

**SJIF Impact Factor : 7.032**  
**ISI I.F.Value : 1.188**

**ISSN (Online): 2455-3662**  
**DOI: 10.36713/epra2013**



**EPRA International Journal of**  
**MULTIDISCIPLINARY RESEARCH**  
**(IJMR)**

**Monthly, Peer Reviewed (Refereed) & Indexed International Journal**

**Volume - 6 Issue - 8 August 2020**



**Chief Editor**  
**Dr. A. Singaraj, M.A., M.Phil., Ph.D.**

**Managing Editor**  
**Mrs.M.Josephin Immaculate Ruba**  
**Editorial Advisors**

1. **Dr.Yi-Lin Yu, Ph. D**  
Associate Professor,  
Department of Advertising & Public Relations,  
Fu Jen Catholic University,  
Taipei, Taiwan.
2. **Dr.G. Badri Narayanan, PhD,**  
Research Economist,  
Center for Global Trade Analysis,  
Purdue University,  
West Lafayette,  
Indiana, USA.
3. **Dr. Gajendra Naidu.J., M.Com, LL.M., M.B.A., PhD. MHRM**  
Professor & Head,  
Faculty of Finance, Botho University,  
Gaborone Campus, Botho Education Park,  
Kgale, Gaborone, Botswana.
4. **Dr. Ahmed Sebihi**  
Associate Professor  
Islamic Culture and Social Sciences (ICSS),  
Department of General Education (DGE),  
Gulf Medical University (GMU), UAE.
5. **Dr. Pradeep Kumar Choudhury,**  
Assistant Professor,  
Institute for Studies in Industrial Development,  
An ICSSR Research Institute,  
New Delhi- 110070.India.
6. **Dr. Sumita Bharat Goyal**  
Assistant Professor,  
Department of Commerce,  
Central University of Rajasthan,  
Bandar Sindri, Dist-Ajmer,  
Rajasthan, India
7. **Dr. C. Muniyandi, M.Sc., M. Phil., Ph. D,**  
Assistant Professor,  
Department of Econometrics,  
School of Economics,  
Madurai Kamaraj University,  
Madurai-625021, Tamil Nadu, India.
8. **Dr. B. Ravi Kumar,**  
Assistant Professor  
Department of GBEH,  
Sree Vidyanikethan Engineering College,  
A.Rangampet, Tirupati,  
Andhra Pradesh, India
9. **Dr. Gyanendra Awasthi, M.Sc., Ph.D., NET**  
Associate Professor & HOD  
Department of Biochemistry,  
Dolphin (PG) Institute of Biomedical & Natural Sciences,  
Dehradun, Uttarakhand, India.
10. **Dr. D.K. Awasthi, M.SC., Ph.D.**  
Associate Professor  
Department of Chemistry, Sri J.N.P.G. College,  
Charbagh, Lucknow,

ISSN (Online) : 2455 - 3662  
SJIF Impact Factor :7.032  
ISI.I.F. Value : 1.188  
DOI : 10.36713/epra2013



EPRA International Journal of  
**Multidisciplinary  
Research**

Monthly Peer Reviewed & Indexed  
International Online Journal

Volume: 6 Issue: 8 August 2020

Indexed By:



Published By :EPRA Publishing

CC License





# EPRA International Journal of Multidisciplinary Research (IJMR)

Peer Reviewed Journal|| Journal DOI URL: <https://doi.org/10.36713/epra2013>

## CONTENTS

S.NO	TITLE	AUTHOR/S	PAGES
1	SOME ASSUMPTIONS ON DEVELOPING LEARNERS' SPEAKING SKILLS AND FACTORS INFLUENCING ON IN	Polvonova Saodat Matrasulovna, Saparbaeva Gulandam Masharipovna	1-2
2	BELIEFS AND RELIGIOUS VIEWS OF THE POPULATION IN ANCIENT KHOREZM	Hamdam Khamidjanovich Matyakubov, Shahriyor SHarifboy o'g'li Kadamboev	3-7
3	INFLUENCE OF FUNGI TRICHODERMA LIGNORUM STRAINS ON THE DEVELOPMENT OF FUSARIUM WILT AND ROOT ROT DISEASES OF CUCUMBERS IN GREENHOUSES OF TASHKENT	S.S.Xasanov, PhD, S.E. Avazov, DSc	8-12
4	COMPOSITION OF AGENTS OF FUNGAL DISEASES OF CUCUMBER SEEDLING UNDER THE CONDITIONS OF CLOSED GROUND IN THE TASHKENT REGION OF UZBEKISTAN	S.S.Xasanov, PhD, S.E. Avazov, DSc	13-14
5	ASSESS THE BEHAVIORAL AND EMOTIONAL PROBLEMS AMONG SCHOOL GOING CHILDREN ADMITTED IN PSYCHIATRIC WARD IN SELECTED HOSPITAL, PUDUCHERRY	Sherin Nithya S, Sumathy P, Saranya S	15-19
6	ENVIRONMENTAL EDUCATION TO BOOST PRO-ENVIRONMENTAL BEHAVIOUR IN REDUCING PLASTICS CONSUMPTION AMONG STUDENTS IN UNIVERSITAS BINA DARMA PALEMBANG <a href="https://doi.org/10.36713/epra4913">https://doi.org/10.36713/epra4913</a>	Risqo M. Wahid, Endah Dewi Purnamasari, Fitriya Fauzi	20-32
7	EFFECT OF SODIUM ARSENITE ON THE KIDNEY AND ITS REMEDY WITH COMBINED EXTRACTS OF ALLIUM SATIVUM AND GONGRONEMA LATIFOLIUM USING RATS <a href="https://doi.org/10.36713/epra3286">https://doi.org/10.36713/epra3286</a>	Usoh, I. F., Akwa, N. E	33-49
8	A SELF LOCALIZED ALGORITHM FOR PACKET FORWARDING IN SENSOR NETWORKS	Sunita Kumawat, Dr. Pushpneel Verma	50-58
9	A STUDY ON JOB SATISFACTION AND WORK LIFE BALANCE OF WOMEN EMPLOYEES IN SELECTED ORGANISATIONS WITH SPECIAL REFERENCE TO BANGALORE CITY <a href="https://doi.org/10.36713/epra3247">https://doi.org/10.36713/epra3247</a>	Dr. S. Ramesh, Dr. Haniefuddin Shaik, Dr. Shaik Shamshuddin	59-65
10	THE EFFECTS OF CERTAIN AMINES ON THE CORROSION BEHAVIOR OF STEEL	Oserbaeva Alfiya Kurbanbaevna	66-69

11	FACTORS AFFECTING INTERNATIONAL VISITORS' PREFERENCE FOR LOCAL FRUITS IN THE MEKONG DELTA, VIETNAM <a href="https://doi.org/10.36713/epra4910">https://doi.org/10.36713/epra4910</a>	Nguyen Quoc Nghi, Bui Thi Yen Ni	70-74
12	APPLICATION OF THE EXPERION SYSTEM IN THE DEVELOPMENT OF PROCESS CONTROL SYSTEMS	Abdumalikova Zulfiya Ismatullaeva	75-76
13	INSTALLATION OF AUXILIARY TECHNICAL DEVICES INSIDE THE PANELS	Rakhmonov Dilmurod Khusanboyevich	77-79
14	"MEASUREMENT OF PHYSICAL PARAMETERS OF A THREAD"	Kipchakova Gavkharoy Mirzasharifovna	80-83
15	COMPUTER-AIDED DESIGN OF AUTOMATED SYSTEMS	Mirzayev Sardor Abdullajon ugli	84-86
16	METHOD FOR PRODUCING DOUBLE-LAYER WEFT KNITTING FABRIC	A.Jurabayev, K.Holikov, M.Mukimov, I.Sh.Xakimjonov	87-91
17	PROFESSIONAL ACTIVITY OF FUTURE TEACHERS INTEGRATED INNOVATION FORMS OF THE PREPARATION PROCESS	Samidjonova Mukhabbat Kholiqjonovna	92-93
18	BOTNET ATTACK IN COMPUTER NETWORK SECURITY <a href="https://doi.org/10.36713/epra4905">https://doi.org/10.36713/epra4905</a>	S.Nagendra Prabhu, D.Shanthi	94-100
19	EFFECTS OF CAPACITY PLANNING AND CONTROL ON CUSTOMER SATISFACTION IN SELECTED BANKS IN NORTH CENTRAL STATES, NIGERIA	Boluromi, Samuel Sunday, Olorunnipa, Samuel Atteh, Saliu Adekunle Ekundayo	101-114
20	OPERATIONAL PERFORMANCE OF KINFRA INDUSTRIAL PARKS IN KERALA: SELECT INFERENCES <a href="https://doi.org/10.36713/epra4925">https://doi.org/10.36713/epra4925</a>	Dr. P. Noufal	115-122
21	LIBRARY RESOURCE SHARING: AN OVERVIEW	Ajay Kumar Saini	123-127
22	EMERGING PARADIGMS OF ETHICS IN HOSPITALS: AN INSIGHT	Dr. Sumeet Dastidar, Niva Kalita	128-137
23	MEASURES TAKEN BY INDIAN POLICYMAKERS TO COMBAT COVID-19 (ATMANIRBHAR BHARAT ABHIYAN)	Abha Gautam, Abhishek Gautam	138-151
24	THE GROWING ROLE OF ARTIFICIAL INTELLIGENCE IN HUMAN RESOURCE <a href="https://doi.org/10.36713/epra4924">https://doi.org/10.36713/epra4924</a>	Akanksha Saxena	152-158
25	A STUDY OF EFFECT OF EXERCISE AND YOGA ON PHYSICAL & MENTAL FITNESS ON HANDBALL PLAYERS	Mahendra Singh Rajawat	159-167
26	TEACHING SLOW LEARNERS IN RUSSIAN AND ENGLISH CLASSES	Khodjayeva Dilnoza Shavkatovna, Khusanov Eldar Davlatjonovich	168-170
27	EVALUATIVE NATURE OF ANTHROPOCENTRIC PROVERBS WITH HUMAN NAMES	Ra'no Urishevna Madzhidova	171-181
28	THE ROLE OF PRAGMATICS IN LINGUISTICS	Qurbonova Sayoraxon Makhamadaliyevna	182-185
29	ANALYSIS OF AVAILABLE CLOTHING USED IN DAILY USE OF COLLEGE GOING GIRLS <a href="https://doi.org/10.36713/epra4912">https://doi.org/10.36713/epra4912</a>	Iti Dubey, Sudha Babel	186-191

