology, economy and production. The prerequisites for the transformation of the individual's ecological culture in the article are revealed; the content of the universals of ethical principles of rethinking the individual's ecological culture is established; on the basis of the study results the structure and content of axiological, cognitive, procedural, orientation components of the individual's ecological culture modern model are justified and their practical importance in the implementation of the universals of ethical principles is proved. The study does not cover all aspects of the problem. The primary problem of further research is to rethink the methodology of ecological culture as an integrated system of eco-centric values of interaction between nature, man and society.

It is proved that the problems in the development of modern civilization have created the prerequisites for the global environmental crisis resulting from economic activities, focused on the anthropocentric consciousness of man, his interests and needs. The ability of nature to self-purification in a man-made civilization is almost exhausted, and advances in science, technology, culture can no longer fundamentally affect the overcoming of the entrenched crisis. In the current difficult conditions, it is important to understand that in solving the global environmental problem of civilization survival it is necessary to rethink the anthropocentric ideology of mankind, which has crossed the border of permissible activity in relation to the natural environment, on the ethical values of equal interaction of nature, man and society. As a key idea of this interaction specialists substantiate ethical principles of ecological culture.<sup>4</sup>

## 5. RESULT

Axiology of eco-ethics includes both natural and human values which are considered separately in ethics and ecology. Its main idea is to unite environmental problems with human values. So, the convergence of natural and anthropometric values forms an axiological basis of eco-ethics. From its point of view, ethical and axiological reasons of the ecological crisis are the dominance of consumerism values and the human egoism manifesting itself

invariably in relation to the natural world (Akaev, 2017). An opportunity to overcome the crisis lies in the following projects: to develop the new value-normative strategies increasing the value of natural resources, to overcome the alienation of human from nature, to unite the world of nature and the human world, to develop a new ecological worldview and a new environmental ethics.

Eco-ethics in the global world is responsible for the development of the most important values and ways of human existence that should help to prevent environmental disaster (Seth & Barrett, 2017)<sup>5</sup>. To make them possible and effective it's necessary to accept the value of nature, to develop human responsibility for the ecological balance in the world, to form a new, eco-centric worldview of the modern humanity. Eco-ethical ideas have become very popular today (Qu, Sun, Guo, & Yu, 2016)<sup>6</sup>. Eco-ethics acts as a universal moral regulator of human activities and nature transforming, a fundamental element of the new worldview system of the global society. It orients social consciousness to the ideal of harmonious relations in the process of joint development of society and nature. It's also an important condition for overcoming the modern ecological crisis.

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## **DEVELOPMENT OF TRANSPORT AND LOGISTICS SERVICES MARKET**

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### **ANNOTATION**

*For enterprises in any sector of the economy, directing investment activities to achieve strategic advantage is an important prerequisite for long-term development. Through this, it is possible to maintain and multiply their income, capital, market share, knowledge and skills.*

**KEY WORDS:** *development, transport, logistics service.*

### **DISCUSSION**

Unlike other industries, the market of transport services with an oligopoly appearance does not allow its participants to take full advantage of the traditional competitive advantages, namely, the quality of service, customer orientation, effective marketing and advertising. Therefore, we believe that automotive transport enterprises should strive to have competitive advantages based on their assets and professional maturity as well as sustainable development in the transport services market.

At the same time, the stability of development can be achieved by attracting investments kengaytirishga the stability of financial activity, new areas of activity and the geography of service, taking into account the high level of capital of the transport system.

Almost all automobile transport enterprises are considered vertically integrated and diversified enterprises, providing transportation services related to cargo or passenger transportation to consumers in the form of a final product.

Today, large-scale investments in the development of the market of transport-logistics services and the expansion of transport and transit opportunities of our country are being attracted.

However, the lack of a single policy related to the implementation of investment research and innovative works in the field of Transport Logistics, as well as the development and improvement of the system of introduction into production, does not

allow sufficient application of new techniques and technologies and advanced foreign experience on the account of investments in the market of transport services.

It is known that the volume of 90 percent of the period from the creation of products and services to the delivery to consumers coincides with the processes of transport and logistics, which include the management of purchases, the management of reserves, warehouse work, the management of product distribution, the processing of cargo, packaging, increase-drop, Logistics Information Technology and integrated logistics systems. The provision of safe, high-quality and affordable cargo and passenger transportation and other transport and logistics services to the population and economic sectors is a direct link to the efficiency of the implementation of these processes in a flexible way.

This basically determines the direction of the investment activity of these enterprises and puts in them strategic tasks, for example, the effective combination of their own funds and borrowed capital, the assessment of the level of risk of various types of activities and the achievement of their balance sheet, as well as the involvement of professional management personnel for planning and implementation.

A strong competitive environment dictates the maximum use of all the tools and methods of production management so that the vehicle transport operators can take full advantage of the service



potential. A positive solution to this issue can be achieved by maintaining the production policy at the required level at the enterprise. This policy is aimed at strengthening and expanding the position of the enterprise in the selected market segment, increasing the number of customers, ensuring the achievement of superiority in the competitive struggle and ultimately increasing the volume of profit by defining the Basic Rules at the stages up to the selection, creation, tariff designation and provision of transport and logistics services to customers. Such:

A) achieve resource savings;

B) increase the volume of transportation and logistics services;

V) simultaneously reduce the cost of maintenance and increase the volume provides evaziga rezultadorlik .

It is known that the provision of transport services in the scientific literature on today's transport economy is studied into 3 basic processes: transportation, auxiliary services and supply processes.

The issues of the organization of the production management process are considered separately in the scope of each of the basic processes. Because management in the system of provision of transport services is a one-time or without some actions, but rather a complex combined process among themselves. Management of basic organizational processes is a relatively independent, but interrelated set of functions .

Therefore, the strategic need to create horizontal integrated and diversified structures in automotive transport Enterprises is based on the need to achieve the synergistic efficiency of economic activity.

In the first paragraphs of our work, various sources of financing of investment projects, in particular, equal partnership, strategic joint financing, various forms of lending (loans of our country and foreign banks, lending and export agencies, the market of bonds), as well as sources of financing through the cooperation of public and private sectors and infrastructure organizations were discussed.

According to the results of the study, through the organization of the corporate investment process, it is possible to ensure the strategic competitiveness of the enterprise in the market, the efficiency of investment resources, the overall corporate risk level is relatively low, and in the future the market value of the enterprise will increase.

It is worth noting that it is difficult for an enterprise to achieve the effectiveness of investment activity without applying such principles and approaches in the selection of investment projects and programs that allow it to invest limited capital in the most optimal areas of activity.

Effective investment decision making and selection of the most suitable projects require job visibility based on certain systematized criteria. In our opinion:

- strategic compatibility of projects;

- economic efficiencyadorlik;

-availability of real options for future development;

- compliance with current and future regulatory laws and legislation;

-compliance with creditors requirements;

-the availability of internal resources can be noted as the most basic of them.

This approach, which is proposed to determine the criteria for the selection of projects and the formation of investment portfolios, is considered relevant for today's economy, takes into account all the main factors of competition and is aimed at increasing the effectiveness of long-term investment activities.

It is difficult for modern enterprises to carry out their activities without the use of an effective and continuous risk management system. This allows not only to collect and process data on various parameters of the enterprise's activities in market conditions, but also to reduce losses and uncertainties in areas such as sales of finished products and purchase of raw materials, capital construction, borrowing in financial markets, production of technological equipment. At all stages of the investment activity of the enterprise, the task of managing and controlling the risks of continuous use in the management of risks is laid down.

This can be achieved through the proper use of strategic analysis and modeling tools and principles for effective strategic and investment planning for automotive transport enterprises. The purpose of such modeling is an expression from a detailed calculation of the alternative variants of all investment projects, which can affect the development strategy of the enterprise, its position in the market, its capitalization or the sphere of economic activity.

The essence of strategic modeling, taking into account the analyzed alternative variants of strategic development, implies the creation of dynamic financial models with a wide range of activities of the enterprise in the future. In addition, various investment projects and initiatives are included in the main scenario of enterprise development, which also serve as an effective tool for analyzing the impact of enterprise-investor relations. This approach will help to better understand the prospects for the development of transport enterprises within the framework of planned investment programs, high-risk and large-scale investment projects.

There are several factors to consider when predicting the future activities of any transport



enterprise. First, the automotive transport enterprise needs a large amount of investment in order to modernize its content in its existing movement and acquire new ones, which in turn leads to a decrease in profitability, an increase in the cost of transportation, as well as additional costs for the provision of services to bank loans. Secondly, the increase in the price of lubricants and other energy resources leads to a decrease in revenues, slowing the development of new projects and their resumption. Finally, the regulation of tariffs for socially significant transportation increases the risk of the transport services business due to the uncertainty of the future amount of profit.

With the use of project financing tokens, it is possible to accurately reproduce investment risks among various project participants, including its initiator, creditors, the state, suppliers of goods and consumers. Financing investment projects on the basis of multilateral agreements allows to minimize the uncertainty of future cash flows and increase the investment attractiveness of projects.

Another important means of financing investment projects is the mechanism of Public - Private Partnership, which implies joint investments in the implementation of large-scale projects aimed at the development of regional transport and integrated road networks and the establishment of diversified transport and logistics enterprises. Within the framework of Public-Private Partnership, the state assumes the leading investor responsibility in the infrastructure component of projects, which increases the investment attractiveness of private investors.

Finally, one of the potential opportunities for the implementation of investment programs in the automotive transport system is to focus on ensuring a high level of environmental security. In such programs, it is possible to limit the volume of greenhouse gas emissions or attract foreign investment on the basis of transactions called Kyoto protocol. This protocol, if they are aimed at reducing the impact on the environment and creating a new ecologically clean service or production system, will allow to finance investment projects partly on the basis of foreign resources.

Thus, the investment activity of an automobile transport enterprise is a complex and multifaceted process that requires a careful approach to its organization and management at all stages. The interaction of the participants in the investment activity is of a complex character and indicates the need for a complex approach to the organization and management of investment activities in order to achieve strategic objectives and ensure long-term development of enterprises in conditions of uncertainty in the transport services market, high competition and internal development.

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# PROSPECTS OF THE DIGITAL ECONOMY IN THE INFORMATION SOCIETY

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## ANNOTATION

*In this article, ideas about the digital economy, which is an integral part of an informed society, its development trends, the prospects for digitization in the countries of the world, artificial consciousness, expert opinions, Digital Culture, cybersecurity, young people in a new society, their acquisition of knowledge, innovation flexibility, blockchain technologies were put forward.*

**KEYWORDS:** *information society, digital economy, globalism, digital technology, big data, blockchains, artificial consciousness, digital culture, cybersecurity.*

## INTRODUCTION

With a focus on the development of developing countries with developed and bold steps in the world today, concrete results have been achieved with the reforms aimed at the gradual modernization of science, education, upbringing, attention to young people and society in the same society.

In each period of development and intensive development of new technologies have emerged as a result of the implementation of new technologies, based on their internal capabilities, from the point of view of the spheres. Innovations have required flexibility, advanced thinking, innovative approaches from people, especially from young people. And this position, in turn, gained interest in studying, studying, acquiring knowledge. It was believed that educated and educated people have their place in the development of society and can overcome only and only behind the harmony of knowledge, reason and science, in political and economic activity, in innovative development, in the strengthening of statehood, ideological problems and threats.

In order to further develop science and pay attention to it at the state level, the president of the Republic of Uzbekistan Sh.Mirziyoyev expressed such thoughts in his address to the Oliy Majlis: "In order to further develop science in our country, to educate our youth as owners of deep knowledge, high spirituality and culture, to continue intensively our

work on the formation of a competitive economy and to raise it to a new, modern level, I propose to name 2020 as the year of development of Science, Education and digital economy in our country" [1].

In the modernization of society, in the acceleration of reforms, the digital economy plays a promising role. During the transition to an Information Society, a number of works are being carried out and strengthened by legislation on the development of the digital economy in Uzbekistan, creation of conditions for it, introduction of innovative technologies, attraction of specialists in our country and abroad, especially young people. As a result of the reforms carried out over the past three years, the attention of scientists and intellectuals, the use of youth power and knowledge in the development of society, our state has gone on the path of development of the countries of the world and has been paying special attention to the development of the digital economy, which is considered.

In the XXI century, mankind faced a wave of serious global changes. As a result of the rapidly developing information technology, the development of digital technology, cellular communication that connects through satellites, the borderless ignorance of the internet, the substitution of computers by hand phones and other gadgets, the launch of large-capacity servers, the information space revolution arose, which is characterized by the globality of the economy. Information has become a major source in



the business processes of society and states. The penetration of digital technologies into life is one of the characteristics of the future world, it has the characteristics of changing the economy of the countries of the world at a rapid pace, developing poor countries, providing employment for the unemployed, working in a place where the earth wants, doing business without leaving home, earning money, shopping.

At present, the concept of digital economy and the restoration of an informed society has appeared in the economic theory and practice of a number of countries. It is characterized by the rapid development of digital technologies, a revolution in the field of information and the acceleration of the global processes of the economy. With the increasing effectiveness of their use, knowledge and theories have been transformed into practice, socio-philosophical, economic-political relations are becoming more and more. Now, in the transition to digitization and information society, it is necessary to form a digital culture in which people, especially young people, use computers, information and communication technologies, the internet and artificial intelligence. Because, without a digital culture, one can not operate in a new society. It is inevitable that individuals who do not have a digital culture will have a negative impact on the laws of an informed society. "The main factor of digital transformation in the activities of market entities is the development of Digital Culture. At the present stage of social and economic reform of society, the environment is drawing on the characteristics inherent in the institutional structure of society and on this basis it is necessary to formulate new concepts and approaches.[2]

The president of the Republic of Uzbekistan, in his address to the Oliy Majlis of the Republic of Uzbekistan on the most important tasks for December 28, 2019, also stressed that we should fulfill the following tasks for the development of the digital economy in our country and that it is all equally responsible for this, in this way it is possible to "We need to develop a national concept of the digital economy, which implies the renewal of all sectors of the economy on the basis of digital technologies. On this basis, we need to implement the program "Digital Uzbekistan – 2030". The digital economy allows to grow the gross domestic product by at least 30 percent, sharply reducing corruption. The analysis conducted by influential international organizations also confirms this.[3]

Development of the digital economy in our country", electronic government, blokchayn technologies and their development are entrusted to the National Agency of Project Management under the president of the Republic of Uzbekistan.

Cooperation agreements on the development of these spheres were signed with the Republic of Korea, one of the developed countries of the world. According to the agreement, the leading experts and specialists of Korea are closely assisting in the development of digital economy, digitization and informatization of Public Administration, e-government in our country.

"Big data is a treasure for collaboration with new technologies, such as artificial intelligence, the Internet of products, and the important thing is to be able to use it," said Professor Jinvon Hon, a Korean expert on country digitization. It is possible to obtain knowledge from extremely large and complex data and have the necessary information, which in turn causes the discovery of new laws of such information. Information becomes knowledge, changes our lives, determines strategy, determines the direction of choice, other sciences and technologies help to carry out Social Research"[4].

"Byuro expert on Europe and Central Asia of the UN Development Program Robert Pashichko stressed that" by 2027, 10 percent of the world's gross domestic product is stored in blokcheyn technology. Blokcheyn allows each other unfamiliar people to trust in common records. Blokcheyn makes it possible to carry out financial operations, including money transfers, convenient, risk-free and without excessive expenditure. This technology can be used not only in banking and finance, but also in logistics and energy, in the provision of cadastral services, in the online organization of electoral companies" [5].

Global trends in the digital economy are growing very rapidly, "World Bank" expert Randin Sudan said. In 2016 year, the global economy was numbered by 15,5 percent, which is 11,5 trillion. It amounted to US dollars. By 2025 year, this figure is 24,3 percent, that is, 23 trillion. It is expected to grow to the US dollar. The digital economy not only grows 5 times faster than in other non-digital sectors, but also creates new conditions and opportunities for their growth. Artificial intelligence, blokchayn technology, digitization – these technologies are already recognized as long-term trends. News is coming for new technologies, it all happens very quickly. However, against this background, people gradually adapt to them. Much depends on the laws. The role of the state is an indicator of their regulation"[6].

According to Raphal Rogozinski, founder and head of the SecDev group of Canada, a well-known expert on security issues in the digital world, studies and studies have identified that "70 percent of global internet use accounts for the Eurasian region. 51 percent of the expenditure on the IT sector is also part of the countries of this region."

As the digital economy develops in the world, the corresponding issues of cybersecurity are also



transversal before a person, and it is necessary to think about them now. These problems are: international terrorism, the theft of electronic money by hackers and the attack on banks, the discovery of sensitive aspects of sites specializing in tourism, mining, mining and the hacking of their server, the use of drugs, weapons and human trafficking.

R.Rogozinsky believes that “cybersecurity problems are primarily related to people, not to technology, because today the 3/2 part of humanity is connected with the global internet, and they are mainly young people under the age of 25, called new generations (digital). Today, they are able to step into a fertile age that is hampering the development of innovation, and win or benefit from the development of the digital economy, and this is a global phenomenon”[7].

Now, digital technologies and the processes associated with them are increasingly entering our daily lives and becoming an integral part of our lives. People will also be able to read, learn, think accordingly, interfere in the affairs of the state and society, use digital public services and social services. In the digital world of an informed society, people should receive new information every day, faollashs in social networks, have their own philosophical opinion.

At the current stage of the digital economy, people who have their own startups, are clearly motivated, innovative-minded, have knowledge in the field of information and communication technologies, have mastered several foreign languages, especially young people who are remotely keen on having their own business on the internet. This leads to the accumulation of money in the digital economy in certain people, companies or countries.

By the end of 2019, the United Nations (UN) published the report “Digital Economy for 2019 year” of the digital world in the countries of the world. “The digital revolution is changing our lives and our society at an unprecedented speed, while at the same time bringing great opportunities and great challenges” says UN Secretary-General Antoniu Guterrish. New technologies can add an important element in the sustainable development of the digital economy, but positive results are not guaranteed ... in a short time, progress in the field of digital technology has led to the creation of enormous wealth, accumulated in a small group of people, companies and countries. If there are policies and rules in place, this trend will continue and this will lead to further inequality. Without appropriate efforts, more than half of the world's population can not overcome the digital gap, which is either limited or not at all, access to the internet. In order for the

digital economy to function in favor of all nations, it must cover all the surface of the earth”[8].

As the digital economy and the processes associated with it continue to evolve day by day, it is necessary that the existing infrastructure will allow financial institutions to revise the activities of the treasury, banks, credit unions, pawnshops, other economic organizations and lenders, change their trends, develop digital development strategies and integrate them into the platforms created on the basis of innovative technologies.

Because, now there is no clear data on the development of the digital economy in the countries of the world, its profit or loss, from which countries the economy is receiving more profit, the internet network is working at a loss for some countries that are not so developed, also far from fairness. In many states, no concrete conceptions of the digital economy have been developed.

Mukhisa Kutuyi, Secretary General of the UN conference on trade and development, on the impact of fast-evolving digital technologies on economic and social activities, said: “in the digital age, special attention is paid to two main factors of value creation, namely digital data and platforms, and the question of how to change the current trends in wealth concentration and ensure a more equitable distribution. We are now at the beginning of the digital era, and many of the existing questions on digitization have not yet been answered. Due to the lack of relevant statistical and empirical data, rapid technological progress, politicians are faced with constantly changing priorities in the development of effective strategies of the digital economy...In addition to our research on the digital economy, a team of government experts on e-commerce and the digital economy, the e-commerce week, which is held annually, is a useful forum for political excellence”[9].

It can be seen that it is necessary to cover each territory of the country with the internet, to formulate the skills of young people to work with the internet and information and communication technologies starting from preschool institutions, to use them, to explain their positive and negative cases with concrete examples. Digitization, the internet, artificial consciousness, in-depth study of the laws of an informed society and the training of young people are one of the main factors for the future of countries.

## CONCLUSION

So, in conclusion, taking the research on the development of the digital economy in society, the introduction of digital technologies, the formation of digital culture, cybersecurity, digitization, the expansion of the circle of innovative ideas of young



people, the following measures should be taken to deepen their knowledge:

- Formation of the base of the digital economy in Uzbekistan, taking measures to provide internet access to every district, every neighborhood and every village;

-On the principle of openness in the development of the digital economy, conducting questionnaires through social networks or sites of state institutions, on the basis of which determine the social status and direct funds for their development;

- The introduction of digitization in state and economic management bodies, regardless of the form of ownership, eliminating the need for people to meet with leaders and specialists, faster introduction of the platforms "Electronic Government", "Electronic authority" and "electronic organization" or other relevant platforms;

-Business development through digitization, provision of online banking services to representatives of the private sector, implementation of banking operations through mobile applications, obtaining loans, paying them off, carrying out commercial work;

-Introduction of blockchain and cloud technologies, training of young people on information technologies and foreign languages for productive use of these technologies, productive use of their knowledge;

- To explain, show the positive and negative cases of digitization to young people on the basis of real events on the basis of statistical data, to develop their socio-philosophical views on this basis;

-To teach young people in depth the issues of cybersecurity, to train educated personnel in the same field using their intellectual knowledge;

- Formation of digital culture relations between young people on the internet and technology;

- To educate children in pre-school educational institutions, schools, institutes and universities in this field in the transition to the digital economy of an informed society, to work on creating new and new opportunities with young people.

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# CLASSIFICATION OF COULD WORDS IN GERMAN AND UZBEK

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## ABSTRACT

*The usage tradition is very long and rich in the German-speaking area: "Since the early history of the German language, the twin formulas form a distinctive group of phraseologisms." However, we often encounter the word pairs in the current language, they are spoken and written and are in all They are always a lively, invigorating, and in some cases graphic, ornamentation of human utterances. The present work provides a quick insight into the problem of phraseology in its theoretical part, briefly dealing with its definition, its main features and the classification of phraseologisms. I pay more attention to the characteristics of the considered word pairs, where I mainly follow the terminology, partial classification and the syntactic and semantic structure. The practical part includes the corpus of the German formulas and their Czech equivalents*

**KEYWORDS:** *word pairs, phraseology, linguists, twin formulas, dictionary.*

## INTRODUCTION

One of the tools to demonstrate the rich linguistic capabilities of all languages is phraseology. Phraseology is an important layer of every language and plays an important role in the visualization of its specific features. The greater the phraseology, the greater the language. Phraseology (proverbs, proverbs and idioms) reflect the history, traditions, customs and culture of the people. At the same time, phraseological features reflect the national characteristics of the people, which, in addition to their deep and rich meanings, give the speech a special warmth and influence.

## MATERIALS AND METHODS

As the phraseology began to be studied in German linguistics, the question of classification and systematization of phraseological units began to rise. German linguists have classified phrases based on different approaches. For example, M. Stepanova and I Chernyshova have classically and semantically classified phrases. Theo Shippan also distinguished two types of phraseology, namely the phraseological integrity and stable compounds. Another linguist, William Fick, compares phrases with free speech, distinguishing between the two types of verbs. Hence, linguistic scholars have tried to study various aspects of phraseology.

Like all other fields, phraseology has its own subject of study. The study of phraseology, in turn, is so complex and unique that it provides new sources for the development of the above-mentioned linguistic disciplines.

It has already been shown that phraseology is a major theme in German linguistics. First and foremost, the discussion raises the question of classification. Phraseological systems do not have a specific system of structural types and elements of affixes, as in word formation.

In German, a pair of words is also a phraseology. In linguistics, some scholars have included a couple of words as phraseological units. He has been researched in many languages, including VV Vinogradov in Russian by I. Chernesheva, V. Flaysher, A. Lenkova and A. Iskos, and in Uzbek by Hojiev.

In their theories, these scholars regard the double word as a phraseological unit. The main feature and feature of the pair words is the functional stylistic color. The problem of double words in two German and Uzbek languages has not yet been studied.

## DISCUSSION AND ANALYSIS

Many phraseological scholars have used different terms in their scientific works in relation to



double words. In German, these phraseological units are called Paarformel, Wortpaar, Binomiale, Zwillingsformeln, Sprichtwörtliche Formeln, Wortgeschwister, Doppelungen, Formelhafte Wendungen.

A. Iskos and A. Lenkova use the terms "Zwillingsformeln", "sprichtwörtliche Formeln" and "Wortpaare" in their book „Lesestoffe zur deutschen Lexikologie“.

Wernfried Hofmeister used the term "Wortpaar" and "Binomiale" in the book „Sammlung der gebräuchlichen Zwillingsformeln in der deutschen Gegenwartssprache“.

E.H. Assenine also used the term "Wortpaare" in his research paper, and I. Brandsh the term "Paarformeln" as a phraseological unit.

In his book "Double Words in German and Uzbek" by Sh.S.Imyaminova, "Today, double words are used in several languages and do not have a specific name in German. Therefore, the terms "Wortpaare" and "Zwillingsformeln" are more commonly used in German. Different views on the meaning and similarity of the double and repetitive words, as well as the terminology, and the relationship between these two sets of words and their relation .

When it comes to the grammatical composition of a pair of words, it is not a compound or derivative of the components of a pair of words, but rather a combination of one or two components of affixes common to both components of a pair of words. is understood. It is advisable to classify pairs of words to more precisely analyze them. For example: fix unf fertig (fam). We define the first component fix (X), the second component fertig (Y). Let's put together a pair of word binders, with the word uder. As a result, the X scheme is generated. The pair of words formed from the verbs in general - Verb (B), the nouns consisting of nouns (Substantive (C), the double words formed from adjectives - Adjective (A), two we will label the two words that are formed by the adverb - Adverb (Adv). The following formula is derived from:

The pair also deals with the terms that are related to the nouns of the nouns. A pair of nouns is not only used with a few prepositions, but also contains a pair of words that come with all prepositions. For example. mit Haut und Harr, von Gift und Galle and others.

Predogs are always preceded by a pair of nouns. However, in German, the quality, progress, and pronunciation are less common in the categories of the word.

In the Uzbek language, the adjective consists of antonym. Many adjectives come from additives. For example, patience and suffering. With the suffixes such as:

Taking a closer look at the meaning of a pair of words, because German pronunciation plays a key role in the pairing of words in German, while the Uzbek language is not a prlog, it is the root of the double words. The adjectives formed by the addition of affixes distinguish the differences between the two words.

If we stop the problem of double word formation in German, there will be no new word formation in double word formation. They cannot be a combination of words. E. Agricola about the couple words "The pair words are always two similar words. They are words that relate to each other".

Many of our scholars divide pairs of words into two groups, that is, pure words and duplicate words. In another group of researchers, we describe double and repeated words as different categories of words that have common characters, and propose to separate them into separate groups. According to V.Reshetov and U. Tursunov, the double words are a separate group and the repeated words are in the combined words. In the Uzbek language, Professor A. Hojiev, who has done a particularly interesting study of double words, argues that it is not possible to use the term "joint word" in general for double and joint words. clicks. In his view, "double words are two pairs of words, which are formed by the interrelation of two independent lexical or lexical content and the generalization and the general meaning." The distance between the pair words is very close. As an example; good or bad, orchards and more.

If we stop the problem of double word formation in German, there will be no new word formation in double word formation. They cannot be a combination of words. E. Agricola about the couple words "The pair words are always two similar words. They are words that relate to each other ".

Linguist F. Zeller explained that the two words are usually bound by an underscore (or) linker and sometimes with an oder (or) linker. For example:

es geht alles drunter und drüber (umg)

es herrscht Unordnung; grosses

Durcheinander sein.

разг. все идет кувырком (или вверх дном);

полный ковардак (или сумбур);

страшная путаница (или не разбериха, сумятица) –сам черт ногу сломает.

Ish chappasiga ketmoq, Hammasi ag'dar-tuntar bo'lib ketmoq.

(M.I.Umarxo'jaev, K.N. Nazarov, Deutsch-russisch-usbekisches Phraseologisches Wörterbuch. S. 23)

I. Chernesheva and M. Stepanova describe the following words. "The structural sign of a pair of words consists of words that are closely related. That is a combination of the two words."



In this context, it is possible to say that in German, a pair of words consists of two words of the same word category, or in most cases three, same or opposite words.

In the Uzbek language, the double word is derived from the two words that are formed by the equal combination of two words in accordance with the language rules. As we have already mentioned, the German words are formed by the word *oder*, by the plaintiffs, and in the Uzbek language by the pairing of the words.

fix unf fertig (fam)

1. vollständig fertig

2. vollständig erschöpft

БЫТЬ ГОТОВЫМ, БЫТЬ В ПОЛНОЙ ГОТОВНОСТИ

тайёр бўлмоқ, тап-тайёр, буткул тайёр бўлмоқ.

(M.I.Umarxo'jaev, K.N. Nazarov, Deutsch-russisch-usbekisches Phraseologisches Wörterbuch. S. 39 )

German words are very important to the German language. They have the power to make sense of the meaning of the sentence. But they do a variety of ways to make sense. In this regard, the linguist K.A. Levkovskaya studies four ways of translating meanings into pairs.

1. Repeat the same word (*durch und durch, über und über, nach und nach, halb und halb*).

2. By linking synonyms or words close together (*auf Schritt und Tritt, Hof und Gut, Angst und Bange*).

3. Different meanings, but there is a very close connection between them. (*Haus und Hof, Dreck und Speck*.)

4. By linking words that are completely opposite to each other in terms of meaning (*Himmel und Hölle, Himmel und Erde, Hund und Katze*).

#### IV. RESULT

A. Iskos and A. Lenkova use the terms "Zwillingsformeln", "sprichtwörtliche Formeln" and "Wortpaare" in their book *Lesestoffe zur deutschen Lexicology*.

Wernfried Hofmeister used the term "Wortpaar" and "Binomiale" in the book *Sammlung der gebräuchlichen Zwillingsformeln in der deutschen Gegenwartssprache*.

E.H. Assenine also used the term "Wortpaare" in his research paper, and I. Brandsh the term "Paarformeln" as a phraseological unit.

In his book "Double Words in German and Uzbek" by Sh.S.Imaminova, "Today, double words are used in several languages and do not have a specific name in German. Therefore, the terms "Wortpaare" and "Zwillingsformeln" are more commonly used in German. Different views on the meaning and similarity of the double and repetitive words, as well as the terminology, and the

relationship between these two sets of words and their relation .

Many of our scholars divide pairs of words into two groups, that is, pure words and duplicate words. In another group of researchers, we describe double and repeated words as different categories of words that have common characters, and propose to separate them into separate groups. According to V.Rhethetov and U. Tursunov, the double words are a separate group and the repeated words are in the combined words. In the Uzbek language, Professor A. Hodzhiev, who has done a particularly interesting study of double words, argues that it is not possible to use the term "joint word" in general for double and joint words. clicks. In his view, "double words are two pairs of words, which are formed by the interrelation of two independent lexical or lexical content and the generalization and the general meaning." The distance between the pair words is very close. As an example; good or bad, orchards and more.

If we stop the problem of double word formation in German, there will be no new word formation in double word formation. They cannot be a combination of words. E. Agricola about the couple words "The pair words are always two similar words. They are words that relate to each other"

Linguist F. Zeller explained that the two words are usually bound by an underscore (or) linker and sometimes with an *oder* (or) linker. For example:

es geht alles drunter und drüber (umg)

es herrscht Unordnung; grosses Durcheinander sein.

#### CONCLUSION

After studying the phraseologisms in German linguistics, the question of classifying and systematizing the phrasemological units began to arise. Scientists of German linguistics classify the phraseologisms using different approaches. For example, M. Stepanova and Chernyshyova have classical and semantically classified phraseologists. Theo Shippan also distinguished two types of phraseologisms, namely phraseological integrity and stable connections. Another linguist, U. Fick, compares the two types of Frazeeologismen with the free expression, the meaning of verbs or the incompatibility of verbs. So linguists have tried to learn different aspects of the phraseologism.

As in all areas, phraseology has its own theme. In turn, the topic of phraseology is so complex and unique that it creates new sources for the development of the linguistics mentioned above while studying.

There are already indications that grammar is the main subject of the German language. First, the classification problem is discussed. There is no



separate system of structure types and processing elements (phrasals) as used in phraseologism.

Both German words are also phraseologisms. In linguistics, some scholars have inserted a double word into the phraseological units. Studied in many languages, including Russian V.V. Vinogradov, in Russian at I.I.Chernesheva, V. Flaysher, A. Lenkova and A. Iskos and in the Uzbek language at Hojiev.

In their theories, these scientists say that words are a phraseology unit. The main aspect of both words is the functional stylistic coloring. The problem of double-words in two non-German and Uzbek languages has not yet been investigated.

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## THE IMPORTANCE OF AN INNOVATIVE APPROACH IN ECONOMICS

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### ABSTRACT

*This article discusses the role of innovation in the economy of a country.*

**KEY WORDS:** *Economy, innovation, development, growth, market, competition*

### DISCUSSION

Innovation is the result of scientific and technical activity, designed as an object of intellectual property materialized in the production sphere (implemented in the service sector) and claimed by the consumer.

J. Shumpeter, who first applied this term, interpreted innovation as a new combination of resources, motivated by entrepreneurial spirit. A common value is also the understanding of innovation as an innovation that has gained public recognition through commercialization, transformation into a product or service.

All the interpretations of the concept of «innovation» are united by a common characteristic - the new consumer value of the product created in the process of innovative activity. The main properties of innovation:

- Scientific, technical, technological or managerial novelty;
- Practical applicability (possibility of implementation in a specific project);
- Compliance with market demand (social needs);
- Potential profitability.

The following innovation functions stand out:

- A transforming function, the essence of which is that innovation allows you to combine theory with practice in a specific subject area; Reify scientific knowledge; Apply them to the benefit of society. A successful innovation in the case of wide distribution can change the economic structure and direction of economic development in a single country, in a group of countries of the same technological level or in the world as a whole;

- A stimulating function that consists in the fact that innovation gives impetus to the development of human capital and science in the

country through the material interest of all participants in the innovation process;

- Reproductive function, consisting in the fact that innovation serves as a source of economic growth and changes the structure of the country's gross domestic product in favor of its greater science intensity. This is due to the increase in the share (proportion) of high-tech industries;

- Social function, confirming the inseparability of the bilateral relationship of economic processes and social factors. Innovation contributes to the saturation of the market with quality goods and services, which is important, because most of the needs of modern man is still in the material plane. Through innovations in the direction of increasing comfort, the habitat changes and the quality of life improves. A prerequisite for the recognition of the success of the innovative solution is currently considered its ecological purity.

In the process of innovative activity, an enterprise can function with the greatest efficiency, only clearly focusing on a certain object and guided by maximum consideration of the impact of external and internal factors. This requires a detailed classification of innovations, their properties and possible sources of financing. A single, universally recognized classification of innovations, or at least of classification characteristics, does not exist. Each author considers it his duty to offer both his own set of classification characteristics and his list of innovations falling under these signs.

Most researchers give the following types of classification characteristics:

- On technological parameters of innovative change objects;
- Scientific and technical importance;
- Cause of occurrence;
- Frequency of application;



- The place of innovation in the microeconomic system;

- The realm of concrete incarnation;
- On the scale of novelty.

By the criterion of technological parameters of the objects of innovative changes, food and process innovations are singled out. Product innovations include:

- Obtaining fundamentally new goods and services (both consumer and industrial);
- Use of new materials, semi-finished products, components.

Process innovations involve the use of new technologies (usually more productive), new methods of organizing economic activities, various kinds of managerial innovations.

Technological innovations appear either as a result of a single innovation process, i.e. close relationship of Experimental design work on the creation of a product and technology of its production, or as a product of independent special technological research. In the first case, innovations depend on the constructive and technical features of the new product and its subsequent modifications. In the second - the object of innovation is not a new product, but a basic technology that is subjected to evolutionary or revolutionary transformations in the process of technological research.

By the criterion of scientific and technical importance, innovations are divided into basic and improving. Basic innovations are the results of major scientific and technological developments. They are the basis of fundamentally new products and technologies of a new generation that have no analogues. Basic innovations mark a breakthrough in the consumer market and the market of investment goods.

Today, among them - nanotechnology, the creation of new materials; Yesterday - cellular communication, the Internet, an output in space.

Improving innovations are the results of medium and small scientific developments that underlie significant changes (modernization) of already existing products, technologies, methods of organizing economic activity. Examples of improving innovations are telephone sets equipped with additional functions (photo, video camera), or cars with on-board computers.

From improving innovations, it is necessary to distinguish so-called pseudo-innovations, or minor changes in the characteristics of the goods (color, finish, etc.) that do not affect its design features and do not add fundamentally new consumer properties.

By the criterion of the origin of the cause, reactive and strategic innovations are singled out. Reactive innovation is a response to innovation, applied by a competitor. The goal of reactive innovation is to reduce the economic backwardness

from the industry leader, to prevent a decrease in the competitiveness of their products and to maintain their positions in the competitive struggle.

Strategic innovation is proactive. They are the result of a scientific and technological breakthrough and are aimed at long-term individual leadership in the industry.

By the criterion of the frequency of application, one-off and diffuse innovations are distinguished. One-off innovations do not spread outside the scope of an enterprise or an innovator company. In the early stages of commercial development, almost all innovations are one-off. Diffuse innovations arise during the implementation of innovation by imitation companies. Innovations of this kind characterize the process of spreading innovation in time and space.

By the criterion of the place of innovation in the microeconomic system, innovations in the input, output and internal innovations are singled out in the technological process at the enterprise. Innovations at the entrance affect the resource provision of the core business of the enterprise. Innovations at the output affect the characteristics of the products. Internal innovations modernize technological and management processes within the enterprise.

According to the criterion of the sphere of concrete embodiment, material, technical, managerial, service, social innovations are singled out.

Social innovations are innovations aimed at smoothing or resolving conflicts within an active organizational system.

Social innovations differ from the material and technical ones:

- A closer relationship with specific social relations, business culture. This can not be overlooked, since the same innovations can manifest themselves differently even in different regions of one country;

- A large field of application, since the introduction of technical innovations is often accompanied by social (necessary management, economic and other changes, reorganization);

- A stronger dependence of the use of innovation on the group and personal qualities of users;

- Not so obvious advantages, as at technical innovations, efficiency is more difficultly defined. All experiments and tests here have to be conducted not in the laboratory, but on the operating object - hence the difficulty in distinguishing the overall contribution of this innovation;

- The absence of the stage of «fabrication» (it merges with the design). This avoids the emergence of an innovative process from one industry to another, accelerates the process of creating innovation;



- The peculiarity of the phenomenon of «invention», contributing to a special authorial activity and progress at all stages. Management innovations, as a rule, are developed collectively, with a lot of coordination. Therefore, novelty is often not laboratory, but «field» origin, which makes them more viable.

According to the scale of novelty, global, sectoral, regional, local innovations are distinguished. Global innovation involves fundamentally new types of products, technologies, new management methods that have no analogues in world practice. The potential result of global innovation is the provision of long-term advantages over competitors. In the future, they are the sources of all subsequent improvements, improvements, adaptations to the interests of certain consumer groups and other product upgrades. Industry innovations involve innovations that were not previously applied at enterprises of this industry.

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# **AMPEROMETRIC DETERMINATION OF TUNGSTEN AND ANTIMONY WITH A SOLUTION OF NAPHTHOL DERIVATIVES**

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## **ABSTRACT**

*The paper covers the conditions and the possibility of amperometric determination of tungsten and antimony in a wide range of their concentrations and, with the appropriate selection of the conditions for determination, it becomes sensitive and highly selective.*

**KEYWORDS:** *amperometric titration, organic reagents, tungsten ions, antimony ions, selectivity.*

## **DISCUSSION**

The rapid development and widespread application of amperometric titration methods is due to its high precision, sensitivity, selectivity and accuracy, which are reflected in technological processes, environmental objects, biological products, sanitary ware and many industrial weather conditions allows to successfully and quickly solve the tasks of analytical control (monitoring) of clinical materials. This method is widely used to determine both metal ions and various organic compounds. At present, complex multicomponent mixtures can be analyzed. The simultaneous determination of 30-40 or more elements in the sample, and at low concentrations, up to 10<sup>-5</sup>-10<sup>-8</sup>, is achieved due to

the electrochemical concentration of the component detected on the electrode surface.

The growing industrial needs for tungsten and lead, which are distinguished by their hardness, weight, and refractoriness, make the problem of analyzing environmental objects with a micro content of these metals urgent. Tungsten is less common in nature. The mass fraction of metal in the Earth's crust is  $1.3 \cdot 10^{-4}\%$ . In addition, it is used in the manufacture of machinery and equipment for the metalworking, construction and mining industries, in the manufacture of lighting fixtures and fixtures, in the transportation and electronics industries, in the chemical industry and other fields. A tool made of tungsten steel can withstand the intensity of the most



intense processes in metalworking. The determination of trace amounts of antimony in environmentally important objects is associated, on the one hand, with the ever-increasing use of this metal in the semiconductor industry in the production of diodes, infrared detectors, etc., and as a component of lead alloys, increasing their hardness and mechanical strength, and, on the other hand, with its high toxicity. This in turn requires the development of a new methodology for the determination of tungsten and antimony with the best metrological characteristics and analytical parameters. Along with the expressiveness of determination and the most important requirement for the analysis of materials of various nature is accuracy, correctness and reproducibility.

This means, with all clarity, that the presented article is devoted to the development of a scientific and methodological framework for the targeted determination of microconcentrations of tungsten ions in environmental objects and food products in the field.

## EXPERIMENTAL PART

### Used devices and solutions.

Voltammograms were taken on polarimeters PPT-1 and PU-1 with self-records: LCD 4-003 and PDP 4-002, with a three-electrode cell. To optimize the titration conditions of W (VI), the pH of the medium was determined using a universal EV-74 ionomer and a pH / mV / TEMP Meter P 25 EcoMet pH meter. The initial solution (1 mg / ml) of W (VI) and Sb (III) was prepared by dissolving weighed portions of 2 g of their "chemically pure" salts. A sample of the sample (1.0-5.0 g) was weighed on an analytical balance, after which it was placed in a special heat-resistant glass, 4.0-5.0 ml conc. HCl and the same 5% solution of H<sub>2</sub>O<sub>2</sub> were heated at a temperature no higher than 80–90 ° C for 5–10 min. The resulting solutions were diluted with distilled water in a volumetric flask (250 ml). After that, an aliquot of the sample is taken and the background (buffer) is added and the total volume is adjusted to 10.0 ml and the voltammogram is taken. Measurements were performed at room temperature. Solutions with a lower concentration were prepared daily by appropriate dilution of the stock solutions with bidistillate and stored for no more than a week.

A universal Britton-Robinson buffer mixture with the required pH values was prepared by mixing 0.04 M solutions of H<sub>3</sub>PO<sub>4</sub>, CH<sub>3</sub>COOH and H<sub>3</sub>BO<sub>3</sub> in 0.2 M NaOH [1-4]. A 0.1 M solution of methylanthrazine naphthol was prepared by dissolving (1.829 g) a weighed portion of a freshly recrystallized and well-dried preparation in 96% C<sub>2</sub>H<sub>5</sub>OH.

The experiments showed that 0.005-0.1 M methylanthrazine naphthol solutions prepared with

alcohol practically do not change their titer (provided that they are stored in the dark and in the cold) for 10-15 days. All used reagents had qualifications "special parts", "chemical parts" and "analytical grade", therefore, they were not subjected to additional purification.

## RESULTS AND DISCUSSION

To obtain a voltage-dependent curve of the current, the test solution must be electrically conductive.

Precise determination of the trace amount of lead tungsten reduced in the negative potential is complicated by the presence of a large number of elements and, accordingly, prevents the detection of these ions in minerals of different ores and minerals. It is very common with them in nature to interfere with their precise quantitative determination in various alloys containing other metals.

The amperometric titration method we have developed can be very well applied in solving such problems, since this method can be used to determine up to five metals simultaneously, in one aliquot of the analyzed sample, if their reduction potentials differ from each other by 0.2 V.

Cations that are undetectable against the background of HCl should not impede the selective determination of tungsten and antimony, thereby preliminary, it will be possible to predict and eliminate the influence of some extraneous interfering cations.

Having selected the optimal conditions for obtaining the best analytical signal W (VI) and Sb (III), a priori it is impossible to unequivocally state the correctness and reproducibility of the obtained experimental data without determining them in individual solutions. In order to evaluate the accuracy of the developed amperometric determination methods for W (VI) and Sb (III) as an example in their individual solutions, it is quite possible, since the relative standard deviation (Sr) in all cases does not exceed 0.33, which indicates the absence of systematic errors. Thus, it can be assumed that the methods of amperometric titration that we developed are quite suitable for the accurate determination of the trace amounts of tungsten and antimony in model binary, ternary, and more complex mixtures.

It is known that the amperometric detection method is one of the most powerful analytical and informative methods among other well-known analytical methods, as it allows to determine the oxidation state of an element in solution, which is the most important indicator. Because this parameter often determines the level of toxicity and determines the adsorption properties of the microamphrases in the object under analysis.

For tungsten and antimony, assessing the degree of the oxidized form in solution is a special



case of assessing the lability ratio, since one of the forms of the studied ions may turn out to be electron-active in the selected potential region of the indicator electrode, and the other non-electroactive. Under certain conditions of the study, some ions are electron-active, while others are passive. The total content of the element is determined after appropriate chemical transformations and processing of the sample, and the content of the element in an inert degree of oxidation or reduction is found by the difference between the estimates of the total content and the labile form of the tungsten ion and antimony. Thus, the problem of determining the concentrations of tungsten and antimony ions is relevant and therefore, under the chosen optimal conditions, we experimentally established the electrooxidation potential at which an analytical signal ( $E = -0.45$  V) for tungsten (IV) and ( $E = -0.65$  V) for antimony (III) against a background of 0.2 M HCl, 2.0 ml in volume.

## CONCLUSION

In accordance with the intended purpose and the problems raised, we studied the effect of background electrolytes and buffer mixtures of different nature and concentration on the form of the electrooxidation curves of tungsten and reagent. The correlation established between the value of the analytical signal and the half-wave potential, the nature of the depolarizer and the range of the current of the electroactive substance, the temperature of the test solution, the nature and amount of the background electrolyte and the buffer mixture, the boundaries of the determined concentrations of tungsten (VI) and antimony (III) are established, measurement errors are revealed their useful analytical signal. The developed methods for the determination of tungsten (VI) and antimony (III) are quite suitable for the analysis of waters, soils, standard samples, ores, minerals, tails, concentrates, and other objects of different nature, since the correlation coefficients that we established, the lower boundaries of the determined contents of the studied ions and their detection limits (sensitivity) are at the MPC level and lower, which is very necessary in the analysis of various natural objects and industrial materials.

The obtained experimental results are processed by the rules and procedures of mathematical statistics known in the world literature.

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# IMPROVING TECHNOLOGIES FOR THE DEVELOPMENT OF METAMETHODICAL COMPETENCE OF FUTURE TEACHERS

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## ABSTRACT

*This paper deals competence of the future teacher of technology and entrepreneurship, the essence and structure of technological competence of the future teacher of technology and analysis of the formation of technological competence of the future teacher.*

**KEY WORDS:** *metamethodical competence, competence of future teachers, reforms in pedagogy, professional education.*

## DISCUSSION

The process of global change in modern society and educational space at the turn of the XX-XXI centuries. It is associated with a complex and controversial movement of reforms, the loss of moral guidelines, and the decline in the prestige of the teaching profession. More than ever today, the words of M. M. Rubinstein, which determined its institutional role: "The teacher is the first," sound relevant. Aware of the importance of the cultural and historical meaning of the profession, the scientific and pedagogical community is actively searching for conditions that would contribute to the achievement of a new quality of the teacher's professional development. A special place in this system is occupied by the vocational training of the vocabulary teacher as a teacher, through the word transmitting the experience of cognition of the world in all its manifestations, material and spiritual. The subject-specific, metamethodic function of the mother tongue determines the versatility and universality of the activity of the vocabulary, which can lead to a qualitatively different level of education for the young generation, which gives grounds to define the professional education of the teacher of the native language as an actual scientific direction, which currently does not have adequate pedagogical tools for preparing competent vocabulary teacher.

The relevance of the direction is due to the need to resolve a number of contradictions revealed in the modern system of professional education of the future teacher:

- A contradiction between the growing role of education in 21st century society, which makes special demands on the quality of education, which is enshrined in the State educational standards, and the traditional pre-centric practice of training teachers, which limits the full-fledged formation of the professional competence of a future teacher;

- The contradiction between the need for successful socialization of future teachers and the unwillingness of higher education to stimulate graduates to professional self-realization in the field of education;

- The contradiction between the systemic idea of the nature of pedagogical activity that has developed in science, which has ample opportunities for optimizing the university process of professional training for a future teacher, and its weak focus on the true needs of a modern teacher;

- A contradiction between the need for university practice of vocational education in the scientific and methodological support of the process of professional formation of the future teacher and the insufficient development of a competence-based approach in education in pedagogical science. The



creation of sociocultural and practice-oriented models for preparing a future teacher is an urgent scientific problem for the teacher's professional education system in a modern university.

Thus, the scientific problem of the theory and methodology of professional education of a future teacher-vocabulary lies in the need to create strategies that implement the competency-based approach, which will reflect the ideas of humanizing and humanizing pedagogical education, which will satisfy the urgent need of the state for a teacher who can prepare a modern student for full communication in the native language.

The revealed contradictions and the sociocultural significance of this problem, which has no solution in pedagogical science, determined the research topic: "Formation of the linguistic and methodical competence of a future teacher of the native language in a modern university".

The purpose of this study is the theoretical justification, design and implementation of a model for the formation of linguistic and methodological competence of a student-philologist - a future vocabulary teacher - in the system of higher professional education.

The object of the study is the preparation of a philologist student - the future teacher-vocabulary - in institutions of higher professional education.

The subject of the study is the formation of the linguistic and methodological competence of a future teacher of the native language in the process of professional training at a university.

The hypothesis of the study is a combination of the following assumptions:

- Linguistic and methodological competence is basic in the structure of the professional competence of the teacher-vocabulary;

- The effectiveness of the formation of the linguistic and methodical competence of the future vocabulary teacher is ensured by the implementation of such necessary and sufficient conditions as: the orientation of the formation of the linguistic and methodical competence to the professional ideal of the vocabulary teacher; conjugation in the educational process of the competency-based approach and the theory of contextual learning; creation of a single educational space of the university and school;

- The orientation of the formation of linguistic and methodological competence on pedagogical cooperation between philology students, a teacher-methodologist and vocational teachers will determine the positive dynamics of the development of motives for cognitive, educational and professional activities and will create the prerequisites for the successful implementation of university graduates in the teaching profession.

In accordance with the identified contradictions, the goal and the hypothesis put forward, the following research tasks are determined:

1) To describe the genesis of the linguistic and methodological competence of the teacher-vocabulary in retrospect;

2) Justify the need for historical and pedagogical understanding by the student-philologist of his future professional activity;

3) To characterize the current state of professional pedagogical education of a student-philologist - the future teacher-writer;

4) To develop the conceptual basis of competency-based professional education of the future teacher of the native language:

- formulate a definition of the concept of "linguistic and methodological competence" and prove the legitimacy of its introduction into the terminology of pedagogy of professional education of a student-philologist;

- create a theoretical model and construct on its basis a pedagogical technology for the formation of linguistic and methodological competence of a student-philologist;

5) To implement the pedagogical technology of the formation of linguistic and methodological competence in the professional training of the future vocabulary teacher;

6) To identify and justify the criteria for assessing the level of formation of linguistic and methodological competence of a student-philologist;

7) To analyze the results of constructing the context of pedagogical activity during the formation of the linguistic and methodological competence of the future teacher of the native language.

Achieving the modern quality of education that meets the needs of the individual, society and the state in the 21st century becomes possible as a result of thoughtful actions in the field of professional education of future teachers, taking into account the socio-economic and cultural realities.

A retrospective analysis of the origins of the activity of the teacher of the native language, the formation of his professional ideal, made it possible to investigate the genesis of linguistic and methodical competence, to determine its essence and to prove that linguistic and methodical competence is basic in the structure of the professional competence of a language teacher, determining the professional portrait of a specialist. In the period of Ancient Russia and the Moscow state, the metamethodic function of the language is born; The "primary teacher", who is fluent in book teaching, puts moral education on the basis of teaching the mother tongue. In the era of the Enlightenment, a methodology for teaching the language is emerging; the vocabulary characterizes knowledge of its subject. In the XIX - early XX century. a language teacher develops the



thinking and speech of students, provides knowledge of the language and introduces students to the culture of the people. In the era of Soviet Russia, the metamethodic function of the native language in education is approved, and the language teacher becomes a professional philologist and methodologist who is aware of the subject-specific function of the language.

The study of the essence of linguistic and methodological competence in a historical-pedagogical context, as well as a systematic theoretical, methodological and empirical study of the problems of professional education of a student-philologist - a future vocabulary teacher - led to a reasonable definition of the concept of "linguistic and methodical competence" as a generalized mode of action that provides a teacher with a productive solution -lover of professional tasks in the field of language education of a schoolboy. Linguistic and methodological competence was defined as the ability to teach the native language, which performs a meta-subject function in the educational process, on the basis of a system of knowledge about the language and the methodology of its teaching through the prism of axiological categories of pedagogical activity and awareness of the language as a national-cultural phenomenon.

The revealed characteristics of linguistic and methodological competence and the specifics of professional training of a future teacher of the native language led to the creation of a productive model for the formation of his linguistic and methodical competence in a modern university. In the model for the formation of linguistic and methodological competence, the components of its structure appeared in inextricable unity: the axiological component was correlated with the professional ideal of the mother tongue teacher, the cognitive component was reoriented from the "single subject" approach to the interdisciplinary integration of the linguistic cycle disciplines and methods of teaching the language, and the activity component created the context of pedagogical activity for the effective mastery of philological students by the skills to solve professional tasks of a vocabulary teacher.

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## SCIENTIFIC-INNOVATIVE ACTIVITY OF THE HIGHER EDUCATION SYSTEM OF UZBEKISTAN

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### ABSTRACT

*This article includes the information about the documents on supporting the innovative activity of higher education. Also, it points out the lack of social-economic organization in the activities of higher educational institutions, unsatisfactory arrangement of the prediction of the innovative prosperity based on the analyses and insufficient results in the implementation of the innovative activities and the results of the researches, in commercialization of the scientific elaborations and in attraction of the gifted youth to the scientific researches, and along with the mentioned, nonfulfilment of steady integration in education, science and manufacture is revealed. Besides, it presents the necessity of the advance in the contests, programmes and projects oriented at the contribution to commercialization of the intellectual activities in the higher educational institutions.*

**KEYWORDS:** *innovative activity, higher education system, international programmes, scientific projects, publications, commercialization, state budget*

### INTRODUCTION

According to the Strategy of Innovative Development of the Republic of Uzbekistan for 2019-2021, it has been set as a goal to increase the number of the published scientific articles, their citation indexes, participation in international conferences and seminars, and to enhance the research direction of the activities of the higher education institutions on the basis of state support of the most active higher education institutions selected depending on the number of the patents obtained. [1].

Moreover, the concept of the development of the higher education system of the Republic of Uzbekistan until 2030 based on the needs of the social sphere and the economy, involves the purposes of improving the quality of education, training competitive personnel, effective organization of scientific and innovative activities and the tasks for the development of international cooperation.

The concept defines the strategic goals, priorities, objectives, medium and long-term stages of the development of higher education in the Republic of Uzbekistan and is the foundation for the advancement of the programmes and comprehensive measures in this area [2].