30	FRAGMENTATION OF RELATIONAL SCHEMA BASED ON CLASSIFYING TUPLES OF RELATION AND CONTROLLING OVER REDUNDANCY OF DATA IN A RELATIONAL DATABASE LEADS TO VEXING IN DATABASE INTERFACES	Praveen Kumar Murigeppa Jigajinni	192-196
31	A CASE STUDY ON COMMUNITIES IN KARNATAKA	Praveen Kumar Murigeppa Jigajinni	197-202
32	THE IMPACT OF SYBLINGS IN THE FAMILY ON THE PSYCHOLOGICAL CHARACTERISTICS OF THE CHILD	Tursunova Dilnavoz Tolkin qizi	203-205
33	FACTORS AFFECTING WILLINGNESS TO PAY FOR GOOD QUALITY URBAN WATER IN KOLLAM DISTRICT, KERALA	Dr.Suprabha L	206-211
34	TO STUDY THE IMPACT OF SOCIAL MEDIA ON SOCIETY USING STATISTICAL TECHNIQUES <a href="https://doi.org/10.36713/epra4959">https://doi.org/10.36713/epra4959</a>	Prakash S. Chougule, Tejaswi S. Kurane, Sarika P. Magdum, Pruthviraj D. Nikam, Bhakti R. Dhongade, Ajinkya C. More	212-215
35	HOW TO INTERGRATE THE AFFECTIVE DIMENSION IN THE TEACHING OF FRENCH AS A FOREIGN LANGUAGE IN KENYA	Dr. Auma Rose, Dr. Joyce Kasili, Ms. Clara Bulili	216-220
36	BIO-MEDICAL WASTE MANAGEMENT IN INDIA: CONTEMPORARY APPROACHES AND WAY FORWARD	Sunil K. Yadav, Dr. Indrani Chakraborty Dr. Subhrajit Banerjee	221-227
37	A STUDY ON EFFECT OF HORMONES SECRETION & NUTRITION LEVEL ON BODY BUILDERS AND FOOTBALLERS	Mohammad Afroz Abbas, Dr.Vijay Singh	228-238
38	EFFECT OF HORMONES SECRETION & NUTRITION LEVEL ON HEALTH: A REVIEW	Mohammad Afroz Abbas, Dr.Vijay Singh	239-249
39	THE ROLE OF LIVESTOCK PRODUCTS IN THE FOREIGN TRADE OF UZBEKISTAN IN 1917-1941 YEARS	Djuraev Ravshan Xurramovich	250-252
40	FACILITATE DECISION MAKING OF OPTIMUM UTILIZATION URBAN ROOFTOP RWH, CASE STUDY KOLKATA METROPOLITAN AREA <a href="https://doi.org/10.36713/epra4981">https://doi.org/10.36713/epra4981</a>	Dr. Indrani Chakraborty, Dr. Subhrajit Banerjee	253-268
41	CUSTOMER ATTITUDE AND SATISFACTION TOWARDS INVESTMENT IN LIFE INSURANCE WITH SPECIAL REFERENCE TO ERNAKULAM CITY	Ganga Devi T R, Dr.Lekshmi Bhai P S	269-277
42	STRATEGY FOR CONTEMPORARY BUSINESS ENVIRONMENT- An analysis of tools and media for the development of Marketing strategy <a href="https://doi.org/10.36713/epra4974">https://doi.org/10.36713/epra4974</a>	Dr. K C Prashanth, Dr. Veena M	278-285
43	DETERMINATION OF FACTORS EXERTING INFLUENCE ON INVESTMENT BEHAVIOR WITH SPECIAL FOCUS ON WORKING WOMEN <a href="https://doi.org/10.36713/epra4971">https://doi.org/10.36713/epra4971</a>	Dr. Veena M	286-296
44	FAITH-BASED INTERVENTIONS IN THE REINTEGRATION OF DISPLACED BOKO	Adebayo Ola Afolaranmi	297-314

	HARAM VICTIMS INTO THE SOCIETY: A REVIEW OF SELECTED LITERATURE <a href="https://doi.org/10.36713/epra4986">https://doi.org/10.36713/epra4986</a>		
45	THE USE OF FORUM THEATRE AS CREATIVE PEDAGOGY IN TEACHING AND LEARNING OF MORAL EDUCATION IN SECONDARY SCHOOLS IN MALAYSIA <a href="https://doi.org/10.36713/epra4961">https://doi.org/10.36713/epra4961</a>	Nadarajan Thambu, Ganesan Shanmugavelu, Zulkufli Mahayudin	315-324
46	ENQUIRING THE NATURE OF PELASGIC LANGUAGE(S) VIA INFORMATION SYSTEMS MODELLING	Evangelos C. Papakitsos	325-335
47	INTENSITY OF TECHNOLOGY INTEGRATION IN PRIMARY SCHOOLS IN TANZANIA: THE CASE OF MERU DISTRICT <a href="https://doi.org/10.36713/epra3607">https://doi.org/10.36713/epra3607</a>	Dr. Thadei A. Kiwango	336-341
48	PARENTAL RESPONSIBILITIES TOWARDS TECHNOLOGY INTEGRATION FOR OUT-OF-SCHOOL TIME LEARNING <a href="https://doi.org/10.36713/epra3591">https://doi.org/10.36713/epra3591</a>	Dr. Thadei A. Kiwango	342-348
49	PSYCHOLOGICAL ANALYSIS OF THE COMPLEXITIES OF LEARNING FOREIGN LANGUAGES	Ismailov Akmal Rustamovich	349-352
50	A STUDY ON RECRUITMENT AND SELECTION PROCESS WITH REFERENCE TO E-PUBLISHING INDUSTRY, COIMBATORE	Dr. V. Vanaja, Poornima Chandrasekar	353-357
51	LIQUIDITY MANAGEMENT AND PERFORMANCE OF DEPOSIT MONEY BANKS IN NIGERIA <a href="https://doi.org/10.36713/epra3138">https://doi.org/10.36713/epra3138</a>	Eze Emmanuel, Agu Stephen	358-367
52	IMPLICATIONS OF COVID-19 POLICY RESPONSE ON ECONOMIC SUSTAINABILITY IN NIGERIA	Egiyi, Modesta Amaka	368-372
53	THE ISSUE OF THE USE AND TREATMENT OF THE SLAVES IN THE KHIVA KHANATE	Tojjeva Feruza	373-375
54	THE ISSUE OF THE NUMBER OF "INTEGER TRIANGLES"	Sardor Bazarbayev, Davrbek Oltiboyev	376-379
55	ISSUES OF IMPROVEMENT OF LEGAL BASIS OF LIQUIDATION OF NON- GOVERNMENTAL ORGANIZATIONS IN UZBEKISTAN	Bekzod Narimanov	380-387
56	THEORETICAL SIGNIFICANCE OF SOCIAL WORK IN A SCHOOL FOCUSED ON THE EDUCATIONAL FIELD OF THE SOCIAL WORK PROFESSION	Abdurakhmonova Manzura Manafovna	388-391
57	EVAPORATION PROCESS AS A RESULT OF CHANGE IN BIOLOGICAL LIQUID AND ITS CONTENT (0.9% concentration NaCl)	Karabayev Mukhammadjon Karabayevich, Ergashev Erkinjon Abdusattor-ugli	392-394
58	OUR EXPERIENCE IN CONDUCTING INTEGRATION LECTURES ON BIOPHYSICS AND EYE DISEASES ON "OPTICS. BIOPHYSICS OF VISION"	Nurmatova Feruza Bakhtiyarovna	395-397
59	CARBOHYDRATES MEET IN NATURE. PENTOSE. HEXOSE	Diniyeva Guliston Kurbanbaevna	398-401
60	IMPROVING THE METHODOLOGY OF FORMATION OF STUDENTS' CAMPS IN	Mambetova Sayyora Madraimovna	402-403

	VOCATIONAL EDUCATION ON THE BASIS OF INNOVATIVE APPROACHES		
61	THE INTRODUCTION OF ERP-SYSTEM AS A MEAN OF INCREASING THE INVESTMENT ATTRACTIVENESS OF AN ENTERPRISE	Juraev J.T	404-406
62	TREATMENT OF POSTOPERATIVE RADICULAR PAIN SYNDROME WITH PULSED RADIOFREQUENCY ABLATION OF THE SPINAL GANGLIA	Rakhmatov K.R.	407-413
63	MORPHOLOGICAL CHARACTERISTICS OF THE SPLEEN OF WHITE RATS IN NORMAL, CHRONIC RADIATION SICKNESS AND WHEN CORRECTED WITH A BIOSTIMULATOR	Sh. J. Teshaev, M. R. Turdiev	414-419
64	COMPARISON OF BOTH MIDDLE EAST COUNTRIES' AND COMMON LAW JURISPRUDENCE ON 'ARBITRARY TERMINATION' AND 'UNFAIR DISMISSAL' IN EMPLOYMENT LAW	Bakhramova Mokhinur Bakhramovna	420-424
65	PRESERVATION OF WORDS IN THE MENTAL LEXICON	O`razova Iqbol Abdikarimovna	425-430
66	THE SUBJECT OF MORALITY AND IMMORALITY IN EASTERN AND WESTERN LITERATURE	Khoshimjon Akhmedov	431-433
67	THE EFFECTIVENESS OF THE USE OF MOBILE TECHNOLOGIES IN THE EDUCATIONAL PROCESS	Nafasov Mirzomurod Mukhamadovich	434-437
68	LANGUAGE, COGNITION AND CULTURE IN THE SPHERE OF LINGUISTICS	Shakurova Nargiza Khamrakulovna	438-440
69	TYPES OF PLANTS SKILLFULLY GROWN IN THE LESS FERTILE LANDS OF THE KHIVA KHANATE AND THEIR HISTORY	Nargiza Kamolova	441-444
70	THE IMPORTANCE OF LISTENING IN FOREIGN LANGUAGE LEARNING	Karimova Jamila Shariyevna, Israilova Dildora Atxamovna	445-447
71	INFLUENCE OF PREECLAMPSIA DEVELOPMENT MARKERS ON PLACENTAL MORPHOLOGICAL CHANGES (LITERATURE REVIEW)	Makhmudova Sevara Erkinovna	448-452
72	THE IMPACT OF JOURNALISTIC CRITICISM ON GOVERNMENT POSITION	Sanjar Ilhomovich Shomurodov	453-454
73	THE NEGATIVE INFLUENCE OF THE CORONAVIRUS PANDEMIC ON SECTORS OF THE ECONOMY	Zafar Haydarov	455-457
74	AGRITOURISM AS A TYPE OF TOURISM	Jamila Djumabaeva, Zulfizar Yakhshieva	458-459
75	POETIC FORMS AND POET'S SKILLS	Zoyirova Go'zal Nematovna	460-462
76	PROBLEMS OF FORMATION OF THE CONTENT OF EDUCATIONAL-METHODICAL COMPLEXES IN THE SYSTEM OF PROFESSIONAL DEVELOPMENT	Jumanazarov Sirojiddin Salaydinovich	463-466
77	ISSUES OF ORGANIZATION OF DISTANCE EDUCATION IN THE TRAINING SYSTEM	Eldasheva Gulnoza Vasildjanovna	467-468
78	PRIVATIZATION PROCESSES AND THE CURRENT STATE OF THE REGIONAL SECURITIES MARKET OF NAMANGAN REGION	Ph.D., Assoc. Kadirova H.T.	469-473