The globalization of the world economy and its transition to new technological developments are leading to rising the competition in the world commodity and financial markets, also in the field of

digital technologies and in the ways of solving the evergrowing problems of the population. The main solution to the emerging problems may include the tendencies such as becoming one of the leading countries in the field of science and innovation, being competitive in the fourth industrial revolution, readiness to find new solutions to accumulated institutional problems, as well as to resolve controversial issues caused by globalization.

Nowadays, the government is paying particular attention to the need for full usage of the scientific and innovative potential of higher education. A number of documents [3, 4, 5] regulate the following areas of support for the innovative development of higher education:

- training the innovation-oriented personnel for the needs of high technological sectors of the economy;
- formation of new knowledge and competencies;
- development of the integration between the academic subjects of the universities and the organizations of real sector of economy;
- attracting and uniting young people in the field of science, education and high technology, creating conditions for effective retraining of the scientific personnel and ensuring their academic intensity;



- improving the quality of teaching and the effectiveness of the use of human resources of the universities in solving real problems of the development of high-tech production;

- growth in international recognition of higher education in Uzbekistan, the formation of a global network of universities, internationalization of scientific activity and introduction of a global educational space;

- development and effective use of material and technical base, scientific, technical and educational potential of higher education.

An analysis of financial instruments to support the innovative activities of the educational institutions was conducted during the research of the article. They are classified as follows in an expanded form:

### **1. The international projects and programmes:**

- joint project of the United Nations Development Program "Promotion of leadership in Uzbekistan";

- the project of the Korea International Cooperation Agency (KOICA) "Capacity building of the Academy of Public Administration through the introduction of innovations in the public sector of the Republic of Uzbekistan";

- the project of the "ERASMUS+" programme;

- "The project for providing with scholarships for training" the representatives of the Republic of Uzbekistan by the Japan International Cooperation Agency (JICA);

- "The Education Sector Development Program", the project of the Asian Development Bank, is aimed at ensuring the implementation of the national programme of training in Uzbekistan by strengthening the material base of the education system.

### **2. The programs adopted by the Ministry of Innovative Development:**

- the Fund for Supporting Innovative Development and Innovative Ideas. Measures to establish scientific laboratories equipped with brand new and modern high technological equipment on a competitive basis to conduct advanced research and development work in research and higher education institutions aimed at ensuring the rapid development of science and technology in the country, the development of innovative products aimed at financing [6, 17] the mentioned aspects;

- the Ministry of Innovative Development, the Center for Development Strategy, the UN Development Programme are aimed at supporting the research projects with innovative solutions serving the implementation of the Strategy of Actions for the five priority areas of development of the Republic of

Uzbekistan for 2017-2021 and the main tasks set out in the UN Sustainable Development Goals [7];

- formation, implementation and financing of fundamental and applied researches and also innovative projects financed from the State Budget of the Republic of Uzbekistan [8];

- approval, financing and implementation of startup projects [8];

- enhancing the creative, intellectual and entrepreneurial potential of the youth in cooperation with the government and the economic bodies, and also with the research and educational institutions [9];

- organization of the Academy of Youth, the involvement of leading foreign and domestic scientists, specialists and compatriots in the prescribed manner [9].

### **3. The target programmes which support leading educational organisations of the Republic of Uzbekistan:**

- implementation of systemic measures to ensure the integrated development of the National University of Uzbekistan named after Mirzo Ulugbek [10];

- further development of the system of training, retraining and advanced training the management staff at the Academy of Public Administration under the President of the Republic of Uzbekistan [11];

- training in the field of political science, increasing the effectiveness of fundamental and applied research. These are thought to be scientifically based recommendations to increase the effectiveness of training in the field of political science, to conduct comprehensive systematic research in the field of civil society, the creation and development of the political framework of national statehood, the formation and implementation of domestic and foreign policy, and deepening social-political reforms focused on the development programmes [12];

- the Academy of Banking and Finance of the Republic of Uzbekistan is aimed at retraining and advanced training the management staff and specialists of organizations specialized in banking, finance, taxation and the real sectors of the economy [13].

The above mentioned normative and legal documents and programmes have led to the conclusion that the government is the main power which supports the innovative development of educational institutions. Participation in the programmes and projects is an effective financial mechanism for the implementation of the identification of the educational institutions, in particular, for the commercialization of the results of intellectual activity.

Depending on this support, the government expects educational institutions to go beyond the



priority areas of research and increase the prestige of Uzbek education at the international level:

- Transformation of the National University of Uzbekistan and Samarkand State University into the leaders of higher education institutions of the country;

- By 2030, at least 10 higher education institutions in the country will have been included in the list of the first 1000 in the ranking of internationally recognized organizations (such as Quacquarelli Symonds World University Rankings, Times Higher Education ӘКИ Academic Ranking of World Universities), including the National University of Uzbekistan and Samarkand State University which will be in the list of the higher education institutions for the first 500;

- the development of public-private partnership in the field of higher education, the increase of the level of higher education coverage by 50 per cent on the basis of the organization of the activities of state and non-state higher education institutions in the regions; creation of an adequate competitive environment in the field;

- as an experiment, decentralization and privatization of some of the state higher education institutions (except for the higher military education institutions) the state share in which will be 51 per cent, and applying the principles of corporate

management in them;

- the level of the coverage of the higher education by more than 50% on the basis of the development of public-private partnership in higher education, the organization of the activities of state and non-state higher education institutions in the regions, including branches of prestigious foreign higher education institutions;

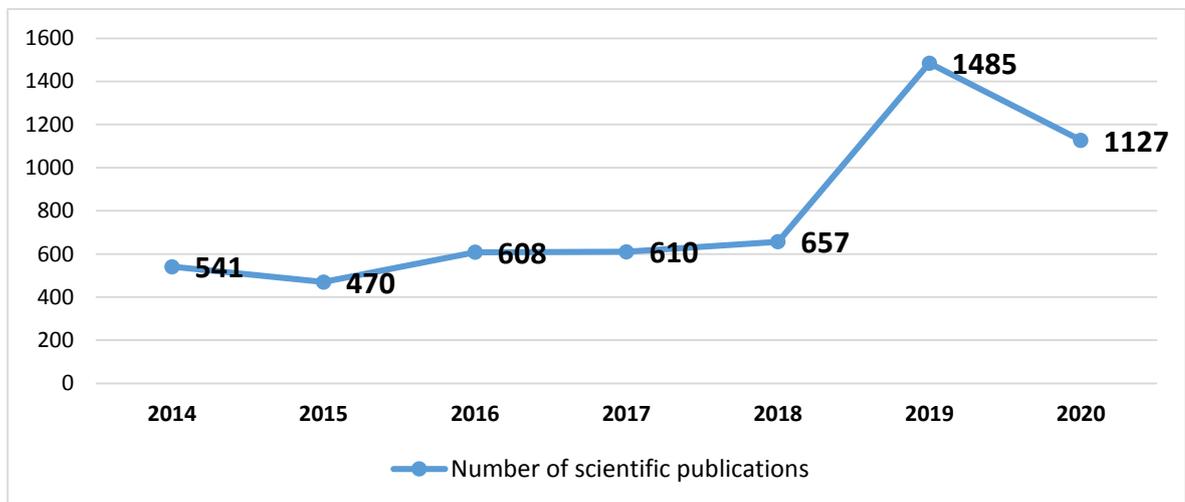
- Organizing of training on the basis of programs of 45 foreign higher education institutions;

- Increasing the share of professors and teachers who have trained or completed training abroad from 4% to 20%;

- Increasing the number of higher education institutions from 10 to 100, where digital technologies are introduced in education, including the electronic platform "E-MINBAR", online, webinar technologies;

- Increasing the number of articles in journals indexed in Scopus, ScienceDirect, Web of Science and other international scientific and technical databases from 1,200 to 7,000.

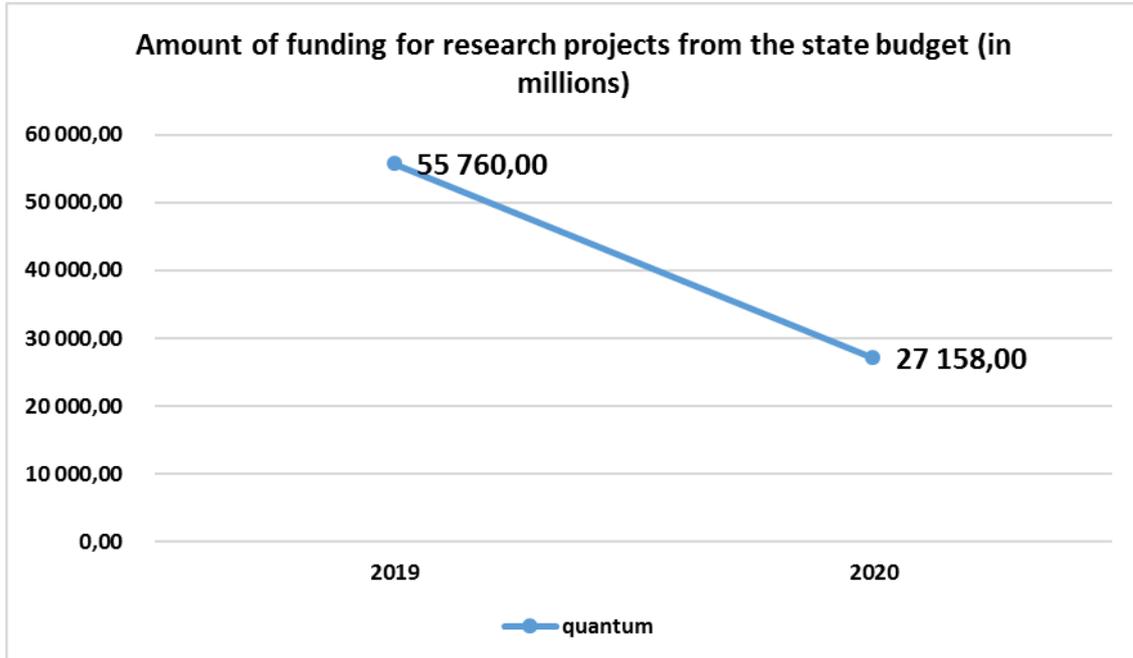
**Research results.** As a result of the reforms, the number of articles in journals indexed in the international scientific and technical database Scopus in Uzbekistan for the 1st quarter of 2020 can be seen in the diagram below (Figure 1).



**Figure 1. Uzbekistan's share in more than 3 million articles published in world scientific journals indexed in databases such as WEB of Science, SCOPUS**

As can be seen from the diagram in Figure 1, the number of publications on scientific publications in the 1st quarter of 2020 alone is 75.8% of the total number of publications in 2019. By the end of 2020, this figure is expected to reach 4,508, or 3 times more than in 2019.

Also, the amount of funding for fundamental, applied research and innovative projects funded from the state budget in the framework of state programs of scientific activity is as follows (Figure 2):



Analysis of the data in Figure 2 shows that in 2019, the annual funding of research projects amounted to 55 billion 760 million soums, while in the 1st quarter of 2020, this figure amounted to 27 billion 158 million soums. This is about 50% of the annual funding compared to the previous 2019. It is obvious that the issues of state support for scientific and innovative activities are growing from year to year.

However, there is a problem of underdevelopment of internal projects and programs of higher education institutions.

These programs are not directly related to supporting the process of commercializing the results of intellectual activity, but rather to supporting more research and production and retaining young staff.

With such competitions, programs and grants, higher education institutions have started their development in the near future and are often implemented in large universities with sufficient funds, which in turn are competitions, programs and programs aimed at supporting the commercialization of intellectual property in higher education and shows the need to improve the internal system of projects.

In conclusion, we can say that the results of the research require the introduction of a system to stimulate domestic demand for new research and development created by higher education institutions.

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# **IMPACT OF E-COMMERCE ON BRAND LOYALTY AND BRAND SWITCHING BEHAVIOUR OF CONSUMERS OF ELECTRONIC PRODUCTS: A STUDY**

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## **ABSTRACT**

*In recent times, tastes and preferences are consistently changing on purchase behaviour. In the year 2018, around 120 million people made their purchases over the internet and the number expected to reach 175 million by 2020. The demand potential of e-commerce made private equity firms to look for it. The government has an attractive policy for e-commerce. The government policy allows the 100 % FDI (Foreign direct investment) in B2B model of e-commerce and 100 per cent FDI also allowed in market place model through automatic route.*

*E-commerce gives benefits to society, customer and organisations. E-Commerce to Society: E-commerce is one of the largest employment generators in India. It reduces the regional imbalances and makes all levels of customers access the product at their fingertips. It eliminates the intentional bias of the sellers so that it saves the customer. E-Commerce to Consumers: Customer can access a wide range of products or services at their fingertips. E-commerce gives zero movement of truth and the first movement of truth for the customers. Customer reviews next to the product on e-commerce site offers mirror purchase experience for customers so that customers avoid the counterfeit products. It provides convenience and also saves time and money. E-Commerce to organisations: Technology makes the organisations independent. E-commerce reduces salespersons' dependence. It abolishes the geographical boundaries of the business. It reduces the cost of sale. It can fetch the precise statistics over the sales, thereby strengthen the business strategies.*

**KEYWORDS:** *E-commerce, Customer reviews, Foreign direct investment, electronic products*

## **INTRODUCTION**

In recent times, tastes and preferences are consistently changing on purchase behaviour. In the year 2018, around 120 million people made their purchases over the internet and the number expected to reach 175 million by 2020. The demand potential of e-commerce made private equity firms to look for it. The government has an attractive policy for e-commerce.

The government policy allows the 100 % FDI (Foreign direct investment) in B2B model of e-commerce and 100 per cent FDI also allowed in market place model through automatic route.

E-commerce gives benefits to society, customer and organisations. *E-Commerce to Society:* E-commerce is one of the largest employment generators in India. It reduces the regional imbalances and makes



all levels of customers access the product at their fingertips. It eliminates the intentional bias of the sellers so that it saves the customer. *E-Commerce to Consumers*: Customer can access a wide range of products or services at their fingertips. E-commerce gives zero movement of truth and the first movement of truth for the customers. Customer reviews next to the product on e-commerce site offers mirror purchase experience for customers so that customers avoid the counterfeit products. It provides convenience and also saves time and money. *E-Commerce to organisations*: Technology makes the organisations independent. E-commerce reduces salespersons' dependence. It abolishes the geographical boundaries of the business. It reduces the cost of sale. It can fetch the precise statistics over the sales, thereby strengthen the business strategies.

### STATEMENT OF THE PROBLEM

"E-commerce had a considerable impact on how business is conducted. It has affected consumers, the value chain, markets and business models." Internet and smartphone demanded the customer to transform from offline to online shopping. E-commerce for the year 2017 has registered 38.5 US \$ billion market value, 2018 F yeas 50.0 US \$ billion, 2020F year 63.7 US \$ billion, 2022F year 150.0 US \$ billion and 2026F year 200.0 US \$ billion. Hence, the present research is undertaken on impact of e-commerce on purchase behaviour of electronic products. The specific problems raised in the present research include: What is the source for e-commerce awareness. Can the e-commerce change the perceptions of electronic products?. What is the impact of e-commerce on purchase behaviour of electronic products? How the e-commerce influence the post purchase behaviour of electronic products.

### SELECT REVIEW OF LITERATURE

The existing studies concerning the awareness of e-commerce, impact of e-commerce on perceptions of electronic products, impact of e-commerce on purchase and post purchase behaviour of electronic products are reviewed;

**Silky Vigg Kushwah1 and Anjali Singh (2019)** research on "From traditional shopping to online shopping a study of the paradigm shift in consumer behaviour" stated seller's image, concern for customer and website quality as the influential factors of the online shopping. **Manisha and Shukla (2016)** article on "An analysis of consumer behaviours towards online shopping of electronic goods with special reference to Bhopal and Jabalpur City" and stated that cash on delivery, product price, quality, accessibility, time convenience, discounts and

promotions and shop anywhere and anytime of e-commerce influence the purchase attitude of electronic products. **Upasana, Naveen and Abhishek (2015)** in their research article on "A study of online purchase behaviour of customers in India" acknowledged that return, delivery services and refund policy of online store influence the purchase behaviour.

**Subhalakshmi and Ravi (2015)** study on "The impact of perceived risk on the online shopping attitude of cosmetic products in Tirunelveli City" have extracted three different types of risks for online shopping: financial risk, information risk and time risk. **Sanjay Kumar (2015)** article on "Online shopping – a literature review" stated social contact, convenience, diversity and information seeking as the influential factor of online shopping. **Riaz and Raman (2015)** research on "The emerging trend of online shopping: a literature review" affirmed that online customer can attain the knowledge of product quality, product specifications, price easily, and availability than traditional customer.

**Li et al. (2015)** study on "The interplay between value and service quality experience: e-loyalty development process through the eTailQ scale and value perception" explored the e-loyalty factors and also validated the e-service quality scale "eTailQ scale". The research claims eTailQ scale dimensions as: security, website design, customer support and reliability. **Korina C. Pinca and Legaspi (2015)** article on "Online shopping behavior of students in the college of business administration: basis for enriching content of the subject matter" revealed that female students are more preferred online shopping than female students. **Kavitha and Muthumani (2015)** research on "The Impact of demographic variables based on buying behaviour intention towards e-store in India" have explored the impact of demographic factors on online shopping. The research claims male and 26-30 age groups as the potential demographics for online shopping.

**Hemani and Manjit Kaur (2015)** article on "Consumers' behaviour towards online purchases" claims online purchase experiences, safety of payment, product perception, and customer service as the influential factors of online shopping. **Harjot and Daljit (2015)** research on "E-commerce in India-challenges and prospects" acknowledged fear as the greatest obstacle of online payment in India. **Cheah et al (2015)** have explored the "Factors influencing consumers' attitudes and purchase intentions of e-deals" and identified three different types of factors for online consumer attitude; vendor and product



characteristics, channel characteristics and consumer characteristics.

### NEED FOR THE STUDY

**Reason for selection of topic:** In recent times, customers' tastes and preferences are consistently changing in Indian. In the year 2018, around 120 million people made their purchases over the internet and the number expected to reach 175 million by 2020. The demand potential of e-commerce made private equity firms to look for it. The government has an attractive policy for e-commerce. The government policy allows the 100 per cent foreign direct investment in B2B model of e-commerce and 100 per cent FDI also allowed in market place model through automatic route. E-commerce gives benefits to society, customer and organisations. In India, E-commerce expected to reach US\$ 200 billion by 2026. Hence, the present study will help for electronic product organizations to tap the potential market. The research is helpful for academicians to understand about the impact of e-commerce on purchase behaviour electronic products. For marketing practitioners it is useful to formulating strategies for e-commerce purchase of electronic product. Hence, there is a need to undertake a research on impact of e-commerce on purchase behaviour electronic products.

### OBJECTIVES OF THE STUDY

The specific objectives formulated for this study are:

- I. To study the concept of e-commerce and theoretical aspects of consumer purchase behaviour of electronic products;
- II. To examine the awareness and perception of customers on e-commerce;
- III. To analyze the impact of e-commerce on purchase behaviour of electronic products;
- IV. To assess the impact of e-commerce on post purchase behaviour( satisfaction & loyalty) of electronic products and
- V. To offer suitable suggestions for further improvements of electronic products purchase behaviour.

### RESEARCH FINDINGS

- The highest, 270 respondents are the satisfied buyers followed by 192 respondents are habitual buyers and switchers, 68 respondents are linkers of the brand and 56 respondents are committed buyers. Time lag between the purchase and availability of more no. of

brands made them habitual buyers and switchers majorly.

- Out of 586, the highest, 83.95 stated that e-commerce contributes for brand switch behaviour of electronic products and 16.04 percent stated that e-commerce can enhance the brand loyalty of electronic products. Majority 64.89 percent of the customers stated that by selling all varieties of same brand e-commerce enhance the customer loyalty and rest 35.10 percent are stated other reasons.
- To the statement "New models of electronic products comes very often in e-commerce hence I will change electronic brands frequently", out of 492 respondents, 2.0 percent are disagreed, 22.4 percent are agreed, 2.6 percent are strongly disagreed, 6.3 percent are neutral and 66.7 percent are strongly agreed.
- For the statement "Large variety of brands on e-commerce site makes the customer to choose different brands", the highest, 68.3 percent are agreed followed by 26.6 percent are strongly disagreed, 2.8 percent are strongly agreed, 1.6 percent are neutral and 0.6 percent are disagreed.
- Out of the 492 customers, 1.2 percent are disagreed, 32.3 percent are strongly disagreed, 1.4 percent are neutral, 62.4 percent are agreed and 2.6 percent are strongly agreed to the statement "Time lag between the purchases of electronic product on e-commerce makes the customer to switch the brand."
- The highest, 18.5 percent are strongly disagreed, 37.0 percent are disagreed, 30.5 percent are neutral, 9.8 percent are agreed and 4.3 percent are strongly agreed to the statement "Offers/ Discounts of e-commerce make the customer to switch the electronic brands".
- The highest, 62.8 per cent are agreed to the statement "Price variants of brands on e-commerce make the customer to switch the electronic brands" followed by 29.9 percent are disagreed, 4.1 percent are strongly agreed, 1.8 percent are neutral and 1.4 percent are strongly disagreed.
- The rotated component matrix shows the two influential factors of e-commerce on brand switch behaviour of electronic products and the two factors are:  
Factor -1: Promotions (Discounts and Offers)



Factor-2: Decoy effect

## SUGGESTIONS

In the light of the findings arrived earlier, the following measures were suggested;

- Majority of sample respondents acknowledged that they aware the e-commerce products through digital media like search engine, social media and so on. Hence, electronic product organizations have to consider digital media as awareness media.
- E-commerce promotions are changing the perception of customers. This fact is acknowledged by most of the sample respondents. Hence, it is advised to electronic product organizations along with their own promotions have to collaborate with the promotions of e-commerce sites.
- E-commerce is influencing the purchase behaviour of electronic products through: promotions (discounts and offers); product assortment; convenience and fraudulent behaviour. Hence, it can be advised to electronic product organisations to select the e-commerce businesses which exhibit the above characteristics.
- The conclusion that it can draw from the study is that e-commerce is influence the satisfaction of electronic products through it's; mirror purchase experience, convenience and promotions. Therefore, electronic product organizations companies should ensure the good ratings and reviews on the e-commerce site and has to focus on offers, discounts of its products.
- The research reveals that e-commerce causes the brand switch behaviour of electronic products through decoy effect and promotions (discounts and offers). Hence, it can be advised to electronic product organisations to focus more product variants and offers/ discounts in order to avoid brand switch behaviour.
- Sales promotion still remains an important factor of purchase of products on e-commerce site. Hence, it can be suggested electronic product organizations must inculcate sales promotion in their strategy towards purchase behaviour of consumer.
- Electronic product organisations should device a feedback mechanism for customer

reviews and ratings to products modifications and new product development and it should be made an integral part of the research and development process of the organization.

- It is an acknowledged truth that, product cannot attain a good reputation through offers, discounts. The product quality vital for it hence it can be suggested that electronic product organisations along with the offers, discounts has to maintain proper quality of products.
- Along with financial aspects e-commerce sites, electronic product companies should also focus on the right relationship with the e-commerce sites for long term business success.
- Electronic products tastes and preferences change from time to time. Hence, electronic product organisations should introduce the new brand to increase its market share.

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# TRAITS INHERITANCE AND CLUSTER ANALYSIS OF F<sub>1</sub> PLANTS OBTAINED ON THE BASIS OF HYBRIDIZATION OF *G.BARBADENSE* L.VARIETIES AND LINES

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## ABSTRACT

*This article outlines the results of analysis of farm-valuable traits inheritance of F<sub>1</sub> plants obtained on the basis of hybridization of varieties and lines belong to *G.barbadense* L.cotton plant species. Dominating level and its inheritance was determined to be under positive and medium negative, dominant and super dominant forms according to the studied cotton weight, fiber length and yield, weight of 1000 cotton seeds in one cotton boll. It is required to continue genetic-breeding research work on next generations for maintaining positive heterosis status achieved at F<sub>1</sub> generation. In order to identify the interrelation of varieties by their farm-valuable traits through analyzing group division of clusters in which varieties are combined, a four-cluster type analysis was found to be the most favorable for an effective work.*

**KEYWORDS:** *species, variety, line, hybridization, inheritance, cluster, generation, cotton weight, fiber length and yield, weight of 1000 cotton seeds in one cotton boll, dominating level, super dominant, heterosis, negative heterosis.*

## INTRODUCTION

Cotton plant varieties that belong to *G.barbadense* L. species are known to be higher hot requiring by their biological attributes, and they are grown in some fields of southern regions. The introduction of fine-fiber cotton in the country will bring great benefits to the state economy. One of the main disadvantages of fine-fiber cotton varieties is their low yield and late maturation. One of the main indicators of cotton productivity is fiber yield, on the base of the study of the inheritance nature and modification it has been determined that the trait depends on the parental genotypes and it is possible to achieve a large-scale transgression in fiber yield and quality by hybridization of different species. In

order to implement this, creation of precocious varieties with best fiber quality and high yield and expanding crop lands of cotton plant varieties of *G.barbadense* L. species play an important role [5, 7, 9, 11].

Plants isolated from the higher generation of backcross hybrid populations that obtained by crossing (♀T-817 x ♂010972) x T-817 a geographically distant 010972 sample of *G.barbadense* L. species with the T-817 line of fine-fiber cotton and inheritance of farm-valuable traits of the plants of this group with large cotton bolls (larger than 4,2 g), their modification and correlation among them have been studied. In higher generation hybrid plants, it has been proven that strong negative correlations between fiber yield and fiber length,



fiber yield and weight of 1000 cotton seeds can be altered in a positive way [3].

A lot of fine-fiber varieties have been developed in the Republic of Uzbekistan since today including Termiz-7, Termiz-8, Termiz-14, Termiz-15 and Termiz-31. Later other fine-fiber varieties (C-6029, C-6030, C-6032, C-6037, C-6040, C-6042, Karshi-8, Karshi-9, Surkhon-2, Surkhon-3, Surkhon-5, Surkhon-7, Surkhon-9, Surkhon-14, Surkhon-16, Surkhon-18, Surkhon-100, Surkhon-101, Surkhon-102, Surkhon-103) have been created and regionized. The growing demand for the purchase of high quality fiber in the world cotton market in recent years is closely connected with the need to create I-a, I-b, I, II types of fine fiber varieties [8].

Due to a sharp rise in temperature and frequent hot winds in Surkhondarya and Kashkadarya regions during the growing season of cotton plant, the loss of yield elements of medium-fiber cotton varieties has been observed. Therefore, in the southern regions it is recommended to plant fine-fiber varieties of cotton. In particular, the information about the farm-valuable traits of Termiz-202, Termiz-208 varieties has been presented. Also, Termiz-202 and Termiz-208 varieties have been reported to have high opening rates of bolls [4].

Another method of multidimensional statistics is cluster analysis. The cluster analysis method is based on measuring the Euclidean distance between points (varieties) in a multidimensional space as a measure of genetic divergence to distinguish genetically close groups of varieties. Tryon was the first to use cluster analysis term in sociology and described this method. Cluster analysis basis is consisted of close or similar divisions – clusters of a number of objects and traits. Clustering methods can be used in even the simplest grouping operations. The best aspect of this method is that it can be used to separate objects into a whole set of characters or traits. In addition, cluster analysis, unlike most mathematical and statistical methods, places no restrictions on the objects under consideration and allows the processing of different amounts of data of different nature.

As N.I. Vavilov noted, sometimes there are different genotypes under the similarity of varieties by appearance [6]. One-sided selection of such varieties leads to diversification of population biotypes and a decrease in varietal indications. This case raises the questions: how can genotypes be grouped? How to determine which of them belongs to this variety on the basis of farm-valuable traits? Clarification of these questions is related to the study of the genetic structure of varieties.

In the correct grouping of genotypes according to their genetic proximity, it is necessary

to determine the number of clusters sufficient to meet the goal set for the classification of samples. In his research, R. Abidov [1, 2] used the cluster method to determine the similarity of cotton species in terms of protein components. The author acknowledged that as a result of the six-cluster analysis, natural allotetraploid species and representatives of the D genome group have a relatively close genetic relationship. This is evidenced by the fact that they are combined into a single cluster. Studies have shown that the easily soluble protein components of seeds are genomically specific, which makes it possible to determine the relative proximity of cotton species.

Several measures have been conducted on the use of factor and cluster analysis methods in local varieties and lines. The author used k-cluster and hierarchical analysis programs to determine the genotypic diversity of the species and lines studied in his research. Using Euclidean distance as a measure of genetic proximity and Word method as a method of aggregation, the author identified indicators on a number of traits to determine the genotypic composition of the S-6770 variety population of cotton plant. As a result, he distinguished 5 groups of clusters that differ from the original population in the set of trait and retain their characteristics in generations. The first cluster consisted of plants with small bolls and the lowest yields, low weight of 1000 seeds and fiber index. The second cluster consisted of large-boll plants with higher yields per plant than the population average index. The third group consisted of plants with the lowest fiber yield but the seeds were relatively large, the fourth group consisted of plants with small and less bolls, 1000 seeds with low weight, the lowest yields and late maturation. In the fifth cluster, the number of plants was the smallest, but with the most number and largest bolls, and also with higher weight of 1000 seeds [10].

## OBJECT AND THE METHODS OF RESEARCH

The experiments were carried out in extension fields of the laboratory of Cotton systematics and introduction of the Institute of Genetics and experimental biology at the Academy of Sciences of the Republic of Uzbekistan. As an object of the research cultural Termiz-31, Surkhon-14, Surkhon-18, Iloton, Angor varieties and lines with large bolls which belong to *G. barbadense* L. species were chosen.

The following methods were used to conduct the research: simple hybridization, mathematical and cluster analysis.



## **RESEARCH RESULTS**

According to the parameters of the initial samples selected for the study it was found out that by the trait of cotton weight of one cotton boll, the largest boll was average 5,9 grams in T-2006 line and the lowest indication by trait was 2.4 grams in cultural Iloton variety (Table 1).



**Table-1**  
**Inheritance of farm-valuable traits of initial sources and F<sub>1</sub> plants obtained by their hybridization**

Initial sources and their F <sub>1</sub> hybrid combinations	Cotton weight of one boll, gr	hp	Fiber length	hp	Fiber yield	hp	Weight of 1000 seeds	hp
<b>Surkhon-14</b>	3,2±0,13	-	40,3±0,26	-	34,0±0,03	-	119,3±1,1	-
<b>Surkhon -18</b>	2,7±0,08	-	40,3±0,18	-	37,3±0,49	-	107,95±1,2	-
<b>Iloton</b>	2,4±0,19	-	39,5±0,13	-	34,0±0,38	-	104,0±1,4	-
<b>Termiz-31</b>	3,2±0,20	-	39,4±0,31	-	36,5±0,53	-	123,6±1,8	-
<b>Angor</b>	4,8±0,12	-	40,2±0,17	-	36,5±0,35	-	141,4±1,8	-
<b>T-1985</b>	5,7±0,06	-	40,2±0,16	-	35,3±1,03	-	143,7±2,3	-
<b>T-2006</b>	5,9±0,38	-	40,3±0,18	-	34,8±0,52	-	146,0±1,7	-
<b>T-2017</b>	5,6±0,20	-	40,7±0,24	-	34,6±0,29	-	139,8±1,8	-
<b>T-2017-2</b>	5,3±0,20	-	39,3±0,26	-	35,9±0,40	-	134,1±1,9	-
<b>F<sub>1</sub>T-1985 x Surkhon-14</b>	4,4±0,07	-0,04	40,0±0,04	-5,0	36,9±0,68	3,4	102,6±0,08	-2,3
<b>F<sub>1</sub> Surkhon-14 x Angor</b>	4,2±0,15	0,2	39,0±0,04	-25,0	36,4±0,36	0,9	105,4±0,06	-1,2
<b>F<sub>1</sub> Surkhon-14 x Iloton</b>	3,8±0,06	2,5	38,8±0,02	-2,7	36,4±0,58	2,4	120,8±0,08	1,1
<b>F<sub>1</sub>Termiz-31 x Angor</b>	4,2±0,15	0,2	38,3±0,03	-1,9	37,4±0,34	0,9	108,5±0,07	-2,6
<b>F<sub>1</sub>Angor x Surkhon-14</b>	4,2±0,07	0,2	38,5±0,03	-0,3	36,4±0,31	0,9	107,1±0,10	-2,1
<b>F<sub>1</sub>T-2017-2 x Iloton</b>	4,3±0,07	0,3	38,7±0,02	-7,0	30,5±0,51	-3,0	116,9±0,09	-0,14
<b>F<sub>1</sub>T-2017x Surkhon-14</b>	3,9±0,07	-0,4	37,6±0,02	-14,5	35,3±1,20	-3,3	98,4±0,14	-3,0
<b>F<sub>1</sub> Surkhon-18 x Iloton</b>	3,2±0,09	4,3	38,0±0,04	-4,7	34,2±0,70	-0,8	79,3±0,48	-9,0
<b>F<sub>1</sub> Angor x Iloton</b>	4,1±0,11	0,4	40,2±0,03	1,0	33,7±0,13	-1,2	114,4±0,10	-0,43
<b>F<sub>1</sub>T-2017 x Iloton</b>	4,0±0,10	1,6	39,2±0,03	-1,1	35,5±0,59	4,0	109,8±0,05	-0,67
<b>F<sub>1</sub>T-2017-2 x Surkhon-14</b>	3,9±0,03	-0,3	40,3±0,02	1,0	36,8±1,83	1,9	105±0,14	-2,93
<b>F<sub>1</sub> Angor x Surkhon-14</b>	4,3±0,08	0,3	38,2±0,08	-41,0	35,3±0,57	0,04	81,3±0,17	-4,4
<b>F<sub>1</sub>T-2006 x Iloton</b>	4,6±0,05	0,2	39,8±0,03	-0,2	34,3±0,28	-0,2	89,4±0,14	-1,69
<b>F<sub>1</sub>T-1985 x Iloton</b>	4,0±0,08	-0,03	38,6±0,03	-3,5	32,5±1,13	-3,3	108,2±0,04	-0,78



Being one of farm-valuable traits of cotton, the weight of cotton in one boll constituted average 3,2-4,6 grams in  $F_1$  plants obtained by hybridization of varieties and lines of cotton, and this result showed that the inheritance of this trait varied. A strong heterosis condition was observed in the plants obtained by crossing two plant forms that had less differed cotton weight in one boll, while in hybrids obtained from hybridization of the forms with large and small cotton bolls, the weight of cotton in one boll was observed to be in the positive and negative intermediate state of heredity. For example, in  $F_1$  Surkhon-18 x Iloton combination, the average weight of cotton in one boll was 3,2 grams, while in super dominant ( $hp = 4,3$ ) Surkhon-14 x Angor combination, this trait was defined to be inherited in positive intermediate state ( $hp = 0,2$ ).

As a result of the study of the fiber length trait of the fine-fiber varieties and lines selected as the primary source, the indication was 39,3–40,7 mm.

In  $F_1$  plants obtained as a result of hybridization, effective results were observed on the trait of fiber length (37,6-40,0 mm), the best index on this trait was recorded in the combination  $F_1$ T-2017-2 x Surkhon-14 to be average 40,3 mm, in the dominant position of the trait ( $hp = 1,0$ ) the lowest index in terms of fiber length constituted 37,6 mm in  $F_1$ T-2017 x Surkhon-14 combination, and the coefficient of inheritance was observed to be negative, occurring under extreme dominance ( $hp = -14,5$ ).

The analysis of the results of the study shows that (Table 1) the selected initial sources have different fiber yield trait, a high rate was in Surkhon-18, i.e 37,3%, while in Surkhon-14 and Iloton varieties this indication was equal to 34,0%.

The fiber yield in  $F_1$  plants was average 30,5-37,4%, the highest index on this trait was recorded in combination  $F_1$ Termiz-31 x Angor, that is an average of 37,3%, the lowest index in the combination T-2017-2 x Iloton constituted 30,5%. In  $F_1$  hybrids, fiber yield trait was inherited in the negative and positive intermediate, dominant and super dominant states.

Experimental data showed that the initial source samples involved in the hybridization on 1000 seeds weight trait differed from each other. By the trait of 1000 seeds weight in the T-2006 line the largest seed showed 146,0 g, while in Iloton variety the average weight of 1000 seeds was found to be average, that is the indication of the trait was 104,0 g (Table 1).

In  $F_1$  plants obtained as a result of crossing, different results were observed for the weight of 1000 seeds, weight varied from 79,3 to 120,8 grams. The best indication on this trait was recorded in  $F_1$ Surkhon-14 x Iloton combination - the average large seed weighed 120,8 grams, and the coefficient of inheritance was observed in the case of positive super dominance

( $hp = 1,1$ ), on the trait of 1000 seeds weight a small seed indication was determined to be average 79,3 grams in  $F_1$ Surkhon-18 x Iloton combination and the coefficient of inheritance was negative in super dominance ( $hp = -9,0$ )

For the cluster analysis, 5 cultivars belonging to the *G. barbadense* L. species and 4 lines with large bolls (Table 1) were used as initial data. These parameters of the varieties were determined in laboratory and field conditions. Our goal is to determine the degree of diversity of these varieties according to their farm-valuable traits and to combine them by their relative proximity, and the cluster analysis method was used to achieve this goal. This method is based on determining the Euclidean distance between varieties, as mentioned in the previous sections, and this distance is measured not in plane, but in multidimensional space.

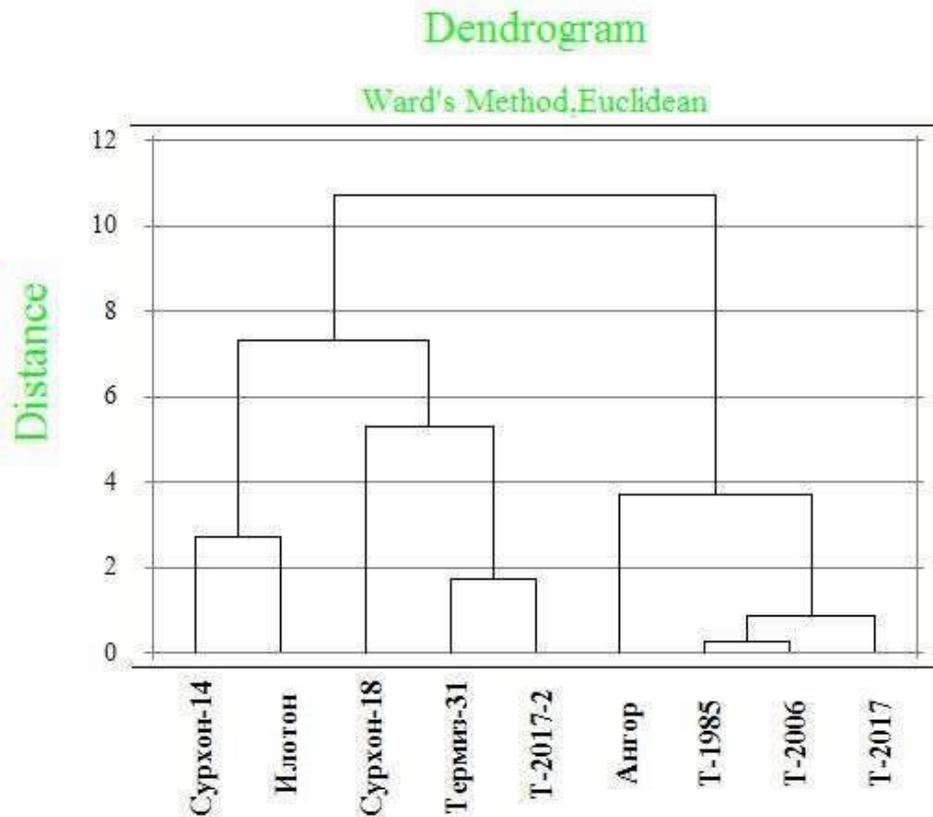
When analyzing the division of the combined clusters of varieties into groups, we found that the 4-cluster analysis was the most moderate to determine the proximity of the varieties in terms of farm-valuable traits (Table 2).

The first cluster included Surkhon-14 and Iloton varieties, which mainly formed the plants with the lowest fiber yield (34,0%). In the varieties included in this cluster, the weight of cotton in one boll was 2,8 g, the fiber length was 39,9 mm and the weight of 1000 seeds was 111,6 g. It was identified that all farm-valuable traits of the varieties included in this cluster had low index.

The second cluster consisted of varieties with the highest fiber length of 40,3 mm average and fiber yield of 37,3 mm, and the weight of cotton in one boll was 2,7 g, the weight of 1000 seeds was recorded as 107,9 g. In Termiz-31, Surkhon-18 varieties and T-2017-2 lines that included in this cluster, the fiber yield and fiber length index were higher than in the varieties of other clusters, and these varieties can be used to improve the indicators of this trait.

The third group included the Angor variety, which had the highest rate of farm-valuable traits. The weight of cotton in one boll of this variety was equal to 4,2 g, while fiber length made 39,3 mm, fiber yield 36,2 mm and weight of 1000 seeds was 128,8 grams.

The fourth group constituted T-1985, T-2006, and T-2017 lines, and the varieties combined in this cluster presented mainly the highest index of cotton weight in one boll, fiber length, and the weight of 1000 cotton seeds. These lines are important in creating fine-fiber cotton varieties with high fiber length and high yield.



**Table-2**  
Average parameters of cluster divisions according to farm-valuable traits

Cluster number	Cotton weight in one boll, g	Fiber length	Fiber yield	Weight of 1000 seeds
1	2,8	39,9	34,0	111,65
2	2,7	40,3	37,3	107,9
3	4,25	39,35	36,2	128,85
4	5,5	40,35	35,2	142,72

## CONCLUSION

Analysis of the obtained results showed that the inheritance of farm-valuable traits in F<sub>1</sub> plants obtained on the basis of hybridization of varieties and lines belonging to the *G.barbadense* L. species had been analyzed thoroughly. It was determined that the dominating level in accordance with cotton weight, fiber length, fiber yield, weight of 1000 seeds in one boll was found to be inherited in the positive and negative intermediate, dominant and super dominant state. In order to maintain the positive heterosis that was achieved in F<sub>1</sub> generation, it is necessary to continue genetic selection research work in the next generations. When analyzing the divisions of the clusters in which the varieties combined, a 4-cluster analysis was found to be the most moderate to

determine the proximity of the varieties in terms of their farm-valuable traits.

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# PHOTOANALYTIC AURICULAR ASSYMETRY IN SOUTHEAST NIGERIANS

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## ABSTRACT

**Background:** Differences between left and right part of the human face especially difference between the paired structures are well known in healthy people. This study was aimed at photoanalytically determining total ear width, total ear length, total lobe width, total lobular height of right and left ears at different angles. **Materials and methods:** 514 subjects (16-30 years) comprising 258 males and 256 females were selected using simple random sampling technique. Total ear length (TEL), Total ear width (TEW), Total lobe width (TLW), Total lobular height (TLH) at 90°, 45° left and 45° right were measured, analyzed and **bilateral assymetry** of the measured parameters was investigated. **Results:** Both males and females were observed to have higher mean auricular values on the right side than on the left, TLW was also observed to be significant at 90°, 45° left, and 45° right ( $P < 0.05$ ). Two important indices (auricular and lobule) were calculated in both the sexes. In both males and females, the right lobule index was found to be statistically higher ( $P < 0.05$ ) as compared to left one. **Conclusion:** Findings from this study show that anatomical variation of the auricle exists amongst south east Nigerians. Results from this study could aid forensic application of ear prints, identification of individuals, facial recognition from security cameras, planning of cosmetic surgery and product design for specific consumer auricular requirements.

**KEY WORDS:** Auricle, South east Nigerians, Variations

## INTRODUCTION

Ear photo-analysis is a valuable additional tool in smart surveillance tasks and forensic image analysis. It employs the use of photogrammetry to obtain angles and distances between facial landmarks as an alternative to direct measurements [1] [2] [3]. The ear can easily be captured from a distance, even if the subject is not fully cooperative as perpetrators of some crimes sometimes wear hats in order to cover their faces and avoid looking directly into overhead Surveillance camera so no frontal images of the person is available [4].

The structural difference in the human ear creates unique shapes and morphology similar to the

unique finger print of each human being. The external ear is highly variable to the point where even the two ears of a single individual may be notably different [5] [6]. In development, the cells of both ears share the same genes but obviously the ear structure is not under complete genetic control but influenced by environmental factors as previous studies have shown that the left and right ears of an individual may differ in size and structure [7]

Great diversity exists in both size and shape of the external auricle even in the same ethnic group [8] [9] The relationship between the left and right ear is important for determining the levels of genetic and environmental control of ear structure [10]. Studies



have also noted that variation exist between two sides of the same individual. However gross difference in size or position of two ears is easily noticed.[11]

Cagatay Barut [12] reported that the left ear indices were found to be significantly higher than right ear indices for all the subjects in all 153 Turkey primary school children in his cohort.

In a preliminary study conducted by [13] on 350 males and female subjects of Central India, to test the uniqueness of ear pattern, twelve direct measurements taken on the ears were projected in a twelve dimensional feature space. The Euclidean distances were measured between subjects to test uniqueness and none of the ears were found to be identical.

In Nigeria, morphological changes of human pinna in relation to age, sex and ethnicity has been reported [8] [14][9]. Despite the numerous reports on ear anthropometry, very few studies in the sub-saharan Africa including Nigeria has explored the efficiency of photoanalysis and software technology in the assessment of external ear with the aim of individualization and human identification at a large scale. Therefore, this study therefore aspires to establish the anatomical variation in the auricular structure of Southeast Nigerians

## MATERIALS AND METHODS

A total of 514 subjects were recruited for the study. Age of subjects ranged from 16-30 years. The subjects were selected using stratified random sampling technique. None of the subjects had previous plastic surgery or trauma on the face. In Ethical approval was obtained from the Ethical Review Committee for Human Experimentation, College of Medicine Enugu State University of Science and Technology, Enugu Nigeria (ESUTHP/C-MAC/RA/034/183).

## PROTOCOL OF PROCEDURE

Consent was taken from each participant after explaining the purpose of study in accordance with World Medical Association Declaration of Helinski Ethical Principles for Medical Research Involving Human Subjects [15]

### i Pre-Image Acquisition:

Before photography was taken, Subjects were numbered using self adhesive stickers of known length (45x13mm) at the sides of the face which was to calibrate the ImageJ software in order to get the actual measurement from the photographs) and placed on the side of the subjects face. Subjects' age, sex and state of origin were recorded along with their identification numbers.

Female subjects were asked to clip back hair using hair clips to prevent it from obscuring the photograph of the ear. The tripod was adjusted so that

it was equal with the height of the ear of the subject to ensure the ear was visible within the shots.

### ii Image Acquisition:

- Images were acquired using Nikon D90 digital single lens reflex camera (manufactured by Nikon Corporation Tokyo, Japan) in the same lightening conditions with no illumination changes. Camera settings of 12.3 mega pixel, 600Dpi resolution, fixed focal length 90 to 150mm, high quality macro lens (which assures maximum depth of field) high aperture setting ( $f > 16$ ) and short exposure time ( $> 125$  milli sec) were also kept constant.

Each subject was asked to relax with both hands hanging beside the trunk

Subjects positioned on a line marked 100cm from the camera [15]. Camera was moved to either side in order to have photo taken at  $90^\circ$ ,  $45^\circ$  angles parallel to the subject to reduce possibility of image perspective distortion due to poor positioning.

### iii Image Processing

- When photos had been taken they were downloaded into Adobe illustrator version 17. (Adobe systems USA)

- All photos were cropped and sharpened if necessary for a clear picture. They were converted to gray scale (color removed) and contrast increased for the best possible definition. It was necessary for all photographs to be on the same scale for accuracy in measurement.

- Photographs with incorrect lightening or with unnoticed hairs concealing actual auricle dimensions were discarded.

- Image editing software (Image J 1.48 software j (v.j.48 ava 1.6.0 2064 bits written by Wayne Rasband, National institute of mental health, Bethesda, Maryland, USA) process image option was used to

**A: Process the images**-Sharpen images (optimize brightness), enhance contrast, and size to produce a clear image, subtract background and image calculation

**B:** Furthermore, this program has an analyze option dimension tool used to set scale and create a vertical dimension line that measures vertical distance between any 2 landmarks using y axis.

Thus ear dimension could be easily and accurately calculated while comparing landmarks

### iv. Ear measurements Taken

Various soft issues landmarks were tagged on photograph of the subjects' ear and then measurements were taken in and results were given to 2 decimal places. The present study included the following parameters for the measurements of the right and left external ear.



**TOTAL EAR LENGHT**

Measurement of the distance between the most superior point of the ear or pinna and the most inferior point of the earlobe .[16]

**TOTAL EAR WIDTH:** Measurement of the distance between the most anterior point and the most posterior point of the pinna.[16]

**TOTAL LOBULAR LENGTH:** Measurement of the distance between the intertragic notch and the most inferior point of the ear lobule.[16]

**TOTAL LOBULAR WIDTH:** Measurement of the distance between the most anterior point and the most posterior point of the ear lobule.[16]

**EAR INDEX** :was calculated as

$$\frac{\text{Ear width}}{\text{Ear length}} \times 100$$
 [17].

Ear length

**LOBULAR INDEX:** was calculated as

$$\frac{\text{Lobule width}}{\text{Lobule length}} \times 100$$

Lobule length

Age of participants was obtained from self-reported date of birth[18].

**STATISTICAL ANALYSIS**

Images was analyzed using pro image J analyzer and the data obtained was presented in tables and subjected to statistical analysis by using t-test (independent and sample t-test) for the comparison of measurements taken from right and left ears between both sexes, Pearson correlation was used to establish the relationship between known anthropometric variables (Age, Height and Weight) and ear parameters measured with the aid of statistical package for social Sciences (SPSS) IBM version 20. P< 0.05 was considered statistically significant and the Mean and standard deviation was calculated for all the parameters.

**RESULTS**

This study provides valuable data pertaining to the ear morphology and their different parameters in south east Nigerians. There are 514 subjects (males and females) in our cohorts.

**TABLE 1: DISTRIBUTION OF AGE AND SEX IN THE STUDY**

Sex	Age group (years)					Total	χ <sup>2</sup>	P-value
	16-18	19-21	22-24	25-27	28-30			
Female	21	104	83	35	13	256	0.2010.995	
Male	19	103	86	36	14	258		
<b>Total</b>	40	207	169	71	27	514		

Age and gender of participants in this study are almost pair-matched (P>0.05) and the male/ female ratio is 1:1(Table 1) .Age distribution of participants showed that majority of population belongs to Age

group 19-21 while the less frequent age range was from 28- 30 age group.

**TABLE 2: COMPARISON OF AURICULAR INDICES AT DIFFERENT ANGLES**

Two important indices (AI and LI) were calculated in both sexes.

Indices	Angle	Side	Male (n=258)		Female (n=256)		Combined (n=514)	
			Mean $\pm$ SD	P-value	Mean $\pm$ SD	P-value	Mean $\pm$ SD	P-value
Ear index	90°	Left ear	58.49 $\pm$ 6.04	0.600	58.68 $\pm$ 5.76	0.717	58.58 $\pm$ 5.90	0.878
		Right ear	58.68 $\pm$ 6.47		58.55 $\pm$ 5.16		58.62 $\pm$ 5.85	
	45° Left	Left ear	57.68 $\pm$ 6.22	0.122	58.20 $\pm$ 5.65	0.161	57.94 $\pm$ 5.94	0.850
		Right ear	58.22 $\pm$ 6.44		57.75 $\pm$ 5.86		57.99 $\pm$ 6.15	
	45° Right	Left ear	58.22 $\pm$ 6.31	0.684	58.09 $\pm$ 5.80	0.011*	58.16 $\pm$ 6.06	0.040*
		Right ear	58.38 $\pm$ 6.55		58.90 $\pm$ 5.31		58.64 $\pm$ 5.96	
Lobule index	90°	Left ear	136.05 $\pm$ 26.35	0.023*	120.71 $\pm$ 22.58	0.000*	128.41 $\pm$ 25.69	0.001*
		Right ear	140.04 $\pm$ 26.20		129.10 $\pm$ 24.23		134.59 $\pm$ 25.80	
	45° Left	Left ear	134.10 $\pm$ 27.10	0.011*	119.76 $\pm$ 21.66	0.000*	126.96 $\pm$ 25.55	0.001*
		Right ear	138.38 $\pm$ 28.60		128.52 $\pm$ 20.96		133.47 $\pm$ 25.54	
	45° Right	Left ear	136.61 $\pm$ 27.77	0.648	121.88 $\pm$ 20.93	0.001*	129.27 $\pm$ 25.66	0.001*
		Right ear	137.31 $\pm$ 27.21		128.56 $\pm$ 21.95		132.95 $\pm$ 25.10	

\* P&lt;0.05 (Significant)

Data was analyzed using paired sample/dependent t-test. Table 2 depicts combined data of ear sides in both sexes and descriptive statistics of different auricular indices when the cohort is broken into male and female subgroup. It was observed that there was significant difference in most of the lobule indices of the left and right ears (P<0.05) and that the right

lobule indices of both males and females was higher than the left at all angles observed.

**TABLE 3: DIFFERENT ANTHROPOMETRIC PARAMETERS IN RELATION TO BILATERAL ASSYMETRY**

Angle	Parameter	Side	Mean $\pm$ SD	P-value
90°	TEL	Left ear	5.91 $\pm$ 0.49	0.926
		Right ear	<b>5.91<math>\pm</math>0.50</b>	
	TEW	Left ear	3.45 $\pm$ 0.35	0.854
		Right ear	3.46 $\pm$ 0.36	
	TLH	Left ear	1.52 $\pm$ 0.22	0.105
		Right ear	<b>1.53<math>\pm</math>0.22</b>	
	TLW	Left ear	1.93 $\pm$ 0.31	0.000*
		Right ear	2.01 $\pm$ 0.34	
45° Left	TEL	Left ear	6.04 $\pm$ 0.55	0.006*
		Right ear	6.08 $\pm$ 0.57	
	TEW	Left ear	3.49 $\pm$ 0.38	0.061
		Right ear	3.51 $\pm$ 0.41	
	TLH	Left ear	1.56 $\pm$ 0.25	0.669
		Right ear	1.57 $\pm$ 0.25	
	TLW	Left ear	1.95 $\pm$ 0.33	0.000*
		Right ear	2.05 $\pm$ 0.33	
45° Right	TEL	Left ear	5.97 $\pm$ 0.50	0.674
		Right ear	5.97 $\pm$ 0.52	
	TEW	Left ear	3.46 $\pm$ 0.36	0.059
		Right ear	<b>3.49<math>\pm</math>0.37</b>	
	TLH	Left ear	1.54 $\pm$ 0.23	0.603
		Right ear	<b>1.55<math>\pm</math>0.22</b>	
	TLW	Left ear	1.97 $\pm$ 0.32	0.000*
		Right ear	2.02 $\pm$ 0.31	

\* P<0.05 was accepted as statistically significant and significant differences of measurements were accepted as assymetry

The comparison of different anthropometric parameters in relation to ear side using paired sample t-test showed that TLW is significant at 90°, 45° left, and 45° right (P<0.05). This implies that the lobule is wider at the right ear than the left ear. The ear height is significant at 45° left (P<0.05). This implies that

the ear is longer at the right than the left side (Table 4).