79	ATTITUDE TOWARDS ANAEMIA AMONG ADOLESCENT GIRLS	M.Abirami, K.S.Pushpa	474-478
80	EYE CARE DURING COVID-19 SCARE: A REVIEW	Kamal Pant, Rajat Bansal	479-485
81	THE IMAGE OF AMIR TIMUR AND THE IDEAS OF HUMANISM IN THE DRAMA OF CRISTOPHER MARLOWE "TAMBURLAINE THE GREAT"	Yakubov Muzaffar Kamildjanovich	486-490
82	CHANGING ROLE OF A TEACHER IN EDUCATIONALLY PROGRESSIVE MAHARASHTRA PROGRAMME <a href="https://doi.org/10.36713/epra5052">https://doi.org/10.36713/epra5052</a>	Patil Sandip Diliprao	491-492
83	LEXICAL SEMANTIC ANALYSIS "EDUCATIONAL ESTABLISHMENTS" IN THE ENGLISH AND UZBEK LANGUAGES	Ganieva Dilafruz Khasanovna	493-496
84	ANALYSIS OF THE CHEMICAL COMPOSITION AND MICROSTRUCTURE OF WHITE CAST IRON	Turakhodjaev Nodir, Saidmakhmadov Nosir, Odilov Furkat, Zokirov Ruslan, Turaev Anvar	497-502
85	THE ROLE OF PUBLIC CONTROL IN EFFECTIVE POLITICAL DECISION MAKING IN LOCAL GOVERNMENT REPRESENTATIVE BODIES	Isabaev Maksad Bahodirovich	503-507
86	THE CRITERION OF HUMAN INDICATORS IN DEVELOPMENT AND RENEWALS IN UZBEKISTAN	Turdiyev Bexruz Sobirovich	508-511
87	THE TERRITORIAL CHANGES IN THE TOPOGRAPHY OF THE CEMETERIES OF BUKHARA	Jurayeva Nafisa Olimovna	512-515
88	AL-GHAZALI ABOUT THE ROLE AND VALUE OF A WOMAN AS A CRUCIAL MEMBER OF SOCIETY	Sayfullayeva Dilfuza Kaxramonovna	516-519
89	SHARIA LAW, CUSTOMARY LAW OF ADAT, PROBLEMS AND ATTEMPTS TO ADDRESS THEM IN THE MATERIALS OF THE REVISION OF SENATOR K.K.PALEN (1908-1909)	Makhmudova Nigora Barotovna	520-524
90	ETHICAL LITERACY OF EFL TEACHERS IN PRESCHOOL EDUCATION	Mirjalol Mirzaahmedov	525-527
91	THE USE OF READING IN MAKING LANGUAGE CLASSES INTEGRATED AND STUDENT-CENTERED	Mahliyo Kukiboyeva, Olimkhon Isakov	528-530
92	IMPROVING THE METHODOICAL PREPARATION OF THE FUTURE TEACHER OF FINE ARTS	Bekmuratova Shohida Nematjonovna	531-532
93	HISTORICAL ROOTS AND SOME ARTISTIC FEATURES OF FOLKLORE AND BLESSINGS IN ENGLISH AND UZBEK LITERATURE	D.S.Urayeva, Niyazova Mokhichekhra Khayatovna	533-535
94	THE IMPORTANCE OF FORMING YOUTH LIFE STRATEGY IN AN INFORMED SOCIETY	Ismoilov Temurbek Islomovich	536-538
95	PROBLEMATIC ASPECTS RELATED TO THE USE OF EDUCATIONAL	Shakhlo Isamiddinovna Botirova	539-541



	TECHNOLOGIES AND INTERACTIVE METHODS IN THE CLASSROOM		
96	ELECTORAL SYSTEM AND SELECTION OF JUDGES IN TURKESTAN AT THE LATE OF THE XIX AND BEGINNING OF THE XX CENTURIES	Karimov Kakhramon Sodikovich	542-546
97	THE CREATION OF "ONE THOUSAND AND ONE NIGHTS" AND ITS ORIGINAL SOURCES	Zebiniso Axmedova	547-550
98	SEMANTIC-ASYMMETRIC INTERPRETATION OF THE "FOOD" FRAME (Using synonymy as an example)	Khasanov Akbarjon Abdurashidovich	551-554
99	PROBLEMS AND SOLUTIONS IN THE DEVELOPMENT OF KNOWLEDGE OF THEOLOGY: THE PAST AND THE PRESENT	N.Z.Madaminova,	555-558
100	RELIGIOUS ORGANIZATIONS IN THE SYSTEM OF INSTITUTES OF CIVIL SOCIETY IN UZBEKISTAN	Rashidov Firuz Tuygunovich	559-562
101	A STUDY OF PURCHASING ATTITUDE OF CONSUMERS TOWARDS ORGANIZED RETAIL FORMATS IN INDIA	Ms. Pooja Pandey, Prof. (Dr.) Simrina Singh	563-569
102	EFFECT OF YOGA AND EXERCISE ON HEALTH: A REVIEW	Mahendra Singh Rajawat, Dr. Vijay Singh	570-578
103	THE CONTRIBUTIONS OF CHRIST APOSTOLIC CHURCH STUDENTS' ASSOCIATION (CACSA) TO THE GROWTH AND EXPANSION OF CHRIST APOSTOLIC CHURCH NIGERIA, 1971-2015 <a href="https://doi.org/10.36713/epra5053">https://doi.org/10.36713/epra5053</a>	Afolabi Samuel Oluseyi Ph.D	579-584



## SOME ASSUMPTIONS ON DEVELOPING LEARNERS' SPEAKING SKILLS AND FACTORS INFLUENCING ON IN

**Polvonova Saodat Matrasulovna**

English teacher,  
General Secondary School #2,  
Urgench, Khoezm,  
Uzbekistan

**Saparbaeva Gulandam**

**Masharipovna**  
Lecturer and English teacher,  
Department of Roman- German  
philology,  
Urgench state university,  
Uzbekistan

### DISCUSSION

In today's globalized world, the language leaning have already become an integral part of our life as it is important for future carrier and life. It is a collaborative and integral process of learner, teacher, parents and surrounding sphere in condition of learning the language as a foreign or second language. Parents usually pay attention to their children's studying when they are already teenagers as they think that they are very young or they should play up to the age of twelve. Unfortunately, it is the real fact which we have faced to. They don't realize that how important is learning languages at early ages of learning when children are in whole physical and mental condition is referred to acquire the world and language of communication in it. However, children need support by teachers and parents at early stage of learning. As they are still young and of course the parents are the initiators of the language learning course for the child. Since they want their children to speak in a foreign language at least they should encourage or take interest on the process and progress in it. It is very important as the children feel upkeep and support. In its turn, it motivates them and assist them to overcome language obstacles.

Today enough attention is paid to teaching and learning foreign languages, especially to the English language. Here, by this article, we are going to tell you about an interesting fact which is connected with teaching and learning foreign languages at school. As you know, each of us learned a foreign language at school. Some of the people learned English, others French or German as a foreign language, but most of them cannot speak in that language. So, why they cannot speak in a foreign language although they have studied the language for five years? What is the main cause of it? And how this problem should be solved?

Firstly, the majority of parents think that teachers of foreign languages lack profound knowledge of the subject and efficient methodology of teaching it. They often complain that teachers cannot teach children with interactive style and 'wake their interest' on the subject. The pupil needs more motivation but teacher cannot give it to them. So, then we tried to know the teachers' opinion and asked their opinion on this problem. To my surprise, they told me that the problem was connected with textbooks. They think that the textbooks do not have interesting authentic material on conversational topics on the subject. We were not sure whether their point of view is reasonable. Then basing on our school years' experience we tried to make clear points on the question and why we ourselves could not speak English at school. We learned some new words and sentences at school but we did not know anything about English grammar because it was not on the school curriculum or even it was in school curriculum the teachers didn't teach us in correct way. And teachers had to follow the curriculum. Usually school textbooks didn't include authentic materials, useful language skill based tasks for classroom usage. In contrary the exercises were for translation from source language to target language or vice versa. Nowadays the same serious problem remains as it was at our times at some schools. Learning and teaching foreign languages with those textbooks were just only wasting time without learning anything. In our point of view enriching language materials in school textbooks as well as implementing new language skill based tasks to teaching process is the most effective approach to teaching and learning foreign languages.

Secondly, teachers should consider whether their pupils have inclination to study the language, if they do not have it, then teacher should make the children to study English by encouraging them. As it



was said in English proverb 'If there is a will, there is a way'. While listening to teacher's speech the interest to language learning awakens in learner's mind. If the teacher has an excellent speech, his pupils want to speak like their teacher and work hard on developing speaking skills. Once we were also inspired by our English teacher because she had an impressive speech and she always tried to speak English. Then we got used to listening English more and more. At last we could understand spoken English but we were still mute or afraid of speaking in English. Because there was barrier and no language atmosphere to breath in.

Moreover, family conditions also influence on children's mind. Most parents are never interested in their children's study. That is another reason for poor knowledge. Parents should pay attention to the study of their children. They must motivate their children to learn languages. They may do this by helping to their homework, checking their study, buying useful books for them or talking about their study with the teachers. But most parents seldom pay attention to their children's study. Even some parents find the study useless to their children. That's why children go to school just for the authority's demand or for learning to read, write and count by spending their valuable time.

All of these are the causes of the problem and what is the solution to it?

According to the first cause the solution to the problem is choosing appropriate course books for the learners language level, focused on developing all four language skills(reading, writing, listening and speaking) and language strategies(vocabulary, grammar and pronunciation) in harmony. Also all other skills and strategies should serve for developing speaking skills of learners because each of us learns language in order to be able to speak in it. In teaching process teachers should be aware of learners learning process, their learning styles, challenges they are facing to and facilitate learning process by authentic materials and useful tasks on them.

The solution to the problem from second point of view is using new innovative, informative and pedagogical technologies in teaching foreign languages as a main tool and language proficiency of the teacher which inspire learners with and opens the gate of opportunities and interest to learning foreign languages. In order to achieve all these, at first the teacher must be the lover of the language which s/he teaching, creative, ambitious, dedicated and feel responsibility for the teaching process sincerely. These features of the teacher are more useful for the learners than textbooks, curriculum or language material. We don't want to say that the textbooks, curriculum or language material less important items in language teaching or there is no need for them. We would like to point out that without teacher's professional skills and using them in language

classroom, they will only remain in papers or in computers, in other words there is no use from them for learners in learning process. That is why a lot attention is paid to the preparation of highly qualified specialists and skillful teachers from early years of our independence. The teaching and learning foreign languages are taken under control of the state policy in order to give profound knowledge for learners and supply them with necessary language skills in order to express their thought in foreign language fluently.