**TABLE 4: COMPARISON OF ANTHROPOMETRIC PARAMETERS OF THE SAME EAR SIDE AT DIFFERENT ANGLES**

Parameter	Side	Angle	Mean $\pm$ SD	P-value
<b>TEL</b>	Left ear	90°	5.91 $\pm$ 0.49	0.001*
		45° Left	6.04 $\pm$ 0.55	
	Right ear	90°	5.91 $\pm$ 0.50	0.001*
		45° Left	6.08 $\pm$ 0.57	
<b>TEW</b>	Left ear	90°	3.45 $\pm$ 0.35	0.012*
		45° Left	3.49 $\pm$ 0.38	
	Right ear	90°	3.46 $\pm$ 0.36	0.011*
		45° Left	3.51 $\pm$ 0.41	
<b>TLH</b>	Left ear	90°	1.52 $\pm$ 0.22	0.001
		45° Left	1.56 $\pm$ 0.25	
	Right ear	90°	1.53 $\pm$ 0.22	0.001*
		45° Left	1.57 $\pm$ 0.25	
<b>TLW</b>	Left ear	90°	1.93 $\pm$ 0.31	0.018*
		45° Left	1.95 $\pm$ 0.33	
	Right ear	90°	2.01 $\pm$ 0.34	0.016*
		45° Left	2.05 $\pm$ 0.33	
<b>TEL</b>	Left ear	90°	5.91 $\pm$ 0.49	0.001*
		45° Right	5.97 $\pm$ 0.50	
	Right ear	90°	5.91 $\pm$ 0.50	0.001*
		45° Right	5.97 $\pm$ 0.52	
<b>TEW</b>	Left ear	90°	3.45 $\pm$ 0.35	0.001*
		45° Right	3.46 $\pm$ 0.36	
	Right ear	90°	3.46 $\pm$ 0.36	0.001*
		45° Right	3.49 $\pm$ 0.37	
<b>TLH</b>	Left ear	90°	1.52 $\pm$ 0.22	0.001*
		45° Right	1.54 $\pm$ 0.23	
	Right ear	90°	1.53 $\pm$ 0.22	0.001*
		45° Right	1.55 $\pm$ 0.22	
<b>TLW</b>	Left ear	90°	1.93 $\pm$ 0.31	0.001*
		45° Right	1.97 $\pm$ 0.32	
	Right ear	90°	2.01 $\pm$ 0.34	0.001*
		45° Right	2.02 $\pm$ 0.31	

The comparison of anthropometric parameters of the same ear side at different angles shows that all the measurement at 90° , 45° Left and 45° Right are significant (P<0.05). This implies that the ear is

longer and wider at the 45° Left and Right measurement than that of 90° .

**TABLE 5:REGRESSION EQUATION OF THE RELATIONSHIP BETWEEN THE MEASUREMENTS AT 45° AND 90° ANGLES**

Parameters	Side	Angle	Constant	Coefficient
TEL	Left ear	45° Left	1.642	0.707
		45° Right	0.826	0.852
	Right ear	45° Left	2.166	0.616
		45° Right	1.286	0.774
TEW	Left ear	45° Left	1.308	0.615
		45° Right	1.133	0.665
	Right ear	45° Left	1.417	0.580
		45° Right	1.191	0.654
TLH	Left ear	45° Left	0.364	0.744
		45° Right	0.233	0.837
	Right ear	45° Left	0.434	0.691
		45° Right	0.309	0.783
TLW	Left ear	45° Left	0.486	0.740
		45° Right	0.473	0.740
	Right ear	45° Left	0.573	0.701
		45° Right	0.380	0.810

## DISCUSSION

It has been noted that the external ear is an infinitely complex structure with great variation between individuals[19].Several studies on the variations of the external ear have shown that both ears of an individual vary in its dimensions. These structural differences in the human ear create unique shapes and morphology.[12].

In the present study, attempt was made to establish the anatomical variation of the external ear amongst south east Nigerians. Subtle differences between the right and left ear parameters within each gender group was observed, 95% of the measured subjects had different measurement values for the right ear and left ear dimensions this concurs with the reports of [7]who reported that the “differences between the left and right parts of the human face, especially differences between the paired structures, are well known in healthy people” .

In this study,(Table 3)both males and females were observed to have higher mean values on the right side than on the left, This was similar to the findings of [20][16].Results of the present study also concurs with the report of [21]anthropometric study on the anatomical variation of the external ear amongst Port Harcourt students in Nigeria, he also reported that all parameters were significantly larger on the right side than on the left.

Kearney et al,[22]. in their Australian studies on the variation of the ears suggested that lots of variations exists between the left and right ear of a single individual and that the fleshy parts of the ear are the most variable because they are the features under the least genetic control and are most greatly affected by environmental factors during development .

In our study,(Table 3), Total lobular width (TLW) was also observed to be significant at 90°, 45° left, and 45° right ( $P < 0.05$ ). Two important indices (auricular and lobule) were calculated in both the sexes,(Table 2) In both males and females, the right lobule index was found to be statistically higher ( $P < 0.05$ ) as compared to left one, this concurs with the findings of [23]. who reported that the right lobule is wider than the left in both males and females and the difference was found to be statistically significant in his cohort.

In this study(Table 4) comparison of auricular anthropometric parameters at different angles shows that all the measurement at 90°, 45° Left and 45° Right are significant ( $P < 0.05$ ).This implies that the ear is longer and wider at the 45° Left and Right measurement than that of 90°.Regression equation of the relationship between the auricular mean values at varying angles was also deduced (Table 5) to provide photoanthropometric auricular dimensions at 90°, 45° left and 45° right of both ears, as a valuable additional identification tool that will give room for proper conversion intervention in a situation where only the side view of pictures of the auricle is gotten at varying angles other than 90°. In this regards the use of the generated formula which is specific to the Igbo ethnic group can be a valuable amendment to existing face recognition systems for identifying subject

## AREA FOR FURTHER RESEARCH

This study has shown that ear is a structure variable enough to be considered useful for the purpose of forensic identification, It is hence recommended that further studies should be carried out using larger population, Age range should be



increased and selection of individual tribes for wider anthropometric coverage in Nigeria and Africa.

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# TEACHERS' EVALUATION OF STUDENT-CENTERED LEARNING ENVIRONMENTS

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## ABSTRACT

*The student-centered teaching is the arrangement of the teaching experience focusing on the students' responsibilities and activities in the learning process which takes into consideration the students' interests, demands and needs. According to this approach, while teaching experiences are planned, different learning strategies and styles of students are taken into account. A student who can reach information is more valuable than the one who memorizes it.*

**The Aim of Study:** *The aim of this study is to determine teachers' evaluations of their own classes in terms of the student-centered learning environment dimensions of time, place and infrastructure, psycho-social aspect.*

**Methods:** *The research is descriptive in design. In this study, a data collection instrument was used that lends itself for teachers to evaluate their classes in terms of the dimensions of student-centered learning; namely time, place, infrastructure and psycho-social.*

**Findings:** *Teachers' evaluations of student-centered learning environments in relation to different variables highlight that teaching area is an effective factor putting elementary school teaching at an advantage in terms of scores. Teachers, when asked to evaluate the dimensions of student-centered learning environments; have given the highest score to psycho-social dimension, followed by time, equipment and place dimensions.*

**Conclusions and Discussion:** *Based on the results of the study, the following suggestions are made. Teachers, while determining on educational models and approaches in their teaching-learning process, should ensure that it allows students to learn on their own. Within the school and class context, teachers should allocate time for activities that increase student-centered learning, individual and social activities like extra-curricular activities, student club activities. Teachers should be offered chances of in-service training so that they can improve their skills and gain knowledge about student-centered learning with respect to their teaching areas.*

**KEYWORDS:** *Learning environment, student-centered education, student-centered teaching/learning, learning environment dimensions*

## INTRODUCTION

The concept of student-centered education has led to perceptual changes in relation to education, learning and teaching. In student-centered teaching, at the stages of decision making, planning, application, and evaluation during the teaching-learning process learners participate in the process willingly, showing interest with determination. It can be said that student-centered teaching has brought about the change in questions from "What should we teach?", "How should we teach?", "With what should we teach?" to a perspective where "What would s/he like to learn?", "What will s/he do to learn?", "What would assist him/her in his/her learning?", "To what extent did s/he learn?" In

other words, in student-centered teaching learners actively participate in the decision making process about what to learn, how to learn, and what kind of help is required, and how to decide how much is learned<sup>1</sup>.

For over 100 years, philosophers such as John Dewey, Lev Vygotsky, Jean Piaget, Jerome Bruner, Ferriere, Rousseau, Freinet, Howard Gardner, Gianni Rodari, Bruno Ciari, Maria

<sup>1</sup> Burge, E. J. (1988). Gender in distance education. In: C.C. Gibson, Editor, *Distance learners in higher education*. Madison, WI: Atwood Publishing,



Montessori and others have reported on the benefits of experiential, hands-on, student-centered learning. Involving learner in decision making and using student interest to drive curriculum and projects supports a growing body of evidence that concurs with these revolutionary philosophers. Learning is not only about knowledge making. Children need to be active learners within the context of culture, community, and past experiences. Teachers who adhere to student-centered classrooms are influenced strongly by constructivism, naturalistic, social constructivism, existentialism, humanism, and progressive philosophies.

Student-centered learning, or student centeredness, is a model which puts the student in the center of the learning process. Student-centered learning is a model in which students play an active role in their own learning styles and learning strategies. While learning, internal motivation is of vital importance. Individual systemizing is more important than standardized systems. Student-centered learning improves learning to learn and learning how to improve skills such as critical thinking, problem-solving and reflective thinking. Students apply and display different styles. Student-centered learning differs from teacher-centered learning in which it is characterized by the more active role of the learner when compared to the teacher.

Student-centered learning helps students to get their own goals for learning, and determine resources and activities guiding them to meet those goals (Jonassen, 2000). Because students pursue their own goals, all of their activities are meaningful to them. Student-centered learning which is based on experiential learning helps knowledge and skills to be grasped more extensively and permanently (Lont, 1999). Since both students and teachers participate in learning process, teachers are perceived to be a member of teaching environment and students to be the persons whose individual learning needs should be addressed. Thus, teachers by using more recent teaching methods involve students in learning process more actively. This improves and expands teachers' roles, which in turn contributes to team spirit and the culture of working together. The properties of student-centered teaching program were prepared as follows<sup>2</sup>:

<sup>2</sup> Jonassen, D.H. (2000). Revisiting activity theory as a framework for designing student-centered learning environments. In D.H. Jonassen & S.M. Land (Eds.), *Theoretical foundations of learning environments* (pp. 89-121). Mahwah, New Jersey: Lawrence Erlbaum Associates.

Lont, D. (1999). Using an intranet to facilitate

- emphasizes tasks that attract students' various interests,
- organizes content and activities around the subjects that are meaningful to the students,
- contains clear opportunities that let all students develop their own learning skills and progress to the next level of learning,
- contains activities that help students understand and improve their own viewpoints,
- allows for global, interdisciplinary, and complementary activities,
- supports challenging learning activities even if the learners find them difficult, and
- emphasizes activities that encourage students to work with other students in cooperation.

### LEARNING ENVIRONMENT

Learning is a dynamic process during which individuals make internal adjustments individually and develop necessary skills. Thus, in order to enhance effectiveness of learning, the learning itself should be the starting point and other concepts, such as instruction and curriculum or teaching techniques, should be built on it. Learning is a process that takes place in mind. Individuals do not merely mechanically react to the internal and external stimuli without thinking. Yet, they develop their own knowledge and patterns of perception in interaction with stimuli that reaches the organism. They form a net of structures out of their interpretations, and they form meanings regarding different dimensions of their daily lives. Since knowledge is not a final product, and since it can be improved or changed they can perceive an event differently and they can develop different knowledge structures.

In student-centered learning, the teacher takes a more active role in learning rather than being the person in the center of knowledge. The student, rather than being passive, takes a role in the application, analysis, synthesis and evaluation processes. In learning, the factor of place is everywhere where learning takes place. The time factor shows differences with respect to the learning activity. In addition, in student-centered learning, technology is used in such a way that it realizes teacher- student and student-student interaction.

Kolb (1984) argues that active learning is acquired by individuals by doing more than thinking. According to Kolb, active learning can develop by thinking about the details of thoughts, experiences, perceptions, and emotions that come about during experiences. According to this, active

learner-centered learning. *Journal of Accounting Education*, 17(2-3), 293-320.



learning involves four stages of concrete experience (gaining experience): observation and reflection based on experience, forming abstract concepts, and new experiences. It is possible to participate in this cycle at any stage and follow the cycle in its logical order. Active learning takes place only when these four stages are materialized. Independently none of the stages constitutes active learning (Kolb, 2010).

Student-centered learning environments provide interactive, complimentary activities that enable individuals to address then- unique learning interests and needs, examine content at multiple levels of complexity, and deepen understanding (Hannafin, 1992). The concept of a learning environment is not new. Its roots can be traced to early apprenticeship. Socratic and similar movements that have sought to immerse individuals in authentic learning experiences, where the meaning of knowledge and skills are realistically embedded<sup>3</sup>.

Various learning environments can be classified according to the manner in which they manifest their underlying foundations. Hannafin and Land (1997) emphasize that educational environments have psychological, technological, cultural and pragmatic principles. All learning environments explicitly reflect these underlying models for foundations. Psychological principles take as the basis “the individuals’ knowledge and skill acquisition, organization and application”. In student- centered learning environments, students’ experience, content, and the construction of knowledge are important. Psychological foundations are rooted in beliefs about how individuals think and learn. Pedagogical principles take “activities, methods and the structure of learning environments” as their basis. For student-centered learning to take place, exemplifying, discovering, researching, and learning based on problem-solving are vital. Technological principles take “assistant technology and technology to enrich the learning environment” as their basis. In student-centered learning

environments, different tools can be implemented in various ways. Technological capabilities constrain or enhance types of learner-system transactions that are possible. Cultural principles highlight “social values such as researching, inventing, and critical thinking”. Student-centered learning environments support researching, discovering, and critical thinking. Pragmatic principles cover “economic conditions, technological facilities and the ability to reach innovations”. Pragmatic conditions define the limitations in implementation; for example, the financial situation. Five foundations are functionally integrated in learning systems designs.

Student-centered learning environments are set up in such a way that they give students the chance to take the responsibility for organizing, analyzing and synthesizing knowledge, and consequently play a more active role in their own learning (Means, 1994). These environments provide students with the opportunities of explaining complex problems and solve those in cooperation, and by applying to different sources (Hannafin & Land, 1997). This approach gives students the chance to take individual responsibility and adapt an active role in the teaching-learning process at the highest level. The mechanisms of self-confidence and self-control in individuals improve at a better rate<sup>4</sup>.

Student-centered teaching focuses on the student. Decision-making, organization and content are determined for most by taking individual students’ needs and interests into consideration. Student-centered teaching provides opportunities to develop students’ skills of transferring knowledge to other situations, triggering retention, and adapting a high motivation for learning. The active involvement of students helps them to construct knowledge.

## **STUDENT-CENTERED LEARNING ENVIRONMENT DIMENSIONS**

In student-centered learning environments, it is essential that students takes responsibility for learning, they are directly involved in the discovery of knowledge, the materials used offer students a chance to activate their background knowledge, the activities done are based on problem solving, for cooperative learning to take place, the society, home and workplace are used as sources, and various institutions and outside-class

<sup>3</sup> Hannafin, M.J. (1992). Emerging technologies, ISD and learning environments: Critical perspectives. *Educational Technology Research and Development*, 40(1), 49-63.

Hannafin, M.J., Hall, C., Land, S. M. & Hill, J. R. (1994). Learning in open ended environments: Assumptions, methods and implications. *Educational Technology*, 34(8), 48-55.

Hannafin M.J. and Land S.M. (1997). The foundations and assumptions of technology enhanced student-centered learning environments. *Instructional Science* 25(3), 167-202.

<sup>4</sup> Land, S. M. & Hannafin, M. J. (1996). Student-centered learning environments: Foundations, assumptions and implications. ED 397 810.

[www.eric.ed.gov/ERICWebPortal/recordData](http://www.eric.ed.gov/ERICWebPortal/recordData)



activities are in-cooperated to support students' learning. Time, place, infrastructure-hardware and psycho- social environment dimensions of the learning environment and the characteristics of these dimensions in student-centered learning environments are determined as follows:

### **TIME DIMENSION**

Among the student-centered learning dimensions, it is the one which should have priority. Apart from sufficient time, it is also important that arrangements should be done for using time efficiently. Time has to be flexible so as to allow changes when necessary. The characteristics of the main five components of the time dimension can be listed as:

- For the effective use of time in terms of the psychological component, it is important to give students time to reach information, to construct it cognitively on their own, and to establish a connection between the acquired knowledge and real-life.
  - For the effective use of time in terms of the technological component, technology serving communicative purposes should be aimed at; the time used for communication should not be limited; and for students to have concrete experience, technology assisted time planning should be made.
- For the effective use of time in terms of the pedagogical component, students should be given time to acquire knowledge in natural settings, and flexible time plan to allow students to learn at their own pace.
- For the effective use of time in terms of the cultural component; time should be given so that students can research previous studies, inventions and products related to what is being learned. Time should be left for thorough learning, synthesizing, observing and applying what is learned to social life, work-life, family and society.
- For the effective use of time in terms of usefulness, time should be given to realize key learning-teaching conditions aimed at objectives. A time plan that allows individuals to fulfil their responsibilities and affects the effectiveness of both students and teachers positively should be made.

### **PLACE DIMENSION**

It is the place where education or various studies take place. In student-centered education, place covers all the places where the student lives and engages in activities. This includes places such as school, schoolyard, library, museums, work-place and home. In student-centered education, these places are considered as the ones where real

learning takes place. Within this framework, the basic characteristics of place dimension needs to carry out with respect to the educational environment's basic components can be listed as follows:

- For effective use of place in terms of the psychological component, places should give students the opportunities for constructing their own knowledge, studying on their own, perceiving knowledge out of class-in, its real-life context, and guiding their learning according to their own individual characteristics.
- For effective use of place in terms of the technological component, places should ease communication, support learning visually, offer access to various information sources and be acoustically convenient.
- For effective use of place in terms of the pedagogical component, places should support natural learning, relate to students' individual interests, encourage students to exhibit their skills and products, and support the improvement of problem-solving skills. Places should be established in such a way that teachers and students can communicate comfortably, students can produce and observe their own products, perform group work and study in cooperation.
- For effective use of place in terms of cultural component, places should offer students the chance of seeing conducted research and inventions for gaining in-depth knowledge, taking the social structure into consideration and offering solutions to problems.
  - For effective use of place in terms of usefulness and places that should support students and teachers for reaching their goals.

### **INFRASTRUCTURE-HARDWARE DIMENSION**

Educational tools, equipment and organizational skills form the infrastructure dimension. All factors related to equipment, which can be called educational technology, fall under this dimension. As regards student-centered learning, the infrastructure dimension has to exhibit the following characteristics in terms of the five main components:

- With respect to psychological component, the infrastructure has to provide students opportunities of establishing their own knowledge, recalling and activating their prior knowledge and experience, perceiving the natural context, realizing activities in line with their personal viewpoint and value judgments.
- With respect to technological component, the infrastructure has to be given which allows use



of developing technology, offers communication without giving any place for limitations, supports concrete learning with visuals and provides a variety of sources.

- With respect to pedagogical component, the infrastructure has to offer natural learning contexts, has to give students opportunity of putting together information from different times and areas. The infrastructure has to be arranged in such a way that students can realize their individual aims, interests and ideals, and teachers get the opportunity of guiding and interacting.
- With respect to cultural component, the infrastructure has to allow for students' in-depth learning.
- With respect to usefulness component, the infrastructure has to be established in such a way that it supports reaching targets and fulfilling responsibilities.

### **PSYCHO-SOCIAL DIMENSION**

One of the main elements that form the learning environment is the psycho-social dimension. During learning process, the psycho-social environment is a main determiner in reaching objectives. Student-centered learning is mainly based on internal motivation. Therefore, student-centered learning environments offer context for students to learn their own by focusing on their wishes, expectations and interests. According to student-centered learning, the psycho-social dimension has to carry the following characteristics with respect to the five main components:

- In order to use the psycho-social dimension effectively in terms of the psychological component, the environment should allow students to teach on their own, support learners for gaining confidence and helping them to learn about themselves.
- In order to use the psycho-social dimension effectively in terms of the technological component, learning environment should be available so that students can, among themselves and with the teacher, have ongoing interaction.
  - In order to use the psycho-social dimension effectively in terms of the pedagogical component, the environment should be prepared in which it provides students take responsibility, fulfils natural, individual wishes and expectations, and increases their internal motivation.
- From the cultural perspective, the psycho-social dimension needs to include cultural values.
- For the usefulness of psycho-social dimension, the environment should raise students'

awareness of responsibility and give place to a feedback system.

The aim of this study is to reveal teachers' evaluations about giving place student-centered learning environments in their own schools within dimensions of time, place, infrastructure hardware and psycho-social environment. Within the framework of this general aim, the answers to the following research questions were sought;

1. What are teachers' evaluations about giving place to student-centered learning environments as a whole in their schools?
2. Do teachers' evaluations about giving place to student-centered learning environments in their schools show any difference according to independent variables (gender, teaching area, work experience, graduated higher education program)?
3. What are teachers' evaluations about giving place to student-centered learning environments when the dimensions of time, place, and infrastructure-hardware and psycho-social environment are taken distinctively?
4. Do teachers' evaluations about giving place to student-centered learning environments in their schools show any difference according to independent variables (gender, teaching area, work experience, graduated higher education program) when the dimensions are taken distinctively?

### **METHOD OF THE RESEARCH**

In this study, data collection instrument providing to collect teachers' evaluations about giving place to student-centered learning environments in their schools with respect to time, place, infrastructure-hardware and psycho-social dimensions was used.

### **DATA COLLECTION INSTRUMENT**

In the study, data collection instrument consists of two sections. The first section is composed of questions that elicits personal information related to the teachers; the second section is composed of the "Scale on Student-centered Learning Environments", which elicits teachers' evaluation of their own classes in terms of the student-centered education dimensions; namely time, place, infrastructure, and psycho-social.

### **ANALYSIS OF THE DATA**

In the analysis of the data, beside to descriptive statistical techniques like arithmetical average and standard deviation, parametric statistical techniques of t-test for two group comparisons, and One-way Variance Analysis (ANOVA) for more than two group comparisons were used.



## FINDINGS

This section consists of the findings as a result of the analysis of the data and discussions of the findings. Findings related to the research questions asked in relation to the aim of the study.

In order to get a general idea of the participant teachers related to student-centered learning environments, the arithmetical averages and standard deviations of the scores received from the scale have been calculated.

When the findings are analyzed, it can be said that the scores of participant teachers received from the Scale on Student-centered Learning Environments show a distribution like: 1.54 as the lowest score, 5.00 as the highest score, 3.43 as the average score. In this case, it is not wrong to say that the general tendency centers around “frequently” level. Student-centered education, having the basic characteristics of being flexible in time, motivating, highlighting student responsibility and individual differences, includes the training of individuals equipped with the skills of critical thinking, adapting to innovations, learning, and life-long learning ability. As classrooms change and become more student-centered, it is essential to provide teachers with opportunities that enhance their learning of different strategies. One strategy commonly seen in student-centered classrooms is use of learning centers.

Teachers’ evaluations about giving place student-centered learning environments in their schools show any difference according to independent variables

In this study, gender, teaching area, work experience, and graduated higher education programs are the independent variables. According to the findings, when average scores are considered based on 0.05 significance level, it can be observed that gender is not a significant factor regarding the participant teachers’ evaluations of student-centered learning environments. Teachers’ thoughts in terms of their evaluation of student-centered learning environments based on teaching area.

According to the findings, when average scores are considered based on 0.05 significance level, it can be observed that teaching area is a significant factor regarding the participant teachers’ evaluations of student-centered learning environments, and elementary school teaching exhibits a higher score level.

Student-centered learning environments comprise many forms, often with few apparent similarities. Isolated student-centered environments in science, mathematics, social science, literature, and other domains have prompted educators to explore the structure, goals,

and perspectives of student- centered systems. The efforts, however, often appear dissimilar in functions, goals, and features, thus making it difficult to identify general design principles. Despite such variations, common assumptions have been identified and re-manifested either explicitly within the environment<sup>5</sup>.

Presents results from a study of teaching and learning characteristics and the role of teachers in ICT (information and communication technology) learning environments of 25 technology-rich primary and secondary schools in five European countries. Results indicate that learning environments are more pupil-centered when there is greater curriculum differentiation and when teachers act as coaches<sup>6</sup> (Smeets & Mooij, 2001).

Report results of a survey developed to assess the use of learner-centered techniques in undergraduate science and mathematics classrooms. It reveals that learner-centered techniques are used infrequently, but when used, they are applied to all aspects of teaching. It is suggested that federal funding has been slightly effective in promoting its use (Walczyk & Ramsey, 2003).

The Variance Analysis results based on the participant teachers’ evaluations of student-centered learning environments, the value is found as  $F = 421$  ( $P > 0.05$ ). Thus, it can be said that there is no meaningful difference when work experience is taken into consideration. Teachers’ distribution in terms of their evaluation of student-centered learning environments based on graduated program.

Teachers’ thoughts in terms of their evaluation of Student-centered Learning Environments based on the dimensions. In the study, teachers’ evaluations of their own classes regarding the following dimensions of student-centered education were considered: psycho-social/the school’s social atmosphere, infrastructure and equipment, place, time.

In order to get a general approximate idea of the participant teachers’ evaluations regarding student-centered learning environments, the arithmetical averages and standard deviations of the scores

<sup>5</sup> Hannafin, M.J., Hall, C., Land, S. M. & Hill, J. R. (1994). Learning in open ended environments: Assumptions, methods and implications. *Educational Technology*, 34(8), 48-55.

<sup>6</sup> Smeets, Ed. & Mooij, T. (2001). Pupil-cented learning, ICT, and teacher behaviour: Observations in educational practice. (EJ635530). *British Journal of Educational Technology*, 52(4), 403-17.



received from the scale have been calculated.

Research indicates that teachers who readily integrate technology into their instruction are more likely to possess constructivist teaching styles. Evidence suggests that teacher's student-centered beliefs about instruction and the nature of the teacher's technology-integrated lessons are paralleled with each other. This connection between the use of technology and constructivist pedagogy implies constructivist-minded teachers maintain dynamic student-centered classrooms where technology is a powerful learning tool. Unfortunately, much of the research to date has relied on self-reported data from teachers and this type of data often presents a less than accurate picture. Versus self-reported practices, direct observations that gauge the constructivist manner in which teachers integrate technology are more precise, albeit protracted, measured<sup>7</sup>.

Churchill (2006), in his study explores the private theories of four vocational education teachers in Singapore who have engaged in technology-based learning for their own classes. The understanding of teachers' private theories is important in the context of contemporary educational reforms, which emphasize the shift towards student-centered practices and technology integration. As teachers learn to change strategies and utilize technology, they might also need to transform aspects of their private theories that could impede effective technology integration and lead them to continue with outdated educational practice. This study aims to understand and explicate areas of private theories that impede the effective design of student-centered technology-based learning. The final outcome of the study was setting propositions for readers to examine for the possible application in their own environments<sup>8</sup>.

Numerous benefits of student-centered web-based learning environments have been documented in the literature; however the effects on student learning are questionable, particularly for low self-regulated learners primarily because these environments require students to exercise a high degree of self-regulation to succeed. Currently few guidelines exist on how college instructors should incorporate self-regulated

<sup>7</sup> Judson, E. (2006). How teacher integrate technology and their beliefs about learning: Is there a connection? (EJ729639). *Journal of Technology and Teacher Education*, 14(3), 581-597.

<sup>8</sup> Churchill, D. (2006). Teachers' private theories and their design of technology-based learning (EJ736364). *British Journal of Educational Technology*, 37(4) 559-576.

strategies using web-based pedagogical tools<sup>9</sup>.

Presenting a model for designing student-centered, technology-rich learning environments help educators to operationalize constructivist and student-centered approaches for teaching and learning. Highlights include facilitating knowledge construction and lifelong learning; technology use; student attitudes; levels of implementation; performance assessment; and traditional instructional systems design models.

In this study, gender, teaching area, work experience, and graduated higher education programs are the variables.

The two student-centered learning methods, concept checks and just-in-time teaching were tested. While both of the methods were found to be valuable for active participation of the student in his or her education, just-in-time was perhaps more effective as regards getting the student to prepare ahead of the next lecture and in the process getting better knowledge of the concerned topic.

The Variance Analysis result based on "Environments" shows that there is no relationship between learning dimensions and "Scale on Student-centered Learning work experience.

The Variance Analysis result based on the scores participant teachers' received in the "Scale on Student-centered Learning Environments" shows that there is no relationship between learning dimensions and the programs they graduated from.

## CONCLUSIONS AND DISCUSSION

The following conclusions can be drawn from the findings of the study: It can be observed that the scores participant teachers received from the Scale on Student-centered Learning Environments shows an average score of 3.43. This corresponds to the label of "frequently", which reflects the participants' evaluation of the extent to which their classes possess features of student-centered learning.

It can be concluded that teachers' evaluations of student-centered learning environments do not show any significant differences based on different variables; namely gender, work experience, teaching area and graduated higher education program.

Teachers, when asked to evaluate the dimensions of student-centered learning environments, they have given the highest score in psycho-social dimension, followed by time,

<sup>9</sup> Dabbagh, N. & Kitsantas, A. (2004). Supporting self-regulation in student-centered web-based learning environments (EJ723806). *Anastasia International Journal on E-Learning*, 5(1) 4047.



infrastructure/equipment and place dimensions.

Teachers' evaluations of student-centered learning environments in relation to different variables highlight that teaching area is an effective factor putting elementary school teaching at an advantage in terms of scores.

The evaluations of the participant teachers regarding different dimensions of student-based learning environments do not show any significant difference.

Student-centered learning environments evolved as a result of changing beliefs and assumptions related to the role of individual in learning. Based on the results of the study, following suggestions can be made. Student ownership for their goals and activities is essential for a student-centered approach. Because students make decisions about their work and take actions to meet their goals that are meaningful to them, which in turn encourages in depth understanding and intrinsic motivational orientation. Teachers, while determining on educational models and approaches in their teaching-learning process, should ensure that they allow students to learn on their own. Within the school and class context, teachers should allocate time for activities that increase student-centered learning, individual and social activities like extra-curricular activities, student club activities. Teachers should be offered opportunities of in-service training so that they can improve their skills, gain knowledge about student-centered learning with respect to their teaching areas and they should maintain the sustainability for following improvements and implementing these improvements.

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# CALCULATION OF OPTIMAL SIZES OF REFLECTING ELEMENTS OF THE MOSAIC CONCENTRATOR

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## ANNOTATION

*The article deals with the main relations of choosing the optimal sizes of mosaic concentrator elements, as well as large-sized faceted elements on a paraboloid and mosaic basis, taking into account the optimal size of the scattering spot (receiver) at the maximum efficiency value obtained for the power generating station.*

**KEYWORDS:** *parabola, mosaic, focus, facet and concentrator, receiver.*

## INTRODUCTION

Currently, in solar thermal power stations (SES) of high power, two schemes of concentration of solar radiation are used. The first, "point" focusing (tower SES) and the second, "linearly" focusing with linear concentrators (LC) - Luz SES [1]. Concentrators of solar radiation are optical systems (mirror, lens, or mixed mirror-lens) that change the course of the sun's rays (by reflection or refraction) so that they reach a certain radiation receiver. In the general case, two optical schemes for the concentration of solar radiation can be distinguished: single-mirror (single-lens) and multi-mirror (multi-lens). The former include, for example, cylindrical with various second-order curves in the section, spherical, parabolic, etc. [2].

The production of solid parabolic and mosaic mirrors is associated with great technological difficulties, so it is more economical to produce powerful energy concentrators from separate reflecting elements [3-5]. One of the variants of this type is mosaic concentrators, the individual elements of which have a flat surface [6-7]. Having an approximate parabolic and mosaic surface made in one way or another during the process of gluing flat elements to the surface of the concentrator, adjusting these elements, you can achieve a good quality of the focal spot [8-9].

## MATERIAL AND METHODS

Using a theoretically accurate paraboloid and a mosaic of rotation of a certain diameter and focal length, we will try to solve the following problem. A separate mirror of a certain size is installed relative to this parabolic and mosaic surface. Find the dependence of the element size (flat mirror) on the size (diameter) of the

focal spot. In this case, let us consider the case when rays fall on a parabolic surface that are parallel to the optical axis of the paraboloid by rotations of the focal zone has a flat shape [10].

The angle between the optical axis and the tangent to the paraboloid has different values for different points on the parabolic surface, and the smallest value is obtained for the most extreme point. This means that from the mirror installed at this point, a beam of rays will go most deflected to the optical axis, and these rays, cut by the focal plane, will give the largest size of the spot.

**DISCUSSION RESULTS**

Therefore, if the dimensions of the mirrors are the same, we will make calculations for the extreme mirror. The angle  $2U$  and the angle between the incident beam and the normal to the reflecting surface  $\alpha$  are connected, i.e.

$$U = 2\alpha . \tag{1}$$

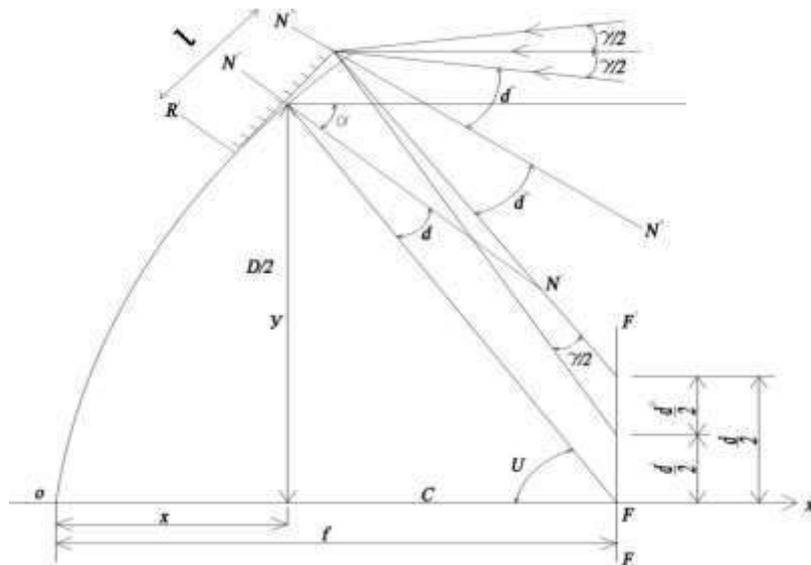
From  $\Delta ABC$  and  $\Delta MKE$  we have:

$$b = l \cos \alpha \tag{2}$$

$$b = d' \cos U \tag{3}$$

Hence, given (1), we get

$$l = d' \frac{\cos U}{\cos(U/2)} = d' \frac{\sqrt{2 \cos U}}{\cos U + 1} . \tag{4}$$



**Figure 1.**To calculate the dependence of the size of the element  $l$  on the  $f$  and  $D$  of the concentrator, taking into account the angular size of the Sun.

The the following expressions can be written (Figure 1):

$$RF = x + f \tag{5}$$

$$C = f - x \tag{6}$$

$$C = RF \cos U \tag{7}$$

$$C = (f + x) \cos U \tag{8}$$

$$\cos U = \frac{f - x}{f + x} . \tag{9}$$



$$\text{Considering } x = \frac{2Y}{16f}, \quad (10)$$

$$\text{we get } \cos U = \frac{16f^2 - 2Y^2}{16f^2 + 2Y^2}. \quad (11)$$

Substituting the cos U value in expressions (4), we define

$$l = d' \frac{16f^2 - 2Y^2}{4f\sqrt{16f^2 + 2Y^2}}. \quad (12)$$

Consider the actual condition of the concentrator, that is, when a beam of rays coming from the Sun falls on it. We take into account that the angular size of the Sun,  $\Delta\gamma = 32' = 0.0093$  radian,  $f$ - focal length,  $F$ -focal plane.

The dependence of the diameter of the focal spot on the angular size of the Sun has the following meaning:

$$d'' \approx ftg\gamma \quad (13)$$

In a first approximation, it can be assumed that the rays from the extreme mirror determine the additional increase, i.e., the actual diameter of the focal spot, taking into account the angular size of the Sun from a separate plane mirror, installed with respect to the mosaic, parabolic and parabolic cylindrical surface, is

$$d = d' + d''. \quad (14)$$

Substituting the values of  $d'$  into expressions (4) and (12), we can obtain

$$l \approx (d - ftg\gamma) \frac{16f^2 - 2Y^2}{4f\sqrt{16f^2 + 2Y^2}}; \quad (15)$$

$$l \approx (d - ftg\gamma) \frac{\cos U}{\cos(U/2)}; \quad (16)$$

Thermal solar systems in practice, the most beneficial is the opening angle  $2U=90^\circ$ . Then, given

$$f = \frac{2Y}{4} ctg \frac{U}{2}$$

$$\text{Can find } l \approx 0,5774d - 0,0054f, \quad (17)$$

$$\text{or } l \approx 0,5774d - 0,0023 * 2Yf, \quad (18)$$

$$\text{or } l \approx 1,7320l + 0,0093f, \quad (19)$$

$$\text{or } l \approx 1,7320l - 0,0040 * 2Y, \quad (20)$$

We establish the relationship between the size of the element, the diameter of the concentrator and the concentration coefficient. From the expression (16) it follows:

$$l \approx (d - \frac{2Y}{4} ctg \frac{U}{2} tg\gamma) \frac{\cos U}{\cos(U/2)}. \quad (21)$$



$$\text{From here } \frac{l}{d} = \frac{d}{2Y} \frac{\cos U}{\cos(U/2)} - \frac{\cos U}{4 \sin U/2} \operatorname{tg} \gamma.$$

$$\text{Because } \left( \frac{2Y}{d} \right)^2 = K_g$$

where, concentration coefficient,

**Dependence of the concentrator diameter (D) on the size of the elements (l).**

Table 1

D,m	K <sub>g</sub> values							
	100	200	400	600	800	1000	1200	1400
0,5	27,7	19,3	13,3	10,7	9,1	8	7,2	6,6
1,0	55,4	38,5	26,6	21,3	18,1	16	14,4	13,1
1,50	83,1	57,8	39,9	32	27,2	24	21,8	19,7
2,0	110,8	77	53,2	42,6	36,2	32	28,8	26,2
2,50	138,5	96,3	66,5	53,3	45,3	40	36	32,8
3,00	166,2	115,5	79,8	63,9	54,3	48	43,2	39,3
3,50	193,9	134,8	93,1	74,6	63,4	56	50,4	45,9
4,00	221,6	154	106,4	85,2	72,4	64	57,6	52,4
4,50	249,3	173,3	119,7	95,9	81,5	72	64,8	59
5,00	277	192,5	133	106,5	90,5	80	72	65,5
6,00	332,4	231	159,6	127,8	108,6	96	86,4	78,6
7,00	387,8	269,5	186,2	149,1	126,7	112	100,8	91,7
8,00	443,2	308	212,8	170,4	144,8	128	115,2	104,8
9,00	498,6	346,5	239,4	191,7	162,9	144	129,6	117,9
10,00	554	385	266	213	181	160	144	131

$$l \approx \left( \frac{1}{\sqrt{K_g}} \frac{\cos U}{\cos U/2} - \frac{\cos U}{4 \sin U/2} \operatorname{tg} \gamma \right) 2Y \quad (22)$$

$$\text{at, } 2U = 120^0, l \approx \left( \frac{1}{\sqrt{3K_g}} - 0,0023 \right) 2Y \quad (23)$$

## CONCLUSIONS

1. The dependence of the size of the element (flat mirror) on the size (diameter) of the focal spot for concentrating systems with parabolic and mosaic mirrors for the case of the flat shape of the focal zone has been revealed.
2. A method of calculating the dimensions of individual reflecting elements of a mosaic concentrator with a rigid parabolic surface has been developed.

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## SOME ASPECTS OF ETHICAL EDUCATION IN PENALTY INSTITUTIONS

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### ABSTRACT

*This article discusses one of the complex processes of the penal system. This is the process of moral correction and education of convicts. The article also deals with the formation and development of such qualities in convicts as moral qualities, respect for work, society and human dignity, the stages of formation of these qualities and the direction of moral education.*

**KEY WORDS:** *penitentiary institution, moral education, moral standards, moral education of the convict, positive moral orientation, degree of education, stages of moral education, the direction of moral education*

### INTRODUCTION

In our country, special attention is always paid to education. The focus on this issue has been particularly strong in recent years. This serious attention is also paid to the education and upbringing of convicts serving sentences in penitentiary institutions. To this end, comprehensive measures are being taken in our country today to increase the effectiveness of educational work on the organization of general and vocational education of prisoners, their moral correction. “In accordance with the Action Strategy for the five priority areas of development of the Republic of Uzbekistan for 2017-2021, it is planned to develop a system of education, training and employment of prisoners, especially minors and young people” [1] The aim is to provide general and vocational education to convicts and, in particular, juvenile offenders, to rehabilitate and educate them in the educational process and to facilitate their reintegration into society after their release.

### METHODS

Certain measures are being taken to implement this strategic task. In particular, the draft Resolution of the President of the Republic of Uzbekistan “On additional measures for the organization of education in the penitentiary system”

was announced. It was reported that “six penitentiaries have been set up for general secondary education, and four penitentiaries have been set up for secondary special and vocational education. On the basis of the “master-apprentice” system, comprehensive measures are being taken to provide vocational training to convicts [8]. General and vocational education provided to convicts is one of the means of psychological influence of an educational nature. In the process of education, along with the increase in the literacy of convicts, their moral correction and upbringing are carried out. They adopt the accepted moral norms in society, learn to live in obedience to the law. Also, the occupations held by convicts in the penitentiary institution help them to engage in socially useful work in the society after their release.

### RESULTS AND DISCUSSIONS

On November 7, 2018, the President of the Republic of Uzbekistan signed the Resolution “On measures to radically improve the criminal-executive legislation”. In order to implement this decision, the “Concept” of improving the criminal law of the Republic of Uzbekistan in 2019-2021 was adopted. The second part of the concept focuses on “Correction of prisoners and prevention of recidivism” [2], which aims to improve the work of



penitentiary and other penitentiary institutions in terms of moral correction of prisoners and the effectiveness of educational work. mentioned All this shows that the issue of moral correction and education of convicts is one of the most pressing issues today.

In our country, the legal aspects of this issue are A.A. Shamansurov, I. Ismailov, S. Niyazova, K. Payzullaev, M.Sh. Yuldashev, M.Z. Mukimova, R. Jabborbergenov, A. Payziev, Yu.S. Pulatov, studied by A.Sattorov and other scientists. The issue of moral correction and education of prisoners is being studied psychologically and pedagogically by such scientists as B.N.Sirliev, R.M.Mahmudov, L.Tursunov.

It should be noted that one of the main reasons why the issue of moral education is on the agenda is, in our opinion, due to the spread of "popular culture" around the world. The development of social networks and television has led to the fact that the moral worldview, which contradicts our oriental educational traditions, also has a certain place in our country, albeit negatively. These negative vices continue to "poison" the minds of young people. The issue of further increasing the influence of the family and public education system in preventing this scourge, which is spreading in society, remains relevant. As a result of the lack of attention paid to child rearing in the family, adolescents are left out of parental control. This, in turn, causes them to fall into the path of crime. Almost every parent firmly believes that their child will not commit a crime. Even in the case of a crime, the parents are adamant that "this is slander, my child will not do that". The child, on the other hand, believes that his criminal behavior, which he has learned from others, from the Internet, from movies, is correct. Eventually, however, he finds himself in a penitentiary. What can we conclude from this? The conclusion is that in the commission of crimes of any kind by the younger generation, it is necessary, first of all, to increase the responsibility of parents for the upbringing of children. In doing so, it is important what kind of moral example a parent sets for their child.

The moral education of convicts who come to penitentiary institutions is entrusted to the specialists who serve there. The moral education of convicts requires special attention. In the process of moral upbringing of convicts, their moral correction shall be carried out. Therefore, "The moral correction of a convict is the formation of law-abiding behavior, respect for man, society, labor, rules and traditions of society"[3]. Moral education of prisoners is one of the most complex and important aspects of the penitentiary system. The Criminal Procedure Code of the Republic of Uzbekistan states that educational work is one of the main means of moral correction of persons sentenced to imprisonment. This shows that all the educational work carried out in penitentiary

institutions is aimed at the moral correction of convicts.

The process of moral correction of convicts, the psychological and pedagogical problems to be solved are characterized by their complexity. Indeed, in the majority of convicts, views have been formed over the years that contradict the moral standards accepted in society. Any attempt to change these views in a positive direction will be strongly opposed by them. As mentioned above, they have always been accustomed to thinking of themselves as "right". Such vices as dishonesty, selfishness, and encroachment on the property of others have become the worldview of some convicts. It takes a lot of knowledge, effort and hard work to work with a person with such a worldview, to change it for the better. Therefore, it is necessary to pay special attention to the individual approach in the planning of moral and educational work with convicts. It is from this point of view that the choice of methods of educational influence should be taken into account. Along with the choice of educational methods, a comprehensive approach to the education of convicts is also very important. Moral education should be carried out in conjunction with other areas of education: spiritual education, legal education, patriotic education, inter-ethnic education.

E.V. Zautorova, who conducted research in the field of education of convicts, points out the following as the founders of the essence of moral education:

- Spiritual education - the formation of moral feelings and skills, moral behavior skills;
- Patriotic education - the formation of love for their homeland and readiness to stand up for their people;
- International education - the formation of respect for other nations and peoples;
- Political education - the formation of political consciousness [4].

E.V. Zautorova divides the moral rehabilitation of convicts into two periods. The first period is the preparatory period, which is divided into three stages:

- Initial stage. At this stage, conditions are created for the formation of the convict's ability to see his own behavior, to analyze his unconscious actions;

-Controversial phase. At this stage, the abandonment of old habits and the transition to new behaviors take place. The person understands his actions and takes the first "step" in the direction of moral correction.

-Final stage. Conditions shall be created for the convict to work on himself. The goals he sets, the ideals he strives for.

In the second period, direct moral correction takes place, that is, the formation of moral



consciousness and moral behavior, which leads to the complete disappearance of old habits.

The scholar noted that the successful completion of the moral correction of convicts can be seen in the moral conduct. This is manifested in a person's behavior, that is, in his actions or inactions in a particular situation. It is also seen in the words spoken by the convict, in the attitudes towards the people around him, in himself, in his gestures, attitudes, and speech tones.

The most important aspect of the educational process is the result of the educational impact. It is important to determine whether the educational impact shown to convicts over the years has been effective. The conclusions of FR Sundurov are noteworthy among the scientists who have studied the effect of educational influence among penitentiary scientists. The scholar distinguished the following groups of convicts on the basis of their moral recovery:

1. Positively classified convicts. These are:
  - proven morally corrected;
  - those who have passed the path of moral correction;
  - who have entered the path of moral correction.
2. Negatively classified convicts. These are:
  - those who have not entered the path of moral correction;
  - those who grossly violate the agenda of the institution [7].

From the point of view of these scholars, it can be said that the moral recovery of convicts can be observed in their behavior. This situation helps to determine the direction of educational work with them.

V.G. Stukanov, a specialist in educational work with prisoners, identified the following areas as the main areas of moral education:

1. Exercising educational influence in order to form the desire of convicts to overcome their immoral habits and inclinations. First of all, it is alcoholism and drug addiction.
2. Formation of moral values. The strategic task is to inculcate in prisoners the value of a free and law-abiding life in society.
3. Build confidence in a positive life future.
4. Develop self-awareness and self-control, understanding other people's experiences and behaviors [6].

Summarizing the above points, it can be said that the moral education of convicts can be carried out in several directions: moral education, formation of moral feelings, moral values, moral behavior and confidence in the future, and practice of moral methods of behavior. This leads to the following results: 1) the convict knows and understands moral norms, ideals, etc.; 2) the convict acknowledges that they are important to him; 3) the convict acts in

accordance with moral norms; 4) the convict controls his actions; 5) The convict lives in bright days, with confidence in the future.

## CONCLUSION

In conclusion, today special attention is paid to the moral education of prisoners. In conducting educational work with prisoners, their moral education requires special attention. In carrying out moral education with convicts, it should be borne in mind that convicts cannot be forced to accept universal moral norms and values and to behave in accordance with them. Only man can change his values. The educator only needs to help the pupil make a decision about living a socially useful life. "Some convicts have a positive mental outcome based on their age, life experience, academic and social status, occupation, health, and other characteristics" [5]. It is necessary to rely on these positive qualities in upbringing. This is the only way that moral education with convicts will be effective.

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# HUMAN AND HUMANITY ISSUES IN THE FIELD LITERATURE AND ART AT THE PERIOD OF RENAISSANCE IN EUROPE

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## ANNOTATION

*The article considers the ideas of humanism of philosophers of the XV-XVI centuries. Also the article analyzes the ideas of humanism in the early stages in Italy as a form of study of ancient literature, art, language and culture.*

**KEY WORDS:** *Renaissance, personality, individualism, aesthetics, Platonism, Neo-Platonism, literature, art, cultural heritage, morality, thinkers*

## DISCUSSION

Literature and art of the Renaissance have increased the attention to the personality of the individual than ever. Neither in ancient times nor in the Middle Ages was the attention paid to the so-called human being. At this time, each person's unique abilities and skills were prioritized over everything else. Attention to the unique talent of great individuals has grown. This gave rise to the formal formation of the concept of personality during the Renaissance. The concept of personality began to be used in parallel with the concept of individuality. Renaissance literature also refers to the person's ability to sense responsibility for his actions and behavior. According to the thinkers of this period, the universal exaltation and individuality does not always coincide with human development. The aesthetic taste of the person and the development of character traits should also be compatible. In particular, the comprehensive development of individuality in the XXV and XXVI th centuries led to increased selfishness in some cases. From the foregoing, it is clear that, unlike medieval thinking, new humanistic trends have emerged in the Renaissance philosophy. In the writings of human scholars, poets and writers, the study of the relationship between man and nature, between the individual and the society became the main topic. Representatives of humanistic philosophy began to promote the idea of a fully developed personality.

In Europe, the Renaissance period had different features. At the beginning of the Renaissance the Italian was humanistic. Florence was

the true center of the Italian humanist movement. Organizers and propagandists of the Florentine humanitarian movement, when thinking about the ideas of humanism, adhered to the ancient Roman philosopher Cicero (1st century BCE). Cicero understood humanity, first and foremost, as humanism. Mankind was considered to be the greatest achievement of Roman culture, the result of which was the basis of the conflicting pluralistic views of the ancient Greeks. That is why, according to Cicero, humanism is the expression that elevates a person to the level of a human being, his rebirth and the process of manifesting human characteristics.

Cicero used this phrase to explain to the church "fathers" that man is the greatest value. That is why the word humanity began to be used in the various Latin correspondents of the Christian Church's "fathers" - Tertullion and Lactanti (III-IV centuries). Humanism, therefore, is a Latin expression (humanus) which means to strive for humanity or to create the conditions necessary for human existence. When a person begins to think of himself, his place in the universe, the nature of his own nature and what he is capable of, the meaning and purpose of his existence then humanism begins. Undoubtedly, humanistic ideas have always had concrete socio-historical basis. If we analyze the phrase humanism in its narrowest sense, it can be viewed as an ideological act. In particular, the ideas of humanism were first introduced in Italy in the form of the study of ancient literature, art, language and culture. In particular, Dante's "Divine Comedy", the famous philosophical work "Party" and the most



important political treatise "Monarchy", which is the founder of the Italian literary language, served as a powerful source in the formation of ideas of Italian humanism (more on Dante humanism later). The value of the humanistic movement has been evaluated not only by its contribution to the development of philosophical culture, but also by the research work done on the study of ancient manuscripts. It is for this reason that Italian humanism, characterizing the first phase of the European Renaissance, has sometimes been described as a literary-philological event.

The theoretical foundations of Italian humanism were the ideas of Platonism and Neo-Platonism. In Italian humanism, the philosophy of Platonism and Neo-Platonism was understood as a symbol of development and progress. Plato's philosophy in particular was regarded as the crown, the crown of all philosophy of the past. That is why the Plato Academy in Florence called Plato "the God of philosophers". For it has been repeatedly emphasized that Plato's philosophical doctrine made a worthy contribution not only to the development of philosophical culture, but also to the development of Christianity. Florentine scholars noted that Plato's contribution to the development of the concept of inhuman acts in human nature was particularly admirable. The philosophers of Florence also supported Plato and his followers with the great philosophy and religion, the interrelationships between man and God and especially the remarkable ideas about man. This is illustrated by the works of famous Italian scientists Dante Alighieri and Pico Della Mirandola. One of the Christian scholars who made a significant contribution to the development and development of the ideas of humanistic anthropocentrism, Dante Alighieri [1] was a great poet, publicist, philosopher, and political figure of the late medieval and early European Renaissance.

He enriched the treasures of the world cultural heritage with his works "New Life", "Treatise on Philosophy Hunt", "Party", "Monarchy" and "Divine comedy". Dante's efforts were especially instrumental in introducing Europe to Eastern culture, particularly Eastern philosophy. In the poem collection "New Life" dedicated to his beloved friend Beatrice (made into a collection from 1291-1292), he continues the Oriental traditions of Ibn Sina and Ibn Rushd and reveres for true love and affection, devotion and loyalty [1]. It emphasizes that love is the highest human trait, the highest morality, the manners, and the human nature in general. He tries to explain the process of formation and development of love, urges it to respect it in every way.

During his exile in 1304-1308, Dante wrote one of his greatest scientific and philosophical works, "Party" and his artistic and philological work "People's Speech". "Party" is the largest

encyclopedia of medieval philosophical thought. In this work, Dante urges his contemporaries and contemporaries to study philosophy in a comprehensive way. It is the duty of every citizen to be aware of the philosophical heritage. Dante pays great attention to the analysis of human problems in the "Party", especially the process of their moral formation. According to the poet, the moral and spiritual image of each person determines the cultural level of society. Dante, contrary to medieval teachings, places morality ahead of all sciences, even theology and metaphysics. Dante strives to create the criteria for defining humanity in his "Party". In his view, the most important characteristic of humanity is generosity. As the poet explains, human life goes through four main seasons: the first is youth, which relates to heat and humidity; the other is puberty, with heat and dryness; the third is old age, with cold and dryness; the fourth is aging, which has coldness and moisture. [2]. That is why a person always seeks knowledge and needs it. Knowledge is a hallmark of our spirit and learning is the greatest pleasure for human beings, Dante says.

In his work "Monarchy" (1312-1313), Dante outlines his political and supernatural views. He considers the church and the pope not to interfere in government affairs. Following in the footsteps of the renowned Eastern thinker Ibn Rushd, he denies that the clergy ruled over the kingdom. He proposes the idea of building a united state under the guidance of a just ruler. It unites the people of Italy, who have suffered because of political dissolution and propagates the idea of establishing a world-destroying system, the world empire. He concludes that there are similarities, commonalities and, in a word, universal qualities, even among people of different religious backgrounds. He was one of the first in the history of Europe to incorporate the concept of "humanity" into fiction and philosophical literature. That is why Christian scholars are asking the Italian authorities to burn Dante's "Monarchy" and to remove the author's hockey from the grave. But Ravenna is defending Governor Dante.