Approach to the problem from third point of view is more complicated for the teachers. The family of the learner, the life conditions in it, parent and children relations in the family, social and economic background of the family influence on learners outlook more than we could imagine. In order to overcome this challenge the teacher should be a psychologist, friend and an ideal person for the learner. We know that when learners have problems they usually try to avoid from the conflicts at home by going away from home, spending a lot of time together with friends or the most dangerous committing injuries for their life or etc. In these cases teachers must be friend or psychologist to help them.

Another situation is, when parents agree and the learner wants to study and learn languages at school but their family's financial state cannot support further studies. As a result of shortcomings in a family the learner loses hope for future and helps parents to earn money to keep body and soul together. In this case the teacher can help the learner with the knowledge s/he acquires by joining him to extra-curricular activities and setting him individual tasks to work at and shows the examples from life and hard work of famous people who came from ordinary families. Here teacher's role is instructor and facilitator.

In conclusion we would like to say that the time for teaching English through new effective ways has already come, we as future teachers from early years of studies at higher educational establishments should prepare ourselves for the future profession by enriching language knowledge and gaining professional skills of the teacher of foreign languages.

## REFERENCES

1. *Authentic Materials Activity-Shaping the Way We Teach English.* Sites.google.com/site/shapingthewayweteachhenglishii/authentic-materia.
2. Harmer, J. *The Practice of English Language Teaching.* London and New York: Longman.
3. Ur, P. *A Course in Language Teaching,* Cambridge: Cambridge University Press.



## BELIEFS AND RELIGIOUS VIEWS OF THE POPULATION IN ANCIENT KHOREZM

**Hamdam Khamidjanovich Matyakubov**  
PhD, teacher of the department “History”  
Urgench State University

**Shahriyor SHarifboy o'g'li Kadamboev**  
Master of the Department “History”  
Urgench State University  
Urgench, Uzbekistan

---

### ABSTRACT

*This article provides information about the first religious beliefs and their customs that emerged among the population in ancient times of Khorezm.*

**KEY WORDS:** *Khorezm, Central Asia, Neolithic, Bronze Age, Porushasp, Vishtasp, Arjatasp, Siyovush.*

---

### INTRODUCTION

There hasn't been created any special research on the scientific subject matter of the religious views of the population of Khorezm oasis during the Bronze and Iron Age yet. The problem is merely acknowledged in some chapters of various monographs. As it's known, human's labor activity has been a source of his knowledge. There appeared an opportunity to observe, compare and summarize the causes of various events by the collection of knowledge and practical experience in the labor process. A person didn't separate himself from the atmosphere surrounding him. From ancient times, he had realized the common unity with natural environment, flora and fauna his dependence on them. Many natural phenomena, which were difficult to understand, affected the views and worship of members of communities [1].

### MATERIALS AND METHODS

The archeological materials of the Bronze Age in Khorezm oasis, peculiar to the theme, are insufficient to reveal the essence and significance of the people's beliefs. It is important to note the development of the habit of worshipping for fire in the oasis during the Neolithic and Bronze Age. In Central Asia, fire worships have ancient roots and originally emerged as a home-hearth belief. The Bronze Age ceramic monuments of horses and dogs found in Khorezm oasis are the evidence of the development of the beliefs such as totemic and fertility [2].

As a result of studying the funeral ceremonies of the Saks in the Aral Sea region, some aspects of the religious views of livestock breeder tribes can be described. They are connected with the tradition of valuing died people and worshipping the spirit of ancestors [3].

The dead were buried in specially equipped cellars and graves like hovel-shaped houses. The graves were filled with tools, jewelry, household goods and horse items. Various information is the evidence of the belief in worshipping for fire (rituals of burial or strewing ash on bodies). The burning customs of the dead originated from the beliefs of the Sun [4].

It is possible to recall the words of Herodotus concerning the religious views of the Massagets: “The only God, the Most Merciful among the Massagets, is the Sun, so they sacrificed horses to the sun, because they thought that they should sacrifice the fastest living creature in the world”. There were found bones of sacrificed horses in the cemetery strongholds of Sakarchaga and there are also horse items.

It is likely that the burial customs was based on the idea that the soul of a dead person flies to the Sun with the help of fire. The symbol of the Sun was expressed in thin, round, small objects made of bronze and clay. In religious views, the horse was valued as being associated with the Sun. The horse was described as a means of transport that takes the lives of the deceased to the world of ancestors.

The analysis of the personal names mentioned in the first sources indicates that in many cases their origin was associated with domestic



animals – horses, camels, bulls and cows. For example, there is the word “ushtra” – “camel” in the composition of the name Zardusht-Zaratushtra, as well as the names in “Avesto”, such as Porushasp, Vishtasp, Arjatasp are connected with “asp”, i.e. “horse”. The name of Zaratushtran’s mother, Dugdhave, is translated as “cow’s daughter” [5]. The legendary name Siyovush means black horse.

The emergence of such names has ancient origins and was derived from the fact that different groups of kin were closely related to certain animal, their belief in kinship, i.e. from totemism. Totem was not worshiped for and it was considered as “a father”, “an ancestor” who would help kin members and brings them benefit.

At the stage of the abolishment of the primitive society, individuals who were connected with the fulfillment of their religious beliefs were separated. These people were considered as having wonderful qualities and secret knowledge. They became professional servants, fulfilling religious ceremonies i.e. priests.

There were found various utensils connected with sacrificial ceremonies in the graves of priests and woman priests in the cemetery strongholds of the Saks, including yorghuchoks were put beside dead woman bodies. The yorghuchoks were a symbol of fertility and the female priests were considered as the hearth of home and sponsors of fire.

In the art of the Saks, the image of wild animals (deer, pigs, leopard) was reflected. Jewelry and amulets were made from horns of deer and teeth of pigs. It is possible to assume that magic played an important role in the practice of beliefs of kin system. According to historical and ethnographic data, proficiency of magician was developed in connection with mastering and production economy. Rain and wind were called with the help of ways and methods of inevitable movements, words and wizard dance and a successful hunt was prepared for.

The theme of the emergence of the religion Zoroastrism and funeral ceremonies in Central Asia, including Khorezm oasis, is one of the most actual topics in the subject history. Khorezm and Zoroastrism were widely covered in the monograph of D.Sh. Kurbanova [6]. It is therefore expedient to briefly outline some aspects of the problem.

There are no graves found belonging to Kuzalikir culture. Also, there was not found any graves in Bactria, Marghiana and Sogdiana peculiar to the periods during the transition from the Bronze Age to the Early Iron Age and the Early Iron Age itself. The attention was paid in scientific literatures to the fact that this remained as one of the most actual problems in the history of Central Asia [7].

It was identified that bodies of the dead were buried in settlements (houses, pits under the level of rooms) and in special cemeteries around them during the Bronze Age in Marghiana and Bactria [8]. The

absence of the early Iron Age graves in the southern regions of Central Asia was the basis for the ideas on the spread of funeral orders of Zoroastrism in Marghiana, Bactria and Sogdiana.

In the 70-80s of the 20<sup>th</sup> century, in the memorials discovered in Surkhon and Kaskadarya oasis peculiar to the 10<sup>th</sup>-8<sup>th</sup> centuries BC and 7<sup>th</sup>-4<sup>th</sup> centuries BC, there were found parts of human skulls and pieces of human skeletal bones. These data are explained by the spread of funeral ceremonies close to Zoroastrism in the southern parts of Central Asia [9].

Also, the pieces of human skeleton bones, found in the pits belonging to the 10<sup>th</sup>-8<sup>th</sup> centuries BC, in Jarkutan memorial of Sherabad oasis in recent years, are also remarkable. Besides, skeleton pieces of eight people were defined in a separate pit. The bottom and sides of pits were covered with fragments of broken stone and earthenware dishes [10]. These findings once more confirm the ideas about the spread of habits close to funeral orders of Zoroastrism in Bactria.

The skeleton bones were found in Khumuztepa [11] and a human skull in Kuzalikir either [12]. In the graveyard surrounding Dingilja, there were found skulls of three dogs set on corner condition to one another and fragments of human skeleton in the coffin made of ganch (a kind alabaster). According to the writings of M.G. Vorobeva, the funeral ceremony of Zoroastrism was reflected in the grave [13].

The offered data show that by the end of the 7<sup>th</sup> century BC, population groups, who moved from the south to Khorezm, implemented the traditions of pottery wheel, construction techniques, architecture of wattle and daub walls and raw bricks in the Lower Amu Darya region and laid the foundation for the spread of new religious views and funeral ceremonies peculiar to Zoroastrian customs.

This ceremony was not related to special dishes for bones such as “dahna” and “ossuary” belonging to the latest Zoroastrism. The bodies of deceased were taken out of their residence place and set on high hills and sand-stones. After birds and wild animals cleaned the bones, clean bones, which were washed in rain and snow and dried in the Sun, were stored in special places. Strabon’s following idea wasn’t without sense: “Bactrian surroundings were full of human bones. Macedonian Alexander liquidated this ceremony”.

The habit of non-polluting the clean elements with dead bodies and ceremonies of putting bones of deceased in sand-stone places not far from residences in order to clean them appeared long before the invasions of Macedonian Alexander the Great. However, at the time of the first Zoroastrianism, it was not known that human bones were buried in specially constructed buildings – nous and ossuary – dishes for bones. In this connection, it



was suggested that ossuary in Central Asia belonged to the traditions of Zoroastrianism before the antique period and Islam [14].

The traditions of fire worship in Khorezm oasis go back to ancient times. The large hearth found in the hovel Jonbos 4 of the Neolithic Age, central hearths in the cellars of Tozaboghyob culture and the otashkada (a type of fire-place) having raw brick foundation identified in Kuzalikir were striking examples of that. There was found fire room in Dingilja house-stronghold covering the surface of 77 sq.m. and in the center of the room, there was situated a large hearth made of raw brick.

As a result of the study of the Early Iron Age memorials, the evidences of the value of the house fire-places were found in various parts of Central Asia. A sacred hearth was found in Kuchuktepa in Surkhan oasis [15]. The people of the ancient oasis took care of the furnace burns and poured the ashes into the special pits. The traces of the same tradition were found in Kuzalikir.

S.P. Tolstov described Khorezm oasis as a homeland of Zoroastrianism [16]. A.A. Askarov reviewed the issues raised by S.P. Tolstov and commented on them [17]. According to A.A. Askarov, it is not expedient to interpret Khorezm as a home land of Zoroastrianism. It was assumed by A.A. Askarov and T. Sh. Shirinov that the education of Zoroastrianism, originally created as a fire worshiping, is peculiar to the middle of the 2<sup>nd</sup> millennium BC on the basis of the study of Jarkutan – the temple of fire. In a special article dedicated to this issue, T.Sh. Shirinov wrote about the fire, water and haoma worship performed at Jarkutan before Zoroastrianism [18].