Dante's greatest work of worldly fame is "Divine Comedy". The work was not only the end of its ideological and political views; it was the crown of its artistic thinking, but also the end of medieval culture in general. It was also a major social event that determined the future path of European fiction. The true picture of the universe, its existence and unity, the problems of its fate, especially after death, have always disturbed religious leaders and philosophers. Each religion expressed its views on these issues. For example, according to Christendom, the universe is made up of three parts: the heavens, the earth and the underworld. When the heavens and the earth are called the world, the underworld or hell, is called the other world. People in the world are



encouraged or punished according to their actions in the outside world. For example, the souls of the righteous in this world will rest in paradise. Those who do evil, the inferior will be in the torment of hell. However, no religion has elaborated on the nature of these events. Dante tried to explain the same process in his Divine Comedy.

Dante was the first in the Divine Comedy to describe the world beyond. According to the poet, the outside world consists of three main parts: hell, the environment and paradise. According to the thinker, the structure of the outside world is based on specific rules and regulations. There will also be some changes in the rules. For example, people are moving from one world to another, depending on their service to the world, their behavior. They will be punished or rested according to their deeds in this world. Specifically, some will go to heaven and some to hell. Dante's "Divine Comedy" is written in a genre of illusory vision and prophecy, which is common in medieval literature. In the medieval clerical literature, the prophesying genre was to distract a person, to view the world as a transient, unfaithful world; to tempt the world, while Dante portrayed this literary genre as a way of describing the worldly pleasures of the world. He turned towards him.

Dante does not want to distract a person from the world, but rather calls them to understand the beauty of life, to truly love it, to be active in the life of society, to protect the interests of the people, the motherland and to keep it as the blacks of the eye. It is not the temptation of the hereafter, but the humanity of the beauty of life and its meaning. The poet has spent his life in this world meaningless, in order to further enrich the meaning of human life, to devote his whole life to evil, never to do good to others, to criminals, sinners and to the contrary. The hypocritical clergy who use religious beliefs for their own good, in short, put their political opponents in hell and condemns them.

To enter Paradise, a person must pass through a thick wall. The spirit passing through that flaming wall will be free from all defects and ignorance. After the flaming wall, the spirit faces a special area of beautiful gardens, flower-filled lawns, green lawns and vast fields. From here, in this place, a new life of prosperity begins. Paradise was also built on the basis of the Nine folds. Paradise is surrounded by nine heavens because it is located on earth. The first is the moon, the second is Utorid (Mercury), the third is Zukhro (Venus), the fourth is the Sun, the fifth is Myirikh (Mars), the sixth is Mushtariy (Jupiter), the seventh is Zuhul (Saturn), the eighth is a steady star and the ninth is the abode of the highest, the area of angels. Contrary to hell, movement always prevails in paradise. Light, light, spiritual perfection prevail in all the heavens.

Dante will place in the different heavens of the best, noble people, those who serve their people, their homeland and their nation. So, in the lunar sky, lovers of love, adventures of love, in Utorid, Active, selfless people, the spirit of generous and benevolent people in Zuhra, in the sun there are noble priests and philosophers, historians, in Mirrikh the poet reads his grandfather Kichagvida, in the Mushtariy, the followers of Jesus, Adam in the Zuhul, in constant stars, saints place angels have been taken place.

Clearly, by virtue of all the good that is done in this world, the virtues of the people, the world will be far away from the rest of the world including paradise. It is clear that in this world all good deeds and actions take over that lead to goodness are in place in the world beyond and paradise. The moral purity in Paradise, the immortal spirits here and the mental vigilance in their behavior were the spiritual and moral image of the country and society that Dante dreamed of.

In short, the Italian humanism of Renaissance contributed to the formation of humanistic ideas in European philosophy. To be more precise, humanistic anthropocentrism plays a key role. Unfortunately, some researchers overestimate the role and importance of ancient cultural heritage in the formation of Renaissance culture and in particular, humanism. Those researchers, who have come up with such a view, consider that humanism is merely an expression of the impact that Rome or Greek culture had on the formation of their culture. If we think from this point of view, then humanism is only a matter of spiritual and enlightenment. The ever-changing aspects of humanism, the call for creativity and the call for universal values are ignored.

The emergence of such considerations, in turn, suggests that humanism is manifested in different forms, depending on the particular historical and socio-economic conditions. Naturally, this tendency also has to do with Italian humanism, which is reflected in various social movements. Although historically limited, it has become a great event in European history.

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# AESTHETICAL ESSENCE OF LABOR IN PERSONAL DEVELOPMENT

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## ANNOTATION

*The article reveals the aesthetic essence of labor in the development of the personality, its role in enhancing the spirituality of the young generation, as well as the physical and intellectual characteristics of the individual's labor activity.*

**KEY WORDS:** *labor, aesthetic essence, personality and society, physical and intellectual features, nature, beauty, aesthetic taste.*

## DISCUSSION

Labor is the expression of creative abilities that combine the interests of the individual and society. The aesthetic aspects of labor activity are determined by the degree of freedom of the individual, which is reflected in his physical and intellectual abilities. Activity is materialized in conscious behavior, ensuring that a person attains certain skills. This type of work is unique in terms of quantity and quality. Skill is the subject of work that involves technical skills and helps creatively express human abilities to overcome the "resistance" of materials. As these opportunities arise with emotional perception of a particular type of labor, it is naturally aesthetic. In other words, self-actualizing labor activity means that to some extent physical and intellectual forces are excited.

As a result of labor activity, a person demonstrates and develops his or her creative abilities, first of all, through the influence of certain objective conditions and secondly, the combination of subjective and personal qualities. Among them, working conditions, its organizational status, social status and degree of human dignity play an important role. In this process, along with objective conditions emerge the social importance of human labor, its personal responsibility and creativity, which is a subjective factor.

Man has only made history by working hard, changing nature for purpose, understanding beauty and creating new values. Of course, in order for humans to live and thrive, they had to have material

needs and to grow them. In this sense, one breath has not ceased to satisfy its needs, it has not ceased to create material possessions and this process has been unlimited. Nevertheless, as Hegel writes, "the needs cannot be attained, while they are constantly and continuously renewed: there is no limit to the needs of food, nutrition, and dreams. Tomorrow again there will be hunger and fatigue". [1.106].

Thus, labor is a process that has a purposeful effect on the objects of nature through human conscious activity, which is processed according to the needs of life and social needs and aesthetic taste.

Formation of aesthetic feelings in labor is a qualitative feature of human existence. This also played an important role in the structure of the aesthetic consciousness of the ancient people. In this sense, the question of whether aesthetic consciousness is born or formed in the course of life, what is the role of labor in the formation of human aesthetic abilities is of particular interest.

Of course, the human process is very diverse. These are, first of all, qualitative characteristics of the labor process, the state of work, the social nature of labor, and the organization of the labor process. The aesthetic aspects of the labor process are as follows:

- Skills constitute a specific kind of creative activity;
- Aesthetic form of activity is the free development of physical and intellectual forces;



- Creative coincidence, behavior, modification as the aesthetic aspect of the material-beneficial process;

- Aesthetic appearance of the production structure.

Let us briefly dwell on the peculiarities of labor in enhancing one's spirituality.

The labor process is the result of human aspiration, behavior, and performance of certain actions. A person who is interested in the success of his or her work strives to do the perfect thing. The end result will depend not only on the means of production, but also on its specific actions, that is, the nature of its operations. At the same time, agility, unmatched ability, comes into play and labor is a combination of creative processes.

An act that has become a qualification is a prerequisite for successful work. Consequently, the labor process is constantly changing and vibrant, not only improving, but also sharpening new skills. Not only that, to a certain degree, mastery of a skill takes place in the labor process and it requires a person's initiative, creative intuition and courage. Therefore, the notion of mastery also includes a thorough knowledge of the processing of material properties, the ability to use labor tools, a proper understanding of the will and the situation and the sustainable promotion. Of course, it is impossible for a person to be dissatisfied with this situation and its results, not rejoice in it and not give in to creative feelings. This is the aesthetic feeling that comes from mastering and performing at the same level of work.

By expressing the standard of excellence in labor, mastery becomes a source of aesthetic pleasure. It is important to remember that the aesthetic meaning of labor also depends on the nature of the functioning. When people freely use their physical and spiritual abilities, pursuing creative and lofty goals, they enjoy their work and enjoy their aesthetics. Labor is free, irrespective of the content and context of the activity, when a person is deeply interested in and enjoying the results, directing his creative skills to high spiritual goals. As Gafur Gulam wrote in his poem, "What Is Beauty?", "Beauty is to work, to sweat the brush, to do well, to be praised!" [2.22]

However, the aesthetic feeling arising in the workplace does not mean simply enjoying the performance. He is creative, playful and freely, naturally but maintains a sense of social change, manifested in the form of serious and complex activities. Therefore, the aesthetic pleasure that arises in the course of labor is linked to its deeper meaning and the spirit of life. A person can be creative in his work, even when doing simple things at first glance and realizing the meaning of his work.

Live labor is a more complex structure that includes production of the structure. In the course of

production people have a particular social relation to each other and to the means of production. Naturally, in the production of goods, it is necessary to perform a complex task, such as specific labor tools (machines, machine tools, equipments and etc.) as well as their proper placement and interaction. All of this is a social production that has its own pace, function, structure and organization. This structure is aesthetically pleasing because of its high level of organization and perfection. The highly organized process, its specific physical appearance and disposition, has an aesthetic effect on people, creating an emotional excitement that creates a creative attitude to activities.

Thus, in the labor process, which is the object of aesthetic perception, there are specific functional and dynamic aspects. However, the aesthetic effects in labor encompass the entire range of recycled materials, work tools, interiors, and subject-matter environments.

The history of aesthetic activity shows that in almost all nations, the aesthetic properties of materials that need to be recycled, such as trees, clay, plaster and glass have been learned during labor and have been used creatively in the creation of works of art. For example, Uzbek poetry, especially in the classical literature is widely used in epithets and metaphors related to flora and fauna. These include the image of the sun, moon, cypress, owl and others. Stone and woodworking has been the subject of the artist's hard work and skill in the aesthetics of the peoples of Central Asia. In addition, natural materials such as bone, clay, leather, lime, and clay are widely used in visual arts as a means of expressing creative and satisfying needs. As the researchers wrote, "The practical value of a product will be given for its aesthetic value" [3.8].

It is known that particular aspects of the labor process play different roles in the national aesthetic culture. Studies by folklorist B.Sarimsakov show that aesthetic value plays a special role in the celebration of Labor Day. He writes that "The peculiarities of the holiday are first of all, the way in which special meals are prepared, new clothes are put on and jokes" [4.14-15].

The aesthetic nature of labor is largely dependent on the social conditions in which it operates. In the recent past, labor subordinated to communist ideology, social ownership, undermined the individual's creative freedom, ability and personal interest, leading to spiritual poverty and most importantly, the "alienation" of their labor and the formation of dependence. Independence eliminated labor alienation and created real conditions for full and comprehensive manifestation of its spiritual and creative forces. Such opportunities, especially in the conditions of political, social and economic freedom in the republic, have allowed the development of the



person's creative abilities, legal guarantees of the inviolability of private property, comprehensive support of property and entrepreneurship and the true essence of the person in the labor process.

Competition in the context of market relations has made the producers of material goods the need for comprehensive creative activity, the creation of high-quality products, the production of goods that meet the artistic and aesthetic taste and needs of consumers. The provision of individual freedoms (freedom of speech, freedom of conscience, ownership, etc.) as a prerequisite for the development of society has given people the need for a high political awareness, moral responsibility and a critical and creative approach to their work. It has increased the aesthetic standards and requirements for labor processes and products manufacturing, with a great deal of emphasis on the use of modern technologies and innovative projects, in particular the design, production and industrial aesthetics.

Thus, labor has a powerful and multifaceted influence on a person, contributes to the work of aesthetic sense and contributes to the development of spiritual maturity. The higher would be the perfection of creativity, the higher would be its aesthetic value and the stronger its spiritual impact. Thus, labor is aesthetically pleasing to a person through the combination of knowledge, experience, willing and character.

It is well-known that the activities of art, science and religion, which are the hallmarks of human activity, especially those of labor, influence the aesthetic maturity of the individual.

"That is why we," President I.A.Karimov wrote, "today, starting with education and training, the press, television, the Internet and other media, theater, cinema, literature, music, painting and sculpture. In a word, we must, step up our activities in all areas that directly affect the heart and mind of the individual, based on the spiritual needs of the people and the demands of our time". [5.129]

Healthy aesthetic feelings are one of the most important aspects of a person's aesthetic maturity. Historically, the aesthetic sense of a person is not simply ability, but a new structure, a qualitative change that has taken place in the course of social development and, in a philosophical sense, the result of a human being moving beyond the natural biological realm to a social and spiritual life.

Human aesthetic perfection is not only aesthetic sense, necessity, but also all of its individual qualities are inextricably linked. Therefore, important aesthetic factors of personality maturity, on the one hand, and their structural and structural aspects, on the other, should be considered in terms of their aesthetic maturity and their impact on creative activity. In other words, a person's ability is manifested in the essence of aesthetic sense, that is,

the nature of emotional pleasure, satisfaction or disgust. This is because aesthetic perfection of a person is not only related to aesthetic qualities, but also to many other factors that shape him as an individual.

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## **ETHNODYNAMICS OF THE CITY POPULATION OF THE FERGANA VALLEY OF THE FIRST HALF OF THE XX CENTURY**

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### **ABSTRACT**

*The article examines the demographic status, composition, changes in the population of the Ferghana Valley in the first half of the 20th century, as well as the ethnodynamic features of the urban population in the region. The period and territory studied during the occupation of the Tsarist Russia and the post-Soviet occupation have been studied based on historical sources.*

**KEYWORDS:** *population, population composition, urban population, demographics, ethnodynamics, minority population, ethnic relations.*

## **ЭТНОДИНАМИКА ГОРОДСКОГО НАСЕЛЕНИЯ ФЕРГАНСКОЙ ДОЛИНЫ ПЕРВОЙ ПОЛОВИНЫ XX ВЕКА**

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### **Аннотация**

В статье исследуется демографический статус, состав, изменения численности населения Ферганской долины в первой половине XX века, а также этнодинамические особенности городского населения региона. Период и территория, изученные во время оккупации царской России и постсоветской оккупации, были изучены на основе исторических источников.

**Ключевые слова:** население, состав населения, городское население, демография, этнодинамика, меньшинство, этнические отношения.



## ОБСУЖДЕНИЕ

Известно, что этнический состав городского населения отличается от сельского сложностью, гетерогенным составом. Поэтому этнический состав городского населения Ферганской долины, в сравнении с этническим составом сельского населения намного сложнее. Анализ этнического состава населения Ферганской долины показал, что рост населения в городе происходит не только естественным путем, но и за счет переезда из других городов, переезда из районов или же за счет превращения районов в города. С древних времен известны такие крупные и древние города Ферганской долины как Маргилан, Андижан, Коканд, Риштон, Кува и Наманган. После того, как в 1877 году Ферганскую долину захватила царская Россия, здесь был построен город Новый Маргилан, который впоследствии стал называться Скобелев, современный город Фергана[1, с. 4-6]. Но некоторые ученые возникновение Ферганы относят к 1874 году[2, с. 166].

В самых ранних работах по переписи населения были указаны также такие города как Новый Маргилан, Маргилан, Коканд, Андижан, Наманган и небольшой город Чуст. А уже в 1926 году в документах по переписи были указаны 9 городов, и к выше перечисленным присоединились новые – Асака, Шахрихон и Косонсой. Кроме этих городов указаны 3 бывших села, получившие статус поселков городского типа – Бешарык, Риштан, Кува, а район Чимен получил название “городок рабочих”. Процесс урбанизации продолжался вплоть до 70-х годов прошлого столетия, 13 населенных пунктов получили статус городов. Это города Шахрихан (1970), Советабад (1972), Касансай (1973), Кува, Хамза, Хаккулабад (1974), Яйпан, Пахтаабад, Мархамат, Ахунбабаев (1975), Кургантепа, Чартак (1976) и Риштан (1977) [3, с. 158, 161, 166.]. Таким образом, на момент переписи 1979 года, насчитывалось 22 города из которых 14 были в областном подчинении (Фергана, Маргилан, Коканд, Кува, Андижан, Ленинск, Советабад, Шахрихан, Наманган, Чартак, Учкурман, Касансай, Чуст), а остальные получили статус районных городов. Кроме этого, 7 населенных пунктов за период 1970-1976 годов получили статус поселков городского типа. Это районы Янгикурман, Езевон и Ташлак Ферганской области, Куйганер Андижанской области, Акташ, Жумашуй и Навбахор Наманганской области.

Следует особо отметить, что большинство вышеперечисленных городов (кроме Нового Маргилана, в последующем Скобелев-Фергана) возникли в древний период, а другие являются населенными пунктами, возникшими 200-300 лет назад. Только большинство этих новых крупных

населенных пунктов своей экономической основой были связаны с сельским хозяйством и крупных промышленных предприятий почти не было.

По своему происхождению города того времени разделялись на древние и новые города, а также поселки городского типа. Старые города возникли как торгово-ремесленные или политико-экономические центры. В некоторых случаях в возникновении городов важную роль сыграла горнодобывающая промышленность.

В скоплении различных этнических групп в вышеуказанных крупных городах важную роль сыграло какую функцию выполнял этот город (например, города с развитой горнодобывающей или ткацкой промышленностью, торгово-транспортные центры и др.), что в свою очередь привело к тому, что них собрались люди определенных профессий.

Исходя из выше сказанного, можно сделать вывод, что в той части Ферганской долины, которая была расположена на территории Узбекистана в 1897 году, было зафиксировано 6 городов и около 250 тысяч жителей (что по предварительным расчетам составляло около 20% от всего населения региона)[4, с.1], а уже в 1926 году было три города, 3 поселка городского типа и один городок рабочих с общим населением 341 тысяча (23,2%)[5, с. 6-7.], в 1939 году в долине уже существовало 7 городов, 1 типовой город и 3 рабочих городка в составе 375 тысяч населения (19,2%)[6], 1959 год – 7 городов, 17 поселков городского типа и 630 тысяч населения (27,4%)[7, с. 11-12.], 1970 год – 9 городов, 20 поселков городского типа и 938 тысяч населения (29,0%)[8, с.18, 116, 118, 120.], 1979 год – 22 города, 18 поселков городского типа и 1 330 тысяч населения (32,1%)[9, с. 13].

Таким образом, средний прирост населения в период за 1897-1926 гг. составляет около 1,3 %, в 1926-1939 гг. – 0,8%, 1939-1959 гг. – 3,4 %, в 1959-1970 гг. – 4,4 % и в 1970-1979 гг. – 4,6 %. Основная причина непрерывного роста численности городского населения за последние 40 лет связана с естественным приростом. Нужно отметить, что переезд жителей районов в города не сыграл большой роли увеличения численности населения последних.

Естественный прирост населения также влиял на увеличение городов и появление новых населенных пунктов. Между первой переписью населения (1897), которую проводила Российская империя, и последней (1979) временный промежуток 82 года. За это время в этнической структуре происходят значительные изменения. В 1897 году городское население состояло из 213 тысяч (84,7%) узбеков, 16 тысяч (6,5%) таджиков, 7 тысяч (2,7%) русских, 1,4 тысяч (0,6%)



украинцев, 1,3 тысяч евреев, 672 татар, 267 кыргызов, 139 уйгуров, 314 немцев и 94 армян.

Численность и состав населения были очень разнообразными. Например, основную часть населения Нового Маргилана (потом Скобелев, затем г. Фергана) составляли русские (42.9 %), узбеки (29.2 %), украинцы и поляки (каждый по 8.1 %), таджики (2.6%), евреи (2%), немцы (1.7%), татары (1.6%), киргизы (0.9%), армяне (0.5%), китайцы (0.3%), уйгуры (0.25) и др.

В отличие от Нового Маргилана в Маргилане, Андижане, Коканде и Намангане основное население составляли узбеки (вместе с сартами и кипчаками). Особенно в городах Маргилан и Андижан основная часть населения были узбеками. В Маргилане 97.6% узбеков, в Андижане 96.5%. В Маргилане, кроме узбеков, проживала небольшая группа евреев (1.7%), а в Андижане небольшая группа русских (1.5%), украинцы и поляки (каждый по 0.4%). В Коканде и Намангане также основную часть составляли узбеки (92.9% и 85.2%), но также было значительно людей других национальностей. В Коканде таджиков (3.3%), русских (1.5%), украинцев (0.3%), евреев (0.3%) цыган (0.5%), татар (0.2%), в Намангане “тюрко-татарского населения” (11.7%)[10], русских (1.3%), таджиков (1.1%) , татаров, украинцев и поляков (все по 0.3%). А вот в небольшом городке Чуст основу этнического состава составляли таджики (92.2%) и узбеки (4.5%).

Начиная с 1926 года состав городского населения узбекской части долины сильно изменился. Если городское население составляло 341 тысяч человек, из них узбеки 236 тысяч (69.1%), таджики 39 тысяч (11.3%), русские 38 тысяч (11.1%), евреев 9 тысяч (2.5%), татары 4 тысячи (1.2%), армяне 4 тысячи (1.2%), украинцев 3 тысячи (0.9%), уйгуры 2 тысячи (0.6%), немцы (526 человек), киргизы (252 человека) и другие[11, с. 144-145, 148-149.]. Основной причиной быстрого роста численности русского, украинского, татарского и армянского населения, на который приходится значительный процент изменения состава городского населения, является рост миграции в то время, а также голод на Волге, Украине и в России в начале 20-х годов. Одной из главных причин увеличения еврейской населения в городах Ферганской долины является также массовая миграция из западных частей СССР в то время. Еще одним изменением этнического состава городов долины является спад численности узбеков в городе Фергане (Новый Маргилан). Впрочем она снизилась с 29.2% до 21.1%, в отличие от числа русских, выросшего с 42.9% до 55.6%. Это отчетливо прослеживается в резком снижении численности

узбеков, и быстрым росте численности русских в городе Коканде. То есть наблюдается спад узбекского населения с 92.9% до 62.2% и рост численности русских с 1.5% до 23.1%. Наблюдается также рост числа русских в населении города Наманган, а именно с 1.5% до 5.2%, но увеличивается и узбекское население с 85.2% до 91.1%. Во время переписи 1897 года “тюрко-татарская группа” вошла в состав узбеков. Прослеживается рост количества татар в отличие от других этнических групп (от 1.6% до 5.1% в Фергане, от 0.2% до 1.9% в Коканде, от 0.3% до 2.0% в Андижане, от 0.3% до 0.7% в Намангане). А в численности таджиков, напротив наблюдается снижение в результате ассимиляции таджиков с узбеками. Однако число таджиков в Чусте увеличилось с 92.2% до 95.4%.

Количество украинцев также увеличилось практически во всех городах. Однако их количество не увеличилось в Фергане. Это связано с ассимиляцией русских с украинцами. Как упоминалось выше, после получения статуса поселения, городского и городского типа, большая часть населения была узбеками, а население Касаная и Риштана осталось таджиками.

Перепись 1939 года показывает, что за последние 13 лет этнический состав городского населения претерпел значительные изменения. Из 375 тысяч человек проживающих в городе, узбеки составляли 202 тысяч (54.0%), русские 94 тысячи (25.2%), таджики 24 тысячи (6.3%), татары 16 тысяч (4.4%) и евреи 8 тысяч (2.2%), украинцы 8 тысяч (2.1%), уйгуры 4 тысячи (1.1%), корейцы 4 тысячи (1.0%), армяне 3 тысячи (0.9%), киргизы 1 тысячу (0.2%)[12, с. 27.]. В составе городского населения резко сократилось число узбеков, по сравнению с предыдущим количеством населения. Видно, что русские массово переселены на основные промышленные объекты долины, в результате чего, их общее увеличение выросло с 11.1% до 25.2%.

В 20-30-е годы прошлого века татары, как и русские, были переселены в большом количестве. Представители этих национальностей занимаются культурно-просветительской работой на предприятиях, укрепляют местные партийные и комсомольские организации, и особенно занимаются переводческой деятельностью. В результате с 1926 по 1936 год татарское население увеличилось в 4 раза по сравнению с общей численностью городского населения.

За это время количество украинцев в городах долины увеличилось с 0.9% до 2.1%, а количество армян уменьшилось. Основной причиной сокращения общего числа евреев была их миграция в Ташкент и другие города, частично в другие республики.



Сокращение еврейского населения с 1926 года до переписи 1939 года наблюдал также Э.Л. Амитин-Шапиро. По его оценкам 1934 года, в Ферганской долине было 4810 евреев, из которых 2000 человек жили в Коканде, 900 в Андижане, 860 в Маргилане, 580 в Фергане и 470 в Намангане[13, с. 53]. За это время количество уйгуров увеличилось с 2 до 4 тысяч. Также к городскому населению присоединилась группа корейцев.

Перепись населения 1926-1939 годов показывает, что развитие этнического состава варьируется в разных городах долины. Примечателен тот факт, что число узбеков на обширных территориях резко сократилось, но в некоторых городах, преимущественно там, где проживали таджики, число узбеков выросло от 4.5% до 7.3% в Касансае, и от 4.1% до 11.2% в Чусте.

Можно увидеть одинаковое увеличение числа русских во всех городах долины, а также в поселках городского типа, особенно в Фергане (с 55.6% до 59%). Также мы видим, что число русских в Маргилане увеличилось с 0.4% до 15%.

В густонаселенных районах где проживали таджики, резко сократилось количество таджиков из-за большого числа этнических узбеков, которые приехали в город в те же годы. Например число таджиков в Чусте уменьшилось с 95.4% до 77.1%, а в Касансае уменьшилось с 94.8% до 81.0%. Количество татар возросло во всех городах и поселках городского типа, особенно в Ленинске (9.7%) и Фергане (5.7%) от общего числа населения. Также мы можем увидеть небольшую группу корейцев во всех городах долины, и во время переписи 1939 года появилась новая этническая группа – мордва, которых насчитывалось 1.3 тысячи человек в Фергане и 0.6 тысяч человек в Маргилане, а в Андижане насчитывалось 1.7 тысяч армян и 1.6 тысяч в Коканде.

Таким образом, из вышеизложенного можно сделать такие выводы: 1) В XX веке в этническом составе городского населения Ферганской долины преобладали узбеки. 2) Общая численность узбеков в городском населении увеличивалась вплоть до 50-х годов прошлого века. 3) Только в Фергане численность русских по отношению к другим национальностям была выше, чем в других городах. 4) Несмотря на то, что общая численность русских в конце XIX века составляла всего 2.7%, в 1939 году она составляла 25.2%. Затем мы видим процесс сокращения числа русских. 5) Хотя татар в конце XIX века было всего 0.3%, в последующее время их число увеличилось, сначала они составляли 4.4%, а уже к 30-м годам их число было 10.3%. 6) В начале

XX века общая численность городского населения таджиков увеличилась с 6.5% до 11.3% (1926), а в 1939 году их численность сократилось до 6.3%, но в последующие годы их численность оставалось умеренной. 7) Хотя украинцы составляли менее 1% от общей численности населения в первые десятилетия XX века, к 1939 году их численность составляла 2.1%, а затем прослеживается спад численности населения украинцев. 8) Евреи составляли небольшой процент от населения города, но их общее количество изменялось, либо увеличивалось, либо уменьшалось в течение переписи.

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## **GREEN PRODUCT AND CONSUMER BEHAVIOR: AN ANALYTICAL STUDY**

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### **ABSTRACT**

*A green product is a sustainable product designed to minimize its environmental impacts during its whole life-cycle and even after it's of no use. Green products are usually identified by having two basic goals – reducing waste and maximizing resource efficiency. With growing markets and increasing consumer volumes, the production, as well as consumption patterns are degrading the environment drastically. The government, consumers and producers have realized the worth of this issue. The research and development department of industries are continuously working to develop products that are environment-friendly and cause less environmental destruction. Products which are capable of being recycled, and possess healthy disposal are often termed as green products. The manufacturing, marketing, and consumption of such products are being promoted by the government as well as non-governmental organizations. Environmental sustainability and personal consciousness of consumers are found to be motivating factors while unavailability and unawareness are deemed demotivating factors along with the cost of installation / usage. Consumers are intended to purchase green products irrespective of their demographics.*

**KEY WORDS-***Consumer Behaviour, Green Marketing, Green product*

### **INTRODUCTION**

The terms “green” or “sustainable” often refer to products, services or practices that allow for economic development while conserving for future generations. We prefer to describe a green product as one that has less of an environmental impact or is less detrimental to human health than the traditional product equivalent. While on the topic of defining a green product, you must realize that almost no product will ever be 100% “green,” since all product development will have some impact on the surrounding environment. It all comes down to degrees of impact

and as we discussed above, trading off between impacts.

A green product is a sustainable product designed to minimize its environmental impacts during its whole life-cycle and even after it's of no use. Green products are usually identified by having two basic goals – reducing waste and maximizing resource efficiency. They are manufactured using toxic-free ingredients and environmentally-friendly procedures and are certified by recognized organizations like Energy star, Forest Stewardship Council, etc. Some of the characteristics of a green product are:



- Grown without the use of toxic chemicals and within hygienic conditions
- Can be recycled, reused and is biodegradable in nature
- Comes with eco-friendly packing
- Uses the least resources
- Is eco-efficient
- Has reduced or zero carbon footprint
- Has reduced or zero plastic footprint

In the usual scenario, brands producing green

To understand the trade-offs you should realize that there are select attributes that describe green products and services; we list them below to help you further understand what a green product truly is. Green products are...

- Energy efficient, durable and often have low maintenance requirements.
- Free of Ozone depleting chemicals, toxic compounds and don't produce toxic by-products.
- Often made of recycled materials or content or from renewable and sustainable sources.
- Obtained from local manufacturers or resources.
- Biodegradable or easily reused either in part or as a whole.

**ENERGY STAR:** A labeling program for energy efficient homes, building products, electronics and appliances. ENERGY STAR is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy helping protect the environment through energy efficient products and practices.

**Green Seal:** Green Seal Certification ensures that a product meets rigorous, science-based leadership standards. It is a lifecycle assessment based labeling program for building products, green operations and maintenance procedures. A green seal can be found on anything from a coffee filter to a hotel.

Green products are now mainstream, whether you are looking for a new home, automobile or even just some vegetables for a salad, there is a green product alternative available. It is up to you to weigh your options and identify what attributes of a green product is important to you; though make sure you are fully informed and aware prior to making the purchase. We applaud your commitment to sustainable living and look forward to building a greener future.

Brand Knowledge

Branding is one of the most important aspects of any business, the process involved in creating a unique name and image for a product in consumers' mind.

Brand Image

Brand image is defined as the subjective impression in the consumers' mind about a brand [9]. Brand image reflects consumers' perception about a brand and the manner in which a specific brand is positioned in the market

Brand Awareness

Brand awareness refers to the extent to which a brand is recognized by potential consumers, and is correctly associated with a particular product. Brand awareness can influence consumers' perceived risk assessment and their confidence in the purchasing decision, due to familiarity with the brand and its characteristics. Consumers show a strong tendency to use brand awareness as a heuristic for a common or repeat purchase. In summary, brand awareness has an effect on consumer decision process. Green marketing can help companies in increasing brand awareness and building positive image in the minds of the consumer's. Consumers who have environmental concerns, their purchasing decision is positively affected by green product, and brand image awareness.

## REVIEW OF LITERATURE

**Chakrabarti, S. (2010)** in his research article has explained the comprehensive research work on consumer buying behaviour in organic food category. Affective commitment was considered to be an important construct which consumers develop towards the brand or its provider over a period of time which drives them to loyalty. The importance of affective commitment dimension was considered relevant in organic food purchase given that the category has association with health and nutrition benefits. For marketers, understanding the process of emotional bonding with regular buyers may be quite critical. The study also identified the factors limiting more organic food usage among regular buyers in India. The three most important reasons were cited as expensive, taste related reasons and the limited availability of the products which marketers need to address on to ensure more regular usage in the category. Stores also need to engage in personal interaction with the customers to develop trust and long term relationships with them. Superior customer value would increase their level of affective commitment towards the store.

**Azad, P. (2011)** in his article has discussed the notion of green marketing, its initiatives, challenges and probable strategies. This was



in the wake of mounting awareness on disturbed ecological balance and environmental consciousness which has changed the behavioural patterns both in the individuals and businesses across the world. The broadening gap between the scarce resources and infinite human wants has augmented the interest regarding fortification of environment and this is felt all over the world.

**Vazifehdust, H & Asadollahi, A. (2011)** in their article have attempted to describe what is meant by social responsibility and explain its relation to green marketing, take a closer look at green marketing and also the ways of implementing the green marketing concepts in some of Iran's industries. Social responsibility transcends the positive environmental approach since it takes into account every angle of consumers' consumption. Today, Iranian consumers care more about their health and environment than ever. In this context, this paper has highlighted some of the areas like product design, product positioning, packaging material and design, advertising, sales promotion, personal selling, services where the companies could focus on by re-engineering their production processes, product design and service position, in order to solidify their positions in the competitive market, otherwise being left behind in the green trend. To establish competitive advantage, the paper suggested greening in the production process and reduced expenditure which will cause an enhanced image of the company in the customers' eyes and increased loyalty.

**Sharma, Y. (2011)** has focused on the changing consumer behaviour towards the usage of green products. The article has explained the four stages of lifecycle of green products – development, production, consumption and disposal. After explaining about the green marketing mix, the article has suggested that companies hoping to embed sustainability have to reframe their strategies. Connecting sustainability with the core business operations and consumers means that the CR team must work with other parts of the business, including brand, marketing and R&D. This enables opportunities for innovation. Green marketing has to be pursued with much great vigour, as it both

environmental and social dimensions.

## OBJECTIVES

- To Understand the concept of Green product
- To Identify the Consumer Perception and awareness of Green Product
- To Find the Relationship of Green Consumption behavior with consumer demographics

## RESEARCH METHODOLOGY

Based on the literature review, the current study develops a research framework consisting of different attributes, such as brand image, brand awareness, country of origin, perceived quality, and purchase intention. Specifically, brand image and brand awareness are both used as the independent variables, country of origin image as a moderator, perceived quality as a mediator, and purchase intention as a dependent variable.

### Data Collection Method

The method selected by the researcher for exploring the consumer perception and behavior towards online shopping is survey research. The research starts with identification of different variables related to responsible for building consumer perception. Research included both primary and secondary data. Primary data for this study was collected.

### Research Methodology:

Both Primary data and Secondary data are used in this research study

### Research Instrument:

The structure build questionnaire is used as the research instrument for the study.

Liker 5point scale (very satisfied, satisfied, neutral, dissatisfied and very Dissatisfied)

### Convenience sampling method:

The researcher used convenience sampling method for data collection. The samples were Collected among various areas in and around Coimbatore.

Statistical tools used for data analysis

- ✓ Percentage analysis
- ✓ Chi square

**Table showing the respondents on respondents on the basis of gender**

Gender	Frequency	Percent
Female	134	53.6
Male	116	43.4
Total	250	100

**CHI SQUARE TEST:**

Table showing that the gender and shop online:

**HYPOTHESIS:**

HO 2a: There is no significant association between gender and shop online.

HI 2a: There is significant association between gender and shop online.

Cross tabulation:

I

SHOP Green Product						
Gender	Very often	Often	Sometimes	Rarely	Never	Total
MALE	34	47	42	10	5	134
FEMALE	33	30	22	19	9	116
Total	66	77	64	29	14	250

**CHI SQUARE TESTS**

	Value	df	Asymp. Sig.(2-sided)
Pearson Chi-Square	3.166a	4	0.529
Likelihood Ratio	3.164	4	0.532
Linear-by-Linear Association	.028	1	.867
N of valid cases	250		

A.0 cells (0.0%) have expected count less than 5.The minimum expected count is 6.50.  
P=0.532>0.05

**Ho-Accepted, H1-Rejected**

The Chi Square value between gender and shop online factor is 3.156a and P value is 0.532 Which is not significant at 5% level. Thus there is no association between genders and shop online factor.

more for the green products to protect their environment. Consumers are motivated to buy green products not only because of their concern for the environment but also because they believe these can be healthier option for them.

**DISCUSSION AND CONCLUSION**

The results of the present study can be used by marketers, manufacturers as well as the government to promote green products efficiently. Unawareness and unavailability of the green products should be countered so as to remove the obstacle in its usage. It is evident that the purchase behavior and customer satisfaction towards green products is not influenced by age, gender, income or educational qualifications of the consumers. Purchasing behavior of consumers depends on their level of satisfaction towards the products. The concern for environment has been found to be more among the young consumers. Consumers regard the features of the green products to be most important while purchasing them. They are even willing to pay

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# DEPENDENCE OF MEAT PRODUCTION ON THE POTENTIAL OF FODDER PRODUCTION IN UZBEKISTAN

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## ABSTRACT

*In the article, the dependence of meat production in the Republic of Uzbekistan on the volume of fodder production was proved by the regression equation using long-term statistics.*

**KEYWORDS:** *agriculture, livestock, meat cultivation, horticulture, fodder, regression equation, correlation index.*

## INTRODUCTION

The main purpose of the reforms carried out in agriculture in the Republic of Uzbekistan is aimed at providing the population of the country with raw materials of food products, industrial sectors, effective use of feedings and increasing the export potential of agricultural sector products. The rapid development of the livestock network in the country plays an important role in providing the population with cheap and high-quality meat and other food products, especially in increasing employment and increasing incomes of citizens living in rural areas.

At the same time, the current state of affairs in the regions dictates the implementation of specific measures to support these Network Enterprises, increase the feed base. Special attention is paid to scientific approaches to the development of livestock in the Republic of Uzbekistan and the wide introduction of advanced modern technologies, saturation of the domestic market with meat products, further stimulation of production and processing of imported substitute and export-oriented meat products, ultimately improving the well-being of the population and increasing incomes [1, 2019].

## THE MAIN FINDINGS AND RESULTS

### ***I. Proposed Methodology***

The theoretical and methodological foundations of the economic and geographical study of agriculture are presented in the works of foreign scientists I.G. Tyunen, K.I. Ivanov, V.G. Kryuchkov, A.M. Nosonov, A.N. Rakitnikov. The first monographs on agricultural geography in the republic were carried out in the middle of the last century by professors Z.M. Akramov and A.N. Rakitnikov [5, 2001]. They led a comprehensive economic and geographical expedition organized in the Zarafshan River Basin, and published the monograph "Agricultural Geography of Samarkand and Bukhara Regions in 1961" [3, 2020]. The economic and geographical aspects of the development of the agricultural sector are illustrated by different regions: M.Yusupov, R.Khodiev, A.Valikhanov, E.Umarov, S.Saidkarimov, T.Egamberdiev, Yu. Akhmadmadiev A. Kholmiraeva [4, 2014].

**II. Result Analysis**

Meat production depends on several factors. However, in the conditions of meat production in Uzbekistan, fodder base is of primary importance [2, 2015]. Therefore, in this study, it was proved by the regression equation that the increase in meat (live weight) production depends primarily on the volume of fodder production. For this purpose, long-term data of the Statistics Committee of the Republic of Uzbekistan were used [6, stat.uz].

**Table 1**  
**Fodder and meat products (live weight) grown in the Republic of Uzbekistan**

Years	Fodder, Thousand ton	Meat (live weight), Thousand ton
2013	5353,5	1787,8
2014	6084,6	1906,3
2015	6390,5	2033,4
2016	6684,2	2172,5
2017	6895,1	2286,8

The table is based on the data of the statistics section of the Republic of Uzbekistan.

According to the information presented in this table, we find the function of linear  $\hat{y}(x) = a + bx$ , which expresses the correlation between the size of fodder and the amount of meat grown in a living weight, that is, the amount of demand ( $y$ ) for the product, we draw up the regression equation for the size of fodder ( $x$ ).

The double regression equation represents the relationship between two variables based on the law of change of the average value of the data obtained from the observation results. If the dependence of demand on ( $y$ ) forage ( $x$ ) is expressed, for example, by the equation  $y = a + b \cdot x$ , then this equation states that when the amount of forage increases, the demand increases by an average of  $b$  ( $b > 0$ ) represents.

In practice, in each individual case, the magnitude  $y$  consists of two additions as follows.

$$y_j = y_{x_j} + \varepsilon_j$$

where:  $y_j$  - is the actual value of the resultant indicator;

$y_{x_j}$  - theoretical values of the result obtained from the regression equation;

$\varepsilon_j$  - is random variables that represent the deviation of the actual value of the resultant indicator from the theoretical value determined in the regression equation.

In this regard, we use the method of small squares.

$$S = \sum (y_i - y_{x_i})^2 = \sum (y - a - b \cdot x)^2;$$

We find the minimum of this function. To do this, we derive  $a$  and  $b$  from this function on the variables.

$$\begin{cases} \frac{dS}{da} = -2 \sum_{i=1}^n y_i + 2 \cdot n \cdot a + 2 \cdot b \sum_{i=1}^n x_i = 0 \\ \frac{dS}{db} = -2 \sum_{i=1}^n x_i \cdot y_i + 2 \cdot a \sum_{i=1}^n x_i + 2 \cdot b \sum_{i=1}^n x_i^2 = 0 \\ n \cdot a + b \sum_{i=1}^n x_i = \sum_{i=1}^n y_i \\ a \sum_{i=1}^n x_i + b \sum_{i=1}^n x_i^2 = \sum_{i=1}^n x_i \cdot y_i \end{cases}$$

Divide the equations in the system by  $n$ , and using

$$\bar{x} = \frac{1}{n} \sum_{i=1}^n x_i, \bar{y} = \frac{1}{n} \sum_{i=1}^n y_i, \overline{xy} = \frac{1}{n} \sum_{i=1}^n x_i y_i, \overline{x^2} = \frac{1}{n} \sum_{i=1}^n x_i^2, \overline{y^2} = \frac{1}{n} \sum_{i=1}^n y_i^2$$



equations, we obtain the following equation. 
$$\begin{cases} a + b \cdot \bar{x} = \bar{y}, \\ a \cdot \bar{x} + b \cdot \overline{x^2} = \overline{y \cdot x} \end{cases}$$

**Table 2**

y	x	x <sup>2</sup>	y <sup>2</sup>	x • y
1787,8	5353,5	28659962,25	3196229	9570987,3
1906,3	6084,6	37022357,16	3633980	11599072,98
2033,4	6390,5	40838490,25	4134716	12994442,7
2172,5	6684,2	44678529,64	4719756	14521424,5
2286,8	6895,1	47542404,01	5229454	15767714,68
2037,36	6281,58	39458247,3	4150836	12797839,83

$$\begin{cases} a + 6281,58 \cdot b = 2037,36, \\ 6281,58 \cdot a + 39458247,3 \cdot b = 12797840,83 \end{cases}$$

$$b = 0,32,$$

$$a = 26$$

Putting the values of the parameters *a* and *b* in the given linear regression equation, we write the following regression equation.

$$y = 0,32x + 26$$

$y(x + 1) - y(x) = 0,32$  means that when fodder increases by 1 ton, meat (live weight) increases by 0.32 tons.

**1.1. Correlation coefficient**

Let's calculate the dependency index. Such an indicator is the sample correlation coefficient calculated

according to formula  $r_{xy} = \frac{\overline{xy} - \bar{x} \cdot \bar{y}}{\sigma_x \cdot \sigma_y}$  :

$$\sigma_x^2 = \overline{x^2} - \bar{x}^2 = 39458247,3 - 4159560,25 = 35298687,05$$

$$\sigma_y^2 = \overline{y^2} - \bar{y}^2 = 4150836 - 4150835,8 = 0,2$$

$r_{xy}$  The linear correlation coefficient takes values from -1 to +1  $r_{xy} = \frac{\overline{xy} - \bar{x} \cdot \bar{y}}{\sigma_x \cdot \sigma_y} = 0,964$  .

The correlation between factors can be weak or strong. Their criteria are evaluated on the Cheddock scale:

- 0.1 <  $r_{xy}$  < 0.3: weak;
- 0.3 <  $r_{xy}$  < 0.5: average;
- 0.5 <  $r_{xy}$  < 0.7: sensible;
- 0.7 <  $r_{xy}$  < 0.9 : high;
- 0.9 <  $r_{xy}$  < 1: max

The correlation between the factors  $r_{xy} = 0.96$  is very high.

**1.2. Elasticity coefficient.**

For this purpose, the coefficients of elasticity and beta coefficients are calculated.

The coefficient of elasticity is found from the following formula: **Error!**

$$E = 0,32 \frac{6281,58}{2037,36} = 0,98$$



This indicates the percentage change in the  $y$  of the resulting factor  $y$  when the mean factor changes to  $x$  1%. It does not take into account the degree of variability of the factors.

Therefore, when it changes to  $x$  1%, it changes to  $y$  98%. In other words, the effect of  $x$  on  $y$  is significant.

### 1.3. Correlation index (empirical correlation ratio).

$$\eta = \sqrt{\frac{\sigma_{y_{cp}}}{\sigma_{y_0}}} = \sqrt{\frac{62280,19}{3556038,5}} = \sqrt{0,017514} = 0,130384$$

Here  $\sigma_{y_0} = 3556037 + 1,573519 = 3556038,5$

$$\eta = 0,130384$$

The value obtained indicates that the factor  $x$  has a weak effect on  $y$ .

The set of relations for any relationship is determined using the correlation coefficient:

$$R = \sqrt{1 - \frac{\sum (y_i - y_x)^2}{\sum (y_i - \bar{y})^2}} = 0,964212248$$

### 1.4. Approximation error.

We evaluate the quality of the regression equation using an absolute approximation error.

$$\bar{A} = \frac{\sum |y_i - y_x|}{n} = 0,000616 \cdot 100\% = 0,0616$$

Since the error is less than 15%, it is advisable to use this equation as a regression.

### 1.5. Determination coefficient.

(Square) The square of the correlation coefficient is called the detection coefficient, which represents the rate of change of the resulting property explained by the change in the factor property.

Often in the interpretation of the detection coefficient it is expressed as a percentage.

In  $R^2 = 0,92970526$  i.e. 0.92 % cases the change of  $x$  leads to the change of  $y$ , in other words, the choice accuracy of the regression equation is higher.

2.1. Significance of the correlation coefficient.

2. Determine the true value of Fisher's F-criterion:

$$F = \frac{R^2}{1 - R^2} \cdot \frac{(n - m - 1)}{m} = \frac{0,92970526}{1 - 0,92970526} \cdot \frac{(5 - 1 - 1)}{1} = 39,6774465$$

Table value of the criterion with  $k_1 = 1$  and  $k_2 = 9$ ,  $F_{kp} = 34,12$  degrees of freedom  $F > F_{kp}$ .

Since the actual value is  $F > F_{kp}$ , the detection coefficient is statistically significant, and the found value of the regression equation is statistically reliable.

## CONCLUSION

Thus, it has been proved that the volume of meat production (live weight) in Uzbekistan depends on the volume of fodder production. We can conclude that in order to increase the production of meat products, the main focus should be on fodder production, only through this can meat production be managed and price controlled.

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# STUDY ON DETERMINANTS OF ENTREPRENEURSHIP AMONG THE STUDENTS

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## ABSTRACT

*Entrepreneurship is the important key for the growth of economic development of country. Entrepreneurship plays important role in the handling unemployment and poverty issues in the developing country. The present study focuses on the determinants of entrepreneurship among the students. For the study descriptive research design was employed and 64 respondents were surveyed. Out of the 64 respondents 79.7 percent respondents were male while 20.3 percent were female. Majority (93.8) respondents have age between 21-25 years and 25 percent respondents have their own family business where as 85.9 percent respondents wants to start own business while 14.1 percent do not want to start their business. The Exploratory Factor Analysis approach was applied to the entrepreneurial intentions statements. The exploratory factor analysis yielded four factors namely will power and perseverance, perceived benefit, self-efficacy and conducive entrepreneurship environment*

**KEYWORDS:** *Entrepreneurship, Determinants of Entrepreneurship, Start-Up, Entrepreneurship Intension, Entrepreneurship attributes*

## INTRODUCTION

The Entrepreneurship can be define as “capacity and willingness to develop, organize and manage a business venture along with any of its risks in order to make a profit”. Entrepreneurship is an important element in the dynamics of national economies and it is seen as the driving engine in economic growth and job creation. (Manikandan and Palanivelu, 2016). Entrepreneurship has a more critical role for economies - especially in developing countries - since it can be an engine of economic progress, job creation, and social adjustment. Entrepreneurship is the new revolution and it’s about continual creativity and innovation. (Amma, 2013).Entrepreneurs and entrepreneurship are arguably the pillars on which economic health ofsocieties werebuilt.Their role has been highlighted in opportunity creation through new ventures and maintenance of existing ones (Bidarkundi and Ramachandra,2015).Entrepreneurship contributes immensely to the economic growth and thereby plays

a vital role in the development process. (Karim and Reddy, 2014) Government of India recognizes the importance of entrepreneurship to the economy and its central role in generating jobs, developing human potential, because in recent years the unemployment is high among the young generation in India. (Ponmani, 2014). The present study try to investigate the entrepreneurial intentions among students.

## REVIEW OF LITERATURE

Matharu *et.al*(2014) studied on “Perception of B-school Students towards Entrepreneurship” where they applied factor analysis and found 10 factors namely Conducive Entrepreneurial Environment, Challenging, Opportunity Seeker, Status, Confidence, Perseverance, Institutional Support, Business Oriented, Influence, and Economic Independence indicating the entrepreneurial traits of the students. The results of t-test show that there is no significant difference in the perception of students on the basis



of gender towards factors affecting the spirit of entrepreneurship.

Yeng Keat, Ooi and Shuhymee Ahmad (2012) studied “ A Study among University Students in Business Start-Ups in Malaysia: Motivations and Obstacles to Become Entrepreneurs” and found that males students were found to be significantly higher entrepreneurial intention, motivational factors (intrinsic rewards, extrinsic rewards, independence and autonomy, family security and change management) and obstacles and challenges (endogenous factors, exogenous factors–personal and endogenous factors–financial and operational) as compared to the female students. Further The factor analysis was employed by grouping the obstacles/challenges items into three categories: exogenous factors, exogenous factors (personal) and endogenous factors (financial and operational). Respondents perceived the endogenous factors (such as lack of working capital/investment, high operating cost and fund) and exogenous factors (such as strong competitors, high interest rate, high labour cost) would be obstacles/challenges for them when starting up and sustaining new ventures.

Flora *et.al* (2014) “An investigation of students’ readiness towards entrepreneurial intentions at Kigali Independent University (ULK)” and results of the study revealed a positive attitude towards entrepreneurship, and a willingness to venture into a new business. It also revealed that gender and family background have no influence on students’ attitude towards entrepreneurship, while perceived desirability, propensity to act and social desirability positively have an impact on entrepreneurial intentions of students.

Sulaiman *et.al* (2014) studied “Factors That Influence the Interest of Youths in Agricultural Entrepreneurship” and found that all respondent agrees that attitude, acceptance and knowledge are the factors that influence youth to become agriculture entrepreneurs. The study also identified other significant factors such as family support, government support and promotion through of

festivals and carnivals. The findings of the study indicated that the attitude and acceptance has significant relationship with the interest of youth to become entrepreneur while the knowledge has no significant relationship with interest of youth to become entrepreneurs.

## METHODOLOGY

The present study aims to understand the determinants of entrepreneurship among students. To fulfil the stated objective for present study, descriptive research design was applied. The cross sectional data from the respondents were collected for the present study. The structured questionnaire was used as data collection instrument. The questionnaire contains questions related to demographic profile of respondent such as gender, age, education etc. and the research questions. The survey conducted on online as well as offline platforms at Agricultural University in Navsari (Gujarat). Total 64 respondents were surveyed. To find out determinants of entrepreneurship among students, respondents were asked to answer 21 prepared statements using 5-point likert scales where 1 is strongly agree and 5 is strongly disagree. The factor analysis approach was applied to the statements to find out factors affecting entrepreneurial intentions among the students.

## RESULT AND DISCUSSION

The collected data were tabulated and analysed with help of computer software. The statistical tools employed for present study are frequencies, percentage and Exploratory Factor Analysis. Exploratory factor analysis using principal component analysis approach was used to determine the most important variables from the large number of variables in the set of data to find out factors affecting entrepreneurial intentions among the students.

**Table: 1 Demographic Profile of Respondents**

Parameters	Frequency	Percent
<b>Age of the Respondents</b>		
Below 20 Years	3	4.7
21-25	60	93.8
26-30	1	1.6
Total	64	100.0
<b>Gender of Respondents</b>		
Male	51	79.7
Female	13	20.3
Total	64	100.0
<b>Specialization of Under graduation</b>		
Agriculture	47	73.4
Non Agriculture	17	26.6
Total	64	100.0
<b>Own family business</b>		
Yes	16	25.0
NO	48	75.0
Total	64	100.0
<b>Willingness to Start own business</b>		
Yes	55	85.9
No	9	14.1
Total	64	100.0

The table no 1 shows demographic profile of respondents. Out of the surveyed respondents 79.7 percent respondents were male while 20.3 percent were female. Majority (93.8) respondents have age between 21-25 years, 4.7 percent respondents having age below 20 years, while 1.6 percent respondents having age between 26-30 years. Out of the surveyed respondents 25 percent respondents have their own family business where as majority of respondents do not have any business. 85.9 percent respondents wants to start own business while 14.1 percent do not want to start their business.

**Reliability test Alpha**

The respondents were asked to respond on 5 point Likert scale for 21 statements. To check reliability cronbach's Alpha was calculated and it was found 0.737 for 21 items. The reliability test Alpha was developed by Lee Cronbach in 1951 to provide a measure of the internal consistency of a test or scale; it is expressed as a number between 0 and 1. (Tavakol *et al.* 2011). As a rule of thumb the value greater than 0.7 is good and acceptable. For the present study cronbach's alpha based on standardized items obtained 0.737. So the data are reliable for further analysis.

**Table: 2 Reliability test (Cronbach alpha)**

Reliability Statistics	
Cronbach's Alpha	N of Items
0.737	21

The Bartlett's test of Sphericity and Kaiser Meyer –Olkin (KMO statistics) measure of sample adequacy were used to assess the suitability of data for carrying out the factor analysis. Generally the value of Kaiser-Meyer-Olkin Measure of Sampling Adequacy test is accepted greater than 0.6. For the present data it is obtained 0.619 and Bartlett's Test of

Sphericity found significant. So, the factor analysis can be performed for the present data.



**Table 3: KMO and Bartlett's Test**

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.618
Bartlett's Test of Sphericity	Approx. Chi-Square	512.031
	Df	210
	Sig.	.000

**Factor Analysis**

Respondents were asked to answer 21 prepared statements using 5-point Likert scales where 1 is strongly agree and 5 is strongly disagree. The principle component extraction performed where the eigenvalue greater than 1.5 was considered. Varimax

with Kaiser Normalization rotation method was employed. The Rotated Component Matrix was presented sorted by size and the coefficients were suppressed having value below 0.4. The factor analysis yielded 4 factors were which explain 50.755% of total variance as shown in below table.

**Table 4: Total Variance Explained**

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.853	23.111	23.111	4.853	23.111	23.111	2.987	14.225	14.225
2	2.104	10.017	33.128	2.104	10.017	33.128	2.906	13.839	28.064
3	2.022	9.627	42.756	2.022	9.627	42.756	2.559	12.188	40.252
4	1.680	8.000	50.755	1.680	8.000	50.755	2.206	10.503	50.755
5	1.480	7.049	57.805						
6	1.274	6.065	63.870						
7	1.126	5.361	69.231						
8	.971	4.626	73.857						
9	.895	4.261	78.118						
10	.843	4.014	82.132						
11	.655	3.118	85.250						
12	.628	2.993	88.243						
13	.477	2.271	90.514						
14	.417	1.987	92.501						
15	.328	1.563	94.064						
16	.293	1.393	95.457						
17	.251	1.195	96.652						
18	.230	1.093	97.746						
19	.184	.875	98.620						
20	.161	.765	99.385						
21	.129	.615	100.000						

Extraction Method: Principal Component Analysis.

**Table 4 : Rotated Component Matrix**

	Component			
	1	2	3	4
I don't like to work for others so I will choose Entrepreneurship	.676			
Entrepreneurs have enjoyment of job giver.	.676			
I want To be my own boss	.619			
I would like to become entrepreneur as I am Risk Taking	.560		.490	
My country has good environment for start up.	.505			
I think Entrepreneurship is better than job.		.664		
I have good management ability.		.661		
Entrepreneurship is good source of more income		.587		
I have good relation with people that help me in Entrepreneurship		.540		
My role model gets success in Entrepreneurship so I think for same.		.529		
Entrepreneurship provides control on own destiny		.490		-.474
The Entrepreneurs have good image in the society so I will choose.	.401	.462		
I would like to become entrepreneur as I am Creative.			.850	
I would like to become entrepreneur as I am innovative			.789	
I would like to become entrepreneur as I am confident			.639	
Entrepreneurship provides autonomy			.402	
The taxation and duties provides positive environment.				.637
I would prefer to be self-employed and independent.				.626
I have social support to start Entrepreneurship.				.544
Entrepreneurship gives need of attachment				.538
The governmental policies provides positive environment.	.491			.522
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.				
a. Rotation converged in 6 iterations.				

The exploratory factor analysis yielded four factors namely will power and perseverance, perceived benefit, self-efficacy and conducive entrepreneurship environment.

The first factor termed as will power and perseverance due to high loading to the statements "I don't like to work for others so I will choose Entrepreneurship", "Entrepreneurs have enjoyment

of job giver", "I want To be my own boss", "I would like to become entrepreneur as I am Risk Taking" and "My country has good environment for startup.", the factor explained 14.225 percent of total variance. The second factors termed as perceived benefit due to the high loading of the statements like "I think Entrepreneurship is better than job", "I have good management ability", "Entrepreneurship is good source of more income", "I have good relation with



people that help me in Entrepreneurship”, “My role model gets success in Entrepreneurship so I think for same”, “Entrepreneurship provides control on own destiny” and “The Entrepreneurs have good image in the society so I will choose”, the factor explained 13.839 percent of total variance. The third factor termed as self-efficacy due to high loading of the statements like “I would like to become entrepreneur as I am Creative.”, “I would like to become entrepreneur as I am innovative”, “I would like to become entrepreneur as I am confident”, and “Entrepreneurship provides autonomy” the factor explained 12.188 percent of total variance. The last factor termed as conducive entrepreneurship environment due to high loading to the statements like “The taxation and duties provides positive environment.”, “I would prefer to be self-employed and independent.”, “I have social support to start Entrepreneurship.”, “Entrepreneurship gives need of attachment”, and “The governmental policies provides positive environment.”, the factor explained 10.503 percent of total variance. These four factors explain 50.755% of total variance.

## CONCLUSION AND IMPLICATIONS

The present paper focuses on entrepreneurial determinants among the students. Total 64 respondents were surveyed. Out of the 64 respondents 79.7 percent respondents were male while 20.3 percent were female. 93.8 percent respondents have age between 21-25 years and 25 percent respondents have their own family business where as 85.9 percent respondents wants to start own business while 14.1 percent do not want to start their business. The Exploratory Factor Analysis approach was applied to the entrepreneurial intentions statements and found that four factors namely will power and perseverance, perceived benefit, self-efficacy and conducive entrepreneurship environment are affecting entrepreneurial intentions among the students. The government should maintain and improve the conducive entrepreneurship environment by designing the favourable policies for Entrepreneurship.

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# AWARENESS, ACCESSIBILITY AND ABILITY TO USE COMPUTERS BY PRIMARY SCHOOL PUPILS

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## ABSTRACT

*This paper is a determination of use of digital technology for instructional purposes in out of school environment. The paper specifically explores the awareness of primary school pupils on the significance of using computers, access to computers and the ability to use computers. A total of 458 pupils were selected from 9 primary schools in three (3) divisions of Meru District in Arusha Region. The findings of the study shows that only 18.8% of pupils were aware of the usefulness of computers, while even smaller percentage of pupils (9.6%) had computers at home. On the other hand, only 16.6% of pupils could use computers. On the basis of the findings, it could be inferred that although some pupils are aware that computers can potentially facilitate learning, they are not adequately available at home, while also quite few pupils can use them. On the basis of these observations; the government, school administrators and other stakeholders in education should work together to raise pupils' awareness of the usefulness of computers, along with making computers available and enabling pupils to make use of them to improve learning both in regular classroom and out of school time. At the bottom line, studies that are geared towards exploring the robust approaches which not only can raise pupils' awareness but can more importantly make families see the importance of availing computers to their school children while at the same time encouraging pupils to use computers to improve their learning at school and out of school time are inevitable.*

## INTRODUCTION

The Government of Tanzania has made several efforts to foster the use of educational technology with a view to improving the teaching and learning process. This is manifested not only in the Tanzania Vision 2025 (URT, 1999), but also in relevant policies such as the ICT Policy for Basic Education (URT, 2014) and the National ICT Policy of 2016 (URT, 2016). The National ICT Policy of 2016, for example, is intended to ensure public awareness of the significance of Information technology in improving the living standards of the local population. Additionally, the

Policy calls for the need to ensure accessibility to technology-based products and using the same to combat poverty, ignorance and diseases. Similarly, the Information and Communication Technology for Basic Education Policy is partly a response to the observed lack of awareness on the use of ICT; thus the Government intends to bridge this gap. As for the Tanzania Vision, it encourages investment in the improvement of citizen's skills and ability to use ICT as a necessary requirement for exploiting technology with the ultimate goal of improving living. However, despite improving education through technology,



policies and other initiatives; awareness, availability and use of educational technology may not produce the expected outcomes, unless efforts are also expedited to ensure involvement of various stakeholders particularly learners, teachers, parents, schools and the Government.

The best approach to improving investment in educational technology is to acknowledge its worth in shaping teaching and learning. According to Costley (2014), technology enhances learning by making pupils actively engaged, while also facilitating retention of more information. Technology also facilitates collaboration among learners to learn from one another, enables learning from real experiences and consequently improves performance. (DePasquale, McNamara, and Murphy, 2003). Lin and Yang (2011) find that wiki technology enables pupils to receive prompt feedback from instructors, consequently improving their writing skills as opposed to traditional learning styles. A study by Herron (2010) determined the role of technology in improving pupils' interest in Mathematics. The study found that technology provides many instructional activities from which learners can select materials relevant to their levels without much difficulty. The merits of technology in education are also acknowledged by Hollnagel (2013) who establishes that technology improves the level of comfort, task-technology fit and learners' satisfaction. Therefore, primary school pupils need to be enabled to use technology at early ages so that they can see the merits of technology and embrace it to better their learning

It is worth understanding that the advantages of using technology in learning cannot be exploited, unless efforts are made to ensure awareness, availability and its actual use among learners especially in the current technology-driven 21<sup>st</sup> century. While this holds true for Tanzania, Maro (2104) noted that schools had acute shortage of technological devices notably computers. For example, the Author found only 7,035 computers in about 180,987 secondary schools in Tanzania, whereas 37.3% of them were meant for administrative issues. With regard to relationship between awareness and academic achievement, on the other hand, Magre (2011) supports that there is significance difference between the level of awareness on information technology and academic achievement in secondary school students.

If awareness and use of technology is limited among secondary school students, one could imagine the situation in primary school. Nihuka and Peter (2014) find out the use of computer among primary school pupils with a focus on their ability to use the device. The findings showed that only a small

proportion of pupils (11.4%) could make use of basic simple computer applications. Nevertheless, many of studies with respect to application of educational technology placed their focus on school environment and overlook home environment. It is important to realize that learning during school time and after school hours supports each other (Metlife Foundation, 2012) and are all important in bringing about transformation in education system. This is the basis of this study to address this situation by examining awareness, availability and use of computers at home among primary school pupils. This is important since it will inform policy makers and educational stakeholders at large to make informed decisions with respect to the investment and applications of information technologies in primary schools.

## LITERATURE REVIEW

### ICT Index

ICT index analyzes and evaluates the development and potential of Information and Communication Technology (ICT) based on pertinent indicators of diffusion across nations of the world (UNCTAD 2003). Some ICT index reports use slightly different indicators depending on the aims of the report in question. The International Telecommunication Union (ITU), for instance, applies three key indicators, namely ICT access, with a focus on fixed-telephone lines per 100 inhabitants, International Internet bandwidth (bit/s) per Internet user, Mobile-cellular telephone subscriptions per 100 inhabitants, percentage of households with computer and percentage of households with Internet access. The second index is ICT use, which comprises the percentage of individuals using the Internet, fixed (wired)-broadband Internet subscriptions per 100 inhabitants and Active mobile-broadband subscriptions per 100 inhabitants. The last index is ICT skills, which subsumes adult literacy rate, secondary gross enrolment ratio and tertiary gross enrolment ratio. On the other hand, indicators for the United Nations Conference on Trade and Development, include connectivity-internet hosts, telephone mainlines and mobile subscribers. Another indicator is access-internet users, average revenue and call costs. Policy environment is another indicator, which is realized by competition, long distance and internet exchange. The other indicator is usage-incoming and outgoing telecommunication traffic.

Other organizations and institutions such as the UN ICT Task force and UNESCO also use varied indicators. The guideline adopted by the UN ICT Task force (2005) falls into two main categories, which are household and business indicators. On the one hand, Household indicators subsume household electricity



connectivity, ownership of radio, fixed telephone line, mobile phone, TV, access to computer and the internet and methods of access. Other considerations are location, frequency and purpose of Internet use. Other indicators include types and value of products and services purchased over the Internet. On the other hand, business indicators comprise most of the household indicators; and extend to local network, corporate website, recent ICT investments, sharing of computer and the internet among employees, purpose for using the Internet, value of Internet purchase and ICT training arrangements.

The UNESCO (2009) approach in measuring ICT development consists of three stages; which are ICT readiness, ICT intensity and ICT impacts. ICT readiness pertains to the status of ICT infrastructures and their accessibilities whereby the degree of e-readiness determined by the degree of ICT adoption and dynamics which influence the capacity for countries to harness the opportunities availed by ICT. The dynamics could be socio-economic, political, regulatory and market-oriented, among others. According to Adam (2010), the UNESCO methodology is relevant in that it focuses on the level of development of infrastructure and relevant policies as a measure of ICT readiness. Relevant to this work, the World Economic Forum (2011) is of the view that it is not enough to view the level of e-readiness as the degree of technology integration and national policies; it is essentially the capacity of businesses, individuals and the community to sufficiently harness the potentials of ICT to bring positively impact on their livelihood. Awareness is implicit in ICT readiness since it enhances the human competence towards embracing technology in its multifaceted manifestations.

The intensity of ICT has to do with the degree of the use of ICT in daily life. Bjarne (2013) notes that use of technology is manifested in economic use, and it include businesses, e-commerce and market competition. Other uses of the kind are export trade and foreign investment, among other factors. Another manifestation is government use; and this subsumes policy making, privacy, intellectual property, trade, regulations, electronic signatures e-government, political openness and democracy. The use of technology is also manifested in such circles as educational and social use. With regard to use in education, it involves use in schools, availability of trained workforce and training in technology). As for social use, it is about use in every day's life by the public to address inequality and basic literacy. ICT impact is all about the results of societal use of ICT. For instance, according to UNESCO (2009), the impact of ICT in education system is the determination of the

transformations enabled by use of ICT in terms of performance such as improving teaching and learning, improving learners' performance, creating new skills in the labour market, creating lifelong learning opportunities and enhancing management of educational institutions and facilities. For the purpose of this work, the indicators applied by the United Nations ICT Task force and UNESCO are adopted since they reflect on levels of availability and use in gauging the development of ICT.

## **METHODOLOGY**

In this research work, a case study design was adopted drawing subjects from Meru District in Arusha Region. Arusha is among the largest urban centres in Tanzania whose population was thus thought to have well established technological infrastructure (Lamudi, 2015; TCRA, 2013). This qualification presumably gives the population better positioned to use technology for various uses. Meru District as a peri-urban district was also considered to have relevant socio-cultural and economic features which represent the majority of Tanzanians as opposed to typical rural and urban sites.

With primary schools constituting the focal point of this research work, a list of all primary day primary schools was obtained from three Divisions of the District, with the assistance of the District Chief School Quality Assurance Officers. The latest NECTA examination results used to sort the schools in each Division according to their performance where it was splinted into three groups of higher, moderate and low performers. Then one school was selected from each group (one from the top, a second from the mid and the third from the bottom of each list) making a total of three schools in each Division and a sum of nine schools for the three Divisions. This was intended to have a balanced selection of schools to represent geographical and educational settings. As the study was intended to deal with home environment, day primary scholars were the target. The preference of primary school pupils was prompted by the need to cultivate positive attitude of the use of educational technology from early ages with a view to encouraging them to embrace educational technology in the future more productively.

Class seven pupils from each school were asked to participate on the study on the basis of their availability and their willingness to volunteer. They were preferred on the assumption that they are more mature and thus more exposed to technology devices though not necessarily for educational ends. Additionally, they could understand research questions better than lower classes. There were 458 participants from class seven who responded to the structured



questionnaire, which demanded them to indicate their level of awareness of the usefulness of computer, if their families owned computers, and if they independently used computers without assistance. Computer is selected as one of the leading and multipurpose digital tool that can be used for learning. For instance, learners can use a computer to access internet, create files, communicate, store and retrieve files, and so on. The results were tabularized and with the assistance of SPSS the descriptive statistics were applied to analyze the same.

## FINDINGS

The findings correspond with the three areas of concern, with particular focus on the awareness of usefulness of computers, availability of computers and the ability of primary school pupils to use computers.

### Awareness of pupils on usefulness of computers

With regard to the above, pupils were required to show their awareness pertaining to usefulness of computers. The findings are summarized in Table 1.

**Table 1: Awareness of pupils on usefulness of computers**

Theme	Response	Frequency	Percent
Awareness of usefulness of computers	Yes	372	18.8
	No	86	81.2
	Total	458	100

Source: Field data (2018)

The findings as summarized in Table 1 above indicate that 81.2% of primary school pupils were not informed of the usefulness of computers; and that significantly small proportion (18.8%) had the understanding regarding the usefulness of computers. This is an indication that most of the pupils had not realized the significance of computers; meaning also that they did not know that computers could improve their learning. The lack of understanding could be attributed to limited exposure to computer both in school and out of school especially home. This suggests implicitly that most

primary schools in the country may not have computers; or else they have limited applications of computers.

### Availability of computers at home

Pupils were also asked to state whether they had access to computers at home. The findings are presented in Table 2 below.

**Table 2: Availability of computers at home**

Theme	Response	Frequency	Percent
Availability of computers	Yes	44	9.6
	No	414	90.4
	Total	458	100

Source: Field data (2018)

As seen in Table 2 above, a significant proportion of pupils (90.4%) indicated that their families did not own computers, while only 9.6% of them acknowledged their families to have computers. This suggests that the pupils whose families had computers were more likely to access and use them for different purposes, not necessarily academic. Conversely, most of pupils were likely to have very limited access to computers out of home since the devices were not found at home. These findings seem to corroborate the observation regarding awareness of the usefulness of computers as reported earlier (see Table 1). To some extent, the situation

could be attributed to economic factors and pertinent infrastructures like electricity connectivity.

### Ability of pupils to use computers

It was also the mission of this research work to determine the ability of pupils to use computers in the absence of support from other individuals. The findings appear in Table 3 below.

**Table 3: Ability of pupils to use computers**

Ability to use computers	Yes	No	Total
	76	382	458
	16.6	83.4	100

Source: Field data (2018)

As per the findings presented above, 83.4% of the pupils could not confidently use computer without some assistance. However, the rest of them (16.6%) indicated that they had the ability to use computer without support. The findings unquestionably mean that most primary school pupils cannot use computers for either academic or other ends. This could be said to be a combined effect of limited access and awareness of usefulness of computers. Economic reasons and lack of supportive infrastructures like electricity may have also contributed to the situation.

## DISCUSSION

This research paper has found that most primary school pupils are unaware of the usefulness of computers. Additionally, pupils have quite limited access to computers since most homes do not own computers. In the same veins, in addition to unawares and limited access, pupils also lack the ability to use computers. This is in line with (Lowther et al., 2012), who found that although computers are useful in educational contexts, there is still limited use of technology in education systems, attributing the situation to limited awareness, and their availability. What is encouraging is that the situation improves as one progress to higher levels of education; for example, Magre (2011) established that 62% of students in secondary schools understood the usefulness of computers. This could mean that the understanding of usefulness of computers could be increasing as one goes up the education ladder while the opposite is true. As regards availability, Maro (2014) found that availability of computers in primary schools is not encouraging. For example, the study found 7035 computers shared among 180987 primary schools in the country. Moreover, 37.3% of the available computers were for administrative matters. As for ability to use computers, Nihuka and Peter (2014) observed that only some 11.4% of primary school pupils could use simple computer applications.

However, studies have shown that learners have more access and use of other technologies such as television. For example, Magoma (2011) concludes that most children in Tanzania can operate television. This agrees with Kiwango (2018), who reports that 83% of pupils in primary schools could operate

television without assistance. These observations mean that availability and ability to use television could be higher than it is the case with computers. Nevertheless, studies have established that majority of children who use the television do so for non-academic pursuits (UNICEF, 2011). Among other factors, the misuse of television and probably other technologies by primary school pupils may be triggered by lack of awareness of its educational use.

## CONCLUSION AND RECOMMENDATIONS

It is concluded in this research paper that the ability to use computers among primary schools in Tanzania is still low partly owing to limited awareness and accessibility. Fortunately, literature shows that majority of pupils in Tanzania have access to television and can use it, although it has also been found that they use television for purposes other than educational. It could be said that if efforts are made especially by parents at home, children could also raise their levels of awareness, availability and use of computers, the same way they have raised levels of access and use of television.

With reference to the findings of this research paper, it is suggested that parents, schools, the government and other stakeholders in education should work together to sensitize and raise awareness, availability and use of technological devices, particularly computers among pupils in order to improve their academic performance. More importantly, given the closure of educational institutions, including primary schools due to the COVID-19 pandemic, some institutions have successfully resorted to out-of-school time (OST) online learning more than ever before. This demands that learners need access to technological devices especially computers and supporting infrastructure. Accordingly, more research is needed to unveil ideal models in the quest to raise awareness, availability and use of educational technology particularly computers at school and home in order to both improve academic performance and deal with challenges that limit the use of traditional classrooms like those posed by COVID-19 in the future.

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# THE EXTERNAL EAR HEALTH STATUS AMONG STUDENT NURSES AT THE UNIVERSITY COLLEGE HOSPITAL, IBADAN

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## ABSTRACT

*The external ear is often affected by both congenital and acquired diseases. On account of its location, the effects of any disease of the entity on the external ear are readily apparent. A prospective study was carried out on 131 student nurses undergoing a basic study in Nursing at University College Hospital, Ibadan, Nigeria. This was made up of 11(8.4%) males and 120 (91.6%) females with a male: female ratio of 1:9 and a mean age of 21.6 years. Cerumen auris (10.7%), preauricular sinus (1.9%) and allergic ear disease (9.9%) were the leading pathogens seen in their external ears. Poor external ear health among future health workers should be promptly addressed to mitigate suboptimal performance while in service.*

**KEYWORDS:** *external ear, pre-auricular sinus, cerumen auris. health*

## 1.0 INTRODUCTION

Preventable ear diseases have been found to be a challenging health problem especially among the youths that form the bulk of the workforce of a given nation. This is more important when considering a group of youths whose day to day optimal performance is dependent on healthy external ear status. Most patients with painless ear diseases hardly ever present early to the hospital in our environment. Hospital presentation is usually as a result of associated complications of the ear disease or significant hearing impairment.<sup>1-3</sup> It should be noted that a large percentage of Nigerian youths who had ear diseases as children were not likely to enjoy the services of Otorhinolaryngologists; due to the fact that there is dearth of such specialists in Nigeria<sup>1</sup>. In addition to the foregoing, a large percentage of Nigerian children who will eventually become youths live in rural areas where access to quality healthcare

is lacking<sup>1,2</sup>. People who have ear diseases with associated significant hearing loss often reported a profound impact on their emotional, physical and social well-being. They are more likely to report symptoms of depression, dissatisfaction with life, reduced function and withdrawal from social activities<sup>2,4</sup>. However, if a student nurse in his or her formative professional life is faced with the challenges of significant external ear disease, optimal performance during training and subsequently as an employee might be retarded.

The aim of this study was to assess the external ear health status of student nurses who were undergoing basic nursing programme at UCH, Ibadan.

The limitations encountered during the course of this study were essentially the filling of the questionnaires and examination which were done in the subjects' classrooms. These constituted a form of external



pressure to some students. The short period for break time led to several visits to each class as the study would have to stop once the tutor enters the class.

## 2.0 LITERATURE REVIEW

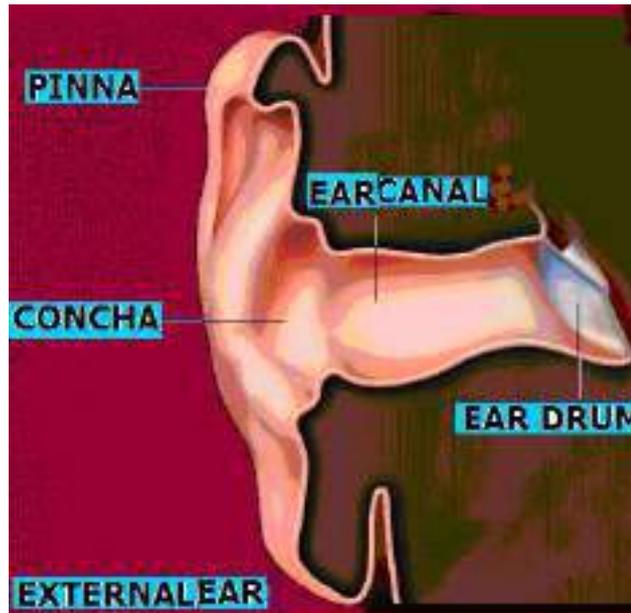
The external ear can be affected by both congenital and acquired diseases. Otological diseases had been studied and documented among various age classes and ethnic groups in Nigeria and in other parts of the world. Okoye et al in Port Harcourt, Nigeria, reported a prevalence of 55.2% of 559ntological diseases among geriatric patients aged 60 years and above which represented 4.7% of the total number of patients seen during the study period<sup>7</sup>. Of the 559ntological diseases reported, otomycosis accounted for 17.5%, while cerumen auris accounted for 15.3%.

Chronic suppurative otitis media (CSOM) was the most common ear disease; accounting for 25% of all 559ntological diseases<sup>8</sup>. Okafor in Enugu, Nigeria had noted that many of the CSOM cases in the elderly had persisted since childhood<sup>8</sup>. From this, it can be deduced that some external ear diseases may co-exist with a chronically discharging ear disease which invariably may affect the functionality of these patients even in their youthful days. Adeosun reported cerumen in 42.2% of school entrants in Mushin Local government of Lagos state, Nigeria<sup>3</sup>. If the quantity of wax in the external auditory canal is significant, optimal learning in such a school entrant may be hampered; resulting in poor school performance even at the post- secondary school level. Akinpelu et al in Ile-Ife, Nigeria reported a prevalence of 33.9% of CSOM among children aged 0 – 5 years. The least common ear diseases seen in the study were cholesteatoma, tinnitus and tumour constituting (0.2%) each. This group of children were equally significantly affected by external ear diseases<sup>1</sup>. In school screening for hearing loss in Ghana by Amedofu et al, otoscopy revealed cerumen in 15% of children while 0.2% had discharging ears<sup>9</sup>. From this, it is obvious that more people are affected by external ear disease; even though the degree of affection is less disabling compared with the effects of middle and inner ear diseases. Ogisi et al in Benin City, Nigeria reported in their study that those with hearing impairment had more abnormal otoscopic findings. Of the 292 children who had otoscopy done, 28% had external canal or tympanic membrane abnormalities<sup>2</sup>. One of the widely studied infective external ear pathology is otomycosis. Fasanla et al reported that most frequently isolated fungal microbes in the external ear are *Aspergillus niger* and *Candida albican*. Nwabuisi et al and Lucent also came up with similar findings<sup>10-12</sup>. Lasisi et al

reported a prevalence of 18.2% of otomycosis among diabetic patients, while Salisu reported a prevalence rate of 0.9% among medical students<sup>6, 13</sup>. Otomycosis is very discomforting and could affect the concentration of the affected individuals. It should also be emphasized that it could spread from one individual to another especially when they share a common item as the use of the ear piece of a stethoscope.

Ijaduola et al in Lagos, Nigeria had reported the otorhinolaryngologic manifestations of Recklinghausen's disease in Nigerians. Of the 13 patients seen, 30.77% had both external meatal stenosis and conductive deafness. The involvement of the pinna was seen in 23.31% while cranial nerves involvement occurred in 30.77%<sup>14</sup>. Recklinghausen's disease poses a lot of cosmetic challenges to an individual who is suffering from it. The external ear affection by the disease may compromise optimal learning. Prakash et al in India reported a prevalence of 75% of 559ntological diseases out of the 1245 children aged 5 to 12 years. Wax and CSOM were the most common ear diseases reported<sup>15</sup>. It has been advocated that if primary health care is made to address common ear pathologies, hearing impairment will be stemmed.<sup>16,17</sup>

External ear pathology expected in this group of volunteers (student nurses in basic nursing programme) may be similar in variety to those obtainable in school children. However, as a result of the older age group (youth) in this study, the frequencies of occurrence of the types of 559ntological diseases are expected to vary. It is estimated that 2% to 6% of the general population in the UK suffers from cerumen impaction at any given time<sup>18</sup>. This is a major external ear disease. About 4% of primary care patients will consult their clinician for cerumen impaction<sup>19</sup>. In a study of 1507 adults screened for hearing loss, 2.1% had occluding cerumen.<sup>19</sup> In a study of general population; cerumen impaction was reportedly present in 10% of children and 5% of normal healthy adults. Fifty seven percent (57%) was reported in older patients living in nursing homes while 36% of patients with mental retardation had cerumen impaction<sup>19-21</sup>. The foregoing report indicates that the more an individual is capable of independent self- care, the less likely the tendency to have cerumen impaction. Cerumen impaction is invariably associated with other ear complaints like hearing loss, otalgia, tinnitus and vertigo<sup>21</sup>. The figure 1 below shows the cross section of the external ear.



Source: (Blatrix, et al<sup>23</sup>)

### 3.0 METHODOLOGY

This was a cross-sectional descriptive study of the health status of the external ear among student nurses at the University College Hospital, Ibadan.

**STUDY AREA:** This is the School of Nursing of the University College Hospital, Ibadan, Nigeria. The school was established in 1952 and headed by a principal. It is made up of 3 arms: 1<sup>st</sup> year, 2<sup>nd</sup> year and 3<sup>rd</sup> year.

#### **SAMPLE SIZE DETERMINATION**

The sample size was calculated using the Fisher's formula<sup>24</sup>

$$N = \frac{(Z_{1-\alpha})^2(P)(1 - P)}{d^2}$$

where

N = minimum sample size.

At 95% confidence level,  $(Z_{1-\alpha}) = 1.96$  from statistical tables.

P is the best estimate of the prevalence obtained from literature. But because of the absence of previous study to give estimate, an assumption of a prevalence of 50% is made.

d = Precision, for the purpose of this study, it is estimated as 10%.

Therefore

$$N = \frac{1.96^2 \times (0.5)(0.5)}{0.1^2}$$

N = 96.04; approximately 100.

Total = 100 subjects.

However, in view of the advice on the possibility of withdrawals, I increased my sample size to 135.

**STUDY POPULATION:** The school has 3 arms: 1<sup>st</sup> year, 2<sup>nd</sup> year and 3<sup>rd</sup> year. It has a total population of 163 students. This was made up of 40 students in year 1, 61 students in year 2 and 62 students in year 3

**TECHNIQUE:** A stratified simple random method using non replacement balloting was adopted

#### **INCLUSION CRITERIA**

\* All student nurses undergoing a basic nursing programme.

\* Volunteers who were randomized and have signed a written consent.

#### **EXCLUSION CRITERIA:**

\*Nursing students who were not into a basic nursing programme.

\* Refusal to give consent.

**STUDY DESIGN AND PROCEDURE:** The study was a cross sectional descriptive type. The randomized subjects in each of the three (3) classes were counseled on the stages of the research and written consent obtained (appendix I). This was followed by the administration of a semi-structured questionnaire (appendix II). The questionnaire contains information on demographic variables and relevant medical history with emphasis on external ear symptoms. The subjects were asked specific ear symptoms which included itchiness in the ear, ear pain, ear discharge, tinnitus and vertigo. Predisposing factors to external ear diseases like previous ear trauma, frequent bathing in rivers and swimming pool without adequate protection and underlying ill-health were asked for. This was followed by



examination of the ears, nose and throat. External ear examination was done using a battery powered head lamp and a hand-held Welch Allen otoscope. The degree of ear wax occlusion was graded on a 3-grade scale of <25%, 25-74% and >74%<sup>18</sup>. This was followed by tuning fork tests using 512Hz tuning fork. Air conduction and bone conduction were assessed.

Subjects that needed ENT treatment after the study were promptly attended to at no personal cost.

**DATA MANAGEMENT AND ANALYSIS:**

Data collection was done using a proforma. Data obtained was entered and analysed using SPSS (Statistical Package for Social Sciences) 20. Demographic variables were represented using tables and charts while summary statistics was done using means and proportions. Test of association for

categorical variables was done using Chi square. Test of association for quantitative variables was done using t- test and ANOVA. Level of statistical significance was set at p value of <0.05

**PERIOD OF STUDY:** The study was done over a period of five (5) months

**4.0 RESULTS**

The study comprised of 131 subjects, out of which 116 completed the study. This was made up of 11 (8.4%) males and 120 (91.6%) females with a male to female ratio of 1: 9 (Figure2). The age range was 18 – 29 years with a mean of 21.6 years. The standard deviation was 2.6; while the standard error was 0.2.

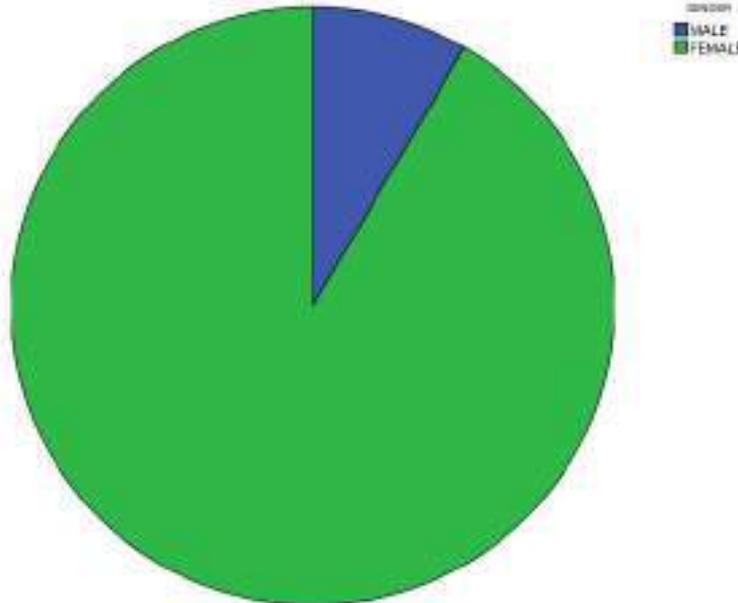


Figure 2: Gender Distribution

Table 1a: Gender distribution

n= 131 Participants.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MALE	11	8.4	8.4	8.4
	FEMALE	120	91.6	91.6	100.0
	Total	131	100.0	100.0	

Table 1b showed that, of the 131 students that took part in the study, first year students constituted 30

(22.9%), second year students constituted 44 (33.6%) while third year students constituted 57 (43.5%).

**Table 1b shows distribution based on years in training.**

n = 131 Participants.

**YEARS IN TRAINING**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid YEAR 1	30	22.9	22.9	22.9
YEAR 2	44	33.6	33.6	56.5
YEAR 3	57	43.5	43.5	100.0
Total	131	100.0	100.0	

**Table II: Age distribution of subjects**

n=131 Participants.

**SERIAL AGE**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 18 YRS	4	3.1	3.1	3.1
19 YRS	19	14.5	14.5	17.6
20 YRS	34	26.0	26.0	43.5
21 YRS	23	17.6	17.6	61.1
22 YRS	21	16.0	16.0	77.1
23 YRS	7	5.3	5.3	82.4
24 YRS	5	3.8	3.8	86.3
25 YRS	2	1.5	1.5	87.8
26 YRS	4	3.1	3.1	90.8
27 YRS	7	5.3	5.3	96.2
28 YRS	4	3.1	3.1	99.2
29 YRS	1	.8	.8	100.0
Total	131	100.0	100.0	

**PATTERN OF CLINICAL SYMPTOMS**

The most prevalent ear symptom was itchininess in the ear, 54 (41.2%) and the least common was otorrhoea,

1(0.8%). None of the students reported vertigo (Table III).

**Table III: Ear symptoms among participants.**

n = 131 Participants

**EAR SYMPTOMS**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid ITCHINESS AND OTALGIA	13	9.9	9.9	9.9
ITCHINESS AND TINNITUS	5	3.8	3.8	13.7
ITCHINESS AND OTORRHOEA	1	.8	.8	14.5
OTALGIA AND TINNITUS	1	.8	.8	15.3
EAR ITCHINESS	35	26.7	26.7	42.0
OTALGIA	10	7.6	7.6	49.6
TINNITUS	2	1.5	1.5	51.1
NO EAR SYMPTOMS	64	48.9	48.9	100.0
Total	131	100.0	100.0	

Risk factors encountered among subjects. Undue exposure to noise was reported by 112 (85.5%),

while 31 (23.7%) and 7 (5.3%) engaged in habitual ear cleaning and swimming respectively (Table V).

**Table V: Risk factors (RF) encountered among subjects**

n =131 Participants.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid HABITUAL EAR CLEANING AND NOISE EXPOSURE	28	21.4	21.4	21.4
SWIMMING AND NOISE EXPOSURE	2	1.5	1.5	22.9
nil attitudinal RF	11	8.4	8.4	31.3
HABITUAL EAR CLEANING	3	2.3	2.3	33.6
SWIMMING	5	3.8	3.8	37.4
NOISE EXPOSURE	82	62.6	62.6	100.0
Total	131	100.0	100.0	

History of Allergy was reported in 13 (9.9%) of the respondents while 4 (3.1) had recent external ear diseases (Table VIII)

Examination revealed 5 (1.9%) cases of preauricular sinuses; all asymptomatic. Debris was seen in 8 (3.1%) right external auditory canals (EAC) and in 7

left EAC. Wax was seen in 18 (6.9%) and 10 (3.8%) right and left ears respectively. The prevalence was 10.7%. Normal tympanic membrane was seen in 122 (46.6%) and 115 (43.9) ears on the right and left respectively (Table VI). The pinnae appeared normal in all the subjects.



**Table VII: External ear findings among subjects.  
n= 262 ears.**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid RT Ear preauricular sinus	2	0.8	0.8	1.5
LT Ear preauricular sinus	3	1.1	1.1	3.8
RT Ear Debris	8	3.1	3.1	9.9
LT Ear Debris	7	2.7	2.7	15.3
RT Ear wax	18	6.9	6.9	29.0
LT Ear wax	10	3.8	3.8	36.6
RT Intact and shiny TM	122	46.6	46.6	60.3
LT Intact and shiny TM	115	43.9	43.9	80.9
RT Intact and dull TM	11	4.2	4.2	89.3
LT Intact dull TM	11	4.2	4.2	97.7
RT Retracted TM	1	0.4	0.4	98.5
LT Retracted TM	2	0.8	0.8	100.0

Seven (7) of the participants had wax in the EAC occupying >74%<sup>8</sup> of the canal space. Age range was 19-24 years. They had ear syringing done. Those

with lesser degree of wax in the EAC had manual removal with the use of Jobson Horne probe (Table VII).

**TABLE VIII: Age and degree of canal obstruction by wax among subjects.  
n=131 Participants.**

Count		DEGREE OF WAX				Total
		<25	26-74	75-100	NO WAX	
Age in years	18	0	0	0	4	4
	19	1	2	2	14	19
	20	4	5	0	25	34
	21	0	2	4	17	23
	22	0	4	0	16	20
	23	0	1	0	6	7
	24	0	0	1	4	5
	25	0	0	0	2	2
	26	0	0	0	4	4
	27	0	1	0	7	8
	28	1	0	0	3	4
	29	0	0	0	1	1
	Total	6	15	7	103	131



## 5.0 DISCUSSION

For student nurses to acquire dependable skills in their training, their sensory organs must be functional. The presence of obvious external ear defects like macrotia, microtia, meatal stenosis, meatal atresia and symptomatic preauricular sinus among others constitute major cosmetic embarrassment which could reduce the self-worth of the individual among other effects.

A total of 28 ears had wax in this study, accounting for a prevalence of 10.9%. Three (3) of the students had bilateral cerumen auris, while 22 of the students had unilateral cerumen auris. Ahmad examined the ears of children from a deaf school in Ibadan and reported a prevalence of 39.4%<sup>4</sup>, while Adeosun reported a prevalence of 42.2% among school entrants in Mushin Local government of Lagos State<sup>3</sup>. A higher prevalence in these studies might be due to the characteristics of the study population. Salisu reported a prevalence rate of 10.2% among clinical medical students of University of Ibadan<sup>6</sup>. The similar value compared with the index study might be due to increasing age and educational level resulting in a better health awareness status among student nurses and clinical medical students. Only 6 of the participants had symptoms associated with cerumen auris such as otalgia and tinnitus. Cerumen auris was associated with conductive hearing loss (mild) when the degree of occlusion was 75% or more. All the subjects with impacted wax had ear syringing after softening the wax.

Preauricular sinus was the only congenital external ear anomaly observed among the student nurses studied. Five (5) cases of preauricular sinus were seen accounting for a prevalence of 1.9%; 3 were observed on the left and two on the right. None was symptomatic and no history of previous infection in any of them. They were seen in 3 students- 2 had bilateral, while 1 had it on the left. Salisu had reported a prevalence of 1.4% among clinical medical students<sup>6</sup>.

In our world today, allergy has become a very important component of pathologies affecting the head and neck region<sup>18</sup>. The head and neck are the most commonly affected target sites in allergic conditions. In this study, all the 13 (9.9%) participants with a history of allergy had debris in their external auditory canal and patchy discoloration of the pinnae. Further examination also showed that 10 out of those with history of allergy had intact and dull tympanic membrane.

## 6.0 CONCLUSION

Poor aural health among future health workers should be promptly addressed through periodic ear examination and adoption of hearing preservation measures. Regular comprehensive otologic check-up for prospective nurses (student nurses) at least annually should be advocated. Those with allergy require further management to rule out the involvement of the middle ear, skin and paranasal sinuses.

## ETHICAL CONSIDERATION

This study was performed in accordance with the declaration of Helsinki. Ethical approval was obtained from the Joint University of Ibadan/University College Hospital, Ibadan Ethical Review Board. To conduct the study, understood informed consent was also obtained from the participants. Written permission was obtained from the school principal.

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**CONFLICT OF INTEREST:** NONE

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## **PROCESSES OF URBANIZATION IN THE TOWNS OF KARAKALPAKSTAN IN THE XX-TH CENTURY**

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### **ABSTRACT**

*The article is devoted to the study of the processes of urbanization in the cities and towns of the Republic of Karakalpakstan in the XX-th century. There have been defined the reasons of urbanization and distinguished three periods in the processes of urbanization: the study of culture and economics in large centers, spreading of culture in countryside and striving of villages and towns to achieve the level of large cities.*

**KEY WORDS:** *urbanization, town, village, phenomenon, demography, social, economics, intensive, evolutionary, integration, agroindustry.*

### **DISCUSSION**

The foundation and development of towns in Karakalpakstan was connected with the phenomenon of urbanization of countryside in Central Asia. The development of agriculture in the republic was realized thanks to favorable climatic conditions and water resources.

V.M.Mason investigated the issues of processes of urbanization in the region and found out the following reasons: on the one hand they are realized under the influence of laws of social development, on the other hand, under the influence of holding back going forward. These processes can be studied according to three stages:

First: the study of culture and economics of large centers;

Second: spreading of urban culture in countryside (cultural colonization).

Third: striving of villages and towns for achieving the level of large central cities<sup>1</sup>.

It's natural that trade and commercial relations make influence on the processes of urbanization. The diachronic analysis (from the historical point of view) of urbanization shows the important role of the transcontinental track Great Silk Way that connects East and West. It made an influence on the peoples of Eurasia and became the basis for the intensive development of economics and trade. The situation of the city of Nukus on the cross of the Great Silk Way gives it wide opportunities to communicate with the population of many towns and villages .

A city is considered to be a complex and dynamic phenomena. In the past Nukus was a political, economic center and a fortress "Guardian post", and it was of a great significant, protective and strategic importance. Economic and political development promoted to the formation and development of Nukus as a city. First, the flourishing of trade and handicraft became the basis of the appearance and foundation of Nukus, then the development of industry, transport and functions of government promoted to the fact, that Nukus took a certain honorary place among other large cities. Nukus, being an active form and element in the

<sup>1</sup>Masson V.M. Typology of ancient towns and historical process (ancient towns). Materials of the Allunion conference «Culture of Central Asia and Kazakhstan at the epoch of early Middle age». Pedjikent, October 1997). Leningrad, 1977. p.7.



field of economics, played a great role in the formation of production resources and development of the region in the Republic of Karakalpakstan. It can be seen in the high scientific-technical, social-economic and demographic changes and great influence on the environment. On the basis of these processes the city experienced all forms and ways of urbanization.

In the research we'll focus our attention on the following issues in the study of the capital of the Republic of Karakalpakstan as an economic center situated on the Aral seaside:

- the role of the city in the development of economics and its contribution into the development of the Republic of Karakalpakstan;
- the perspectives of the capital in economic development.

Today the provision of urban amenities of the Republic of Uzbekistan and ways of improving this system is considered to be one of the actual issues. This problem should be solved in the regional and urbanization locations. Last time it is recommended to use and include the form of regional extension in the state policy. In the result of the investigation it was found out that towns cannot transfer to a certain category and be independent because of the peculiarities of «planning» economics. It can be seen according to the urban potential in the agro-industrial complex of Karakalpakstan that many towns are usually formed as small towns. We can see it on the example of such towns as Beruniy, Tortkul, Chimbay, Takhtakopir. These towns of middle level are consolidated by the social-economic activation and improvement of inhabited localities with little population. Such towns as Konirat, Khojeli, Bostan and Elabat are considered to be large towns<sup>2</sup>.

Small towns-villages have an objective basis in the course of their development: traditionally, people living there are provided with the work dealing with agriculture, irrigated lands for growing plants, farms transferring to the industrial method. Methods serve, first of all, to the categories of the town. The urbanization policy in regional localities of such towns corresponds to the agrarian policy of the state. That's why the problems of small towns are solved in the result of social-economic reconstructions in rural inhabited localities of small towns.

Thus, social welfare of the people improves thanks to deepening of market reforms in the agrarian sector of national economy and development of rural infrastructure.

There is a close connection between country sides in Karakalpakstan and foundation of small towns and their service in certain places. Being consolidated by the functions of central places and developing other functions, towns together with places perform their functions in the geoeconomic latitude.

Today the micro-economic stability and development, improvement in the fields of food, fuel energy and transport is one of the actual, important problems of the independent country. Before in the state policy of the most developed countries the issues of the development and improvement of cities–capitals took an honorary place. The issues of high development and increase remained significant problems at the period of “planning” economics. The population increased slowly and gradually. For the last 10 years the population increased only from 2 mln. to 2 mln.200. Today 10% of population of Uzbekistan live in Tashkent, it is considered to be the normal situation.

Here is the information about increase and decrease of population in Uzbekistan in the 1991-1999-s.

Angren	Fergana	Chirchik	Tashkent	Kokand	Andijan	Jizzak	Namangan	Karshi	Nukus	Termez
3,6%	8,5%	13,3%	1%	18%	18%	18%	20%	20%	22%	24%

It should be emphasized that towns in Karakalpakstan began to be built in the result of the industrialization and development of light industry and food industry. This social-economic and demographic increase shows a decrease of differences between rural and urban life of the people, countryside and towns. According to the observations there are also other reasons: urbanization, low level of the region' development and others<sup>3</sup>.

<sup>2</sup> Ata-Mirzaev O., Genshtke V., Murtazaeva R., Salaev A. Historical-demographic essays of urbanization in Uzbekistan. Tashkent. University, 2002. p.52.

<sup>3</sup> Ata-Mirzaev O., Genshtke V., Murtazaeva R., Salaev A. Historical-demographic essays of urbanization in Uzbekistan. Tashkent. University, 2002. p.57-58.



The peculiarities of the region include the situations in the social-economic structure of the republic, necessity of town constructions in the result of modernization. As other cities of Central Asia, the city of Nukus, capital of Karakalpakstan was founded in the result of close links and relations between the peoples of different nationalities and their movements and settlement in the same place.

At the period of totalitarian regime the cotton monoculture brought to the spoiling of land, and in the result of dry the natural environment in Nukus and its surroundings were damaged and spoilt. There was observed a decrease of lands with soil giving rich harvests that brought in its turn to decreasing the degrees of settlement of the people being occupied by agriculture.

Thick density of population in Nukus causes difficulties in the usage of land water resources. Besides, there are some ecological problems connected with improving the sanitary-hygienic relations of high-concentrated harmful things. Such situations increase from year to year, especially on the Aral seaside.

In the result of the research we come to the conclusion that not only in Karakalpakstan but in Central Asia in whole it's difficult to see distinctly the differences between the town and countryside. One of the peculiarities of urbanization processes in towns of Central Asia is the accelerated movement of the people to towns. For example, in the city of Nukus we can see the appearance of rural-urban system, such districts-villages as Kos-kol 1-2-3, Sarancha, Samambay and others gradually, step by step enter the city.

The development of urbanization in Karakalpakstan are characterized by the appearance of large towns. It should be emphasized that the potential of social-economic development and role of the city of Nukus and such large towns as Konirat, Khodjeili are the same like of that one in regional centers.

In seventeen towns of Uzbekistan to 2000 the population was more than 100 in each of them. At average about 58% constitutes the urban population.

Tashkent	Namangan	Samarqand	Andijan	Bukhara	Nukus	Karshi	Kokand	Fergana	Margilan	Chirchik	Navoiy	Urgench	Angren	Djizzak	Almalik	Termez
2,1 mln.	386,2 thous.	361,1 thous.	334,3 thous.	239,1 thous.	206,7 thous.	201,3 thous.	197,4 thous.	185,2 thous.	156,0 thous.	143,3 thous.	140,9	139,2	129,0	128,9	114,7	113,5

As we can see from the table in the country the same increase of large towns was observed and this fact should be taken into account. The number of towns in Fergana valley-5, in Tashkent region -4, at the Aral seaside-2 (Nukus and Urgench). An increase of the number of population in large and other towns is taken into account in the research of the phenomenon of urbanization in Central Asia.

The investigation of this issue in detail shows the slow development of urbanization processes in Uzbekistan, and it also allows us to feel and see the differences between large and small towns. The peculiarities and distinguishing features of urbanization in Uzbekistan can be defined in the course of the development of regional economics.

Studying generally the urbanization processes in Uzbekistan it should be pointed out that they increase for account of the bases of a great number of small towns.

Last time the agroindustrial character of the national economics give us opportunities to see a thick density of population in rural locality. In the following table we can see the dynamics of density of population in the 1989-2000-s

**Table 3.**

<b>№</b>	<b>Cities and towns</b>	<b>1989</b>	<b>2000</b>
1.	Nukus <sup>4</sup>	168,5 thousand	206,7 thousand
2.	Khodjeili	59,2 thousand	69,2 thousand
3.	Takhiatash	42,8 thousand	51,5 thousand
4.	Tortkul	35,9 thousand	48,6 thousand
5.	Beruniy	37,3 thousand	47,3 thousand
6.	Konirat	29,4 thousand	35,2 thousand
7.	Chimbay	27,1 thousand	33,1 thousand
8.	Mangit	23,1 thousand	30,5 thousand
9.	Khalkabad	9,1 thousand	11,4 thousand
10.	Moinak	12,0 thousand	13,6 thousand
11.	Shumanai	10,4 thousand	12,6 thousand
12.	Bostan	8,4 thousand	13,1 thousand

In the national system of towns the city of Nukus of Karakalpakstan plays a leading role and the population size in it is three times more than in Khodjeili, seven times more than in Konirat, Chimbay and Mangit. These indicators show that according to population size and social-economic development the capital of Karakalpakstan stands in the first place comparatively with the towns situated at the Aral seaside.

That's why in future performing its functions as a capital, it will take a place after Tashkent, the capital of Uzbekistan, and it will develop the leading role in service and financial functions. The functioning and service of the international airport, international stations situated at the cross of the Great Silk Way and the construction of other objects will strengthen the position of political development of sovereign Republic of Karakalpakstan.

If we compare the poles of increase in regional centers, the development of town-villages (villages of urban type) in large cities and towns as Nukus, Khodjeili, Tortkul, Konirat and others are characterized by distinguishing features.

**Dynamics of increasing urban population in the 1989-2000-s on the Aral seaside. The Republic of Karakalpakstan. Town-villages.**

**Table 4.**

<b>№</b>	<b>Town-villages</b>	<b>1989</b>	<b>2000</b>
1.	Altinkol	20,4 thousand	24,0 thousand
2.	Kizketken	16,6 thousand	23,8 thousand
3.	Takhtakopir	14,8 thousand	17,2 thousand
4.	Pristan	13,0 thousand	15,6 thousand
5.	Kegeili	10,7 thousand	13,0 thousand
6.	Kanlikol	7,2 thousand	9,9 thousand
7.	Akmangit	6,0 thousand	8,1 thousand
8.	Vodnik	5,2 thousand	6,1 thousand
9.	Karaozek	10,4 thousand	4,5 thousand
10.	Karakalpakia	3,0 thousand	4,1 thousand
11.	Jaslik	3,8 thousand	4,1 thousand
12.	Jumirtau	2,6 thousand	3,5 thousand
13.	Kazanketken	0,1 thousand	3,5 thousand
14.	Karatau	2,1 thousand	2,8 thousand
15.	Aksholpan	0,1 thousand	1,0 thousand
16.	South Ustuyrt	0,5 thousand	0,7 thousand

The natural resources of the mountain Sultan Wayis and a village Karatau situated there consolidated the position of Nukus as a capital of Karakalpakstan not only on the Aral seaside but all over Uzbekistan.

As it has been mentioned above, there are many enterprises and establishments equipped with modern technologies in Nukus, Khodjeili, Takhiatash and Khalkabad, and in future it is planned to develop and increase

<sup>4</sup> Baz Karatau, Kizketken, Pristan.



their number in Nukus, Khodjeili, Takhiatash, Akmangit, Kizketken, Karatau, Pristan, Khalkabad and other places of Karakalpakstan.

Thus, all the towns and villages in Karakalpakstan cannot be developed at the same time and at the same degree, and it is necessary to select them from regional hierarchy taking into account their potential as centers. These centers for Nukus are such towns as Khodjeili, Takhiatash, Akmangit, Khalkabad with the villages Karatau, Pristan, Kizketken, they all make the requirements. We can see these characteristic features in the leading position of the capital of Karakalpakstan and in the economics of the Aral seaside.

Studying the issues of urbanization in towns and villages of Karakalpakstan, we compared them with the data got in the result of the investigation of the dynamics of increasing towns and villages in Khorezm region.

**Dynamics of increasing towns and villages of urban type in  
1926-2000 in Khorezm region (in account of one thousand people)**

No	Towns	1926	1939	1959	1970	1979	1989	2000
1.	Urgench	5,3	22,5	43,8	76,2	98,0	126,4	139,2
2.	Khiva	20,3	14,4	17,5	24,1	30,4	39,2	48,8
3.	Pitnyak	-	-	-	-	8,6	12,2	15,7

It can be seen from the table that the urbanization processes according to population increase develop mainly in Khorezm region. Urgench and towns Khiva, Khazarasp, situated near it, are considered to be the centers of tourism. Besides there is an international airport and many objects of automobile construction there. Despite these facts these towns fall behind Nukus according to population increase.

**Dynamics of increasing towns and villages of urban type in  
1926-2000 in Khorezm region (in account of one thousand people)**

No	Village of urban type	1926	1939	1959	1970	1979	1989	2000
1.	Khamza	-	-	-	-	-	28,8	31,7
2.	Gurlen	-	-	-	-	-	19,5	21,6
3.	Kushkupir	-	-	-	-	-	11,7	15,6
4.	Khazarasp	-	-	-	-	-	12,2	15,7
5.	Shavat	-	-	-	-	0,8	19,1	14,6
6.	Chalish	-	-	-	-	3,1	5,0	5,9
7.	Yangibazar	-	-	-	-	-	4,5	5,9

The agro-industrial character of villages of urban type, an important role of the national economics and agriculture in the urbanization processes are realized inside the region. If we compare towns in Khorezm region with Nukus, they fall behind according to population increase and size. Comparatively with them Nukus has some advantages: it has close connections with Uchkuduk, Navoiy, Sultan Wayis, and the railway Nukus-Kungrad plays an important role as a caravanserai. The influence of urbanization processes on Nukus is in the following: it opens a way to the appearance and development of large towns on the Aral seaside. We can see the same situation on the example of Tashkent, Margilan, Samarkand.

Thus, being of urban type according to agro-melioration form, really such villages are of rural-urban type, and there are all opportunities to develop agro-industrial complexes and branches there. That's why, they play a great role in the development of national economics in the agrarian sector by acceleration and improvement of relations and links between town and village.

The capital of Karakalpakstan Nukus enters the oasis of capital regions having irrigated lands cultivated on the basis of agro-melioration and situated geographically on the Aral seaside. These suitable geographical situation, natural conditions promote to the improvement of people's level of life and welfare. Urbanization consists of internal contradictions and complex structures. They can be proved by increase of towns, movement and settlement. Taking into account the development of urbanization on the Aral seaside by evolutionary ways, today we observe the development the agro-industrial integration and increase of small towns.

It should be pointed out the great significance and role of Nukus in solving the issues of arrangement and reconstruction in urbanization processes in geopolitical regions.

Many changes taken place in the country: transition to market economy, many-structured system of economy, consolidation of mutual cooperation with foreign companies, the strategy of developing urbanization in Uzbekistan give their good results today. That's why the issues of social development in villages and kishlaks



should be investigated taking into account the state and relationship of both: town and village. In this relationship there are some situations that show the differences between town and village. Nukus cannot be responsible for an accelerated increase of urbanization processes in the city.