The Bronze Age fire temples were explored in the memorials in northern Afghanistan and in the Lower Murghab oasis. In the writings of V.I. Sarianidi, in the temple Tughalok, there was prepared a type of drinking - haoma (mixture of milk and juice of plants with needle leaves) [19]. Haoma was used in religious ceremonies of Zoroastrianism.

According to A.A. Askarov's view point, the convictions closely related to Zoroastrianism, originally formed in Marghiana, Bactria and Sogdiana. According to the confirmation of V.I. Sarianidi, the motherland of Zardusht and Zoroastrianism was situated in Dranghiana (East Iran), Bactria, Marghiana and Belujiston.

According to A.S. Sagdullayev's conclusion on the issue, it is true that the heritage of fire worship of various ethnic groups in Central Asia is common. As noted in Bactrian memorials, the tradition of fire worship can not be connected only with Zoroastrianism or to the religion of Ahamanides. Truly, worshiping for fire existed before the emergence of these religions and have more ancient habits emerged on the basis of valuing and worshiping for home hearth at first.

In our opinion, the religious views and customs of the people living in different regions of Central Asia did not always suit one another. Historical data show that Central Asia has distinctive features of religious beliefs and ceremonies of farmer and nomadic livestock populations.

In the art samples of the culture of Kuzalikir, there are observed influences of various descriptive traditions. These traditions were reflected in gold jewelry with bird-head, a golden dome with deer head, a snake wound around a ring of a seal, a lion on a seal made of haliedon stone, and in the image of a shooter on a bronze ring-seal. The images of this literal art were worked out peculiar to the methods of "Scythian-Syberian" and "Frontier Asia" and they are the most perfect expressions of the human views, mythological layers and eternal struggle of noble and evil forces. In the descriptive art of the Saks, the descriptions of leopards and tigers hurting and torturing deer were widespread [20].

Ancient hymns calling for respect for the natural forces, worshiping the sun and the fire are the components of Avesto and performed by the priests in the ceremonial celebrations. The imaginations formed during the era without writing and included in the book "Avesto" have centuries-old historical progress and they were preserved in oral folklore [21]. In particular, they were reflected in the folklore of Khorezm oasis at different levels.

H. Abdullayev wrote that various interpretations were preserved in lots of myths created in the oasis, in the epic poems about Anahita – Ardivisura – the sponsor of nature, water and fertility, in a number of myths about Siyovush riding black horses, in the call for protection of the Amu Darya from the evil forces and spirits. Also archaeological materials of the Early Iron Age prove the existence of worshiping traditions of natural forces and fire in Khorezm oasis.

It should be noted that there occurred certain changes as a result of the spread of cultural news and the development of socio-political conditions in the process of the development religious imaginations of the population in Khorezm in the 9<sup>th</sup>-8<sup>th</sup> centuries BC (Amirabad culture, the last stage of the primitive society), the 7<sup>th</sup>-6<sup>th</sup> centuries BC (Saks, Kuyisay culture, Kuzalikir culture, the Early Iron Age), the last quarter of the 6<sup>th</sup> century BC – the 5<sup>th</sup> century BC (Khorezm's becoming a part of Ahamanides state). The funeral ceremonies of the southern Aral Sea were connected with burying and burning bodies of the deceased, their religious views with worshiping for the spirits of ancestors, however, there were no graves of Kuzalikir culture found and the absence of them can be explained by the spread of funeral ceremonies of Zoroastrianism in Khorezm oasis. Various views were offered on the history of the religion Zoroastrianism, as well as, Khorezm is considered one of the oldest centers Zoroastrianism.



The emergence of the Zoroastrianism education, the motherland of the founder of this education Spitama Zaratushtra (Zorastrian) and the period of his life have been reasons for the discussions going on for several years, because the date and the area, where Zaratushtra appeared, were not discovered. In this regard, many types of assumptions are worth attention.

In many cases, Zariastratushtran's homeland was associated with Aryonam Vayjo – "Fertile lands of Ariys". It is likely that Zaratushtra, at first, began his activity as a priest of Ariys. In Avesto (Yasna), he was called "zaotar" – priest [22]. So, Zaratushtra was educated in the spirit of traditions of ancient religion and propagandized them. During this time, his clan was cattle breeder and the shepherds of steppes worshiped water and fire and sacrificed their cattle to the natural forces [23]. According to legends, Zaratushtra, when aged 30, was met by Ahuramazda – the great god and reported that he had been chosen to propagate Ahuramazda's knowledge and good deeds. However, the teachings of Zaratushtra, new religious advice were not adopted by his own tribal family members. Zaratushtra had to escape from his homeland.

D.Sh. Kurbanova wrote that Zardusht, who abandoned his country, mastered many of the beliefs in Bactria and Marghiana and enriched his teachings and carried out religious reform. The above-mentioned conclusions correspond to reality in condition of taking into consideration the historical tradition about the fact that the king of Bactria Kavi Vishtasp had been the sponsor of Zardusht and he had been the first follower of Zoroastrianism education. So, some kinds of Zoroastrianism habits have ancient roots in Bactria-Marghiana.

According to archaeological information, there were no temples in Khorezm oasis during the Bronze Age. Therefore, it is possible to suppose that religious rituals were carried out in open air, near fireplaces. Fire was important for residents of steppe (the source of hot and light, meat – one of the main meals of livestock breeders fried by fire). Fire was respected, people were always trying to keep the furnace burned and burning embers were moved from one place to another in the pot. In this way, belief connected with the holy and eternal fire came to being.

In the process of mastering the atmosphere surrounding, the first religious views appeared due to the idea of the unity of mankind with the nature, flora and fauna. It is not difficult to imagine that the ancient hunters, cattle-breeders and farmers appealed to invisible forces, asking for help, lucky hunting, bags, feeding for cattle and high harvest for themselves.

In the southern Aral Sea regions, fishing and hunting developed during the Neolithic Age and in the Bronze Age, beliefs related to livestock breeding

and farming (water, fire and Sun worships) developed.

In the 9<sup>th</sup>-7<sup>th</sup> centuries BC, the tribes of Southern and Eastern Aral Sea were engaged in breeding cows, horses, camels and small cattle. Important aspects of economic relations were linked to livestock, which had become the main wealth of society. In the oldest parts of Avesto, various information about the importance of livestock has been preserved: "livestock is the source of life", "We call for provide livestock with feed peacefully". The heroes of "Avesto", "having a lot of herds" and "having lots of horses" slaughtered horses, bulls and sheep in fresh and open air in the foot hills [24]. This ceremony was dedicated to divine powers. Thus, the cattle were also valued. The belief "the God is a horseman" came from the fact that Khorezmians – the Saks and Massagets worshiped horses.

## CONCLUSIONS

Thus, the formation of religious views and beliefs in Khorezm oasis were the oasis of the reasons and factors peculiar to society's history and they were developed on new basis as a result of changes in historical processes, socio-economic relationships and spiritual culture.

## REFERENCES

1. Pershits A.I. Mongayt A.L., Alekseev V.P. *The history of pervobytnogo obshchestva*. - M.: Vysshaya shkola, 1968. - C. 108.
2. Itina M.A. *Female statuette of epoxy bronze from Khorezm* // KSIE. - M., 1958. Vyp. XXX. - S. 23-29.
3. Vishnevskaya O.A. *Kultura saksix plemen nizovev Syrdari v VII – V vv. do n.e.* // Tr. XAEE. - M., 1973. T. VIII. - S. 130-131; Yablonskiy L.T. *Saki Yujnogo Priaralya (archeology and anthropology of cemeteries)*. - M.: Institute of Archeology RAN, 1996. - p. 61-62.
4. Rapoport Yu.A. *Khorezmiy astiany* // SE. - M., 1962. - № 4. - S. 79; Mandelshtam A.M. *Pamoknniki epoxy bronze in South Tajikistan* // MIA. - L., 1968. - № 145. - p. 102-103.
5. Tolstov S.P. *Ancient Khorezm*. - M.: MGU, 1948. - C. 317.
6. Qurbonova D.Sh. *Ancient and early medieval spiritual culture of Khorezm oasis*. - Tashkent: Publishing House of the National Library of Uzbekistan named after Alisher Navoi, 2015. - B. 107-129.
7. Sagdullaev A.S. *K izucheniyu kultovyx i pogrebnogo obryadov yuga Sredney Azii epochi rannego jeleza* // Drevnyaya i srednevekovaya archeologiya Sredney Azii. - Tashkent: Fan, 1990. - C. 29-38.
8. Askarov A.A., Abdullaev B.N. *Djarkutan (to the problem of protogorodskoy civilization in the south of Uzbekistan)*. - Tashkent: Fan, 1983. - C. 8-15.



9. Sagdullaev A.S. *Archaeological data in the study of the first religious rites of the Avesto // History of Uzbekistan. - 2001. - № 3. - B. 5.*
10. Mustafakulov S.I., Rakhmanov U.V. and dr. *Results of research in Djarkutane in 2009-2011. // Polevoy otchet. - Samarkand, 2011. Archive of the Institute of Archeology AN RUz.*
11. Baratov S. *Some problems of archeological researches of ancient culture of Khorezm // History of Uzbekistan. - 2007. - № 4. - p. 31, primech. 22.*
12. Vishnevskaya O.A. *Raskopki gorodishcha Kyuzeligyr // AO 1978. - M.: Nauka, 1979. - C. 567*
13. Vorobeva M.G. *Dingildje. Usadba I tysyacheletiya do n.e. in Ancient Khorezm // MXE. - M., 1973. Vyp. 9. - S. 86.*
14. Rapoport Yu.A. *Iz istorii religii drevnego Xorezma // Tr. XAAE. - M., 1971. T. VI. - S. 122.*
15. Askarov A.A., Albaum L.I. *Kochuktepa settlement. - Tashkent: Fan, 1979. - C. 25.*
16. Tolstov S.P. *In the wake of drevnexorezmiyskoy civilization. - M., 1948. - p. 88.*
17. Asqarov A. *Some issues on the history of ancient Khorezm // Ethnology of Uzbekistan: new views and approaches. - Tashkent, 2004. - B. 76-84.*
18. Shirinov T.Sh. *Srednyaya Aziya vo II tysyacheletii do nashey ery i protozoroastrizm // IMKU. - Samarkand, 2000. Vyp. 31. - C. 46-47.*
19. Sarianidi V.I. *Ancient woods of Margush. - Ashgabat: Ylym, 1990. - p. 150-153.*
20. Kuzmina E.E. *Stseny terzaniya v iskusstve sakov // Etnografiya i archeologiya Sredney Azii. - M.: Nauka, 1979. - C. 78-82.*
21. Mirzaev T., Jo'raev M. *Avesto mythology and Uzbek folklore // History of Uzbekistan. - 2001. - № 3. - B. 30-37.*
22. Fray R. *Nasledie Irana / Per. s angl. V.A.Livshitsa and E.V.Zeymal'ya. - M.: Nauka, 1971. S. 54-56.*
23. Boys M. *Zoroastrians. Verovaniya i obychai / Per. s angl. and primech. I.M.Steblyn-Kamenskogo. - M.: Nauka, 1987. - C. 10-11.*
24. *Avesto. Yasht book / Translated by M.Ishakov. - Tashkent: Sharq, 2001. - B. 22-23.*





# INFLUENCE OF FUNGI TRICHODERMA LIGNORUM STRAINS ON THE DEVELOPMENT OF FUSARIUM WILT AND ROOT ROT DISEASES OF CUCUMBERS IN GREENHOUSES OF TASHKENT

**S.S.Xasanov, PhD**  
Tashkent State Agrarian University,  
Uzbekistan

**S.E. Avazov, DSc**  
Professor,  
Tashkent State Agrarian University,  
Uzbekistan

---

## ANNOTATION

*The article provides data on the composition of phytopathogenic fungi on cucumbers in greenhouses and influence of strains of the fungus Trichoderma lignorum on the development of fusarium wilt and root rot. The highest rate of disease development according to average data (2011-2019) is from the development of withering and lodging of seedlings - 24.0%, then there is fusarium wilting - 20.9%, root rot - 17.9%.*

**KEYWORDS:** *Cucumber diseases, phytopathogenic fungi, species, developmental intensity, disease prevalence, fusarium wilting, root rot, trichoderma lignorum.*

---

## INTRODUCTION

Fusarium wilting (Fusarium wilt) is currently one of the most dangerous diseases of vegetable crops, including cucumber in Uzbekistan. [1].

The causative agents of fusarium wilt are fungi of the family Fusarium, ubiquitous, widespread in Uzbekistan, infect a wide range of feeding plants [3].

In addition to the composition of micromycetes, the tasks of the study included determining the frequency of occurrence or prevalence of diseases, as well as developing measures to combat them.

The measures against crop diseases is a complex of agrotechnical, chemical, biological and other measures. In addition to agrotechnical methods, selection and seed-growing activities, limiting the development of fungal diseases, an important role is assigned to biological and chemical methods of protection.

## RESEARCH METHODS

The chemical method is the fastest, most available and most effective. The effectiveness of the above method is largely determined by the availability of the required range of pesticides, which is currently very high. [6].

The increasing application of the biological method deserves special attention, i.e. application of environmentally friendly measures to against plant diseases.

During our own experimentations of crops, we found the causative agents of fusarium - *F. aurentiacum* Sacc., *F. javanicum* Koord., *F. monilioforme* Schlecht., which caused damage to plants, manifested in the form of yellow spots. However, the form of lightning-fast wilting of adult plants, without loss of green color and preservation of foliage on cucumbers, upon identification, was identified by us as *Fusarium oxysporum* Shlecht. f. sp. *cucumerinum* Owen [5].

In total, 26 phytopathogenic species of fungi were identified on greenhouse cucumbers, of which *Fusarium* is the leader in terms of severity. *Fusarium* cucumber was observed everywhere in the Tashkent region, Uzbekistan. The data on the incidence of pathogens of various types of diseases on cucumbers is given in Table 1.

**Table 1.**  
**Accounting for the incidence of pathogens of various types of diseases on a greenhouse cucumber in the conditions of the Tashkent region, Uzbekistan (%).**

Culture	Pitioz	Thielaviopsis	Rhizoctonia	Rot	Fusarium	Verticilliosis	Total - withering	Downy mildew	Powdery mildew	Alternaria	Cladosporium	Total - spotting	TOTAL CULTURE:
%	1,6	1,4	0,6	7,0	16,0	5,2	21,2	4,4	18,0	10,0	9,0	41,4	24,9
number of isolates, pcs	2	2	1	10	23	7	30	6	26	14	13	59	198

The table shows that the most common diseases on cucumbers in Tashkent region are fusarium wilting and powdery mildew. So, on cucumbers, powdery mildew was more common than fusarium (18 and 16%, respectively).

Due to the fact that greenhouse vegetables can be used for food almost immediately after harvesting, much attention has been paid recently to obtaining safe, environmentally products.



**Photo 1, Greenhouses in Tashkent, Uzbekistan.**

One of the questions we were facing was the approbation of the system of protecting greenhouse

crops from the development of fusarium wilting and root rot, the fungus *Trihoderma lignorum* was used



as an antagonist of pathogens of soil rot in the fight against fusarium.

For this purpose, strains of *Trichoderma lignorum* were isolated and studied from the soils of the educational farm of the Tashkent State Agrarian University and directly from the soil of greenhouses.

Three methods were used to study the possibility of effective use of strains selected for further work (No. 59 and No. 18).

In the first, the strain grown on a grain substrate in an amount of 30 g / m<sup>3</sup> was laid in the soil to a depth of 6-8 cm, after which the seedlings were planted in lysimeters.

In the second variant, 10 g of the fungus obtained on a grain substrate was introduced into each well, followed by sowing seedlings.

The third option involved immersing the seedling roots in the *Trichoderma lignorum* culture liquid (2 ml per plant) followed by sowing.

The results are shown in Table 2.



Table 2.

Influence of strains of the fungus *Trichoderma lignorum* on the development of fusarium wilt and root rot (2019 year).

Experience options	strain №	Variety	application rates	The development of the disease, %		Productivity, kg/ м <sup>2</sup>	Extra harvest kg/ м <sup>2</sup>	Biological efficiency,%	
				Fusarium	Root rot			Fusarium	Root rot
Control (without treatments)	-	Orzu	-	20,5	11,2	8,14	-	-	-
Option 1. Strains of <i>Tr.lignorum</i> introduced into the soil	№59	Orzu	30 г/м <sup>2</sup>	4,3	2,0	9,10	0,96	69,3	81,2
	№18		30 г/ м <sup>2</sup>	5,6	2,7	9,05	0,91	72,7	75,9
Option 2. Strains of <i>Tr.lignorum</i> introduced into the well	№59	Orzu	10 г/лунка	-	-	9,20	1,06	100	100
	№18		10 г/лунка	-	-	9,20	1,06	100	100
Option 3. Seedlings immersed in the culture fluid of the <i>Tr.lignorum</i> strain	№59	Orzu	2мл/1 рассаду	3,8	-	9,17	1,03	81,5	100
	№18		2мл/1 рассаду	4,7	-	9,17	1,03	77,1	100
the least significant difference 05						0,02			



## CONCLUSIONS

So, in the case of the introduction of the biomaterial into the well, the biological efficiency of both strains, both in the case of fusarium wilting and root rot, was equal to 100%. The yield was 9.20 kg / m<sup>2</sup> and the additional yield was 1.9 kg / m<sup>2</sup>.

## LITERATURE

1. Velikanov L.L., Sidorova I.I., Assumption G.D. *Field practice on the ecology of fungus and lichens.* –M., Publishing House of Moscow State University. 1980 -111 p.
2. Zuev V.I. *Tomato, cultivation and harvesting* - Tashkent, 2008 - 140 p.
3. Kimsanbaev Kh.Kh., Zuev V.I., Kadyrkhodzhaev AK, Sulaymonov B. *Pests and diseases of nightshade vegetable crops and control measures* - Tashkent, 2007 - 122 p.
4. Rudakov O. L., Rudakov V. O. *Protection of vegetable crops of closed soil against root rot and wilting disease* // *Protection and Plant Quarantine, No. 10, 20000* - p.27-29
5. Khassanov B.A., Ochilov R.O., Gulmurodov R.A. *Diseases of Vegetable measures against them.* - Tashkent, Visa Print, 2009 - p. 15-28.
6. E.A.Kholmuradov, S.E.Avazov. *Plant pathology second chapter* – Tashkent, 2020 -p211-212.
7. Avazov,S. (2017). *Mildew of onion in the Tashkent Region.*Bulletin of Science and Practice ,(12), 141-144
8. Avazov, S., & Holmuradov, E. (2018). *Mycobiota sowing of onion in the conditions of the Qashqadaryo region of Uzbekistan.* Bulletin of Science and Practice, 4, (4), 166- 168
9. S.E. Avazov S. (2019). *Fusarios wilting of cucumbers in green houses.* EPRA International Journal of Research and Development (IJRD) doi:10.5281/zenodo.1218311, SJIF Impact Factor: 6.260| ISI I.F. Value:1.241 Volume: 4 | Issue: 11 ISSN: 2455-7838 Online, 88-91



# COMPOSITION OF AGENTS OF FUNGAL DISEASES OF CUCUMBER SEEDLING UNDER THE CONDITIONS OF CLOSED GROUND IN THE TASHKENT REGION OF UZBEKISTAN

**S.S.Xasanov, PhD**

Tashkent State Agrarian University,  
Uzbekistan

**S.E. Avazov, DSc**

Professor  
Tashkent State Agrarian University,  
Uzbekistan

## ANNOTATION

*The article provides a result of the research which carried out from the soils of greenhouses under tomatoes and cucumbers, a total of 52 species from 21 genera, 6 families, 4 orders from 3 classes of the fungi were identified. The largest number of identified soil species belongs to the class of Imperfect fungi - 45 species, to the class of Zygomycetes - 6 species and Marsupial fungi - 1 species. The genera Aspergillus - 8 species, Penicillium - 7 and Fusarium - 6 species are richly represented. 3-4 species were recorded in the genera Mucor, Cephalosporium, Gliocladium, Trichoderma and Cladosporium. The rest of the genera are represented by 1-2 species.*

**KEYWORDS:** *Cucumber diseases, phytopathogenic fungi, species, developmental intensity, Aspergillus, fusarium wilting, root rot*

## INTRODUCTION

Agriculture produces basic food products as well as raw materials for food and other industries. The main task of the agro-industrial complex is to improve the quality of products, eliminate its losses at all stages of production, transportation and storage. The challenge for agriculture is not only to create crops, but also to protect plants from pathogens and pests [1].

Due to the nutritional value, the value of greenhouse cucumber crops is beyond doubt. The study of plant diseases, the composition of pathogens and their biology is the first step towards further study of the ecological patterns of the formation of mycobiota, and also forms the basis for the development and optimization of a system of measures to protect crops from harmful organisms. It is known that fungi are a constant component of any biogeocenoses, which also includes soil. [3].

According to A.A. Yachevsky, the study of plant diseases, the composition of pathogens and their biology is the first step towards further study of the ecological patterns of the formation of mycobiota, and also forms the basis for the development and optimization of a system of measures to protect crops from harmful organisms. [4].

As a result of the research carried out from the soils of greenhouses under tomatoes and cucumbers, a total of 52 species from 21 genera, 6 families, 4 orders from 3 classes of the Kingdom of Fungi were identified.