Thus, it becomes clear why particularly Nukus, situated on the Aral seaside with the developed economy, was assigned as the capital of the Republic of Karakalpakstan.

#### **Dynamics of population in the cities and towns of Karakalpakstan in 1926-1939<sup>5</sup>**

No	Cities and towns	In 1926	In 1939
1.	Tortkul	4,1 thousand	19,6 thousand
2.	Nukus	3,4 thousand	14,0 thousand
3.	Khodjeili	3,0 thousand	11,4 thousand
4.	Chimbay	5,4 thousand	8,5 thousand
5.	Konirat	4,2 thousand	4,9 thousand
6.	Moinak	1,9 thousand	2,9 thousand

Thus, Nukus, within 13 years before the war, was considered to be one of the cities among other towns taking the first place according to the development in all spheres of life, including the population increase. According to population size it was in the second place after Tortkul.

The comparative analysis and study of population size in Nukus comparatively with other cities and towns of Uzbekistan in 1926-1939 shows the place of Nukus among them.

#### **Dynamics of population size in the city of Nukus in 1926-1939 comparatively with other cities and towns of Uzbekistan**

No	Cities and towns	In 1926	In 1939
1.	Tashkent	314,0 thousand	556,1 thousand
2.	Samarkand	105,2 thousand	136,3 thousand
3.	Andijan	73,5 thousand	84,7 thousand
4.	Namangan	73,6 thousand	79,5 thousand
5.	Bukhara	46,7 thousand	50,3 thousand
6.	Margilan	44,3 thousand	46,0 thousand
7.	Fergana	14,3 thousand	38,6 thousand
8.	Kattakurgan	14,5 thousand	25,9 thousand
9.	Urgench	5,2 thousand	22,5 thousand
10.	Kokand	10,4 thousand	12,7 thousand
11.	Urgut	3,2 thousand	16,5 thousand
12.	Yangiyul	3,7 thousand	16,2 thousand
13.	Karshi	13,2 thousand	15,8 thousand
14.	Chist	14,4 thousand	15,8 thousand
15.	Khiva	20,3 thousand	14,4 thousand
16.	Nukus	3,4 thousand	14,0 thousand

The first leader of the Republic of Karakalpakstan K.Kamalov contributed much into the development of the city of Nukus. Nukus became a political-economic, scientific, educational, cultural and spiritual center. The following persons worked as a major of the city of Nukus: Sm.Iskenderov, I.Sultanov, N.Turintaev, K.Khudaibergenov, A.Begmanov, Sh.Paluanov, M.Yusupov, R.Babanazarov, J.Abdimuratov, A.Kunnazarov, the pupils of K.Kamalov –L.Burd, A.Yakushin, S.Nurkhojaev, B.Bekturdiyev, A.Asanov, E.Dauletmuratov, Sh.Usnatdinov, A.Ametov and I.Khalmuratov<sup>6</sup>.

<sup>5</sup> Central State Archive of the Republic of Karakalpakstan. f. 322, reg. 1, d.87, l.19; f.324, reg.1, d.4, l.3; l.5, l.3.

<sup>6</sup> Koshanov B.A. Stories about the capital. It is rightly called «the main» // Vesti Karakalpakstana. Nukus, 2002, October 15.



Academician S.K.Kamalov in his works emphasizes that a frequent change of the city major made a negative influence on the development of infrastructure of the city.

We've studied an increase of population size in the capital of Karakalpakstan Nukus comparatively with the population of other cities and towns of Uzbekistan for 30 years and received the following data.

**Dynamics of population size in the city of Nukus in 1959-1989 comparatively with other cities and towns of Uzbekistan (1000 people)**

Nº	Cities and towns	1959	1970	1979	1989
1.	Tashkent	926,7	1384,5	1754,5	2053,7
2.	Samarkand	196,5	266,8	470,1	364,0
3.	Namangan	123,5	175,3	226,6	304,4
4.	Andijan	130,9	188,0	229,7	290,5
5.	Bukhara	69,3	111,0	184,8	222,2
6.	Fergana	80,2	111,3	173,0	198,3
7.	Kokand	105,1	133,1	151,5	179,5
8.	Nukus	39,1	74,1	106,9	168,5

In conclusion, it should be pointed out that the issues of studying urbanization processes are considered to be significant, actual problems in the science of history, and they deserve further research. That's why before the study of the origin, history and development of a city or a town it is recommended to start with the study of urbanization processes there.

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## **EXTRA-LINGUISTIC FACTORS IN DEVELOPING A FOREIGN LANGUAGE SPEECH OF STUDENTS AT THE RUSSIAN LANGUAGE LESSONS**

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### **ABSTRACT**

*The article under discussion depicts extra-linguistic factors in developing a foreign language speech of students at the Russian language lessons in technical higher educational institutions. The author of the article thinks that teaching Russian should involve all aspects of students' speech activity. The practical classes should include a variety of exercises for practicing and consolidating language skills. Imitation, substitution, transformation, reproductive and speech tasks are aimed at forming language, speech and communication competences in their professional sphere.*

**KEY WORDS:** *extra-linguistic factors, effective, teaching, a foreign language, methods, speech, technical universities, model, communicative tasks, goals, concepts.*

### **DISCUSSION**

Nowadays, knowledge of a foreign language is not only an attribute of a person's cultural development, but also a condition for his or her successful activity in various spheres of production. In this regard, the goals and objectives of foreign language teaching are being reviewed, new concepts and approaches to teaching foreign languages are emerging, and new forms and methods of teaching are being introduced.

Teaching a foreign language is a complex task. Different situations require different teaching materials, different methods, different activities, strategies and approaches. Some teachers have been using the same approach in teaching for many years and consider this method to be the most successful, the most efficient. Other teachers are constantly looking for new, more effective methods. A language should be a communication tool to penetrate into another culture, to identify its characteristics and to adopt a type of behaviour that is adequate to the perception of another culture. The program of learning the Russian language, as well as other foreign languages, includes in-depth study of grammar, phonetics and lexical composition of the language, however, theoretical study gives way to the development of practical skills [1].

The main thing becomes the functional principle of learning. It is necessary to teach students not only the basics of a foreign language, but also to teach them to communicate with interest and correctly in another language, both in professional subjects and in everyday situations [5]. Students should not only understand the speech addressed to them in a foreign language, but also build their response message correctly, which will correspond to the culture of the interlocutor. Therefore, in addition to studying the language phenomena, it is necessary to study the specifics of the cultures involved in the dialogue, their characteristics, similarities and differences.

The study of cultural traditions is an integral part of the language learning process. Teaching a foreign language is also a learning of interpersonal communication. In the process of working in the classroom, students should confirm and defend their point of view, use the arguments, learn to analyze the content of the response message and find ways of mutual understanding in the process of dialogue in the language studied. In this way, the boundaries of learning are widened to optimize the very process of communication between people. The innovative approach to learning allows to realize the modern goals of learning - the formation of communicative



competence of students and fostering tolerance in a multicultural society.

The new approach to teaching the Russian language as a foreign language is based on methods and techniques that promote effective learning. It is known that some people can learn a language at once, while some find it difficult to master it. Despite the complexity of the process of teaching foreign languages, the teacher is looking for ways in which language learning will be effective and useful for everyone. It is the teacher's responsibility to master the art of making the lesson lively and exciting. The art of teaching should include an individual set of teaching methods, tools and techniques. This includes the correct construction of the lesson, taking into account the psychology of students, the use of visual and audio materials.

In considering the essence of foreign language teaching methods, it should be assumed that in teaching methods and related sciences the term "method" is explained in two ways. The method is a way of learning, a way of research, a way of achieving a goal or solving a problem. In language teaching methods, mastering knowledge and developing a worldview on the material of the language being studied plays an important, but not the main role. The search for effective ways of mastering speech skills acquires the main importance, which, in the end, makes the use of the language studied a communication process.

The concept of ability or inability to speak is nothing more than a myth, because the ability to speak is inherent in all people from birth. The ability to speak a foreign language depends to a large extent on the way the student is taught and the way the teacher teaches. At present, there are many different methods of teaching foreign languages and their modifications [2]. However, one should not believe that any of these methods is a magical pass to the foreign language world. Some people are closer to non-standard teaching methods, others to proven classical ones. For this reason, a teacher should be well acquainted with the methods of teaching foreign languages, apply them in practice and look for or choose from them the most effective. To find out what will bring a person or group the best result, the only thing that can be done is to start teaching a foreign language in the chosen way, drawing on the experience of leading teachers in the industry. The general trend in the development of methods is related to the convergence of different methods in the direction of finding the best option for specific learning conditions.

As a subject of teaching in a technical higher educational institution (Ferghana Polytechnic Institute), the Russian language performs several

functions, one of them is communicative, which is the main, leading. The content of teaching the Russian language has a communicative orientation and promotes practical mastery of the Russian language as a means of communication. Learning to speak in a non-native language is a very complex, long and time-consuming process. It can be said that no type of language activity requires as much training as it is necessary to develop the ability to express their thoughts orally in a non-native language.

The complexity of the process of teaching oral speech is primarily due to the fact that in order to express their thoughts in the non-native language under study, students, firstly, must have a certain stock of lexical units, grammatical forms and structures, intonation drawings and have skills to use this language material in speech, and secondly, must be able to focus primarily and mainly on the semantic side of speech, combining these elements of the language structure to express their thoughts. Thus, the process of learning a non-native language has two objectives: learning how to communicate and to master the speech. This means that the following areas of teacher's activity are highlighted: language teaching, i.e. vocabulary and grammar of the Russian language, which are used as the initial basis for understanding speech and communication; speech teaching - "ways of forming and formulating thoughts through language in the process of communication"; teaching of speech activity - the process of communication, carried out with the help of different types and forms of speech and implemented in such types as listening, speaking, reading, writing [3].

The development of each type of speech activity requires the unity of three components: language as a means of formalizing thought in the word, speech as an expression of thought in the word, extra-linguistic factors: motive, situation, context. The development of speech communication skills requires the interaction of at least two interlocutors who perform different types of speech activity in turn: one speaks, the other listens, or vice versa. It is considered necessary already at the first stage - the formation of language skills - to take into account both speech and extra-linguistic factors, to develop all types of speech activities and the ability to use them in speech communication. Practical mastering of the Russian language requires first of all speech practice in the Russian language, as any skills are acquired only as a result of practice, so speech skills are developed in the process of speech practice. In other words, the practical mastering of Russian as a means of communication (learning goal) is achieved through the practical use of Russian (learning tool), i.e. students learn to communicate via speaking.



Speech practice, involving students in the process of speech communication is realized mainly through exercises. However, it is not all exercises that contribute to the formation of speech skills, but only speech exercises that provide solutions to certain communication problems. Speech exercises should provide some information related to the real world, the students' life experience; they should be creative, requiring students to solve certain speech problems on their own; the exercises should be situational, so that it is possible to produce speech for certain communication conditions. The psychological peculiarity and didactic value of these exercises is that they mobilize students' activity and encourage them to speak out.

Many scholars, methodologists and researchers recognize the effectiveness of situational communication exercises for educational purposes. Achieving the communicative goal of learning depends to a large extent on the organization of the learning process that is close to natural communication based on the simulation of speech situations. Situations used in Russian language classes to develop verbal skills are a reflection and reproduction of individual facts and cases encountered in the life of students and taken by the teacher within a strictly defined framework to address specific objectives of the learning process. It is important to emphasize that these situations are well known to students by their content. They have a clear understanding of the content of the situation and of the logic of attitude and behaviour in these situations.

The creation and use of situations at Russian lessons is a kind of imitation of elements of life itself. This is what ultimately enables students to actively use Russian as a means of communication [4]. This methodical method, to a greater extent than traditional methods, allows the use of psychological and emotional factors that have a positive impact on the learning process and learning of material in a non-native (Russian) language. If the teacher is able to create a natural situation, the lesson is interesting and motivating, with the active participation of all students.

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## THE ISSUES ON DEVELOPING READING SKILLS IN TEACHING A FOREIGN LANGUAGE

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### ABSTRACT

*The article under discussion depicts the main issues of developing reading skills in teaching a foreign language. The author of the article considers that it is important to continue and sometimes help to develop the reading skills of students at the foreign language lessons in technical higher educational institutions. It is necessary to teach students to mature reading, to master all kinds of reading and apply actively them both in class and in real life. The article under discussion discusses different types of reading and shows the importance to develop this skill among students.*

**KEY WORDS:** *reading, master, skills, information, receptive, communication, a foreign language, learning, speech activity,*

### DISCUSSION

Reading is one of the most important means of obtaining information and occupies a significant place in the life of a modern educated person. In real life, reading is a separate, independent type of communication activity, the motive of which is to meet the need for information contained in the text. It is a receptive type of speech activity, aimed at perception and understanding of the written text. In the process of reading, the information contained in the text is understood and evaluated [1].

In the process of teaching foreign languages, reading performs two functions:

- Reading is the purpose of learning, i.e. it is a type of speech activity (information retrieval tool).
- Reading is a means of teaching other speech activities. But in order to become a tool, reading must be a goal.

These two functions should be clearly distinguished in the learning process, as they define the methodical organization of all work. One of the practical goals of the course in a technical educational institution is to provide students with the ability to read in a foreign language.

Graduates of the technical university will be able to use the acquired skill practically if their reading is mature. The degree of maturity may,

however, vary and the teacher's task is to ensure a so-called minimum level of maturity (the minimum level of communicative competence). Its achievement is obligatory, because only in this case the objective prerequisites for reading are created on their own initiative.

The minimum level of maturity is primarily concerned with limiting the number of types of reading that students are able to master. Their definition is based on practical needs, on the tasks that most often arise when accessing a book in a foreign language. Depending on the purpose of the setting, a distinction is made between introductory, study, viewing and search reading. Mature reading requires both knowledge of all types of reading and easy transition from one type to another, depending on the configuration of the purpose of obtaining information from the text.

- Acquaintance reading (skimming) is a cognitive reading in which the subject of the reader's attention is the whole speech work (book, article, story) without setting to receive certain information. In introductory reading, the main communicative task of the reader is to extract the basic information contained in the text as a result of a quick reading of the whole text, i.e. to find out what issues and how the text deals with them, what exactly it says on these issues. It



asks for the ability to distinguish between principal and secondary information.

- A learner anticipates a very complete and clear understanding of all the information contained in the text and critical reflection on it. It is a thoughtful and leisurely reading that involves a targeted analysis of the content of the text to be read, based on the linguistic and logical links of the text. It is also intended to enable the learner to overcome difficulties in understanding a foreign language without the help of others. The object of "learning" in this type of reading is the information contained in the text, but not the language material. A specific reader learns to treat the text with care.
- Preview reading is about getting a general idea of the material being read. The aim is to get a general idea of the topic and the range of issues dealt with in the text. It is a cursory, selective reading, block-by-block reading of the text for a more detailed reading of its "focusing" details and parts. It may also end with the results of the reading as a message or an abstract. This type of reading requires that the reader has a fairly large amount of language material, so a teacher only teaches some of its techniques to determine the topic of the text.
- Search reading is aimed at reading newspapers and literature by specialty. Its target is to quickly find a text or an array of texts of quite certain data (facts, features, digital characteristics, instructions). It is focused on finding specific information in the text (scanning). It is clear to the reader from other sources that such information is contained in this book, article. Therefore, based on the typical structure of these texts, he/she also refers to certain parts or sections, which is subject to search readings without detailed analysis. At search reading extraction of the semantic information does not ask discursive actions and occurs automatically. Such reading, as well as viewing, assumes the ability to navigate in the logical and semantic structure of the text, select from it the necessary information on a particular problem, select and combine the information of several texts on individual issues.

When teaching a foreign language, the teacher has the task of teaching students to use all four types of reading. Teaching reading also involves developing skills: highlight the main facts; to

separate basic from secondary information; to anticipate possible events and facts; revealing the causal relationship between facts; understand reasoning; extract the necessary information of interest; determine your attitude towards what you have read. Special attention should be paid to the development of the ability to understand the basic content of texts that include unfamiliar vocabulary [2].

The practical orientation of learning requires that reading instruction focuses on the task of extracting useful information from text. In this regard, many of the properties of direct comprehension, such as the high speed of the act of understanding, the lack of awareness of the process itself, the synthetic nature of understanding, reliance on internal speech, etc., which in the concept of discursive understanding were seen as shortcomings, take on positive meaning in the modern formulation of the question [7]. It should also be borne in mind that when reading texts accessible from the point of view of language, understanding does not always come instantly. Very often it requires some reflection and meaning analysis. Nevertheless, in this case, understanding may retain its direct character, i.e., non-mediated by translation.

In modern methods, there are many techniques used by teachers to develop skills of students of reading and speaking in the process of teaching foreign languages:

- Inferring (it is a process of creating meaning from text. It combines prior knowledge with what is read. When readers infer, they create meaning that is not stated explicitly in the text. When readers infer, they draw conclusions, make predictions, create interpretations, make connections and think critically about the text. Inferring allows the reader to extend their comprehension beyond literal understanding).
- Dealing with unfamiliar words (the activity in which students have to underline the unfamiliar words, try to understand them, to rephrase. This is a good activity for early in a lesson to help students recognize and become familiar with their new vocabulary).
- Read and respond (this is the main part of the activity. The learners are first encouraged to read through the text quickly. They then read it more carefully).
- Completing (addition a piece of text using information from the text. Learners read a text and use the information to complete a list, table, chart, or picture).



- Information transfer (this activity involves getting students to put spoken or written texts into another form, such as a chart, grid, picture, table or diagram, or vice-versa. Make sure that the students cannot just copy chunks without understanding them by requiring a different organization to the text. These tasks encourage deep processing of information. The interpretation of text, diagram or tables is a skill that is very useful both in academic and everyday life.)
- Matching (learners match information in a text with other reading texts or pictures).
- Multiple choices (it is a form of assessment in which respondents are asked to select the best possible answer (or answers) out of the choices from a list).
- Outlining (an outline is a great way to organize your thoughts and research if you are preparing a speech, an essay, a novel, or even a study guide). – Predicting (it involves thinking ahead while reading and anticipating information and events in the text. After making predictions, students can read through the text and refine, revise, and verify their predictions)
- Re-ordering (learners read a text in muddled order and number the sentences or paragraphs in the correct order; or they physically reorder sentences on separate strips of paper).
- Story Pyramid (after students read a short story or chapter of a novel, they can use the Story Pyramid to reflect on key ideas and details) [7]. Using in practice the above mentioned activities helps to achieve effective results in the field of teaching reading and speaking. Using the textual problem tasks promotes not only to develop creative thinking at the process of foreign languages, but also increases motivation not only promotes the development of creative thinking on English lessons, but also increases the motivation to study, accustoms students to the attentive and thoughtful relation to reading [5].

## CONCLUSION

Thus, learning to understand the language should be based on learners' mastering the structure of the language, its structural elements. Their function is to design and transmit semantic relationships between independent subjects of thought. Not only does mastering them make reading

easier and faster, as they allow the reader to quickly and correctly divide text sentences into syntagms and establish semantic relations between text elements at different levels, but they also provide the opportunity for accurate understanding of the text.

Reading is always aimed at the perception of the finished speech message (and not at its creation), at receiving information. The peculiarity of reading is that the evaluation of its success is subjective in nature and finds expression in the reader's satisfaction with the result obtained - the degree of completeness and accuracy of understanding.

Reading is a complex perceptual-thinking mnemonic activity, the procedural side of which is analytic-synthetic and varies depending on its purpose. A mature reader is one who is free to carry out this type of speech activity, thanks to his ability to choose each time a type of reading adequate to the task, which allows him to solve it not only correctly, but also quickly, thanks to the full automation of technical skills [3].

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## COMPARATIVE ANALYSIS OF ECOLOGICAL TERMINOLOGY IN THE ENGLISH, UZBEK AND RUSSIAN LANGUAGES

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### ABSTRACT

The target article discusses the comparative analysis of ecological terminology in English, Uzbek and Russian languages. The materials for the research were the texts of the educational discourse in English, Uzbek and Russian, for comparison the professional Internet course was used. The sources of borrowings and different types of foreign environmental terms in English, Uzbek and Russian were identified and described: lexical and semantic borrowings, and internationalisms.

**KEY WORDS:** terms, comparative analysis, languages, lexical and semantic borrowings; foreign language impurities; internationalisms; calques, linguistics, terminology, environmental.

### DISCUSSION

Due to globalization and internationalization of professional activity and education, learning a professional language, or language for special purposes, which is understood as "a functional type of language designed to ensure adequate and effective communication of specialists in a particular subject area", becomes particularly relevant [2].

As a consequence, one of the actual directions of modern linguistics is developing actively - terminology, the foundations of which are laid in the works of D.S. Lotte, T.L. Kandelaki, I.S. Kvitko, A.A. Reformatskogo and others and were further developed in the works of K. Ya. Averbukh, L. M. Alekseeva, M. N. Volodina, E. I. Golovanova, B. N. Golovin, S. V. Grinev-Grinevich, V. P. Danilenko [3]. Linguists' attention is drawn to the problems of interlinguistic interaction in different spheres of activity, and as a result comparative linguistic research, including comparative terminology, becomes especially important [1]. At present, the problems of environmental protection and ecology are very acute for the world civilization, and ecological terminology requires more in-depth study.

The purpose of this article is to identify ways to borrow and types of foreign terms in the environmental sphere in the scientific and educational discourse on the material of the English,

Uzbek and Russian languages. The material for the research was the texts of the environmental sphere: 1) manuals on ecology in English, Uzbek and Russian ; 2) dictionaries.

As you know, one of the ways to enrich the terminology is borrowing - the transition of elements of one language into another. From the point of view of the way of borrowing ecological terminology, the following groups of language units of non-native origin have been singled out: 1) lexical borrowings, which include foreign language aggregates and borrowed vocabulary, as well as internationalisms; 2) semantic borrowings (Pebbles), which are divided into lexical Pebbles and semantic.

1) lexical borrowings are lexical units that have moved from one language system to another. Among lexical borrowings there are foreign language aggregates and transliterated borrowings (borrowed words, or borrowed lexicon). From lexical borrowings from a foreign language both meaning and form of a word are borrowed. Foreign language attachments function in the Internet-discourse and are not typical for scientific and educational purposes. By borrowed lexicon we mean words or combinations of words transposed from one language to another, mastered by the recipient language and transmitted by its graphic means. Ecological terms are borrowed into Uzbek, Russian and English from Greek, Latin, German, French and other languages:



Uzbek, Russian 'биосфера', and English 'biosphere' are borrowed from the German 'Biosphäre'; Russian 'абиссаль' which means 'zone of great sea and ocean depths' is borrowed from French 'oceanic depth', Uzbek, Russian 'баланс' and English 'balance' is borrowed from old French 'balance /equilibrium'; Uzbek, Russian 'эволюция'- 'evolution, development' is borrowed from Latin 'evolutio' - 'unfolding' and others [3].

Among the lexicons of foreign language origin, there is a significant layer of international terminology - internationalisms. The study of internationalisms in the professional lexicon is especially important in the aspect of internationalization of education [2]. Internationalisms are lexemes that function in many languages and are similar in their external form (taking into account phonetic and graphic correspondences) and meaning. For example: Uzbek, Russian 'экология' / English ecology / German Ökologie / French écologie; Uzbek, Russian 'экосистема' / English ecosystem/German Ökosystem; Uzbek, Russian 'гидрометеорология' / English hydrometeorology / German Hydrometeorologie and others.

Many international terms are artificially created, and the material for creation of such terms is the fund of Greek and Latin morphemes: Uzbek, Russian 'антропоэкология' / English anthropoecology (from Greek ανθρωπος 'man', οἶκος 'house, habitat, shelter, dwelling', Χοιρος 'science'); Uzbek, Russian 'антициклон' / English anticyclone (from Greek -anti 'against' and κύκλος 'circle') and others.

2. Semantic borrowings (calque 'copy') are "borrowed-translations", i.e. lexical units modeled on corresponding words of a foreign language by means of exact translation of their significant parts or borrowing of separate values of words. Calque or calculus (from French calque 'copy') - is one of the ways to borrow new ecological terms. A distinction is made between calques lexical and semantic. Lexical (structural) calques can be word-formative (if they calculate a complex or derived word) or syntactical (if they calculate a word combination). Lexical calques may be complete and incomplete. The latter are called half-calques. In full-page, all significant elements of a foreign word are translated by the host language. Half-calques contain both translation of foreign components of a language unit and not translated borrowed components.

In ecological terminology of the English, Uzbek and Russian languages lexical calculus is widely spread. An example of lexical calculus is Uzbek 'қишлоқ хўжалиги', Russian 'сельскохозяйственный' / English 'agricultural'.

Word-formed semi-calque is an Uzbek adjective 'микромикроволновый', Russian adjective 'микроволновый' (as part of the word combination 'microwave radiation'), which dates back to English 'microwave', where the first part of the micro- is borrowed, and the second part - the wave - a translation of English wave [7].

The Uzbek term 'ички истеъмол', Russian term 'внутреннее потребление' is a syntactic total calque with the English 'internal consumption'. The first component Uzbek 'ички', Russian 'внутреннее' is translated from English 'domestic'; the second component Uzbek 'истеъмол', Russian 'потребление' is translated from English 'consumption'. The syntactic half-calques include: Uzbek 'тупроқ бактериялари', Russian 'почвенные бактерии' < English 'soil bacteria'; Uzbek 'иссиқхона газы', Russian 'парниковый газ' < English 'greenhouse gas'; Uzbek 'глобал иссиш', Russian 'глобальное потепление' < English 'global warming'. For comparison, let us give an example from English. In it the syntactic half-calque is the composite term sea-water culture "марикультура" - cultivation of animals and plants useful to humans in sea waters. The term dates back to the Latin 'marinus culture' 'морская культура'. Latin 'marinus' is translated as sea-water, English 'culture' was borrowed from Latin [5].

## CONCLUSION

So, ecological terminology is widely represented by lexical and semantic borrowings of foreign origin. Borrowed terms in educational discourse are mainly international in nature, functioning in several modern languages (Russian, English, German, French) and often go back to classical (Greek and Latin) languages. Semantic borrowings in the ecological discourse are represented by word and syntactic calques and semi-calques. The etymological study of the Uzbek, Russian, English-language terminology of ecology shows that the main foundation of the lexical fund are acquired terminological units, among which the words of the Latin source take the first place.

The results obtained from the study of English-language environmental terminology were compared with data from the etymological study of terminological units in Uzbek, Russian environmental terminology. The results of the analysis of specialized material related to the study of etymological specifics of domestic environmental terms prove that the formation of Uzbek, Russian environmental terminology was based on the resources of the national language, Greek and Latin



sources, as well as on borrowings from the European language fund.

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## COMPARATIVE ANALYSIS OF ELECTRIC POWER INDUSTRY TERMINOLOGY

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### ABSTRACT

The article deals with the problem of abbreviation in the terminology of electric power industry. In this field, various abbreviations are widely used in technical documentation and used in professional communication. The aim of the work is to analyze the peculiarities, methods of education and translation of abbreviations in the investigated terminological field. Quantitative and semantic methods of analysis were used in the study. A sample of English and Russian abbreviations was made from dictionaries, standards, issues of trade journal and technical documentation, by the example of which their regularities and complexity of use were generalized. The results of the research showed that in the field of electric power engineering the initial method of formation of abbreviations is the most frequent.

**KEY WORDS:** electric power industry, terms, research, abbreviations, technical, dictionary, feature, method, translation, semantic, documentation, glossary equipment.

### DISCUSSION

Electric power industry is the most important industry in Uzbekistan, the welfare of the country depends on its level of development. It is engaged in the production and transmission of electricity, the need for which is constantly growing both in industrial and social spheres. Due to the development of science and technology, the energy industry has to face new challenges, such as the development of unconventional energy sources, increasing reliability of energy systems, increasing the volume of data from different measurements, etc. At present, international cooperation in the field of science and economics continues to be strengthened, which requires accelerating the harmonization of the terminology of national languages.

At the same time, it is necessary to expand the boundaries of the existing terminology system in order to add new concepts, terms and definitions to its composition. At the same time, it is necessary to take into account that these new concepts, terms and definitions should be unified for all energy systems to exclude their ambiguous interpretation by specialists of different energy sectors.

In today's world, acronyms are found in various areas of life. Recent scientific works show that they are present not only in specialized fields of knowledge, but also in everyday communication [3]. As stated in the article by I.A. Ulitkin and L.L. Nelyubin, "a feature of modern scientific technical language is a large number of acronyms" [5]. This statement is especially relevant for the current study, as the area of research is the terminology of electric power industry, i.e. specialized technical sphere.

Many linguists, including the already mentioned I.A. Ulitkin and L.L. Nelyubin, connect abbreviations, encountered in the study, with the tendency to save "oral and written text" [5]. Abbreviations are used in national and international standards and are registered by them. The abbreviations can be non-standardized and used in scientific and technical literature and any normative documents. The abbreviations may also be related to economic concepts and technologies applied in the field of electric power.

The purpose of the current research is not to differentiate abbreviations by the principle of their strict or non-strict regulation, but to study their



features, methods of education and translation, as well as to compare the use of acronyms in the electric power industry in English, Uzbek and Russian. The tasks of the paper include consideration of the types of abbreviations typical for the terminology under study, bringing their percentage ratio, studying the problem of abbreviations homonymy. The practical significance of the study is that it is based on a glossary of abbreviations, which will be useful in the work of not only translators, but also a wide range of specialists.

In the technical documentation of the target industry, the process of abbreviation is subject to a large number of terms referring to equipment (AVR - automatic voltage regulator, Russian equivalent of АРН - автоматический регулятор напряжения, Uzbek equivalent of AKR - avtomatik kuchlanish regulyatori), processes (CA - contingency analysis - анализ непредвиденных обстоятельств - favqulodda vaziyatlarni tahlil qilish, LF - load forecast, Russian equivalent of ПНП - прогнозирование нагрузки потребления, Uzbek equivalent of IYBQ - iste'mol yukini bashorat qilish, various values (ATC - available transfer capacity - располагаемая мощность - mavjud quvvat, TTC - transfer capacity - передаваемая мощность - uzatiladigan quvvat, LV - low voltage, Russian equivalent of НН - низкое напряжение, Uzbek equivalent of РК - past kuchlanish), etc. The names of technologies used in the energy sector (SCADA - Supervisory Control and Data Acquisition) are also shortened.

Graphic abbreviations are abbreviations in which the cut off part of a word is indicated by some graphic symbol. This method of abbreviation is used in units of measurement in both languages. For example, the English language uses a slash line and a dot (watt per steradian - W/sr, watt per steradian, revolution per minute - r/min, rpm, Newton meter - N-m), degree symbol (degree Fahrenheit- eF) and numeric designations (cubic meter - m<sup>3</sup>, square inch - in<sup>2</sup>), and the simultaneous use of a slash line and a number (candela per square foot - cd/ft<sup>2</sup>) is possible.

B. V. Borisov highlights the following types of truncation [1]:

- truncation of the end part of the word;
- truncation of the initial part of the word;
- truncation of the initial and the end part of the word.

In our sample, truncation abbreviations are presented in small numbers. For example, in English: antilogarithm - antilog, logarithm - log, diameter - diam, circular mil - cmil, avg - average; in Russian: ГеоЭС - геотермальная электростанция, in Uzbek - geotermal elektr stantsiyasi. B. V. Borisov

notes that the last type of truncation of the initial and end parts of the word is very rare in English [1]. We also failed to find such a type in the terminology of the electric power industry.

A. Yeltsov divides abbreviations into "initial abbreviations represented only by the initials of words included in the original abbreviated word combination and non-initial abbreviations of any syllabic and mixed types" [2]. Therefore, we consider it expedient to bring the percentage ratio of graphic abbreviations and truncation in the aggregate, because in our selection they are the smallest percentage. So, from total number of all selected abbreviations the given type is presented 10,5 % in English and 1,5 % in Russian and Uzbek languages accordingly.

These results allow us to speak about the greatest distribution of initial abbreviations. They are the ones that can cause difficulties in translation of special literature from one language to another. One and the same abbreviation may have several interpretations in different fields of knowledge. Additional complexity may arise if abbreviations are homonymous within the same subject terminology.

Let us consider several such abbreviations - homonyms in detail. The site <https://www.acronymfinder.com> gives us 72 values of the abbreviation LF, three of which are applicable to the field of electric power industry: LF - low frequency / низкая частота / past chastotali, load factor / фактор нагрузки / yuk koeffitsienti, load forecast - прогноз нагрузки / yuk prognozi. For the abbreviation EMF site offers 57 definitions, two of which are used in the electrical power industry: electromagnetic field / электромагнитное поле / elektromagnit maydon and electromotive force / электродвижущая сила / elektromotor kuch. Another common abbreviation EC, according to this site, has 192 values. In the electric power industry, this abbreviation can be used in 8 values, according to the dictionary. N. Putinsky: electrical conductivity / электропроводность / elektr o'tkazuvchanligi, Electricity Council (UK) / Совет по электроэнергетике (Великобритания) / Elektr Kengashi (Buyuk Britaniya), electrocoating / электропокрытие / elektr qoplamasi, emergency conditions / аварийный режим / favqulodda holat rejimi, emergency control / противоаварийное управление / favqulodda vaziyatlarni boshqarish. Therefore, in the translation process it is necessary not only to take into account the subject matter, but also to understand the context in which the abbreviation is used.

When using or translating abbreviations, even small details matter. For example, ac - alternating current / переменный ток /



o'zgaruvchan tok, dc - direct current / ПОСТОЯННЫЙ ТОК / o'zgarvas tok. These abbreviations are sometimes used with the point - a.c. and d.c. respectively. If you follow the general trend and denote the abbreviation with capital letters AC and DC, the meaning of the terminating word combination changes. The International Electrotechnical Dictionary defines: "AC (qualifier): refers to variable electrical quantities, such as voltage or current, to devices operating with them, or to quantities associated with these devices. Notes: 1) The English designation "AC" is preferred to "a.c.", which is the abbreviation for "alternating current" [3]. Or in the dictionary of Ya.N.Luginsky's dictionary abbreviation AC means with capital letters: 1. Accuracy check / КОНТРОЛЬ ТОЧНОСТИ / aniq nazorat; 2. Automatic checkout / АВТОМАТИЧЕСКИЙ КОНТРОЛЬ / avtomatik boshqarish. In Russian it is not customary to abbreviate the concepts of alternating current/ переменный ток /o'zgaruvchan tok and direct current/ ПОСТОЯННЫЙ ТОК// o'zgarvas tok at all.

In abbreviations, i.e. those that contain a person's name, the first letter is the capital. This is mainly characteristic of units: W - watt / Вт - Ватт, J - joule / Дж - Джоуль, A - ampere/ А -Ампер, Hz - Hertz / Гц - Герц.

If you compare the initial abbreviations of the Russian and English languages, you will notice the mismatched number of letters in some abbreviations. For example, kW / kilowatt - кВт / киловатт - kW / kilowatt, SCI / SCT / short circuit / КЗ / короткое замыкание / QT / qisqa tutashuv, i.e. the number of words to be abbreviated in a word combination is the same, and in the formed abbreviation the number of letters is different. If the abbreviation SCI / SCT shortens the letter I/T, another SC nation is formed - static compensator / СТАТИЧЕСКИЙ КОМПЕНСАТОР / statik kompensator. If you eliminate the letter "t", you get kV - kilovolt. Thus, an attempt is made to exclude the possibility of incorrect interpretation of the abbreviation or its homonymy in the language.

## CONCLUSION

So, based on the analysis of the selected abbreviations we can note some regularities of the formation and use of acronyms.

1. The most common are initial abbreviations - most abbreviations of technical terms are denoted by capital letters. This is typical for both English and Russian. In the studied sample, the initial abbreviations are 89.5% in English and 98.5% in Russian and Uzbek. However, there are significant exceptions to this rule when lower case letters are

used, but the percentage of such abbreviations is low, although they denote frequency concepts. At the same time, there are cases when the abbreviation is formed in both capital and lowercase letters, and the meaning of the terminating combination does not change.

2. Some abbreviations are characterized by a homonymy, and abbreviations may have several meanings within the same area of use - in our case electric power industry.

3. In abbreviations containing a person's name, the first letter of that person's name will always be capital.

The method of translation of the full term underlying the abbreviation is predominant in the field of electric power industry. However, the names of technologies or systems may be fully capitalized in Latin letters or transcribed. The results of this study reflect current trends and approaches to the problem of abbreviations in the field of electric power terminology.

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# PRESTRESSED LOSSES FROM SHRINKAGE AND NONLINEAR CREEP OF CONCRETE OF REINFORCED CONCRETE ROD SYSTEMS

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## ABSTRACT

*The article under discussion presents the algorithm for calculating prestressed reinforced concrete rod systems taking into account prestressing loss from nonlinear operation of reinforced concrete over time. The authors of the article suggested a program which is intended for calculation of prestressed concrete trusses taking into account stiffness of knots, creep and shrinkage of concrete, and also for change of prestressed in time, being under the influence of external loads, using the method of consecutive approximations.*

**KEY WORDS:** *pressure, pre-pressure, deformation, creep, shrinkage, armature, connection, stages, losses, external, size, deformation.*

## INTRODUCTION

Prestressed reinforced concrete structures have a complex stress state, varying in time from the effects of external loads, the manifestation of inelastic deformations of concrete, relaxation of stresses in steel and other conditions. In this connection, at designing of prestressed designs it is necessary to know the basic reasons, influence on character and size of change of pressure in armature and concrete at various stages of their work.

## MODELS OF SAMPLES AND RESEARCH METHODS

Precise account of factors influencing the value of losses, as a rule, is a complex and often difficult to solve [1, 2]. In this connection, for practical calculations it is necessary to accept less exact, but simplified methods of preliminary stress losses accounting.

Pre-voltage losses considered in calculations can be divided into the following types: shrinkage of concrete; creep of concrete; relaxation of stresses in reinforcement; deformation of anchors, washers and

gaskets; deformation of joints between blocks of composite structures; deformation of forms for the manufacture of structures; friction of reinforcement in the wall of the channel or concrete surface of structures; concrete buckling under the loops of ring (spiral) reinforcement; temperature difference between the stretched reinforcement and the temperature of the devices that take the stress; multiple repeated load; difference between the coefficients of linear elongation of reinforcement and concrete during the operation of the structure in conditions of increased temperature.

The above factors affecting the prestressed losses from shrinkage and creep of concrete, the relaxation of steel stresses are manifested over a long period of time.

In the operational phase, the main shrinkage and creep of concrete acts on the pre-stressed losses.

Let us determine the pre-stress losses from concrete creep using the formula [3].



$$\sigma_n = \frac{\sigma_b}{\mu_s} (1 - e^{-\xi} \varphi_t) \quad (1)$$

where:

$$\sigma_b = \sigma_{sk} \frac{\mu_H}{1 + n_s \mu} \quad (2) \text{ - initial voltage.}$$

Taking into account the growth of the elastic deformation modulus of concrete in time, the experimental parameters are determined:

$$\xi = n_h \mu_s \left( 1 - \frac{n_n \mu_s}{\delta \varphi_t} \ln \frac{1 + n_n \mu_s + \delta \varphi_t}{1 + n_h \mu_s} \right) \quad (3)$$

$$\mu_s = \frac{A_{sp}}{A} + \frac{A_s}{A} \quad (4)$$

$$\mu_s = \frac{A_s}{A}; \quad \mu_h = \frac{A_{sp}}{A} \quad (5)$$

$$n_s = \frac{E_s}{E_M^{(t)}}; \quad n_h = \frac{E_H}{E_M^{(t)}} \quad (6)$$

$$\varphi_e = \varphi_\infty (1 - e^{-b_1 t}) \quad (7)$$

$\varphi_\infty = \varphi_\infty \eta_1 \eta_2 \eta_3$  - creep limit characteristic;

$\varphi_\infty^c$  - creep limit characteristic value for average conditions;

$\eta_1$  - correction factor dependent on the humidity of the environment in which the element (construction) is located;

$\eta_2 = 1,926 - 0,738 l_{gb}$  - correction factor that takes into account scaling factors (element size);

$\eta_3$  - correction factor depending on the age of the concrete  $t_o$  and the moment the element is loaded;

$E_M^{(t)} = E_{M(\infty)}^o (1 - \beta e^{-\alpha t})$  - the elastic-momentous deformations of concrete;

$E_{M(\infty)}^o, \beta, \alpha$  - constants that depend on curing conditions and concrete composition [4].

Pre-stressed losses from concrete shrinkage are determined by a formula:

$$\sigma_{s,y} = \frac{\alpha_y E_M^{(t)}}{\mu_s \varphi_\infty} (1 - e^{-\xi \varphi t}) \quad (8)$$

where:

$\alpha_y = \alpha_y^c \eta_1 \eta_2 \eta_4$  - the ultimate relative deformation of shrinkage;

$\alpha_y^c$  - the value of the ultimate relative deformation of shrinkage for average conditions;

$\alpha_y^c$  - the correction factor, depending on the time from which shrinkage and concrete accounting begins.

Determining the pre-stressed loss from creep and shrinkage in time, we find the value of "compressive force":

$$N_{sp} = \sigma_{sk} - (\sigma_n + \sigma_{sy}) A_{sp} \quad (9)$$

The calculated  $N_{sp}$  load is treated as an external load and is applied to the end of the prestressed rods with a reverse sign.

## THE RESULTS OF THE EXPERIMENTS AND THEIR ANALYSIS

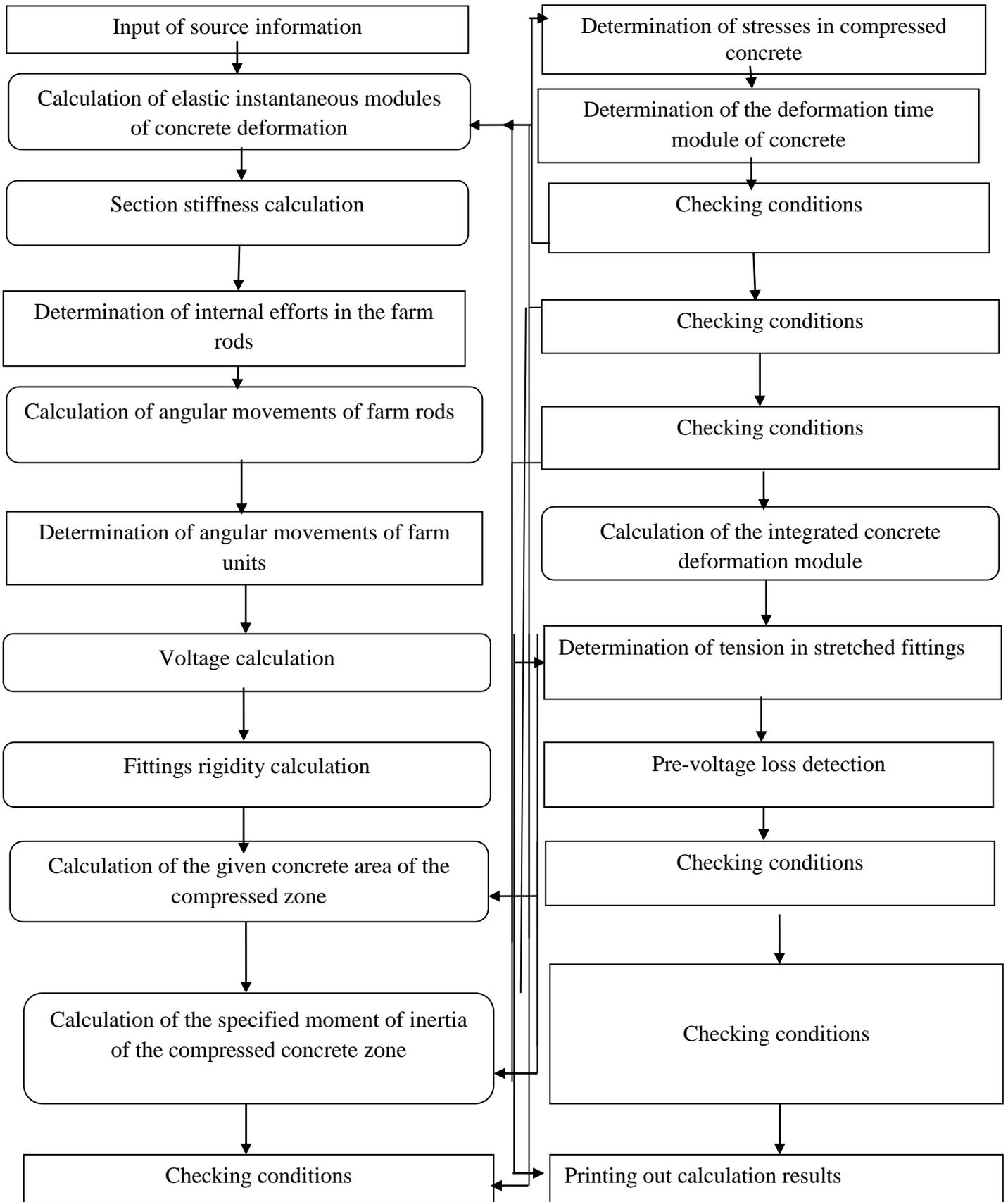
According to the developed algorithms the program is compiled and examples are considered.

The program is intended for calculation of prestressed concrete trusses taking into account stiffness of knots, creep and shrinkage of concrete, and also for change of prestressed in time, being under the influence of external loads, using the method of consecutive approximations. The general structure of the program calculation process is shown in Figure (1).

The results of the considered examples (calculation of prestressed reinforced concrete trusses taking into account the stiffness of the nodes in the inelastic stage) show that the stresses from shrinkage and creep in most of the elements do not change significantly and only in the lower zones significantly decreases.

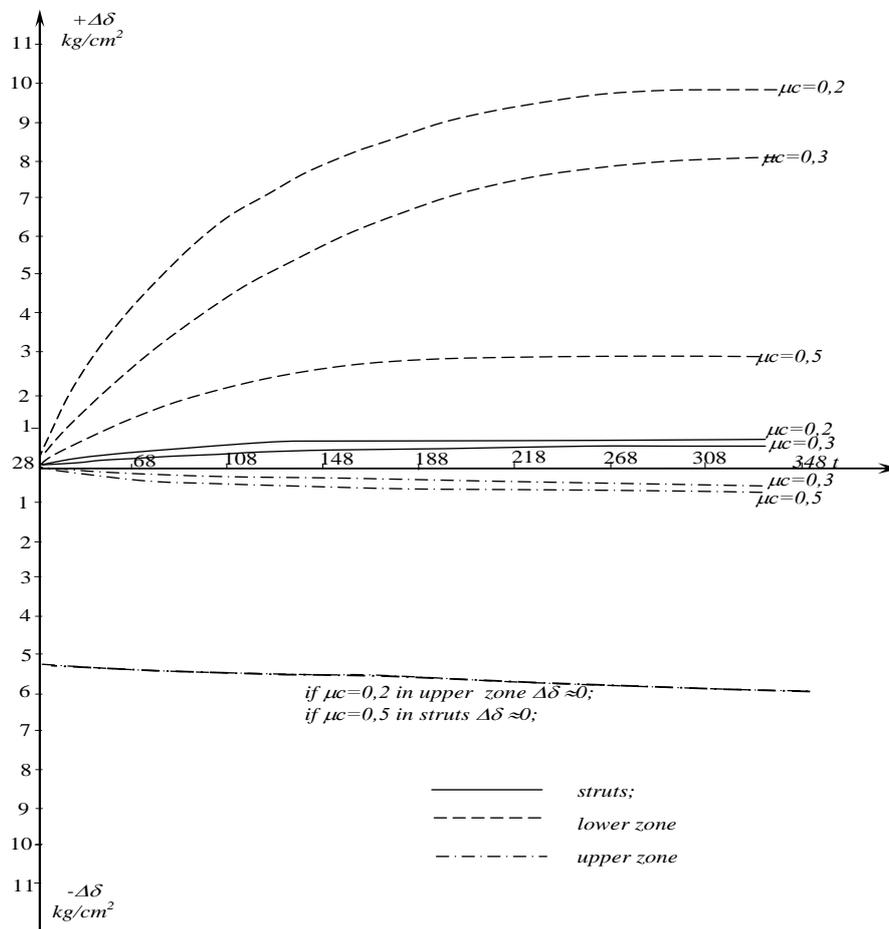
On the basis of graphs (Figures 2, 3, 4) the increase of  $\Delta\sigma$  at different reinforcement percentages obtained in accordance with Table 1 shows that from the action of constant operating loads the stress in the rods of the truss decreases in time in the upper zone and increases in the lower zone, slant and rack. As the percentage of reinforcement increases, the stress increment -  $\Delta\sigma$  changes within the following limits:  
a) in the lower zone from 2 to 8%; b) in the upper zone from 0.5 to 3.5%; c) in the struts from 0.2 to 2.4%.

At the same load level, the process of redistribution of effort increases as the percentage of reinforcement increases. This is due to the fact that in the elements of the farm with a high percentage of reinforcement in compressed concrete and, consequently, the non-linearity of deformation increases. Non-linearity of deformation contributes to the redistribution of stresses between the rods of the farm.

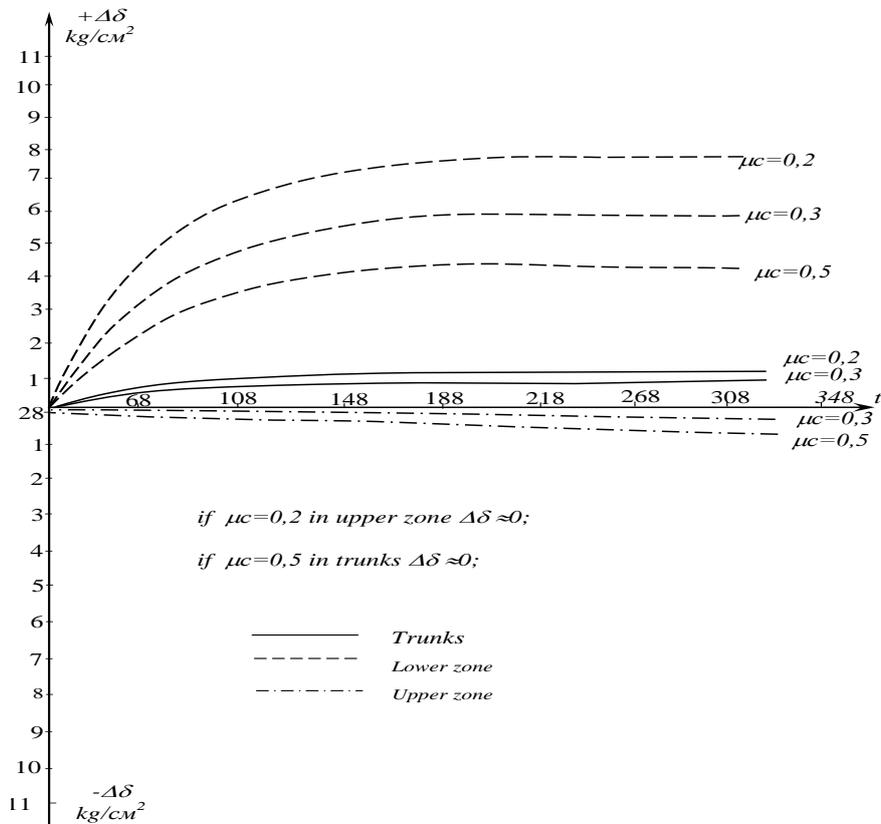




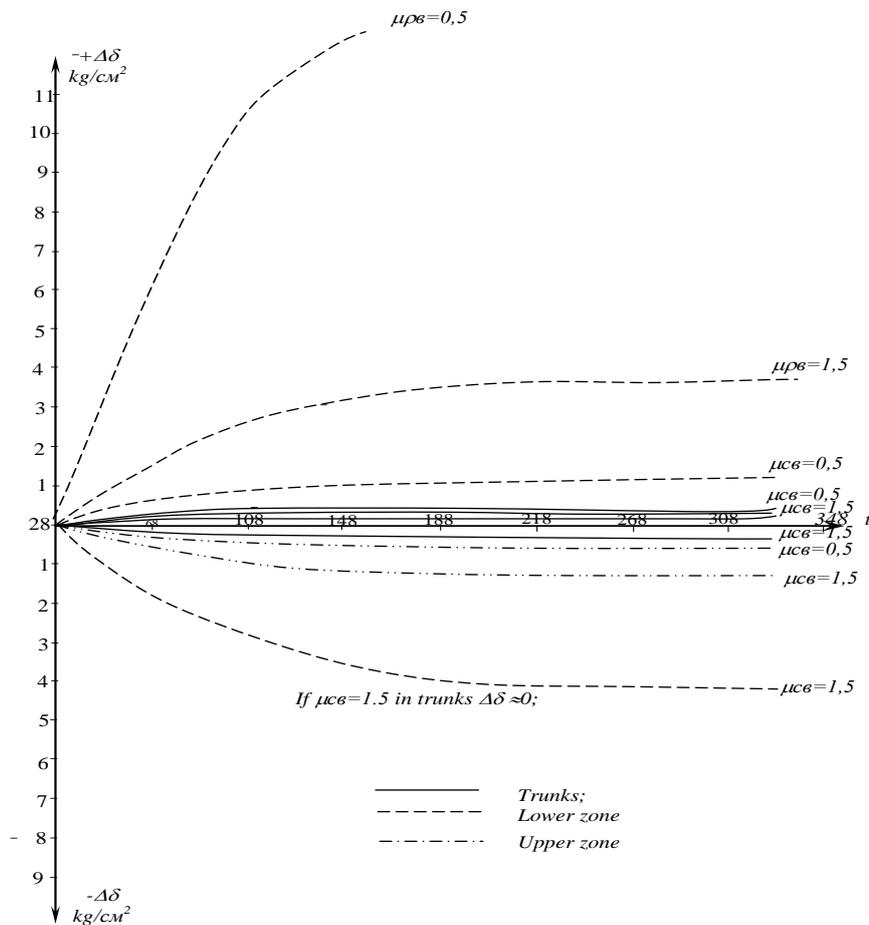
**Fig.1 General structure of the program calculation process**



**Fig.2. Stress increase at the increase from the compressed elements**



**Fig.3. Stress increase at the increase in tension from the stretched elements**



**Fig.4. Stress increase at increase and consequently in all elements**

Farm elements	Task Setting: t / day		% армирования								
			0,2 <sup>c</sup>	0,5 <sup>c</sup>	0,5 <sup>p</sup>	2,5 <sup>p</sup>	0,5 <sup>св</sup>	1,5 <sup>св</sup>	0,5 <sup>рв</sup>	1,5 <sup>рв</sup>	
Upper zone	Elastic, non-linear disequilibrium	t <sub>0</sub> =28	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
		t <sub>0</sub> =28	0,950	0,892	0,954	0,970	0,917	0,706	1,007	0,927	
		t=112	0,947	0,887	0,951	0,964	0,911	0,696	1,006	0,926	
Lower zone	Elastic, non-linear disequilibrium	t <sub>0</sub> =28	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
		t <sub>0</sub> =28	1,205	1,058	1,135	1,139	1,016	0,666	1,217	1,089	
		t=112	1,214	1,058	1,137	1,151	1,024	0,669	1,223	1,093	
Slopes	Elastic, non-linear disequilibrium	t <sub>0</sub> =28	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
		t <sub>0</sub> =28	0,658	0,418	0,667	0,649	0,409	0,152	1,328	0,493	
		t=112	0,660	0,420	0,670	0,650	0,410	0,152	1,386	0,494	

Note: c, p, s, ditch means that reinforcement percentages change only in compressed, stretched and consequently in all elements of the farm.