The largest number of identified soil species belongs to the class of Imperfect fungi - 45 species, to the class of Zygomycetes - 6 species and Marsupial fungi - 1 species. The genera Aspergillus - 8 species, Penicillium - 7 and Fusarium - 6 species are richly represented. 3-4 species were recorded in the genera Mucor, Cephalosporium, Gliocladium, Trichoderma and Cladosporium. The rest of the genera are represented by 1-2 species. Of the total number of species (52 species), the bulk is the group of saprotrophic species - 68%, 17 species in favorable conditions can cause plant diseases.

In addition to soil fungi, special attention was paid to the composition of phytopathogenic fungi of seedlings and adult cucumber plants that cause various diseases.

From the data obtained, it can be seen that diseases of greenhouse cucumbers are caused by 28 species from 17 genera, 7 families, 5 orders, 4 classes of the Fungi kingdom.

The main diseases of seedlings are: root rot, lodging of seedlings, on adult plants plants are



noted: downy mildew, powdery mildew, wilting and various spotting, seed infections were also noted.

In addition to revealing the composition of phytopathogenic micromycetes, one of the tasks was to identify the main, most harmful diseases of tomatoes in greenhouses, for which the distribution in the greenhouses of the Tashkent region and yield losses during the development of diseases were calculated (Table 1).

From the data in the table it can be seen that the highest intensity of development of diseases according to average data (1998-2018) is from the development of powdery mildew - 30.5%, then comes brown spot - 27.0%, downy powdery mildew - 25.5%, fusarium wilting and lodging of seedlings - 18.5% and root rot -13.5% ..

**Table 1**  
**Prevalence and loss of yield from the development of major diseases**

Types of pathogens	Name of the disease	Disease prevalence %	The intensity of the disease %
<i>Erysiphe cichoracearum</i> f. <i>cucurbitacearum</i>	Powdery mildew	37,5	30,5
<i>Peronosplasmopara cubensis</i>	Downy mildew	22,5	25,5
<i>Cladosporium cucumerinum</i>	Brown spot	24,5	27,0
<i>Fusarium oxysporum</i> f. <i>cucumerinum</i>	Withering and lodging of seedlings	23,5	18,5
<i>Fusarium, Rhizoctonia, Pythium</i> и др.	Root rot	19,0	13,5

Prevalence data are arranged differently. So, the most common is powdery mildew - 37.5%, followed by brown spotting - 24.5%, followed by lodging of seedlings - 23.5%, downy mildew - 22.5% and root rot - 19.0%.

#### LITERATURE

1. Zuev V.I. *Tomato, cultivation and harvesting* - Tashkent, 2008 - 140 p.
2. Kimsanbaev Kh.Kh., Zuev V.I., Kadyrkhodzhaev AK, Sulaymonov B. *Pests and diseases of nightshade vegetable crops and control measures* - Tashkent, 2007 - 122 p.
3. A.A. Yachevsky *Protection of crops of soil // Protection and Plant Quarantine, No. 109, 2000 - p.27-32*
4. Khassanov B.A., Ochilov R.O., Gulmurodov R.A. *Diseases of Vegetable measures against them.* - Tashkent, Visa Print, 2009 - p. 15-28.
5. E.A.Kholmuradov, S.E.Avazov. *Plant pathology second chapter – Tashkent, 2020 -p211-212.*
6. Avazov,S. (2017). *Mildew of onion in the Tashkent Region.Bulletin of Science and Practice ,(12), 141-144*
7. Avazov, S., & Kholmuradov, E. (2018). *Mycobiota sowing of onion in the conditions of the Qashqadaryo region of Uzbekistan. Bulletin of Science and Practice, 4, (4), 166- 168*



## ASSESS THE BEHAVIORAL AND EMOTIONAL PROBLEMS AMONG SCHOOL GOING CHILDREN ADMITTED IN PSYCHIATRIC WARD IN SELECTED HOSPITAL, PUDUCHERRY

Sherin Nithya S<sup>1</sup>

<sup>1</sup>.Asst.Prof,

Department of Child Health Nursing,  
kasturba Gandhi Nursing College,  
Puducherry -607402,  
India.

Sumathy P<sup>2</sup>

<sup>2</sup>.Prof, Head ,

Department of Child Health Nursing,  
kasturba Gandhi Nursing College,  
Puducherry - 607402,  
India.

Saranya S<sup>3</sup>

<sup>3</sup>.Asst. Prof ,

Department of Child Health Nursing,  
kasturba Gandhi Nursing College,  
Puducherry -607402,  
India.

### ABSTRACT

*Children of today are the citizens of tomorrow. Children with sound mind and sound body are essential for the future development of the country. All young children can be naughty, defiant and impulsive from time to time, which is perfectly normal. However some children have extremely difficult and challenging behavior that are outside the norms for their age children who suffer from Behavioral and Emotional disorders are at a high risk for school failure, suicide and mental health .Behavioral problems in childhood may lead to limited functional capabilities in adulthood. The importance of early detection of Behavioral and Emotional problems is being recognized worldwide. Mothers place an influencing role in developing personality. The mother has the fulfill her role both as a home maker and as an employee, making it difficult to fulfill the task of meeting the children's needs. To compare the Behavioral and Emotional problems among school children of employed and unemployed mothers will make a note to find the problems among children with their life style aspects.*

**KEY WORDS:** Behavioral problems, Emotional problems, School children, Employed mothers, Unemployed mothers.

### INTRODUCTION

Children are the basement of future world. They are like clay in the potter's hand. Handled with love and care, they become something beautiful or else they will break<sup>[1]</sup>. Every child should have tender loving care and sense of security from parents. The mother is more responsible for the integrated development of a child<sup>[2]</sup>. Children are of paramount importance in determining the future behaviors of children. Children Behavior and Emotional problems are now being recognized as clear indicator of difficulties that may

persist into later development<sup>[3]</sup>.Recent evidence by WHO indicates that by 2020 childhood psychiatric disorders will rise over 50%<sup>[4]</sup>. It may be due to genetic, psychological or environmental factors of the child. A descriptive study conducted on behavior problems among 300 children in New Delhi revealed that 22% of them had Behavioral and Emotional problems<sup>[5]</sup>.

Behavioral and Emotional problems in children can be a part of normal development. Such problems are often transient and may not be even noticed and





may be exhibited in certain settings and not in others. Some school children exhibit a range of deviant Behavior and emotions that may be a burden not only for parents and families, but also for teachers and people in the community. The importance of early detection of Behavioral and Emotional problems is being recognized worldwide. However, until now there has been little systematic research into childhood psychiatric disorders in the developing countries [6].

Working women will have less time at her disposal for child care. The working mother has both positive and negative impact over the child's development. Hence the researcher intended to identify Behavioral and Emotional problems of children of Employed mothers and to compare with that of Unemployed mothers [7]. Most of the women had gradually entered the work force than before. Fewer children are raised by stay-at-home mothers and more are spending prolonged hours at childcare facilities [8]. Children of the working mothers are placed in group childcare, which results in receiving less one-to-one attention and instruction. This may have significant cognitive and behavior effect in childhood. Maternal employment sometimes leads to behavioral problems in children [9].

Behavioral problems during school period are the strongest predictors of more serious problems later including delinquency, substance abuse, antisocial behavior, academic failure, and depression in the adolescent age group. A healthy growth of young children depends so closely on the emotional status of their parent and family caregivers that the Behavioral and Emotional needs of young children are best met through a holistic approach that focuses on their full environment of relationships. Early prevention strategies and efforts to identify and treat emergent Behavioral problems are likely to be more psychologically beneficial and cost effective than trying to treat emotional difficulties after they become more serious at a later age. So, in terms of time spent with the children, parents play an important role in identifying the behavioral changes in children [10].

From clinical experience, the researcher found that most of the children admitted to the pediatric ward exhibited one or the other Behavioral and Emotional problems. Hence the investigator was interested to see hospital records and the parent-reported Behavioral and Emotional problems among school children. This finding may help find the problems of children and take up necessary interventions.

## OBJECTIVES

- To assess the Behavioral and Emotional problems of school children

- To associate the Behavioral and Emotional problems with selected demographic variables.

## RESEARCH HYPOTHESES

H1 - There is difference between Behavioral, Emotional problems of children between Employed and Unemployed Mothers. H2 - There is association between Behavioral, Emotional problems of school children of among Employed and Unemployed Mothers and selected demographic variables.

## REVIEW OF LITERATURE

Sao Paulo, March (2016), done a study to assess the prevalence of behavioral problem was 23.5% the prevalence of internalizing problem was 9.7% and that of externalizing problems, 25.2%. Behavior problems were associated several maternal mental health variables, namely; presence of at least one psychiatric diagnosis (3.01, 95%), anxiety disorder (2.0, 95%), affective disorder (24, 95%), and mental health disorders due to use of psychoactive substance (OR 2.31, 95%cl 1.18-4.55). [11]

Iran J behav Sci. (2015), conducted a Meta-Analysis treatment programs for student with Attention Deficit Hyperactivity Disorder at Kerala. This study comprise of 150 samples. The study concluded that the school children with Attention Deficit Hyperactivity Disorder (ADHD) exhibited deficits in multiple components of attention and social skills that were not related to language-learning disorders and weakness in general intellectual abilities. This Meta-Analysis study showed that treatment programs reduced the attention deficit and improved the social skills in Attention Deficit Hyperactivity Disorder children and adolescents [12]

Margroet Prior et al (2015), were conducted a study on Behavior problem of school children association with socio economic status, gender, academic progress and religion of the parents in Srilanka. The study comprises of 75 parents under purposive sampling technique. The data was collected by using Rutter parent questionnaire. The study concluded that the problem rates were higher in boys and were associated with lower socioeconomic status, religion and poorer academic performance [13].

## METHODOLOGY

The research design was used for the study retrospective descriptive research design. 100 samples were selected by using purposive sampling technique. The study was conducted among mothers' children who were admitted at Psychiatric ward in a selected hospital Puducherry from 2018 September to 2019 September. Data was collected through modified



Achenbach and Rutter's children behavioral and emotional problems assessment checklist by telephonic conversations with mothers. After data collection the data were analyzed by using descriptive and inferential statistics like Frequency, Percentage, Mean, and Standard Deviation, and chi square for association .

## ANALYSIS AND INTERPRETATION OF DATA

**Table 1**(See Appendix),Reveals that the Unemployed mothers mean score is 13.22 with standard deviation of 8.044 and the Employed mothers mean score is 26.26 with standard deviation of 13.781, which is statistically significant at  $p < 0.001^{***}$  level. This result is indicating strongly that Behavioral and Emotional problems are increasing in children of Employed mothers more than the children of Unemployed mothers. **Table 2**(See Appendix),: Reveals that there was significant association between the demographic variables such as educational status of mother, occupation, monthly income, gender of the children, standard of the children and dietary pattern and Behavioral and Emotional problems the children of Employed mothers. Which is Highly statistically significant at  $p < 0.001^{***}$  level This result strongly indicating the association between the demographic variables and Behavioral and Emotional problems of Employed mothers.