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## **METHODS AND TECHNIQUES OF SPEECH DEVELOPMENT IN CHILDREN OF PRESCHOOL AGE**

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### **ABSTRACT**

*The article under discussion depicts the methods and techniques of speech development in children of preschool age. The authors of the article consider that teaching a child a native language, adults simultaneously contribute to the development of his/her intellect and higher emotions, prepare the basis for successful learning at school, for creative work. Speech features of children are related to the form of communication they have achieved. In addition, verbal communication in preschool age is carried out in different activities: in the game, work, household, educational activities and acts as one of the sides of each type.*

**KEY WORDS:** *children, preschool age, methods, techniques, speech, activity, tool, writing, speaking, listening, reading, enrich, expand, development, language.*

### **DISCUSSION**

Speech is an integral part of the social being of people, a necessary condition of human society existence. It is estimated that about 70% of the time when a human being is awake, he dedicates to speaking, listening, reading, writing - four main types of speech activity.

Speech is, on the one hand, a tool for expressing our ideas, thoughts and knowledge and, on the other hand, a means to enrich and expand them. To be perfect in all kinds and manifestations of speech means to possess the most powerful instrument of human mental development and, therefore, the culture of mankind. Nothing affects

the general development as negatively as language backwardness [1].

Speech in human life performs the following basic functions:

- is a means of cognition, a necessary condition of human cognitive activity (thanks to speech a person acquires knowledge, assimilates and transmits it);
- is a means of influencing the consciousness, developing a worldview, norms of behaviour, formation of tastes (i.e. speech is used to influence people's views and beliefs, incline them to actions, etc.);



- it is used in the process of joint labour activity to coordinate efforts, plan the work, check and evaluate its results;
- is a means of satisfying a person's personal needs: to communicate, to join a certain group of people (a person, as a social being, cannot live outside of communication with other people: he must consult, share thoughts, experience and empathise).

Objectives of speech development:

1. Education of speech sound culture.
2. Enrichment and activation of the pupils' dictionary.
3. Formation of grammatical order of speech.
4. Teaching coherent speech by activating traditional and non-traditional methods in the work of speech development.

Kindergarten age is a period of active learning of spoken language, formation and development of all aspects of speech - phonetic, lexical, grammatical. At this age, the circle of children's communication is expanding, which requires the child to master the means of communication, the main of which is speech. In the process of diverse communication, the child learns the natural, subject and social world around him/her in its integrity and diversity, forms and reveals his or her own inner world, his or her "Ego", comprehends spiritual and material values of society, gets acquainted with its cultural norms and traditions, finds the circle of significant other people, acting as an active subject of interaction [2].

A child with well-developed speech easily enters into communication with the world around him or her. He or she can clearly express his or her thoughts and desires and consult with peers, parents, and teachers. Communication is an instrument of culture that is adapted to the development and formation of personal consciousness, its perception of the world, to nurture a humane attitude to the natural, subject and social world around it.

It is a necessary condition for solving the tasks of mental, aesthetic and moral education of children. The earlier speech development training is started, the freer the child will use it in the future.

## **METHODS OF SPEECH DEVELOPMENT**

The modern child is in an active information flow and not everyone can orientate himself in it. It is often very difficult for the child to "process" all the information. Therefore, lessons on speech development are an important part of the overall development of pupils.

Speech development is the process of speech formation depending on age characteristics of

the person, associated with mastering the means of both oral and written speech (language), which in turn characterizes the development of communication skills, verbal thinking and literary creativity.

Methods of teaching speech development are defined as the way in which educators and children work, ensuring that children acquire speech skills and abilities.

There are three groups of methods - visual, verbal and practical - that can be conventionally distinguished in the method of teaching the native language.

Visual methods are used in kindergarten much more often than other methods; they are divided into direct and indirect methods. If the objects under study can be observed by children directly, the educator uses the method of observation or its varieties: examination of the room, excursion, consideration of natural objects. These methods aim to accumulate speech content and provide a link between the two signal systems. If the objects are not accessible for direct observation, the educator introduces them to children indirectly, most often using visual aids - viewing toys, illustrations, photographs, descriptions of paintings and toys, storytelling by toys and pictures, watching movies and diaphragms [3].

Intermediate visual methods are used in kindergarten and for secondary acquaintance with the object, they are used to consolidate knowledge, dictionary, development of generalizing the function of the word, teaching coherent speech. For this purpose, such methods are used as viewing pictures with content familiar to children, viewing toys (as conventional images reflecting the world around them in three-dimensional pictorial forms), children's descriptions of pictures and toys, and inventing storytelling.

The use of verbal methods in kindergarten is less frequent than in school. In kindergarten, the methods used are mainly those related to the artistic word. The kindergarten teacher reads to the children the artistic works in the programme. More complex methods are also used: memorization, paraphrasing, storytelling without relying on visual material (storytelling without showing (in early groups), stories from the life experience of the teacher, stories about noble and heroic deeds of children and adults (in preschool groups), summarizing conversation (of older preschool age to consolidate previously accumulated knowledge and to get used to collective conversation).

These methods require a focus on clarity, so all verbal methods use visual teaching techniques: showing objects, toys, looking at illustrations,



paintings, or showing a visual object to relax children or rest (reading poems, riddles, etc.).

Practical methods are aimed at:

- Teaching children to apply what they have learned in practice;
- learning and improving speech skills and abilities.

In kindergarten, practical methods are most often playful.

Practical methods include various didactic games (games with visual material and a word game - a universal method for consolidating knowledge and skills. It is used to solve all problems of speech development), dramatization games (work with familiar literary text), staging games, round dance games, didactic exercises (getting acquainted with the new, fixing skills or abilities, creatively process the learned information). The main task of these games is to bring up a culture of children's behavior; they are also extremely important for speech development, as they enrich the dictionary and consolidate the skills of speaking [4].

Depending on the nature of children's speech activity, reproductive and productive methods can be conditionally distinguished.

Reproductive methods are based on the reproduction of speech material, ready-made samples. In kindergarten, they are used mainly in vocabulary work, in work on education of sound culture of speech, less in the formation of grammar skills and coherent speech. Among the reproductive can be conditionally attributed methods of observation and its varieties, the examination of paintings, reading fiction, paraphrasing, memorizing, games-dramatization on the content of literary works, many didactic games, ie. all those methods in which children learn words and the laws of their combination, phraseological turns, some grammatical phenomena, such as the management of many words, learn by imitating the sound, retell close to the text, copy the story of the teacher.

Productive methods involve children building their own coherent statements, where the child does not simply reproduce the language units known to him or her, but chooses and combines them each time in a new way, adapting to the situation of communication. This is the creative nature of speech activity. It is clear from this that productive methods are used in the teaching of coherent speech. These methods include generalizing conversation, storytelling, paraphrasing with text reconstruction, didactic games on the development of coherent speech, modeling methods, creative tasks.

There is also no sharp border between productive and reproductive methods. There are elements of creativity in reproductive methods, and

elements of reproduction - in productive methods. Their ratio fluctuates. For example, if in a vocabulary exercise children choose from their vocabulary the most appropriate word to characterize an object, then compared to the same choice of words from a series of given or repetition of the first task after the teacher when examining and examining the objects, the first task is more creative. In independent storytelling, creativity and reproduction can also be manifested in different ways in stories according to the sample, plan, and proposed topic. The characterization of well-known methods in terms of the nature of speech activity will make it possible to use them more consciously in working with children.

Reception is the main element of the method. At present, the method of speech development does not have a stable classification of techniques, but in terms of the role of visibility and emotionality, they can be divided into verbal, visual, practical (game).

The most widespread in kindergarten are verbal techniques. These include: speech pattern, repetition, explanation, instructions, verbal exercise, assessment of children's speech, question.

Speech Sample - correct, pre-tested speech (language) activities of the teacher, designed to emulate children and their guidance for repetition, imitation. It is pronounced clearly, loudly and leisurely.

Repeated pronunciation - deliberate, repeated repetition of the same speech element (sound, word, phrase) in order to memorize it. Repetition of material by the tutor, individual repetition by the child, joint repetition (by the tutor and the child or by two children), as well as choir practice. Choral repetition is especially in need of clear guidance. It is desirable to give him or her explanations: to offer to say all together, clearly, but not loudly.

Explanation is the educator's disclosure of the essence of a phenomenon or way of acting. Widely used in vocabulary work - to reveal the meaning of words, to explain the rules and actions in didactic games, as well as in the process of observation and examination of subjects.

Instructions - explaining to children how to act, how to achieve the desired result. Instructions of a teacher can be divided into educational, organisational and disciplinary ones.

Word exercise - repeated performance of certain speech activities by children to develop and improve their speech skills. In contrast to repetition, the exercise is characterized by greater frequency, variability, greater proportion of independent efforts of children.



Assessment of children's speech is a detailed motivated judgment of the child's response, revealing the degree of knowledge and speech skills acquisition. Evaluation should not be merely stated, but also instructive. It is given so that all children can be guided by it in their statements [5].

In a single session, only some children's answers can be assessed in a broad, detailed way. As a rule, the assessment refers to one or two qualities of children's speech, and is given immediately after the answer so that it can be taken into account by other children. The evaluation is more likely to focus on the positive aspects of speech. If deficiencies are noted, the child may be asked to "learn" by trying to correct his or her response.

## CONCLUSION

Methods of teaching speech development are defined as the way of work of a teacher and children, ensuring that children acquire speech skills and abilities.

The methods proposed to develop speech of preschool age children are aimed at:

- accumulation of speech content and ensuring informational and emotional stability;
- education of children's culture of behavior;
- speech development, enriching the vocabulary and strengthening spoken skills.

Thus, the effectiveness of pedagogical impact on children's speech depends on the right choice of speech development tools and their interconnections. At the same time, a determining role is played by taking into account the level of formation of speech skills and abilities of children, the nature of cognitive and linguistic material, and possible options for using methods and techniques of speech development.

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## TEMPERAMENT AS A FACTOR OF ACTIVITY

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### ABSTRACT

*The article under discussion depicts the issues of the temperament as a factor of activity. The authors of the article consider that the role of temperament in work and study depends on the impact on the activities of various mental states caused by the unpleasant environment, emotional factors, educational influences. Human productivity is closely related to the characteristics of his temperament. And yet, the temperament at the moment also recognized in many ways ambiguous and unresolved problem. However, with all the diversity of approaches to the problem of practice and scientists believe that the temperament has a general biological root, forming a person as a social subject.*

**KEY WORDS:** *temperament, activity, factor, behavior, biological, approach, social subject, person, emotional factors, environment, abstract, logical thinking, perception of reality.*

### DISCUSSION

Temperament is a dynamic characteristic of mental processes and human behavior, manifested in their speed, variability, intensity and other characteristics.

Various points of view have been expressed on the nature of temperament, starting with Hippocrates and Galena, who identified four types of temperament (these types are almost invariably to this day and are used in the study of modern psychologists), E. Krechmer linked the nature of temperament with the chemical composition of the blood, his theory supported U. McDougall and Japanese psychologist T. Furukova; Albrecht Galler introduced the concepts of excitability and sensitivity, and his student G. Vriesberg linked temperament with the peculiarities of the nervous system; I.P.Pavlov experimentally confirmed the theory of the physiological basis of temperament; K. Krechmer, who was a scientist, introduced the idea of the nature of temperament. Sigo linked the difference in temperament features with physiology, and V. Wundert with the force and rate of change of

emotions. Based on these studies, the study of temperament have been conducting today.

The works of I.P. Pavlov, B.M. Teplov, V.S. Merlin, I.M. Paley, L.B. Ermolaeva -Tomina, and many others made a not insignificant contribution to the study of the issue. According to I.P. Pavlov, temperaments are the "main features" of individual features [2]. They are commonly distinguished as follows: sanguine, phlegmatic, choleric and melancholic. Temperament is neither "bad" nor "good", each has its own temperament. It is good in some cases and bad in others. Your temperament can be trained through tests or various cases in life.

I.P. Pavlov singled out three more "purely human types" of higher nervous activity (HNA): thinking, artistic, and average. Representatives of the thinking type (the activity of the second signal system of the brain of the left hemisphere prevails) are very judicious and inclined to a detailed analysis of life phenomena and abstract and logical thinking. People of this type are usually interested in mathematics, philosophy, they like scientific activity.



People of artistic type (the activity of the first signal system of the brain of the right hemisphere prevails) have figurative thinking; it is imprinted with great emotionality, brightness of imagination, immediacy and vividness of perception of reality. They are primarily interested in art, theater, poetry, music, writing and artistic creation. They seek a wide range of communication, these are typical lyrics, and people of the thinking type they are skeptical about as "breadcrumbs". Most people (up to 80%) refer to the "golden middle" type. Their character is slightly dominated by rational or emotional beginning, and it depends on education from early childhood, on life circumstances. It starts to appear by the age of 12-16: some teenagers give most of their time to literature, music, art, others - to chess, physics, mathematics. Modern research has confirmed that the right and left hemispheres have specific functions, and the prevalence of activity of this or that hemisphere has a significant impact on the individual personality.

Dynamic features of human personality are not only in the external manner of behavior, not only in the movements - they are also manifested in the mental sphere, in the sphere of inducement, in general performance. Naturally, the features of temperament affect in training and in working life. But the main thing is that differences in temperament are not the level of mental ability, but the originality of its manifestations [5].

It has been established that there is no dependence between the level of achievement, i.e. the end result of actions, and the peculiarities of temperament, if the activity takes place in conditions that can be defined as normal. Thus, regardless of the degree of mobility or reactivity of an individual in a normal, non-stressed situation, the results of activity will in principle be the same, since the level of achievement will depend mainly on other factors, especially on the level of motivation and ability. However, studies that establish this pattern shows that depending on the temperament changes the way the activity itself.

Depending on the characteristics of the temperament people differ not the final result of the activity, but the way to achieve results. Studies have been conducted to establish the relationship between the way the actions and the features of the temperament. These studies considered the individual style of activity as a way to achieve results or a way to solve a particular problem, mainly due to the type of the nervous system [5]. The results of studies of the vast majority of authors, regardless of the peculiarities of the studied groups and experimental situations in which the typical way of performing actions for these individuals was studied, show that it

is the type of nervous processes, has a significant impact on the formation of a certain style of activity.

Before the sanguine should continuously set new, if possible interesting tasks that require concentration and tension. It is necessary to constantly include his active work and systematically encourage his efforts.

Phlegmatic should be involved and interested in active work. It requires systematic attention. It cannot be switched from one task to another. With regard to melancholic is unacceptable not only sharpness, rudeness, but also simply heightened tone, irony. It requires special attention, should be praised in time for his successes, determination. Negative assessment should be used as carefully as possible, in every way mitigating its negative impact. Melancholic - the most sensitive and vulnerable type with it should be extremely gentle and friendly [5].

It depends on the temperament, which way a person realizes their actions, but it does not depend on their content side. The temperament is manifested in the features of the course of mental processes. Influencing the speed of memory and memory strength, fluency of thought operations, stability and ability to switch the attention [3].

The temperament features should be taken into account in professional selection. The profession of operator of an automatic system control panel, for example, requires a timely and rapid response to changes in the operation of many units and the quick making of the right decisions; discipline in the classroom requires that the student can restrain his feelings and desires. These requirements cannot be arbitrarily changed as they depend on objective reasons - the content of the activity.

Temperament, affecting the dynamics of an activity, can affect its productivity. In different types of activities, the role of temperament is different. In educational activities and in mass professions (turner, locksmith, weaver, saleswoman, doctor, teacher, engineer), one of the properties of temperament, necessary for successful activity and weakly expressed in a given person, can be compensated for by other properties and the resulting methods of work. For example, weavers of inert type, whose attention is very stable, in the process of work are rarely distracted. In a situation where it is necessary to eliminate the downtime of machines or breakage of a thread, this is a positive property. Moving type weavers, whose attention is no less stable, more often than inert weavers, switch from one machine to another. In situations of possible malfunctions, this is also a positive property. Thus, more frequent attention switching compensates for greater distractions, as these workers are quicker to detect



faults. Consequently, in mass professions and in learning the properties of temperament, affecting the activity, in the end, do not determine its productivity, because some properties can be compensated for by others.

In such professions as test pilot, big power system manager, cosmonaut, mine-rescuer, international class athlete, etc., whose activity is connected with regular emergency voltage, risk, danger, big responsibility, the level of requirements to psyche is very high. Properties of temperament - high anxiety, low noise immunity - can not be compensated by other properties. In such professions, the properties of temperament determine the professional suitability of man. In these types of work requires a preliminary selection of people on a number of properties that temperament features meet the requirements of the activity. This way of adapting the temperament to the requirements of the activity is called professional selection.

Each property of temperament requires individual methods of work or influence on people. Thus, melancholic quickly gets tired. Therefore, he/she needs more frequent breaks to rest than others.

Temperament depends on the influence of various factors that determine the level of neurologic-psychological tension ( performance evaluation, expectations of control activities, speed up the pace of work, the impact of disciplinary action). Such regulation of activity by differentiating the value of active stimuli depending on the type of nervous system and human temperament is used by good organizers of production. This way of adapting the temperament of the activity is to individualize the requirements, conditions and ways of working (individual approach) [2].

There is also a third type of adaptation of temperament to the requirements of activity. It consists in overcoming the negative impact of temperament with a positive attitude to activity and appropriate motivations. For example, in a very interesting lesson, causing increased activity of students, the degree of choleric restraint is not less than that of sanguine, and the performance of melancholic not less than phlegmatic.

## CONCLUSION

So, summing up the above, it should be noted once again that the study of temperament have been and are engaged in psychologists from different countries.

Temperament characterizes the dynamism of the personality, but does not characterize its beliefs, views, interests, is not an indicator of value or low value of the person, does not determine its capabilities (do not mix the properties of

temperament with the properties of character or abilities). The general activity of mental activity and human behavior is expressed in varying degrees of desire to act actively, learn and transform the surrounding reality, to manifest themselves in a variety of activities. The expression of general activity is different for different people. Two extremes can be noted: on the one hand, sluggishness, inertia, passivity, and on the other hand, great energy, activity, passion, and impetuosity in activity. Between these two poles are representatives of different temperaments.

Emotional activity is expressed in emotional susceptibility (sensitivity and sensitivity to emotional influences), impulsivity, emotional mobility (speed of change of emotional states, their beginning and termination). Temperament is manifested in the activity, behavior and actions of the person and has external expression. On the external steady signs can be judged to a certain extent about some properties of temperament [4].

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# PERSONALITY AND ITS DEVELOPMENT AS A PSYCHOLOGICAL AND PEDAGOGICAL PROBLEM

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## ABSTRACT

*The article under discussion reveals the pedagogical and psychological problems of the personality's development. The authors of the article consider that*

**KEY WORDS:** *personality, psychological, pedagogical, problem, effective, psychological qualities, upbringing and education*

## DISCUSSION

One of the complex problems of pedagogical theory and practice is the problem of personality and its development. This problem has different aspects, and as a result it is considered by different sciences: age anatomy and physiology, sociology, child and pedagogical psychology, etc. The problem of personality and its development in a specially organized environment. Pedagogy shall consider and identify the most effective conditions for the harmonious development of the personality in the process of upbringing and education.

The word "personality" (persona) originally referred to actor masks (in Roman theatre the mask of an actor was called "face" - a face addressed to the audience). Then this word began to mean the actor himself and his role. By the Romans, the word "persona" was used necessarily with an indication of a certain social function of the role (the personality of the king, the personality of the judge, the personality of the father). Thus, a person in its original meaning is a certain social role or function of a person [1].

Today, psychologists interpret the personality as a socio-psychological education, the formation of which takes place thanks to the life of a person in society. The human being as a social being acquires personal qualities when he enters into relations with other people and these relations

become "forming" his personality. At the moment of birth, an individual does not yet have these acquired (personal) qualities.

A person is most often defined as a person in the aggregate of his or her acquired social qualities. It follows from this that personal features of a person, which are naturally conditioned and do not depend on his or her life in society, do not belong to the number of personal qualities. Psychological qualities of the person which characterize his or her individual style of activity and cognitive processes, except for those which are shown in attitudes to people in a society, do not belong to the number of personal qualities.

The idea of human self-development originates in the great philosophical systems of ancient Greece, and, curiously, immediately receives a pedagogical interpretation. Socrates was one of the founders of the doctrine of the originally reasonable and good nature of man, its conscious aspiration for good and truth. It is known that he gave special importance to the ancient saying, written on the pediment of the Delphic temple in Athens: "Know yourself". Only knowing yourself, Socrates believed, reveals to man that he can, what he can not, and points the way to the realization of the good deeds. Outstanding achievement of the ancient practice of education was the "Socratic conversation", fully



realizing his way of "self-renewal of truth" in the minds of the student.

Plato first justified the a priori nature of self-development of the triune human soul and built on its basis a utopian education system. Representing the human soul as a single substance, which includes the reasonable, volitional and sensual parts, Plato raises the question that a man should make constant efforts to understand what "sizes", the possibilities of each element of the soul he has from birth, must strengthen the reasonable part of the soul and the will to tame the sensual part. This inner contradiction between the lower, sensual and higher, the rational beginning is the driving force of self-development. Before us, in essence, one of the first models of human self-development, pedagogically interpreted by Plato in his works "State" and "Laws". Here he described an ideal system of educational institutions, each of which is a stage of self-development of a certain part of the soul: the ascent from sensual, physical manifestations of man to the willful and reasonable.

Aristotle, as it is known, in contrast to Plato, defended the a posteriori position in understanding the development of the human soul. He convinced that no virtue is given to us from nature, but it is not acquired besides the possibilities of nature, so the appointment of man - "the activity of the soul". This special human activity is defined, as Aristotle believed, by the constant contradiction of two principles: passive (matter) and active (form). The human soul is the active beginning in its material body. Its three main "abilities": vegetable, sensual and reasonable exist in unity and require harmonious development. The starting point for this harmonious development of the soul is the "active mind". It is the knowledge of good that guides all human desires and aspirations for action.

It should be noted that scientific reflection on the idea of personal self-development initially occurs in philosophical (theoretical) and pedagogical (applied) aspects. And the point here is not only that psychology as a science was formed later than pedagogy for almost a century and a half, but also that the pedagogical knowledge up to the middle of the XIX century.

One of the most influential concepts of human self-development in European pedagogy belongs to I.G. Pestalozzi. He regarded human education, following J.J. Rousseau, as the self-development of his own forces, which are granted by nature, and it predetermined the natural need for their active development. "The eye wants to look, the ear wants to hear, the leg wants to walk and the hand wants to grab. But also the heart wants to believe and love. The mind wants to think. In any deposit of

human nature there is a natural desire to get out of the state of lifelessness and ineptitude and become a developed force" [2].

In his search for reliable foundations for the self-development of a child, I.G. Pestalozzi defined three areas of strength: moral, mental, and physical. In each of them, he fixes "elements" - indivisible beginnings, "spontaneous abilities", which appear in a child already at birth and require constant work "with the help of himself". The elements of physical development are simple movements of common labor actions, which are the basis of skill. Elements of moral development - the first moral feelings (love, gratitude, trust), which awaken thanks to "natural maternal care". Elements of mind development - the ability to speak (word), the ability to sensual cognition (form), the ability to know unity [7].

I. G. Pestalozzi stresses the importance of the "balance" of the moral, mental and physical forces of man, the unity of the "inner, spiritual essence" of the self-development of moral feelings, mental and masterly abilities. In such unity, "being animated in a human way," acting and applying in life, they "will develop themselves"[7].

It is noteworthy that in the works of I.G. Pestalozzi, there are already notions of "psychological means," "psychological actions," "psychologically ordered exercises," and his thoughts about the development of the child's abilities for observation, speech, and thinking are quite psychologically equipped. Besides, it convincingly justifies the sequence of pedagogical interaction with the child, commensurate "with a certain level of development of his or her forces" [7]. But the most important is his search for the "trigger mechanism" of the primary integrality of heart, mind, and skill. I. G. Pestalozzi paid attention to the fact that, compiling his impression of the objects of the outside world, the child simultaneously creates an "idea" about his action with the object, about the evaluation of the object, about himself in relation to this object. Calling this act "contemplation" (a concept borrowed from I. Kant), I. G. Pestalozzi substantiates it as a holistic, conscious knowledge of things with its own attitude towards these objects, events or phenomena. He basically asserts that the initial beginning of the self-development of those forces that freely "come from themselves" is reason.

By definition of the Russian psychologist V.A.Ganzen the person is the integral mental system which carries out certain functions and arises at the person to serve these functions. Main functions of the person are inclusion of the person into the system of public relations and creative mastering of public experience. All sides of the person are revealed in relations with other people and only in activity.



Existence, manifestation and formation of the personality occurs only in activity and communication. [3].

## CONCLUSION

Thus, a person is not just a person as a biological individual, but a person with his or her talents and features, with advantages and disadvantages, with a certain set of socially significant parameters. Formation of a personality is a process of socialization of a person, which consists in mastering his or her family, social essence. This mastering is always carried out in concrete-historical circumstances of human life. Formation of personality is connected with acceptance by an individual of social roles and functions developed in society, social norms and rules of behavior, with formation of abilities to build relations with other people. The formed personality is a subject of free, independent and responsible behavior in society.

Personal structure is a set of socially significant mental properties, relations and actions of a person that have formed in the process of his or her development and determine his or her behavior. In the broad, traditional sense, a person is a subject of social relations and conscious activity. The structure of a personality includes all psychological characteristics of a person and all physiological features of his organism. In psychology it is customary to emphasize the social character of the individual - its emergence and development is possible only through the life of the individual in society. The personality is considered as an embodiment in a concrete person of social qualities, which are acquired through activity and communication with other individuals. A person is not born, but becomes a person [8].

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# INTERFERENCE OF THE NATIVE LANGUAGE IN THE PROCESS OF TEACHING A FOREIGN LANGUAGE

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## ABSTRACT

*The article deals with issues related to difficulties in teaching a foreign language (English), namely the impact of the native language on the process of teaching a foreign language. Such influence has both positive and negative aspects. Only through a systematic analysis of both language structures it is possible to identify the points that will help facilitate the learning process. An aspect of the difference in teaching methods between a mother tongue and a foreign language has also been addressed.*

**KEY WORDS:** *student, teacher, university, English, Russian, Uzbek, interference, communication, teaching process, violation, source, system, a foreign language, influence.*

## DISCUSSION

In the context of expanding and deepening contacts of Uzbekistan with other countries in business and public life today, the problem of intercultural communication in general, and language training of students of technical universities in particular, becomes particularly important [1]. Today, the influence of English as a means of international communication, mass media and computer technologies is great, so its teaching should be constantly improved. Since students' speech is not yet perfect, there is some "reliance" on their native language in the process of communication. As a result, this leads to violations of the system and norms of the second language, to the appearance of interference.

The primary system is considered as a source of intervention, the secondary system - as an object of intervention. The primary system can be represented also by the previously studied non-native language, when the features of the system of the previously studied foreign language, on which the human speech activity was carried out, are transferred to the newly studied language, so there is a distortion under the simultaneous influence of the system of the native language and other, previously studied languages. The Institute is attended by students who speak Uzbek and Russian. In this connection, when studying English, both Russian and Uzbek languages can be a source of interference.

The issues of studying two languages, native and foreign, have long been the subject of study by teachers, psychologists and philosophers. The term language interference was introduced by the representatives of the Prague Linguistic School. Interference is the interaction of language systems in the conditions of bilingualism, which develops either at the language contact or at individual learning of a non-native language [9]. Interference is considered to be a negative phenomenon, because mastering the speech skills of the native language provokes errors in bilingualism in the language under study. The main source of interference are differences in the systems of interacting languages: in phonemic composition, in grammatical categories and methods of their expression, etc.

Yan Comenskiy, considering the relationship between the mother tongue and the second language, emphasized the need to study each language separately, first the mother tongue and then the second [3].

K.D. Ushinsky warned against early learning of a foreign language, he drew attention to the fact that learning a second language should not begin before it is visible that the native language has taken deep roots in the spiritual nature of the learner [8].

E.I. Tikheeva believes that it is possible to start teaching in the second language only when a learner studies his or her native language at a high level. In her book on speech development for



preschoolers, she writes that: "The learner has not yet learned his or her native language, between his or her thinking and the skill of transmitting its results in the native language is not yet sufficiently subordinate to it, and the learner is already forced to learn a new, foreign language, or even two at the same time. We often encounter a distorted phenomenon when a learner's linguistic upbringing begins with a foreign language and his mother tongue is pushed backwards [7].

The main deviations from the norms of the English language on the phonetic, lexico-semantic and grammatical levels are associated with typological differences between English and native languages, with the peculiarities of the influence of native (Russian or Uzbek) language, the degree of knowledge of the second (English) language, as well as the lack of natural English speech environment. Lexico-semantic interference depends on the degree of mastering the vocabulary, semantics and stylistic features of the lexical units of English, on the level of bilingualism. Lexico-semantic interference represents deviations from the norms of English word usage, and its reasons can be called mismatching of the volume of word meanings in both languages, mismatching of lexical combinations and associative links in correlated words of English and Russian languages, synonymy and homonymy in English. Grammatical interference in the English speech of students is caused by differences in the grammatical structure of the Russian and English languages. The potential field of grammatical interference creates differences in grammatical categories of certainty and uncertainty, genus, plural nouns, type, time and pledge of the verb, etc.

Stylistic interference is the influence of one language style on another. It occurs because some lesser-known word starts to be used by analogy with its already known synonym. When stylistic synonyms are replaced by each other, the style of expression changes, although the subject in question may remain the same.

The most effective way to identify and, if necessary, extract positive aspects from parallels between the mother tongue and the language being studied. It is only through systematic analysis of both grammatical structures of the language that it is possible to identify moments that will make it easier for the learner to understand or, conversely, cause difficulties in learning a foreign language. Often, in students' understanding, such comparative analysis means transferring already acquired skills in the structure of the native language to the structure of the student. This desire to use grammatical methods that are already familiar and understandable to the learner often occurs until the learner reaches a certain level

of language in the process of learning a foreign language, or until he or she has enough receptive and productive skills to use the various forms of the language. This approach in learning is called interference. A large psychological encyclopedia gives the following definition of this concept: "Interference is a deterioration in memorization of material as a result of exposure (overlapping) of other material with which the subject operates. Interference is studied in the context of memory research, learning processes (in connection with the problem of skills)". In its limited sense, interference tends to transfer the rules to the native language of the student to a foreign language. But the use of such methods in learning involves the interference associated with differences between languages. In this case, when information is transferred from one language to another, it is interpreted or translated directly. Errors that arise as a result of this process significantly affect the meaning of the information being transmitted, in other words, distort it. Therefore, when studying a foreign language, interference should be avoided. The structure of a language should not include only interference, but it should also pay attention to cultural interaction and cultural transmission of social norms of two languages - native and foreign. I.I. Khaliyeva notes in her book "Language Knowledge and Linguistics" that "...mastering a national/foreign language expands the horizons of the worldview and allows better recognition and understanding of a foreign-language communication partner - a representative of a different society and culture" [6].

Ways of learning a foreign language: through society and immersion in the language environment; through the need and desire to communicate in the language of society, in this case the learner has a high level of motivation, desire to explain himself and be understood; through interaction with family and friends; through discussion of things around the learner's group; through hearing and gathering language skills long before applying it in practice (period of silence); playing and experimenting with new language forms in an involuntary situation; sometimes through socialization and immersion in the language environment, but most often through learning special language vocabulary; motivation in learning depends on the need of the student to use the language, therefore, its level may be low, medium or high depending on the situation; through interaction with the teacher and classmates; most often through discussion of life necessity subjects outside the classroom; often the language practice takes place after learning the language for a certain period of time, if necessary; through interaction with the teacher and classmates.



It does not always turn out to accurately describe the process of learning in the classroom, as it takes place through various methods and in diverse situations. The above described methods and situations can not always be, suitable for each type of education and practical training in the classroom, the examples above are taken from standard observations of situational methods. Of course, language learning can take place in non-standard situations, such as a walk in the park, where the teacher uses a live language by immersion of the trainees fully in the language environment of the studied language. In this case, foreign language learners are more typically described in the line related to native language learners, even though those who learn a foreign language in such situations are somehow less immersed in the language environment and their motivation is still reduced. And one should not overlook the fact that native language learners always have a high success rate as opposed to foreign language learners, even after long and intensive learning they still have doubts about their success and achievements.

## CONCLUSION

Teaching a foreign language always faces the problem of influencing this process with the mother tongue. This influence is stronger if a student's language level is reduced and not enough time is allocated for practical classes. Learning about the impact of the mother tongue on learning a foreign language is of undeniable interest to the theory and practice of learning. At the same time it is necessary to take into account the relationship between the two languages of the native language and the foreign language. The final result, the effectiveness of the methods used depends not only on the learning ability, the basic level of the students, but also on the quality of the learning process itself. Independent work can lead to a chaotic fusion of the two languages, especially if they are closely related. Also if learners do not have a strong motivation, the learning process does not have an adequate impact on communication skills and competencies. When learning a foreign language, it is necessary to compare the systems of native and studied languages in the field of phonetics, vocabulary and grammar, which gives a unit of communication.

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## DEVELOPING TEACHING SKILLS IN A FOREIGN LANGUAGE TEACHING

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### ABSTRACT

*The article pays attention to professionalism of a foreign language teacher. The skill of the teacher is emphasized. It is considered that the success of pedagogical activity depends on knowledge of pedagogy. The author of the article consider that raising the level of professional skills as a generalized ability to carry out their professional activities is crucial both for the preparation (self-training) of the teacher himself and for the development of the society as a whole.*

**KEY WORDS:** *student, teacher, pedagogical skill, a foreign language, professionalism, academic discipline, globalization, education, specialist, pedagogical technique.*

### DISCUSSION

In the conditions of globalization of modern educational processes and development of computer learning processes, the problem of intensive study of foreign languages and national cultures becomes more actual. In these sociocultural conditions, a new concept of pedagogical education is being developed, in particular, training of foreign language teachers and advanced training of foreign language teachers in technical universities.

At present, the problem of teaching a foreign language in technical higher educational institution is an urgent one. Traditionally, it is considered that the success of pedagogical activity depends on knowledge of pedagogy, one's own subject and knowledge of its methods. Psychologists in recent decades have proven that part of success depends on the ability of the teacher to create an atmosphere of mutual understanding, trust in the classroom, conducive to contacts, development, creative communication [2].

Each foreign language teacher should be experienced, knowing his subject better than other subjects and comprehensively developed specialist, have such qualities that could help him master the audience, be able to present each foreign word as a native. The most important condition for improving the educational process in the university is to improve the pedagogical skills, which are the core of any pedagogical system. Pedagogical skill of a

teacher is the possession of professional knowledge and skills, allowing a specialist to successfully solve professional problems. It is the knowledge of the peculiarities of the pedagogical process, the ability to build it and set it in motion [3].

A special place in the structure of a teacher's mastery is occupied by pedagogical technique. This is the set of skills and abilities, which is necessary for the effective application of the system of methods of pedagogical impact on individual students and the team as a whole. The ability to choose the right style and tone in dealing with students, the ability to manage attention, sense of pace, management skills and demonstration of their attitude to the actions of students [1]. To become a master, a creator, a teacher must master the regularities and mechanisms of the pedagogical process. This will allow him to think, act, analyze the pedagogical phenomena and divide them into constituent elements. Mastery of pedagogical skills is available to every teacher, provided that he works on himself.

Professionally significant personalities of a teacher is a complex of socially demanded qualities and abilities of a personality that allows to implement effectively modern educational goals. The success of a foreign language teacher depends on the level of professionalism. A professional is a specialist who has mastered high levels of professional activity, makes his or her individual creative contribution to the profession, finds his or her individual purpose,



stimulates interest in the results of professional activity in the society and increases the prestige of his or her profession in the society.

Professionalism is an integral characteristic of a person as a person, a subject and a professional. The skills of a foreign language teacher are divided into constructive, organisational, communicative ones, including didactic and organisational ones [5].

Constructive skills help a foreign language teacher to plan his or her activity; organizational skills are connected with the direct implementation of his or her plans; a teacher should be able to organize both his or her activity and that of students.

Didactic skills are the skills of a foreign language teacher to explain new material to students in a clear and comprehensible way, to demonstrate the skills of foreign language knowledge.

Organizational skills will allow the teacher to correctly and clearly conduct a well-thought-out training session, to implement the planned activity. In the process of education of interest in foreign language lessons usually proceed from the essence of the general system of educational work, as well as the features of the age of students [6].

The conditions of education and upbringing of students determine the interests of students in the activity and contribute to the formation of personality. Pedagogical skills are based on the professional level of a teacher, his general culture and pedagogical experience. For a teacher, the most important link of his professional activity shall be the practice of education, training and development of the younger generation. Pedagogical excellence shall consist not only of knowledge of the subject, professional competence and pedagogical technologies, but also of style, creativity, thinking, experience and many other factors.

The focus on the development of individual abilities of each student, on the education of intelligent, thinking individuals who are inclined to self-education is becoming more relevant [1]. The starting point for this can be an adequate organization of the learning process, namely, the interaction between the teacher and students as equal partners, individuals, and a team of individuals. When the teacher does not impact on the student as an object, he does not solve a problem instead of the student, who repeats the solution and they solve it together, and the teacher only helps, productive interaction is achieved. But the success of learning (and especially of learning a foreign language) does not depend only on the coordinated action of the teacher and the pupils. The interaction of pupils with each other is also important. However, it is rare for children to work together in a lesson that involves addressing each other, exchanging opinions, and really working

together. Children work side by side, but not together. But it is the interaction of their personalities, as well as the personality of the teacher, the mutual understanding formed between them, that forms the psychological basis for cooperation in the classroom. Only in the conditions of joint creative activity of the teacher and pupils, having for each of them personal sense, i.e. in the conditions of personal interaction, the partnership relations between them, which are shown in interrelation and mutual influence of the teacher and pupils, develop.

## CONCLUSION

Thus, the pedagogical mission is formed in the process of future teachers' accumulation of theoretical and practical pedagogical experience and self-assessment of their pedagogical abilities. From this we can conclude that the shortcomings of special (academic) training cannot serve as a pretext for recognizing the future teacher's full professional invalidity.

The professional important skills of a foreign language teacher can be divided into four groups:

1. Ability to learn the peculiarities of a learner's personality, which are formed and developed on the basis of self-knowledge process. The teacher should analyze his experience of learning a foreign language, correlate it with modern theory and practice of teaching the subject and project the obtained data on a specific educational situation.
2. Skills related to the planning of speech communication in the learning process. The teacher should be able to select, based on analysis, learning and visual materials that are most appropriate to the learning objectives and conditions.
3. The skills related to the implementation of planned professional activities and evaluation of their results. The teacher organizes students to carry out the planned activities in class and involves all students in communication. In the course of the learning process he observes the development of creative, cognitive and linguistic abilities of the child, the ability to socially interact with other students.
4. Ability to analyze the results of foreign language communication organized in the lesson.

A teacher of this subject should be an expert not only in the field of foreign language teaching methods, but also in the culture of one or more foreign countries whose peoples speak a particular language studied by students. A teacher of this subject should, in the course of teaching, serve as a native speaker of the culture of a foreign country as well as that of a foreign country, showing pupils the different aspects of the culture of other countries and helping them to understand and appreciate the



valuable aspects of that culture. As a native speaker of the culture of the country in which the subject is taught, the teacher must, in particular, know the standards of behavior adopted in the country, that is, he must not only know a foreign language, but also have a culture of speech in that language, expressed in a culture of speech behavior, in the richness, accuracy and expressiveness of speech, and in the observance of speech etiquette.

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# ASSESSMENT OF AMBIENT AIR QUALITY AND DEVELOPMENT OF GREEN BELT AROUND INDUSTRIES IN ASSAM USING SELECTIVE TREE AND PLANT SPECIES

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## ABSTRACT

*Industrialization is an important aspect of a growing economy. However, rapid industrialization has caused many serious impacts on the environment. One such impact is the deteriorating air quality, especially around industries. It is said that afforestation is the best and simplest way for improving the air quality. Also, trees and plants have been increasingly used as filters for dust particles around the home, traffic roads, etc. In scientific studies, it has also been found that trees and plant leaves can be used to assess the ambient air quality by an index called the Air pollution tolerance index. A literature search has been done on the scientific database like Scencedirect and Researchgate to review the existing knowledge of Air pollution tolerance index and to find the tolerant and sensitive species based on it so that these species can be selectively planted to assess the ambient air quality and also to develop a better green belt around refineries and industries in Assam. The study has reviewed the linkage of the impact of air pollution on leaves of plants and trees through scientific evidence. Through such scientific reviews, the most tolerant species of trees and plants were chosen with the condition that it can grow under the climatic condition of Assam. The recommendation and suggestions of tolerant tree and plant species can be used for specific species plantations for developing green belts around refineries and industries in Assam. The recommendation of sensitive species can be used for monitoring ambient air quality with reference to other standard procedures.*

**KEYWORDS:** *Air pollution tolerance index, Industries, Air- pollution, Green belt*

## I. INTRODUCTION

Due to rapid industrialization and urbanization, air quality has been deteriorating day by day. Industries release many harmful pollutant chemicals from stack emission which can impact the air quality around it. Also heavy vehicular movements around industries release dust and other pollutants in the air.

Since leaves are exposed to air all the time, the deposition of dust and atmospheric pollutants on them may have negative impact on them. Dust depositions can cover the leaves blade restricting them to receive direct sunlight for proper photosynthesis [1]. Studies has shown that plants are quite sensitive to pollutants like CO, SO<sub>2</sub> and NO<sub>2</sub> and high dosage of such pollutants in longer run can lead to leaf necrosis, growth inhibition and may cause plant death [2]. Other effects of pollutants on leaves include variation in ascorbic acid content [3], Chlorophyll content [4], leaf extract pH, and relative water content. The Air Pollution tolerance index is an index based upon these four biochemical parameters defines a species of plant and trees to be sensitive or tolerance against interactions with air pollutants. Through

scientific research and reviews of the Air Pollution tolerance index, the most tolerant species of plants were chosen with the condition that it can grow under the climatic condition of Assam. The recommendation and suggestions of such tree species can be used for specific species plantations for developing green belts around refineries and industries in Assam. Also sensitive plant species can be used as ecological indicators for qualitative assessment of ambient air quality around the refineries and industries in Assam.

## II. RELATED STUDIES

### A. AIR POLLUTION TOLERANCE INDEX

Air pollution tolerance index is an empirical relation[5] that evaluates the tolerance level of plant and tree species to categorized them into sensitive or tolerant to the impacts of air pollutants. It is based upon the biochemical parameters mentioned below.

a) Ascorbic acid: Studies highlighted the highest correlation between Sulphur dioxide(SO<sub>2</sub>) sensitivity and ascorbic acid content in plant leaves[3].



b) Chlorophyll: Reduction of chlorophyll has been observed to be more in plant and tree species growing in polluted areas as compared to less polluted areas[4].

c) Relative water content: Studies have shown variation in relative water content under air pollution stress. Relative water content refers to the capacity of the cell membrane to maintain its permeability [6]. Cell membrane permeability is involved in the loss of dissolved nutrients and water in plants and trees and therefore the high relative water content of the leaf ensures they are thriving in a polluted environment for its physiological balance under pollution stress[7].

d) pH of the leaf extract: Studies have shown the variation of pH under polluted environment. Leaves of plants and trees whose pH has shown to decrease under polluted environment are sensitive towards pollution. A higher level of pH in leaf extract indicates that the plants are tolerant under polluted conditions. pH plays an important role in signifying the condition of plants with respect to the study area[6].

Equation for APTI is mentioned below.

$$APTI = \frac{A(T+P)+R}{10}$$

Where A = ascorbic acid content (mg/g)

T = total Chlorophyll (mg/g)

R = relative water content of leaf (%)

P = pH of leaf extract

Plant and tree species are categorized into sensitive species when the Air Pollution tolerance index is below 11, while above 11 is considered to be tolerant species. Species showing the Air Pollution tolerance index more than 17 are considered to be highly tolerant. The categorization was based as mentioned by the first formulator of the index[8]. However in recent times other parameters like canopy structure, type of tree, laminar characters, economic value along with APTI index has been used to formulate other strong parameters like the Anticipated performance index[9].

## B. PLANTS AND POLLUTANT INTERACTIONS

Leaves interaction with dust, Suspended matter, Sulphur dioxide (SO<sub>2</sub>), Nitrogen dioxide (NO<sub>2</sub>) and other oxides of Nitrogen (NO<sub>x</sub>) and carbon monoxide (CO) has been reviewed as these five pollutants are common to every industries.

### Dust and Suspended Particulate Matter

Physical characteristics of leaves like shape, trichomes, and stomata significantly get affected by accumulation of dust and particulate matters[10]. Dust and particulate matter when deposited over the leaf surface, clogs stomata apertures and prevents the exchange of gases by leaves reducing the rate of photosynthesis[1].

#### SO<sub>2</sub>

Leaves absorb SO<sub>2</sub> via stomata. Inhibition of photosynthesis can take place if SO<sub>2</sub> is hydrated and oxidized to sulfite and sulfate in higher concentrations at apoplastic pH[10]. This can cause SO<sub>2</sub> toxicity with symptoms like

interveinal chlorosis and necrosis in broad-leaved species and chlorotic spots and brown tips specially when observed in pine conifers[11].

#### NO<sub>2</sub> AND NO<sub>x</sub>

Impact of leaves on interaction with NO and NO<sub>2</sub> is much less than interaction with SO<sub>2</sub> as these are required as nutrients by the plants and trees. NO and NO<sub>2</sub> are absorbed and dissolved in the extra-cellular fluid matrix of leaves, are absorbed and dissolved and forms nitrate (NO<sub>3</sub>) and NO<sub>2</sub> in equal amounts and proton (H<sup>+</sup>)[10]. NO<sub>3</sub> is then utilized by plants for synthesizing amino acids and proteins. However symptoms of overexposure of NO<sub>2</sub> include irregular brown or black spots[10].

#### CO

Study of the effect of CO in some plants showed epinastic growth of leaves, hyponasty causing upward curling of leaves, retarded stem elongation, abnormally small leaves, yellowing of leaves and hypertrophied tissues on stems and roots[12].

## C. STUDY-RELATED TO APTI VALUES AROUND INDUSTRIAL AREAS

Scientific studies were done through in depth analysis of scientific papers of research taken only around industrial areas. Areas outside industries were not taken for study.

In a study of Air Pollution tolerance index of tree and plant species around industries, it has been found scientifically that Air pollution tolerance index can be used for selection of suitable species for better planning of developing green belt around industrial and urban areas [13].

In a study of APTI values of trees in three areas ( residential, commercial and industrial ) the quality of air with respect to particulates, SO<sub>2</sub>, and NO<sub>2</sub> was also assessed on respective sites to evaluate the Air pollution tolerance index of the trees [14]. It was concluded through one way ANOVA that the obtained Air pollution tolerance index values to be highly significant at the industrial sites to that of the control site. Through this study it can be said that the Air pollution tolerance index values can be used as a qualitative method for assessing air quality through sensitive species and also the selection of tolerant species for green belt development around industries.

In a study conducted for the evaluation of some tree in three industrial locations of South Bengaluru, India the most tolerant tree species with respect to APTI and heavy metal concentration were Ficus religiosa, Azadirachta indica and Pongamia pinnata [15]. These plants were considered to be tolerant species in the industrial areas. Further from the same study, the Air pollution tolerance index values were used to find the most polluted industrial area among three industrial areas.

In a study of assessment of Air pollution tolerance index of selected plants around the cement industry and control area,



Coimbatore, India it was found that among the species studied *Mangifera indica*, *Bougainvillea* species, *Psidium quajava* showed high APTI values [16]. *Thevetia neriifolia*, and *Phyllanthus emblica* showed low Air pollution tolerance index values.

In another study of Air pollution tolerance index of plants growing near a small scale industrial area showed that emission from even small scale industries can cause considerable impact on the vegetation growing in the vicinity [8]. The study observed that among the various biochemical parameters of the plant leaves, ascorbic acid content was found to be the most crucial factor providing tolerance to the plants against air pollution. Species found to be tolerant was suggested for greenbelt design to assist the air pollution management practices in industrial areas.

### III. METHODOLOGY

Plant species that are suitable for growing in Assam and already available in the region has been only been sorted out and was classified as sensitive or tolerant on the basis of Air pollution tolerance index. Plants species with APTI value lying less than 11 have been considered sensitive while more than 17 have been considered tolerant.

Environmental factors like weather type of soil, location can cause variation in Air Pollution tolerance index results. There might be situations arise when a particular plant species can show the index values in the range of tolerance and in other locations in the range of sensitivity. Therefore, it is always better to take consider the trees or plants as sensitive or tolerant species by not just comparing Air Pollution tolerance index values, but also comparing the Air Pollution tolerance index values of the same plant species from a control region nearby which is not under pressure from pollutants.

If a significant variation is observed in the index value of the species near the industries to that of the same species in the control area, then we may conclude that species are tolerant or sensitive based upon the positive or negative difference of the index. A positive difference of the index of a particular species growing around the industrial area to that of the index growing in control area can be considered tolerant or if negative difference is observed the species can be considered to be sensitive.

### IV RESULT

Table 1 shows the list of the trees and plants which has been found sensitive and tolerant based upon the Air Pollution tolerance index values. Trees and plants has been categorized into sensitive and tolerant species when the Air Pollution tolerance index value of that particular tree or plant is below and above 11 respectively and when the Air Pollution tolerance index value show a significant difference between the values of the industrial area and control area

**Table 1 List of tolerant and sensitive plant species favorable for growing around refineries and industries in Assam.**

Species Name	Common name	Category
<i>Holoptelea integrifolia</i> [14],[16].	Indian Elm <b>Assamese Name:</b> NA	Tolerant
<i>Cassia siamea</i> [14]	Bombay Blackwood tree <b>Assamese Name:</b> Sia Sunaru	Sensitive
<i>Pongamia Pinnata</i> [14],[15].	Indian Beech Tree <b>Assamese Name:</b> Korach	Tolerant
<i>Bauhinia variegata</i> [14].	Kaachnar <b>Assamese Name:</b> Kanchan gos	Sensitive
<i>Azadirachta indica</i> . [15][16][13]	Neem <b>Assamese Name:</b> Neem goos	Tolerant
<i>Ficus Religosa</i> [15][16][8].	Peepal <b>Assamese Name:</b> Aanhot gos	Tolerant
<i>Mangifera indica</i> [16].	Mangoe <b>Assamese Name:</b> Aam	Tolerant
<i>Bougainvillea species</i> [16].	Bougainvillea <b>Assamese Name:</b> Kagoj ful gos	Tolerant
<i>Psidium quajava</i> [16][8].	Guava tree <b>Assamese Name:</b> Madhuri am	Tolerant
<i>Tamarindus Indica</i> [16].	Imli <b>Assamese Name:</b> Tetuli	Tolerant
<i>Thevetia neriifolia</i> [16].	Yellow oleander <b>Assamese Name:</b> Korobi	Sensitive
<i>Phyllanthus emblica</i> [16].	Aamla <b>Assamese Name:</b> Aamlakhi	Sensitive
<i>Dalbergia lanceolaria</i> [15].	Takoli <b>Assamese Name:</b> Meda-luwa	Tolerant
<i>Delbergia sissoo</i> [16].	North Indian rosewood <b>Assamese Name:</b> Shisu gos	Sensitive
<i>Rosa Indica</i> [16].	Rose <b>Assamese Name:</b> Gulab	Sensitive
<i>Moringa oleifera</i> [16].	Drumstick tree <b>Assamese Name:</b> Sojina	Tolerant
<i>Aagle marmelos</i> [16].	Indian bael <b>Assamese Name:</b> Bel	Tolerant
<i>Albizia lebeck india</i> [16].	Indian Siris <b>Assamese Name:</b> Sau koro	Tolerant
<i>Helianthus annuus</i> [16].	Coomon Sunflower <b>Assamese Name:</b> Suryyamukhi	Sensitive
<i>Ficus benghalensis</i> [8][16]	Indian Banyan <b>Assamese Name:</b> Botgos	Tolerant
<i>H.brasiliensis</i> [8]	Pará rubber tree <b>Assamese Name:</b> Robor tree	Tolerant
<i>Syzygium cumin</i> [8][15]	Java Plum <b>Assamese Name:</b> Kalajam	Tolerant

### V.CONCLUSION

From the study of Air Pollution Tolerance Index of tree and plant species around industries from various scientific publications, trees and plants especially tolerant species were sorted out on the basis that they can be grown in Assam and already growing in the region.

Most of the trees mentioned have medicinal and economic values. Some of them can be used as an ornamental plant. Developing of green belt with the mentioned tree and plant species can also help in improving the carbon sequestration



capacity around the area. The study therefore figures out successfully the list of tree and plant species that can be used for the qualitative assessments of the ambient air quality and development of the green belt around refineries and industries in Assam by the Air Pollution tolerant Index. The species mentioned can be used for plantation activities on occasions like Environment Day and Earth day.

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# ENHANCING INTEGRITY AS A POSITIVE VALUE FOR EFFECTIVE LEADERSHIP AND GOOD GOVERNANCE IN NIGERIA

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## ABSTRACT

*One major problem for the citizens of any country has been the privilege to elect or appoint leaders with integrity and who are ready to maintain high moral standards and norms in the conduct of public affairs especially in a democratic setting where expectations are usually high from electorates. In democracies like Nigeria, what is experienced in most successive governments are leaders with Acquired Integrity Deficiency Syndrome. These are leaders who are competing on high magnitude and mode of certain unethical conduct such as fraud, corruption, and collusion with armed /pen robbers. The unethical dimensions of how influential and powerful people in the society conduct themselves; have set a bad precedent to the younger generation and lowly ones in the society, especially those in the formative again. For Nigeria to regain integrity and express positive values in the core of leadership, the war against corruption must be tackled with the right weapon. We cannot continue to use “catapult to shoot an elephant”. There must not be sacred cows. This battle must be taken with all sincerity of purpose; the existing procedures and sanctions for dealing with misconduct should be vigorously be fine-tuned.*

**KEYWORDS:** *integrity, leadership, good governance, democracy, corruption, public affairs, character.*

## 1. INTRODUCTION

Integrity is not a trait that we are born with, rather it is acquired as we go through various stages of life. Most of our leaders do not come from family backgrounds that would reflect their level of integrity but in the course of influencing people and also engage in proper character transformation, integrity is developed

According to Thomas M. Cunningham (2002), no two people have the same level of integrity even though we share common ideologies. He further stressed that this process of integrity begins when we are very young, usually taught by our parents, grandparents, neighbors, teachers, and other children whom we may have contact with. This process can also be taught by reading or by the watching of certain television programming. The process by which we develop integrity is also dependent upon our reception senses as well. How many times have we heard of families who were the cornerstone of integrity and wholesome living in the community,

only to have a child who turned out to be the complete opposite, otherwise known as “the demon seed?” In defense of that example the reverse can be true as well, there have been some who come from families that have lacked integrity only to have a child who possesses a high level of integrity. While this does not happen often, it does happen (Thomas M. Cunningham2002).

James F. Bracher (2012) in his contribution, said that integrity is congruence between what you say and what you do, as well as what you say about what you did. Integrity is the keystone of leadership. The keystone holds the enterprise together at its most critical junction, where ideas, products and services meet the customer. The keystone enables the arch to fulfill its supportive mission. Integrity enables an organization to achieve its mission. Integrity is the strength, unity, clarity and purpose that upholds and sustains all of the activities of the enterprise. Integrity provides this stabilizing dimension by never, ever, compromising. Integrity recognizes risks and



assumes responsibility. It drives the realization of vision toward the enterprise's destination. Leaders exude integrity.

We cannot rule out the fact that one of the challenges of leadership is leading with integrity. People want their leaders to be a source of trusted values and integrity. They look to their leaders for assurance and confidence and for clarity, vision and purpose particularly during times of uncertainty (McKee, 2010). Phrases like “walk the talk” and “lead by example” are often talked about. We insist on integrity in our business and political leaders because they are granted so much power over us. So much is expected of leaders, which is why we feel let down when there is lapse in integrity.

It is claimed that leaders need integrity in order to function effectively. Integrity is seen as a positive attribute. When it is said that person “has integrity” it is a compliment, meaning honesty and strong character. Integrity derives from the Latin root “integer” meaning whole, or complete therefore combination of the two terms: leading completely (Suggs, 2007).

Dr Kenneth Boa (President of Reflections Ministries, Atlanta) describes integrity as the direct opposite of hypocrisy; he states “it’s self-evident that a hypocrite is unqualified to guide others toward attaining higher character. No one respects a person who talks a good game but fails to play by the rules. What a leader does will have a greater impact on those he or she wishes to lead than what a leader says. A person may forget 90 percent of what a leader says but he or she will never forget how the leader lives”.

In other words, integrity has direct relationship to ethics, morality, authenticity, commitment, but what we need is a clear understanding of the concept of integrity. Integrity is concerned with individual wholeness and conscience – the quality of being true to oneself.

The rewards for integrity always come at a long run. The gain for lies and deceit may pay for a short while but the end will always be disastrous.

### **Leadership Definition:**

John C Maxwell: In the 21 Irrefutable Laws of Leadership, John Maxwell sums up his definition of leadership as “leadership is influence - nothing more, nothing less.” This moves beyond the position defining the leader, to looking at the ability of the leader to influence others - both those who would consider themselves followers, and those outside that circle. Indirectly, it also builds in leadership character, since without maintaining integrity and trustworthiness, the capability to influence will disappear.

Warren Bennis: Warren Bennis' definition of leadership is focused much more on the individual capability of the leader: “Leadership is a function of knowing yourself, having a vision that is well communicated, building trust among colleagues, and taking effective action to realize your own leadership potential.”

Peter Drucker: The forward to the Drucker Foundation's “The Leader of the Future” sums up leadership: “The only definition of a leader is someone who has followers.” To gain followers requires influence (see John Maxwell's definition below) but doesn't exclude the lack of integrity in achieving this. Indeed, it can be argued that several of the world's greatest leaders have lacked integrity and have adopted values that would not be shared by many people today.

Some of the common ideas that others include in leadership definitions include exerting influence, motivating and inspiring, helping others realize their potential, leading by example, selflessness and making a difference.

Above all, Peter Drucker gave us a clear-cut image of the leadership definition which include qualities needed to enhance effective leadership and good governance.

### **Features of A Good Leader**

Del Suggs (2007) asserts that, first of all, leadership comes from our values and beliefs. Our values are essentially our attitude about worth. What do you consider important, worthy, or of value? And our beliefs are the assumptions that we carry, perhaps understood as our convictions. Beliefs are also important, because we compare every new experience against an existing conviction, and evaluate it.

A second source of leadership is our ethics and character. Ethics is often confused with morality, or right and wrong. When I refer to ethics, I mean our conduct in a given situation. I think ethics is situational. People we consider to be ethical are people who behave consistently in the same or similar situations. Consider character to be a summation. It's the combination of your conduct, values, and beliefs.

Knowledge and skills are another source of leadership. Think of knowledge as the information you've learned-- what you know. Skills are those abilities and capabilities that we gain throughout life. Certainly we look for our leaders to have knowledge and skills.

The fourth source of leadership is authority. We often think of authority as power, but that's not exactly right. Someone with power is just the boss. He or she may not have any real authority. I like think of authority as power that we give to someone



as a function of their position or job. Most of our elected officials have authority-- we've given them power over us by voting them into office. When officials leave office, they tend to leave their power behind for the newly elected official.

Apart from the relevant features stated above, James F. Bracher (2004) contribution is that integrity has some attributes which must qualify a good leader which include:

1. **Character:** Being consistency between word and deed, care about other people around you and do the right thing even when no one is watching you.
2. **Honesty:** Truthful communication.
3. **Openness:** Operational transparency. Know and understand the rules
4. **Authority:** Know that you have the right to do something, to take action.
5. **Partnership:** honor obligations. Look for ways to help one another --- and then pitch in!
6. **Performance:** accountability throughout the organization. Live up to promises
7. **Charity:** generous community stewardship. Give to others with no strings attached -- don't expect to get anything back

### **How Characters Influences Leadership**

A nation with people of strong positive character is an asset to her citizen because standard of living will be high. Whereas a nation that is low in character is a liability to her citizens in the comity of nations. In the fast changing and deteriorating world of today, leadership with strong positive character is desperately needed in Nigeria. Nigeria should be best positioned to provide leadership envisaged to take the world out of the morals that inept good governance. This is why it is imperative for Nigeria to raise up to the occasion.

Nigerian leaders need to have strong and positive sense of responsibility of who they are in power. They should understand and accept that their self- worth does not come from the position they occupy but their stand on what they believe is right.

All leaders need to be confident that their worth is ultimately from whom they are, rather than what they accomplish. Failure does not discourage the leader but continues to focus on his responsibilities. 'Failure is an event-not a person 'so says John Maxwell.

In national leadership, trust is perhaps the greatest characteristics a leader must build. Without trust people will not follow the leader's vision; they will not put forth their full efforts. Trust is built out of a strong character and transparency.

Ensure what you think, say, and do matchup, examine your motives. If the circumstances change will your action change?

Stand for the things you considered right despite fear. When you act wisely inspire of the fear, you will win over it. Control your fear by taking every fearful thought captive. Confront your fear by looking fear in the face and tell it you would and what you would not accept.

### **The Force Of Character**

- Character distinguish you be advertising the sterling qualities in you and undeniable strength.
- Character endears you to the heart of your leaders, peers and followers respectively.
- Character speaks for you when everybody abandon you or ignore you.
- Character takes over when reputation fails.
- Character imbues you with confidence and strength when ll else fail and everyone condemns you.
- Reputations attracts people to your leadership style but character is what make them remain with you long after they have forgotten what even made them draw closer to you in the first place.
- Whereas ordinary or vain people protect their reputations, character protects the leader with strong positive value.
- Characters cannot be intimidated by limitations because it is who you are in the real sense.
- Character makes you a credible, dependable and predictable leader ever when the chips are down.
- Character is the best legacy you can give the followers and successors. Character is transferrable through teaching, indoctrination and mentoring.

According to Pastor Adeola Mensah (2012), when all things are lost you can still be a transformational leadership. But if you fail the test of character, your leadership position may never be recovered. Character is like an elevator. It takes you up if you apply the right principles. However, if you press the wrong button it can bring you down or get you trapped in the middle of nowhere in leadership, governance and life.

Despite the many failures of leadership in the past and present generations, leadership is still needed today as it is important in initiating meaningful change and galvanizing people to respond. However, it is pertinent to reiterate that knowledge and skills without character can be outright irresponsible and dangerous and can lead to evil outcomes on the part of the leader.



### Value -Based Leadership

Value represents principles which are truth that are universally applicable to guide behavior. Enduring values, when imbibed and practiced consistently, become standards of behavior that can ensure the utmost good to the person, group, nation, or group of nations. They can, therefore, be looking at as a moral standard that guide the way of the people relate and treat one another. When the principle of selfless love guides a person, he will weigh every action of his in this light. He is therefore able to decide among options and choices that he may face in his every day activities. Several groups and profession has put these standards together into what are referred to as the ethics of the profession or association.

The leader should look deep within him to identify the sacred convictions of his heart that would guide his behavior irrespective of the circumstances. These values should be timeless and unchanging and he should be ready for their convictions. This leads to compromises which whether we want to accept it.

### Perspectives

I am in agreement with Del Suggs (2007) who suggest three formulas for leaders to improve their integrity:

1. Leaders with integrity ignore self-interest and personal gain, and reach out to do the best for those they lead. Leaders with integrity are not the stereotypical boss, barking out orders for others to follow. They are more like shepherds. They pursue the best for others and watch after their flock. Little wonder, the followership gets fully committed to the leader's agenda, which should be in tandem with organizational objectives.
2. Leaders with integrity to guard the resources of the group. That means spending funds wisely, using volunteers fairly, and properly utilizing and developing followers. Leaders with integrity are like farmers. They take care of the land, guard the crops, and maintain the resource in the interest of the organization.
3. Leaders with integrity always keep their followers in mind, they never forget their constituents. They are constantly looking for ways to lead, to take responsibilities, and to do a job as a leader. Leaders with integrity like good parents. They are always thinking about their children.

Nigeria greatest problem in governance within the democratic structure is the absence of integrity. According to Professor Wale Omo (2012), Nigerians

are living in a land where yesterday is better than today; where institutions get weaker by the day; where religious centres are mostly trading centres; where traders sell fake to the people; where mediocres are celebrated as achievers; where the dubious play a role of a genius and where corruption expands in high proportion to position. That land will destroy the real vision; it will ground the real and potential leaders. That land is travelling on a fast track to the abyss. The world must come to her rescue.

Nigeria needs rescue missions that will enable her at the end of the day to produce visionary leaders with positive values in order to enhance integrity in the affairs of public governance. This mission requires people who can display the extraordinary ability to ignore chaos and difficulties that surround on decay system and remain focus on positive values. People equipped with inspiring and profound abilities to pierce through hard times into the future and envision the future of Nigeria as a great nation.

Integrity should be earned in the society. Parents should focus more on children upbringing than pursue of money and allow the virtues of good family moral values and ethics be eroded in the fabrics of future and potential leaders.

### CONCLUSION

In Nigeria as a country, days are gone when integrity and transparency took preeminence in the society. Today, we only hear about looting the treasury, massive fraud in the banking sector, e-crime, and corruption and here the common man find themselves harbouring grievances without solutions.

Several governments have come and gone with various structures and agencies to address this situation but worsened on daily basis.

This crusade is to build a viral state devoid of unethical behaviour and conduct known in recent times, where private sector organizations seem to be in keen competition with their public sector counterparts in the magnitude and mode of certain unethical conducts such as e-fraud, corruption, collusion with armed robbers/kidnappers, unauthorized debiting of customers' accounts and so on. There is of course the menace of undue victimization and harassment on the basis of ethnic, religious considerations. Above all, the up-coming generation must have pedestal of information with the moral and social value-orientation in the society which is experiencing a state of decay and confusion.

Virtually no one is completely honest. A leadership which messes up in a big way should come clean and admit their errors. People will generally forgive mistakes but they do not tolerate being treated like idiots by leaders. A mistake is



therefore an opportunity to be better, and to show remorse and a lesson learned

Leaders must establish internal organization codes, systems and structures that reward ethical conduct and punish leaders that behave otherwise. We must deliberately make 'heroes' of leaders with proven track of integrity to encourage such behavior and guarantee organizational effectiveness we must desist from measuring just organizational success without thorough appraisal of the 'method' of attainment of such goals. Organizational chaos is guaranteed if leaders only focus without resistance in right methods.

Public officials should exhibit high ethical standards of behaviour while in office; and the elected officials should be ready to account for the political power in their hands. The issue of accountability and transparency should take a central stage in the affairs of leadership and governance. Emphasis on fighting corruption should be given serious attention so that it can be minimized in the fabrics of the people. It is good to understand that the source of good leadership cannot be position, power, pressure or popularity. Being a decent human being is often the major part of the answer to what makes people great leaders.

Above all, strategies for enforcing accountability and transparency should be put in place so as to give this new generation a sense of belonging and hope for a better Nigeria.

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## **PATIENT HEALTH MONITORING USING ARDUINO THROUGH IOT**

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### **ABSTRACT**

*Health has prime importance in our day-to-day life. Sound health is necessary to do the daily work properly. Monitoring your beloved ones becomes a difficult task in the modern day life. Keeping track of the health status of the patient at home is a difficult task. Especially old age patients should be periodically monitored and their loved ones need to be informed about their health status from time to time while at work. An innovative system that automated this task with ease. System puts forward a smart patient health monitoring system that uses Sensors to track patient health and uses internet to inform their loved ones in case of any issues. This project aims at developing a system which gives body temperature, blood pressure and heart rate using LM35, pressure sensor and pulse sensor respectively. These sensors are interfaced with Micro Controller Arduino ATMEGA328. This Micro-Controller Arduino ATMEGA328 is provided with a programming written in embedded c language. The data is sent to the server through wireless data transmission. This wireless data transmission is done by ESP8266 module. Data is transmitted on IOT platform i.e. thing speak which generates the graphs of Temperature, Blood Pressure and Heart Beat over a period of time. Data visualization is done on Thing speak, so that record of data can be stored over period of time. This data is stored on web server, so that it can be seen to user who logged into the website using his username and its corresponding password.*

**KEYWORDS:** *IoT,Arduiuno, Microcontroller, Smart. Health.*



## INTRODUCTION

Health is the fundamental capability humans require to perceive, feel, and act effectively, as it represents a primary element in the development of the individual. [1] That is why it is necessary to provide adequate ways to manage healthcare by monitoring and medical assistance. [2] Increased life expectancy of the elderly and technological evolution led to innovative and effective solutions for in-home monitoring and treatment of patients. [3] This introduces the use of telemedicine and home monitoring using Internet of Things (IoT). [4] A solution for a sustainable and adaptable patient oriented infrastructure development is presented with the help of Arduino UNO R3. [5] Thus this hopes to achieve a solution that is cheap and economically stable. [6] This proposes architecture for the system, which is developed using the above mentioned devices. [7] The main applications of IoT can be in healthcare, which increase the availability, quality of care and reduces costs. This system will help in real time monitoring of the patient but will be cost. Advancement in information and communication technologies has led to the emergence of Internet of Things. [8] In the contemporary health care environment, the usage of IoT technologies brings convenience of physicians and patients, since they are applied to various medical areas (such as real-time monitoring, patient information management, and health care management). [9] The body sensor network (BSN) International Journal of Engineering and Manufacturing Science. technology is one of the core technologies of IoT elaborating in health care system, where a patient can be efficient. [10] Thus we can make use of arduino for developing cheap systems in healthcare using IoT. [11] In our system we are measuring patient's parameters like Blood Pressure, temperature, and heart rate sensors. The persons. The doctors, patient or his caretakers are sensors values are collected and the data information is given to arduino and then it is transferred to server. [12] [13] The data stored in a database and can be displayed in a website that can be accessed only by authorized given authorization to view the status of the patient. [14] [15]

## 2. LITERATURE SURVEY

### 2.1. Introduction

Patient-Monitoring Systems, Reed M. Gardner & M. Michael Shabot, Year 2014 To meet the increasing demands for more acute and intensive care required by patients with complex disorders, new organizational units—the ICUs—were established in hospitals beginning in the 1950s. The earliest units were simply postoperative recovery rooms used for prolonged stays after open-heart surgery. Intensive-

care units proliferated rapidly during the late 1960s and 1970s. The types of units include burn, coronary, general surgery, open-heart surgery, pediatric, neonatal, respiratory, and multipurpose medical-surgical units. Today there are an estimated 75,000 adult, pediatric, and neonatal intensive care beds in the United States. IoT-Based Health Monitoring System for Active and Assisted Living, Ahmed Abdelgawad, School of Engineering and Technology, Central Michigan University, Mt. Pleasant, MI 48859, USA, Year 2017.

- [1] The Internet of Things (IoT) platform offers a promising technology to achieve the aforementioned healthcare services, and can further improve the medical service systems IoT wearable platforms can be used to collect the needed information of the user and its ambient environment and communicate such information wirelessly, where it is processed or stored for tracking the history of the user. Such a connectivity with external devices and services will allow for taking preventive measure (e.g., upon foreseeing an upcoming heart stroke) or providing immediate care (e.g., when a user falls down and needs help). Recently, several IoT systems have been developed for IoT healthcare and assisted living applications.
- [2] IOT based health monitoring systems, Nayna Gupta & Sujata Pandey, Year 2012. In this fast pace world, managing work and health simultaneously have become a matter of concern for most of the people. Long waiting hours at the hospitals or ambulatory patient monitoring are well known issues. The issues demands for a health monitoring system which can monitor the daily routine

### 2.2. IOT Platform

#### 2.2.1 Introduction

Nowadays, a massive amount of data is being generated and stored in the cloud. One of the main promises of analytics is data reduction with the primary function to support processing with the help of the existing infrastructure. The motivation of this chapter direction comes from data being generated from a variety of sources, such as healthcare industry, communication, messaging networks, mobile sensors and many others, rather than a new storage mechanism. Data reduction techniques for Big Data have three perspectives: descriptive analytics, predictive analytics and prescriptive analytics. In the pay-as-you-go cloud environment, the storage can be very expensive. The perspective of this chapter is represented by: monitoring, analysis



and control of environments, based on collected data from a network of sensors. The Internet of Things (IoT) is a paradigm where every object can be identified and has sensing, networking and processing capabilities. The objects can communicate with each other or with other devices or services available over the Internet. Those objects will be ubiquitous and context-aware. The objective of this chapter is to highlight the current status of the evolution, trends and research on Internet of Things applied in e-Health by examine.

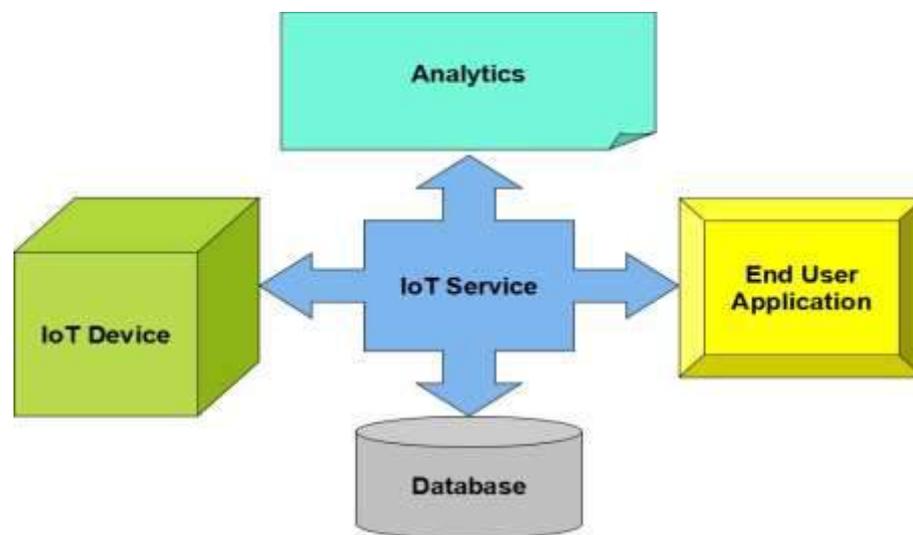
The existing system makes use of heart beat sensor to find out the current heart beat level and display it on the LCD screen. The transmitting circuit includes AVR family microcontroller interfaced to LCD screen and this transmitting circuit is powered by 12V transformer. Similarly, the receiving circuit includes AVR family microcontroller and RF receiver and also has a 12V transformer. The receiver circuit also includes LED light and a buzzer which are used to alert the person supervising the heartbeat rate of the patient and turns on the LED light and buzzer

as soon as the heartbeat level of the patient does not fall within the normal heart beat level set.

#### □ **Thing Speak**

Internet of Things (IoT) describes an emerging trend where a large number of embedded devices (things) are connected to the Internet. These connected devices communicate with people and other things and often provide sensor data to cloud storage and cloud computing resources where the data is processed and analyzed to gain important insights. Cheap cloud computing power and increased device connectivity is enabling this trend.

IoT solutions are built for many vertical applications such as environmental monitoring and control, health monitoring, vehicle fleet monitoring, industrial monitoring and control, and home automation. At a high level, many IoT systems can be described using the diagram below:



**Figure 2.1 The Function of ThingSpeak.**

#### □ **IOT ARCHITECTURE**

The Internet of Things (IoT) is a paradigm where every object can be identified and has sensing, networking and processing capabilities. The objects can communicate with each other or with other devices or services available over the Internet. Those objects will be ubiquitous and context-aware. The objective of this chapter is to highlight the current status of the evolution, trends and research on Internet of Things applied in e-Health by examine.

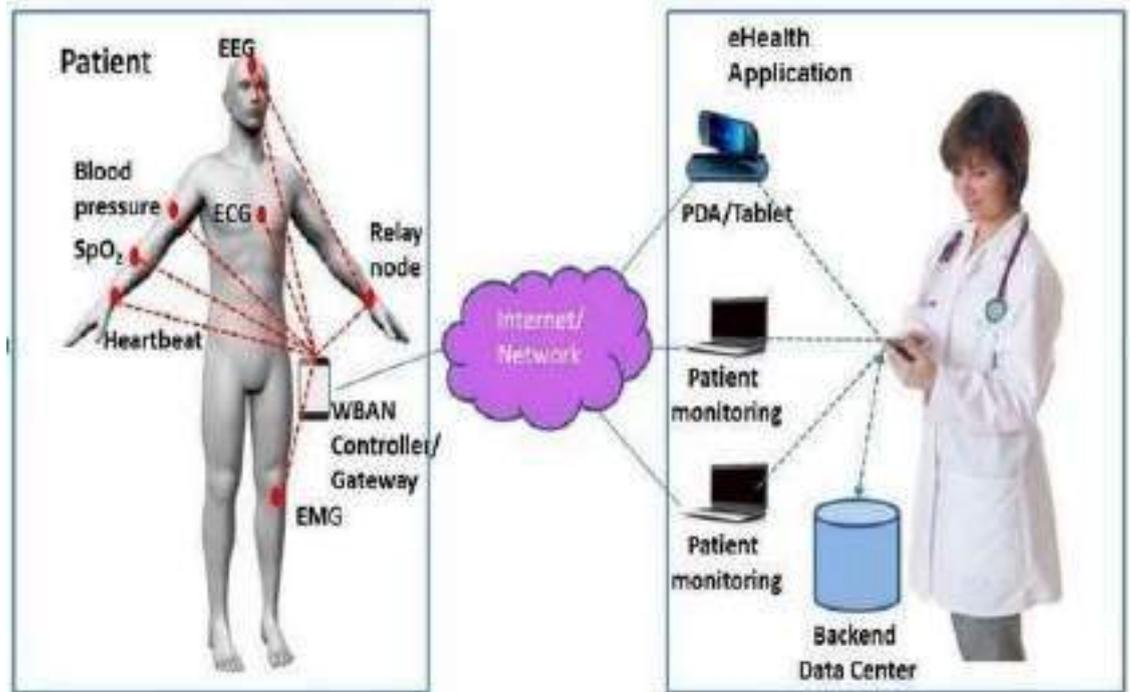


Figure 2.2 Conceptual layout of the ASSET test bed - example of IoT architecture.

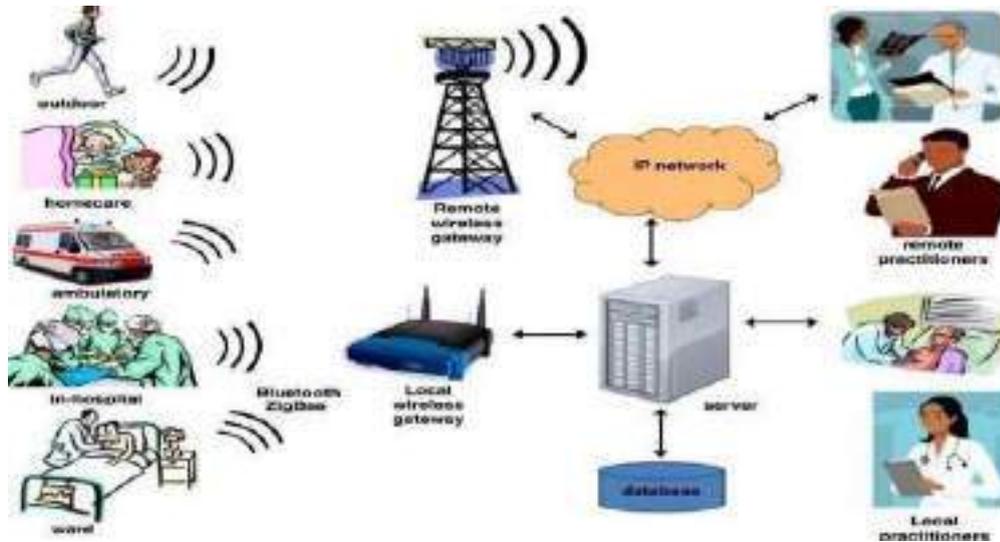


Figure.2.3 Typical architecture of wireless sensor networks in health-care applications.

Based on how the devices are connected to the patient we can classify into:

Implantable

- Wearable

Those devices could be connected on a need basis, always connected or un-Connected.

Based on how the device is connected to the network, the devices can be classified into: - wired

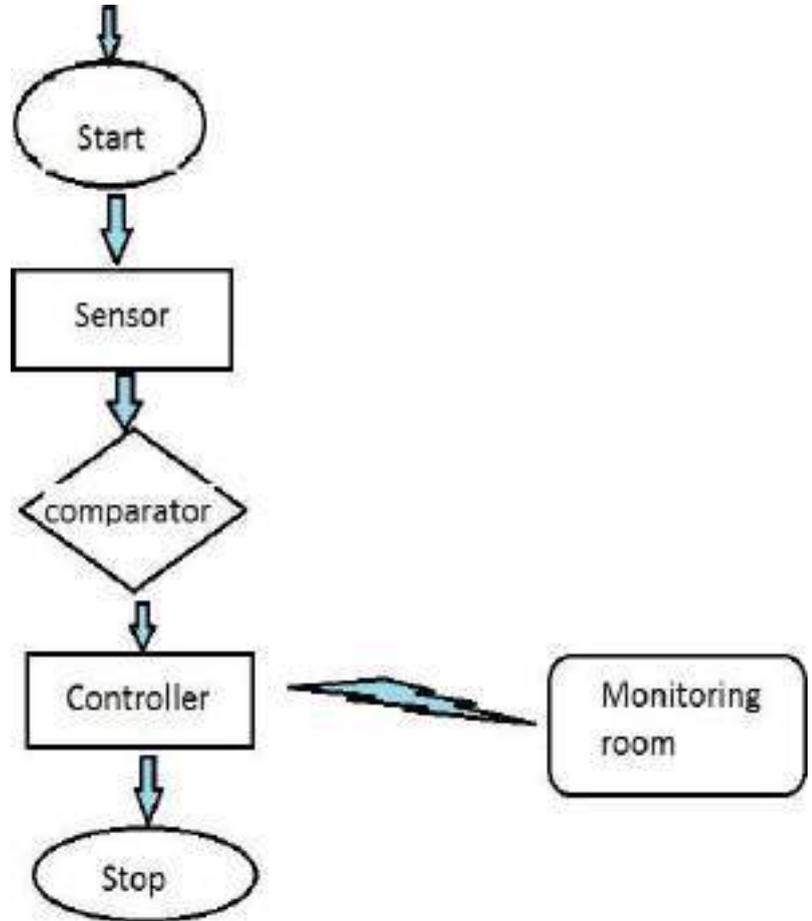
- Wireless

- Non-connected

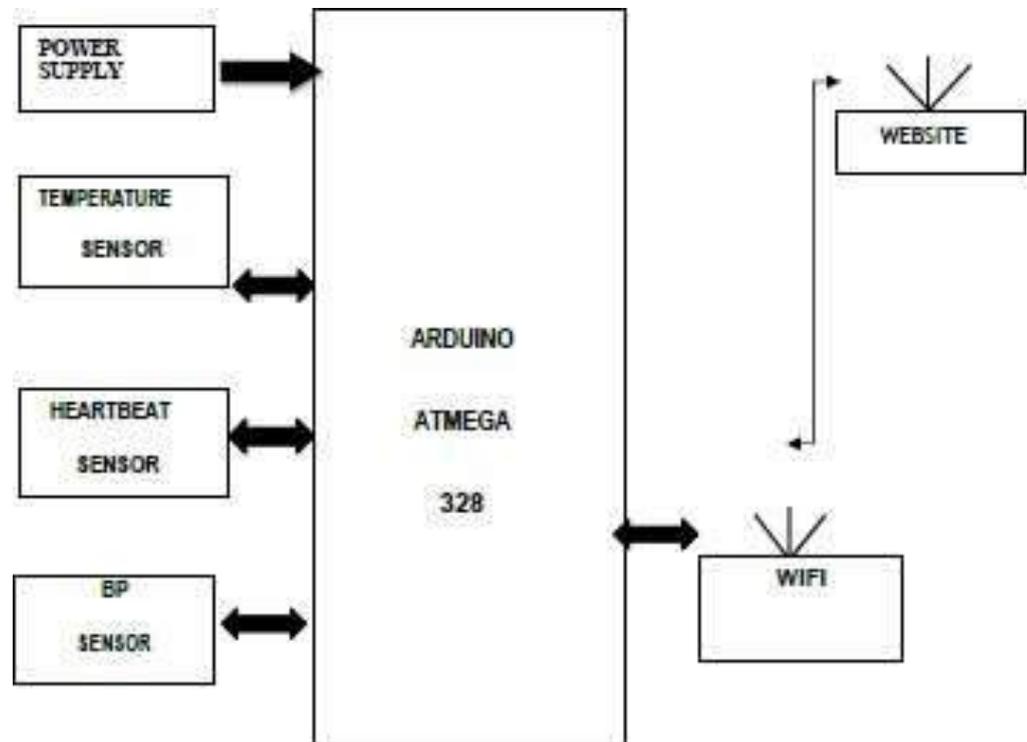
Based on the data generated, the devices can be classified into:



- Real-time streaming (ex. patient monitoring)
- Discrete data sources (oximeter - generates data at predefined intervals)
- One-time data source (ex. MRI scanner)

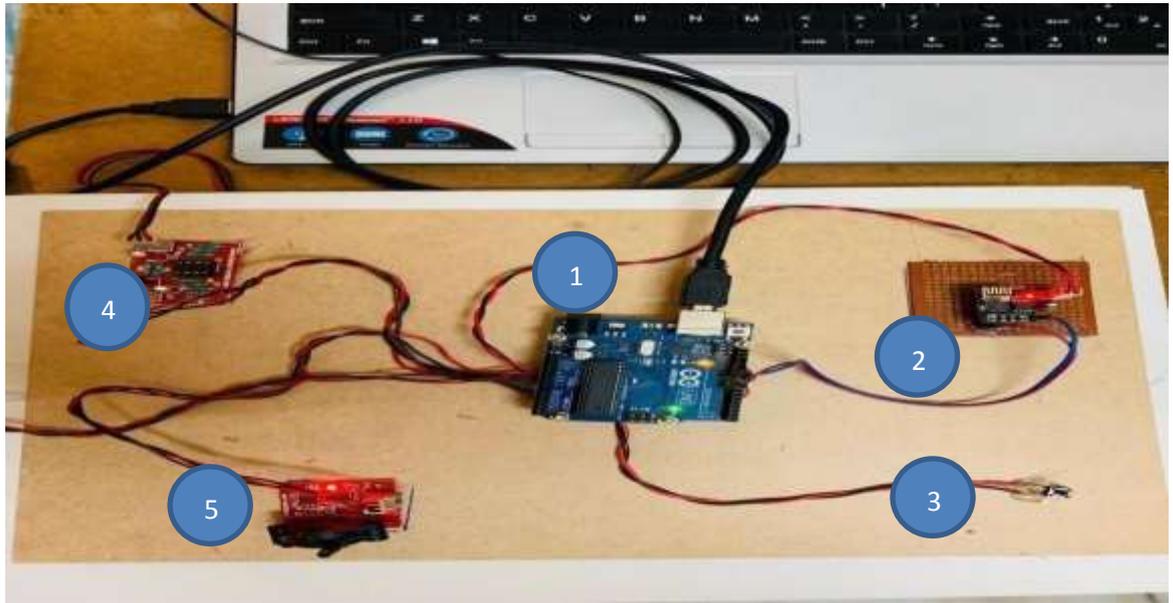


**Figure 3.1 Flow Chart Of Proposed System**

**Block Diagram for Proposed System****Figure 4.1 Block Diagram for Proposed system****EXPECTED RESULTS**

IOT Monitoring proves really helpful when we need to monitor & record and keep track of changes in the health parameters of the patient over the period of time. So with the IOT health monitoring, we can have the database of these changes in the health parameters. Doctors can take the reference of these changes or the history of the patient while suggesting the treatment or the medicines to the patient.

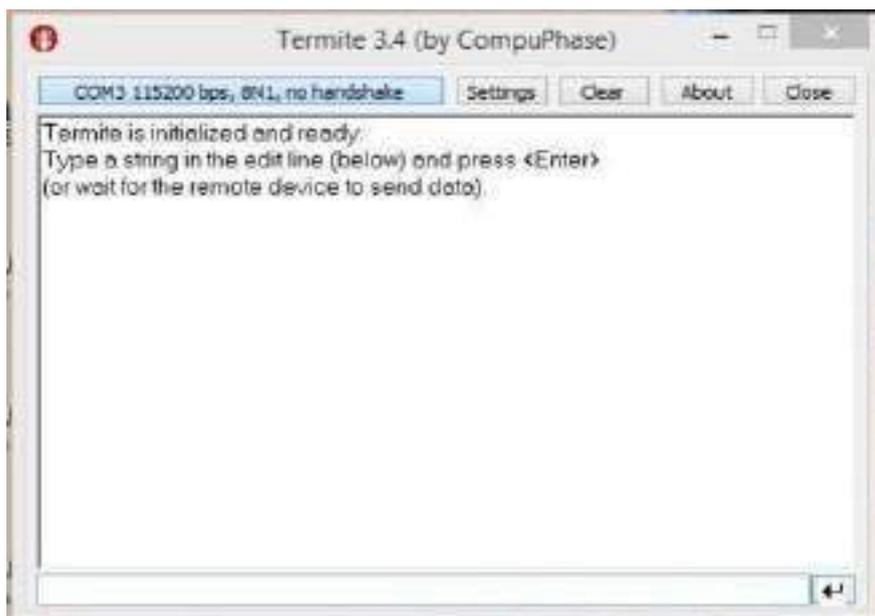
Patient health parameter data is stored over the cloud. So it is more beneficial than maintaining the records on printed papers kept in the files. Or even the digital records which are kept in a particular computer or laptop or memory device like pen- drive. Because there are chances that these devices can get corrupt and data might be lost. Whereas, in case of IOT, the cloud storage is more reliable and does have minimal chances of data loss.



**Power Supply from system**

Arduino board(1) connects couple of sensors together and it provides power for further sensors, here Temperature sensor(3) which give values of patient body temperature, Wifi module(2) which helps to records the values in tremite weblinks. Bloodpressure sensor(5) used to record values of patient's blood

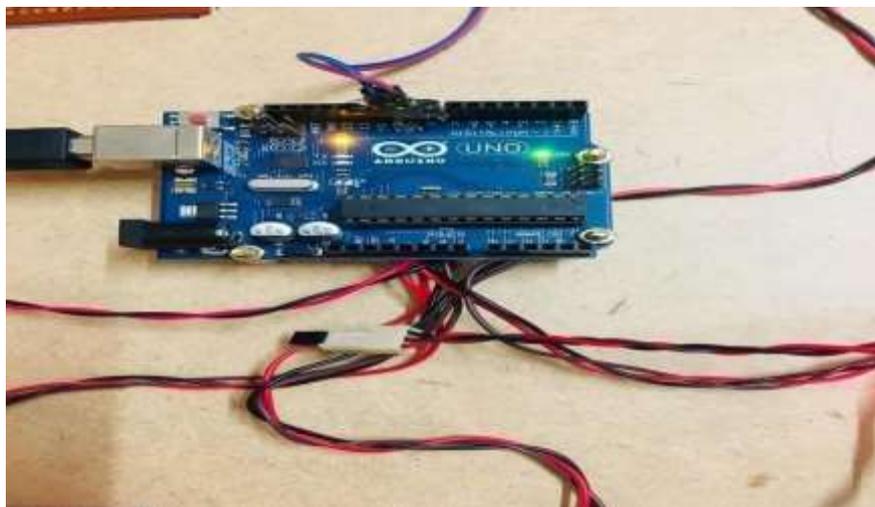
pressure levels, Heart rate reading obtained by the HeartBeat Sensor(4), when you place your finger on the sensor. These all sensors and arduino has connected to laptop. Values and graphs are observed at tremite and basic LCD of module provided, Working observed in fig 7.1.





After checking all the pin connections and adding the library to the Arduino IDE and uploading the source

code, run the code. The screen will display the temperature in fahrenheit.



**Temperature Sensor**

The LM35 series are precision integrated circuit LM35 temperature sensors, whose output voltage is linearly proportional to the temperature in Celsius (Centigrade). The LM35 sensor thus has an advantage over linear temperature sensors, calibrated in °Kelvin, as the user is not required to subtract a

large constant voltage from its output to obtain convenient centigrade scaling. The LM35's low output impedance, linear output, and precise inherent calibration make interfacing to readout or control circuitry especial.

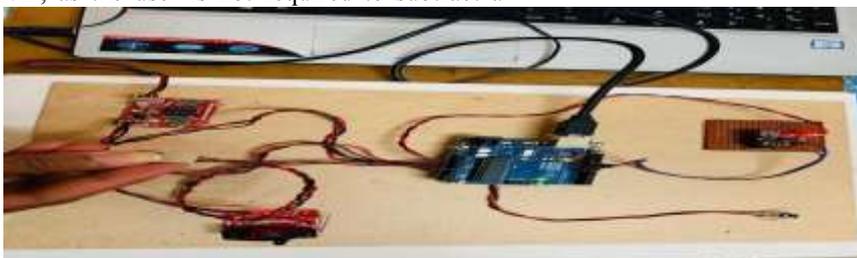
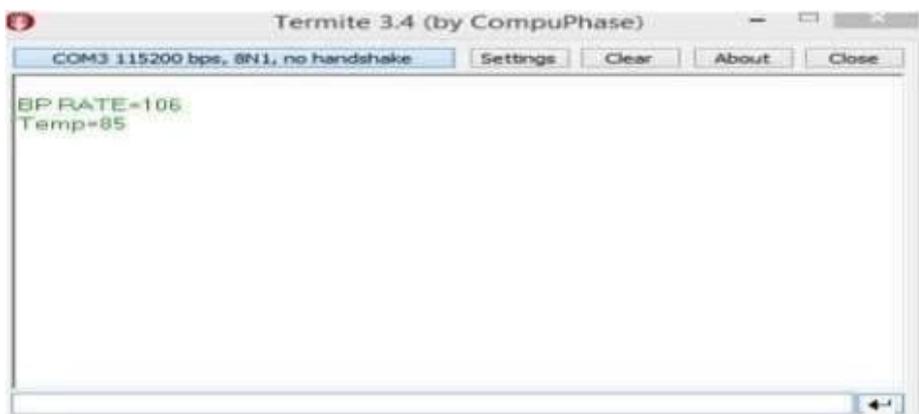




Figure 7.5 Experimental Result Of Temperature Sensor

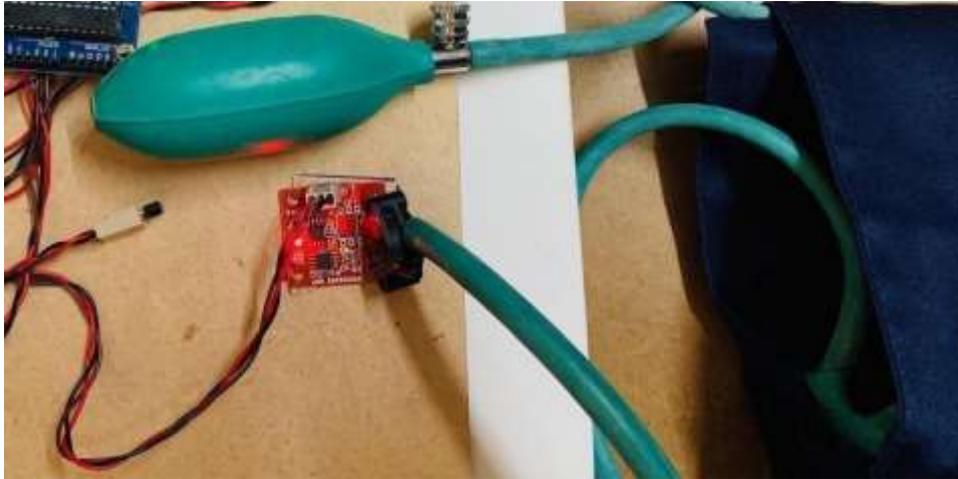


Temperature Result in Termite on system

### EXPERIMENTAL RESULTS ON BLOOD PRESSURE SENSOR:

Blood pressure of a person is obtained by Blood Pressure Sensor. When the doctor puts the cuff around your arm and pumps it up, what he/she is

doing is cutting off the blood flow with the pressure exerted by the cuff.



**Blood Pressure**

Blood pressure measurements were performed before and after the calibrated blood pressure measurements to obtain the systolic and diastolic values of the device designed to be not much different from the

analog blood pressure tool, first before calibration and the second after calibration with a 5 minute interval.



0

**Figure 7.8 Experimentation Of Blood Pressure Sensor**

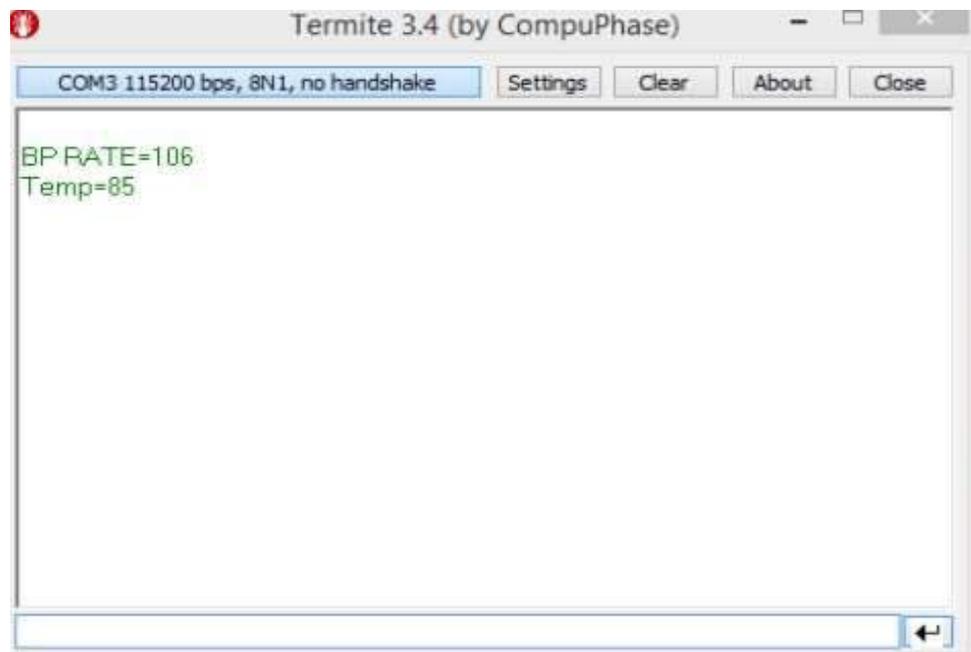
Manually these Blood Pressure sensor connected to arduino, its connected to laptop which gives values of regrading patient analysis. It shares the values both in graphical representation and values also In termite

web links, it explains at following below fig 7.9 & Fig 7.10



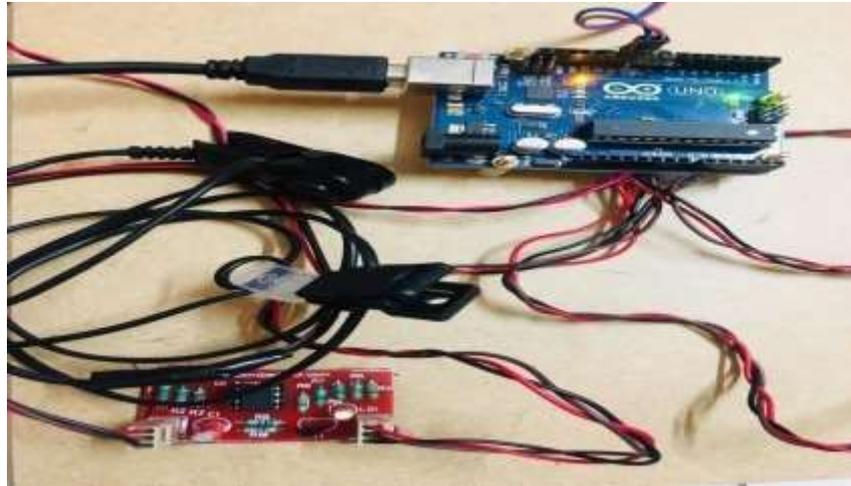
Figure 7.9 Experimentation Result Of BP

Figure 7.10 BP Result in Termite on system





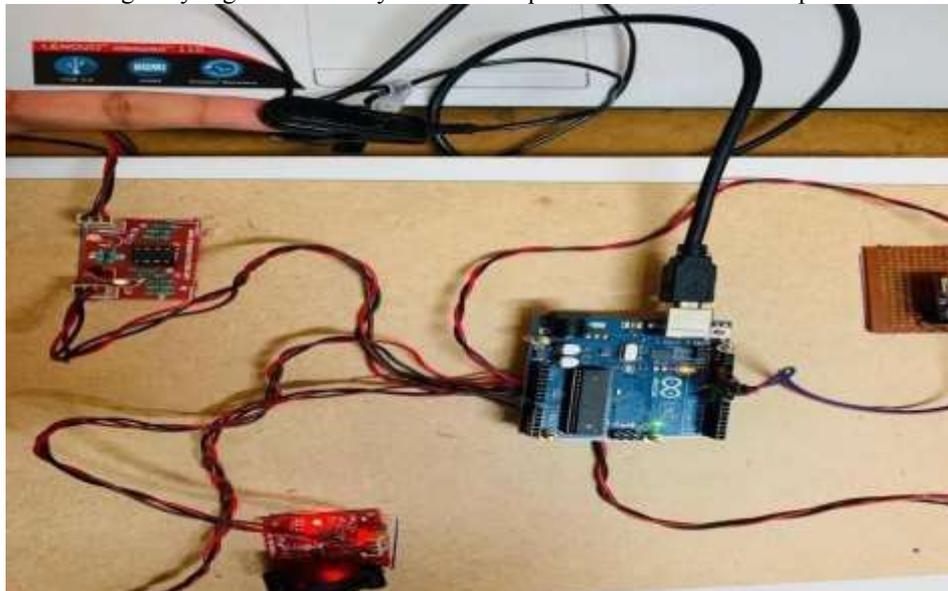
### 7.3 EXPERIMENTAL RESULTS ON HEARTBEATSENSOR:



**Figure 7.11 Heart beat Sensor**

Heart rate reading obtained by the HeartBeat Sensor. Place your index finger on the front side of the pulse sensor, you should see LED1 glow in time with your Human Heartbeat, when you place your finger on the sensor. The heartbeat sensor is based on the principle of photo plethysmography. It measures the change in volume of blood through any organ of the body which

causes a change in the light intensity through that organ (a vascular region). In case of applications where heart pulse rate is to be monitored, the timing of the pulses is more important. The flow of blood volume is decided by the rate of heart pulses and since light is absorbed by blood, the signal pulses are equivalent to the heartbeat pulses.

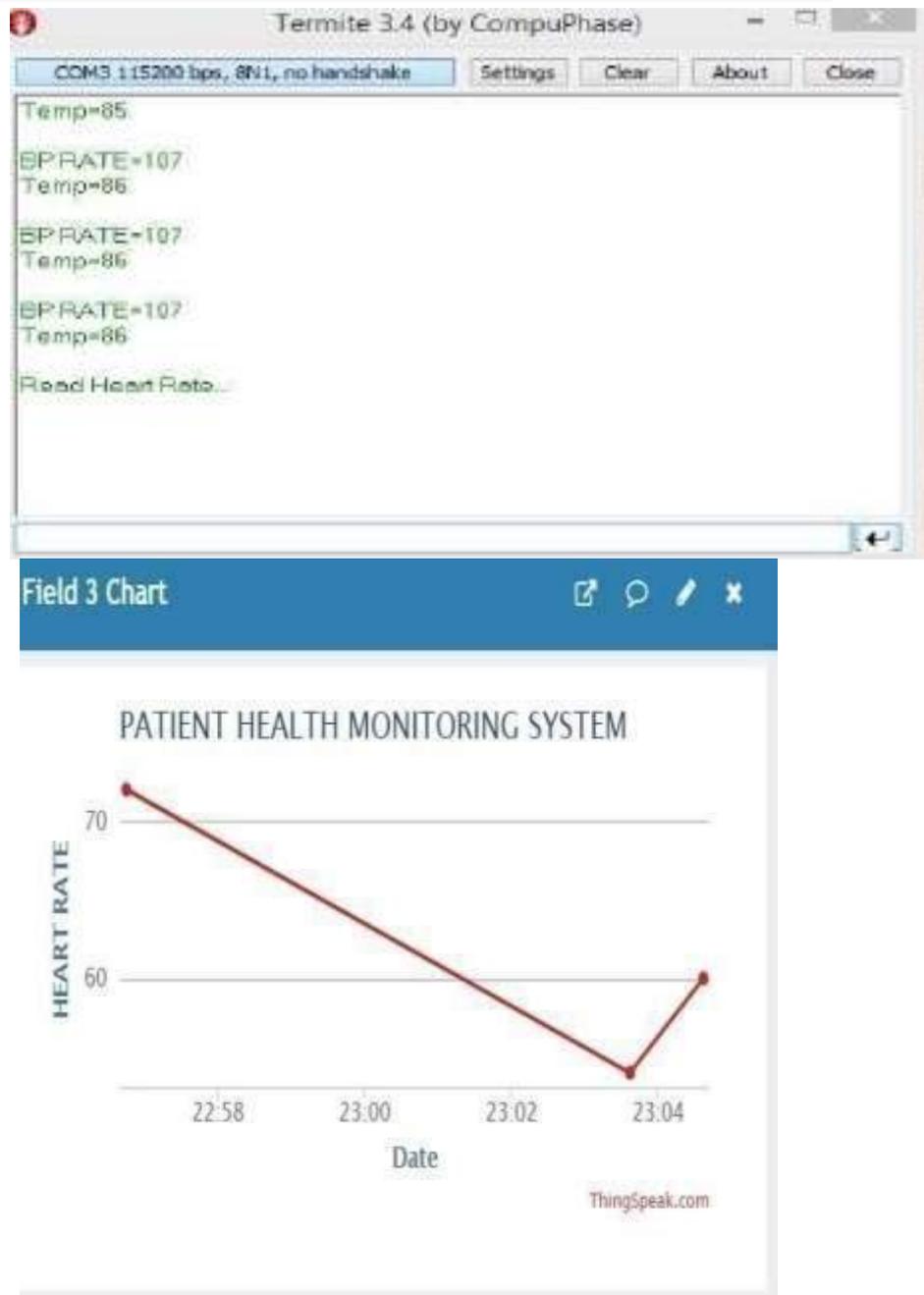


**Figure 7.12 Experimentation Of Heartbeat Sensor**

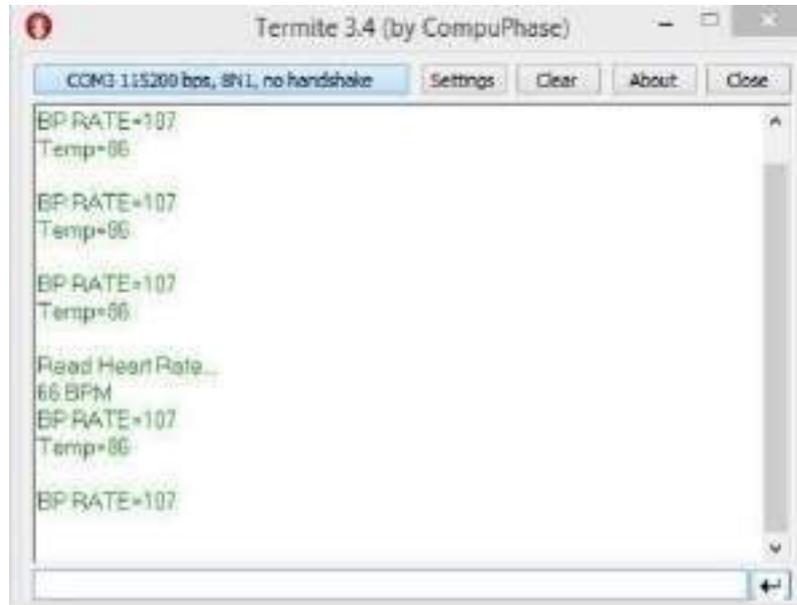
Heart rate reading obtained by the HeartBeat Sensor. Place your index finger on the front side of the pulse sensor, you should see LED1 glow in time with your Human Heartbeat, when you place your finger on the sensor.

Manually these heartbeat sensor connected to arduino, its connected to laptop which gives values of

regrading patient analysis. It shares the values both in graphical representation and values also In termite web links, it explains at following below fig 7.14& Fig:7.15



**Figure 7.13** Experimentation Result Of Heartbeat Sensor

**Figure 7.14 Reading HB in Termite****Figure 7.15 HB,BP,TEMP output in Termite on system**

## CONCLUSION

Now a days we have an increased risk of health conditions. In general IoT based health care platform which connects with smart sensors attach with human body for health monitoring for daily checkup. In this paper we discussed about IoT based patient health monitoring system. The importance of observing medical patient, continuous remote monitoring is necessary. Our project work is giving the opportunity to monitor patient continuously by using the web along with live monitor service. This system which helps to detect heart rate, blood pressure, temperature of person using heart beat sensing, blood pressure sensing, temperature sensing even if person is at home. This system also helps for hospital monitoring system, all patient monitored by single person in server room. This system which helps to measure body temperature, heartbeat, pulses of person. so we can save. With online recoding of medical parameters, the workload of the case providers and the nursing staff is reduced. The clinical information database contains all data regarding the patients in electronic form. If this technology will developed then we can detect heart blockage, bradycardia, tachycardia and paralysis, syncope, hypertension, hypertensive nephropathy, hypertensive retinopathy, fever through this technology by our project.

## FUTURE ENHANCEMENTS

In our proposed system we monitor the patient condition especially for the ICU or cardiac patients, hypertension patients. Also we will monitor the whole ward room or patient room from far places by Wi-Fi module. Therefore, person fall detection feature will be added which would be beneficial to older people. But in the future we will upgrade both hardware and software part. In software segment we will upgrade the Website as well as the Apps. We will build a user friendly feature in the website which will show the patient name, date and time description in the ECG segment automatically. Similarly, Apps will be upgraded and uploaded in the Play store. Therefore, people will get the opportunity to download the Apps from Google Play Store and install it in their Mobile phone.

Due to the importance of observing medical state of patients who are suffering from acute diseases, especially cardiovascular diseases, a continuous remote patient monitoring is essential. Internet of Things is able to provide tools to build comprehensive services

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