## DISCUSSION

The first objective was to assess the Behavioral and Emotional problems of school children. The result reveals that the Behavioral and Emotional problems among children of Unemployed 4(8.0%) were having no Behavioral and Emotional problems, 36(72.0%) were having mild Behavioral and Emotional problems, 10(20.0%) were having moderate Behavioral and Emotional problems.

With regard to Behavioral and Emotional problems among children of Employed mothers, 1(2.0%) were having no Emotional and Behavioral problems, 20(40.0%) were having mild Emotional and Behavioral problems, 29(58.0%) were having moderate Emotional and Behavioral problems. A study was conducted to assess the Emotional and Behavioral problems of children among Employed and Unemployed mothers in Blessed Mother Teresa School at Puducherry data used in this study were collected from a mothers of children under 6-12 years of age and school with sample of 160 Employed Mothers respondents 50 and 360 Unemployed Mothers respondent are 50. Selected by simple random sampling technique. The survey used different tools such as socio-demographic Performa for Employed and

Unemployed mothers, modifies Achenbach and Rutter's children Behavioral and Emotional assessment checklist. The study reveals that the children of Employed Mothers have more Behavioral and emotional problems when compare to children of Unemployed Mothers. Employment among mothers of children with behavioral and emotional problems are attributable to multiple factors. Parental time is commonly regarded as a key determinant in healthy child development and there is still a gendered dimension with respect to the amount and quality of time that mothers spend with their children. A general change in social norms and expectations concerning parenting and children's needs has been suggested, with the emergence of a culture characterized by more intensive mothering and timeless care.

### **The second objective was to associate the Behavioral and emotional problems with selected demographic variables.**

Association of Behavioral and emotional problems with selected demographic variables done by using chi-square test. It reveals that there is a significant association between Behavioral and emotional problem with the demographic variables of educational status of mother, occupation of mother, monthly income, gender of child, standard of children and dietary pattern at  $p < 0.001^{***}$ , were other demographic variables such as age of mother, working hours, residential area, type of family, Employment status of spouse, religion, number of children, age of children, birth order of children and educational performance grade of children was not associated with Emotional and Behavioral problems among children of Employed Mothers.

Children suffering from behavioral, emotional and psychosocial problems demand enhanced parental attention and supervision may divert attention from other important aspects of family functioning (e.g., other children, parental relationship) and are likely to bring a host of logistical burdens such as time-consuming visits to medical and social services. Of note, these factors are associated with both behavior problems and emotional problems of children. Ultimate goal is to improve the betterment of the child's mental health to promote the all round development, so the best way is mother and child relationship and motherly bonding will help the child to come out from all the behavioral and emotional problems at their age.

## RESULTS

The investigator found that, the subjects of 100 were in the age group of 20-30 years. In 100 sample, 50 mothers were Unemployed and 50 mothers were Employed. Majority 41 (82%) of the subjects from



nuclear family. Majority 46 (92%) of the subjects from Hindu religion. Most of them living in urban area 36 (72%). The result revealed that, the children of Employed Mothers are having Behavioral and Emotional problems than the children of Unemployed Mothers. In that 1(2%) child of Employed mothers were having no Behavioral and Emotional problems, 20(40%) children were having mild Behavioral and Emotional problems, 29(58%) children were having moderate Behavioral and Emotional problems. By comparing the mean value, the children of Employed mothers (26.26%) were having moderate Behavioral and Emotional problems than the children of Unemployed Mothers (13.22%). It reveals that, there is a significance difference in the Behavioral and Emotional problems among children of Employed and Unemployed Mothers. Hence the stated research hypothesis (H1) was accepted. By association of Behavioral and Emotional problems with selected demographic variables done by using chi-square test. It reveals that there is a significant association between the Behavioral and Emotional problems with the demographic variables of mother's educational status, occupation, monthly income, gender of the child, standard of children and dietary pattern. Hence the stated research hypothesis (H2) was accepted.

## CONCLUSION

The findings of study revealed that with regard to Behavioral and emotional problems among children of Unemployed, 4(8.0%) were having no behavioral emotional problems, 36(72.0%) were having mild Emotional and Behavioral problems, 10 (20.0%) were having moderate Behavioral emotional problems. Regarding Behavioral emotional problems among children of Employed mothers, 1(2.0%) were having no Behavioral emotional problems, 20(40.0%) were having mild Behavioral emotional problems, 29(58.0%) were having moderate Behavioral emotional problems. Comparing the mean value of Behavioral and Emotional problems of children with Employed Mothers (26.26) and Unemployed Mother (13.22). Behavioral and Emotional problems are increasing in children of Employed mothers more than the children of Unemployed mothers. This study result indicates the need to be aware of the behavioral and emotional problems of school children. Screening is necessary to detect behavioral and emotional problems among the children. Therefore these conditions need early diagnosis and special attention. An awareness of the prevalence, of these problems is important to plan the mental health services for children in order to improve the quality of life for the affected children. Educational program needs to be organized to improve the

knowledge of the mothers on behavioral and emotional problems children.

## RECOMMENDATIONS

A study to assess knowledge of mothers regarding the Behavioral and Emotional problems of children in Rural and Urban areas. A study to assess the Behavioral problems among adolescent girls.

## REFERENCES

1. Vijayalakshmi K, Kumar CV, Rajamanickam H, Cherian A. Child rearing practices and psychological problems in children. *Nursing and Midwifery Research Journal* 2016 Apr; 3(2):49-51
2. Syed EU, Hussein SA, Haidry SE. Prevalence of emotional and Behavioral problems among primary school children in Karachi, Pakistan. *Int.J.Nur, Edu and research* 2 (3): July September 2014; page no: 221-223.
3. Perera H, Gunatunge C. Screening for mental health problems in urban preschool children- A pilot study. *Sri Lanka Journal of Child Health* 2015; 33 (2):39-42.
4. Duhan, Kaur P. Mental health promotion for school children. A manual for school teachers and school health workers. Regional office for the Eastern Mediterranean. *Indian Psychological Review* 2017; 122: 193-5.
5. Rai S, Malik SC, Sharma D. Behavior problems among preschool children. *Indian Pediatrics* 2017; 30(4):475-8.
6. Gururaj G, Gurish N. Prevalence of behavioural problems in children of Karnataka. *Indian Journal of Pediatrics*.2017;74(2):1095-8.
7. Statistics of working mothers. [online]. Available from: URL:<http://www.suite>
8. Dutta P. Pediatric nursing. New Delhi: Jaypee Brothers Medical Publishers; 2016.
9. Abdel MM, Rehman AA. Emotional and Behavioral problems among male Saudi school children and adolescents' prevalence and risk factors. *German Journal of Psychiatry* 2017; 1:1-9.
10. Han WJ, Waldfogel J, Brooks-Gunn J. The effects of early maternal employment on later cognitive and Behavioral outcomes. *Journal of Marriage and Family* 2018; 63(2):336-54.
11. Sao Paulo, prevalence of Behavioral and associated factors in pre school children from the city of Salvador, march 2016 volume 38.
12. Iran J behav Sci ,Self-concept, emotional maturity and achievement motivation of the adolescent children of employed mothers and homemakers, *Journal of the Indian Academy of Applied Psychology* 2015 Jan;33(1):103-10,16
13. Margrort Prior, *Journal of Indian Academy of applied psychology, Jan-July 2015, pp.18-28*



## APPENDIX

**Table 1: Comparison of Mean and Standard deviation of Behavioral and Emotional Problem of School Children**

N=100

Behavioral and Emotional problems of children	Mean	Standard deviation	't' value
Unemployed mothers	13.22	8.044	5.779***
Employed mothers	26.26	13.781	

p&lt; 0.001\*\*\*

**Table 2: Association between Behavioral and Emotional problems of school children and selected demographic variables**

N=100

Demographic variables		N	Score			Chi-square	P-value
			Mean	Median	Standard deviation		
Educational status of the mother	a) Illiterate	1	12	12	-	10.7791	0.0130
	b) Primary	20	12.9	11	8.08		
	c) Secondary	46	18.67	17	12.64		
	d) Collegiate	33	25.61	26	13.82		
Occupation of the mother	a) Homemaker	50	13.22	12.5	8.04	21.2415	0.000***
	c) Government job	44	26.16	28.5	14.36		
		6	27	28	9.34		
Monthly income of the family	a) Less than 3000	1	40	40	40	6.2945	0.0430
	b) 5000-10,000	25	14.64	14.64	11		
	c) More than 10,000	74	21.19	21.19	18.5		
Gender of the child	a) Female	54	23.69	21	12.43	13.5627	0.0002
	b) Male	46	15.11	11	12.21		
Standard of the child	a) 1 <sup>st</sup> -2 <sup>nd</sup>	1	40	40	-	6.4505	0.0397
	b) 3 <sup>rd</sup> -4 <sup>th</sup>	25	14.64	11	10.44		
	c) 5 <sup>th</sup> -6 <sup>th</sup>	74	21.19	18.5	13.29		
Diet pattern of the family	a) Vegetarian	1	-	-	-	2.8815	0.0896
	b) Non-vegetarian	99	19.94	19.94	12.91		

p&lt;0.001\*\*\*



# ENVIRONMENTAL EDUCATION TO BOOST PRO-ENVIRONMENTAL BEHAVIOUR IN REDUCING PLASTICS CONSUMPTION AMONG STUDENTS IN UNIVERSITAS BINA DARMA PALEMBANG

**Risqo M. Wahid<sup>1</sup>**

<sup>1</sup>Lecturer,  
Faculty of Economics,  
Universitas Indo Global Mandiri,  
Palembang,  
Indonesia

**Endah Dewi Purnamasari<sup>2</sup>**

<sup>2</sup>Assistant Professor,  
Faculty of Economics,  
Universitas Indo Global Mandiri,  
Palembang,  
Indonesia

**Fitriya Fauzi<sup>3</sup>**

<sup>3</sup>Assistant Professor,  
Faculty of Economics and Business,  
Universitas Muhammadiyah Palembang,  
Palembang, Indonesia

Article DOI: <https://doi.org/10.36713/epra4913>

## ABSTRACT

*This study investigates university students' perception, attitude, and self-reported pro-environmental behaviour concerning plastic consumption and pollution pre- and post-environmental education (EE). There were 161 students participating in the EE and completing questionnaires. These data were collected from the students of Universitas Bina Darma in Palembang, Indonesia. The analysis process employed Wilcoxon sign-rank tests. The findings exhibit that students perception, attitude, and self-reported pro-environmental behaviour regarding plastic consumption and pollution significantly increased after the implementation of environmental education. This study can benefit universities, governments, and non-governmental bodies for policymaking and other environmental decisions to reduce plastic consumption and pollution for more sustainable future.*

**KEYWORDS:** Plastic Pollution, Indonesia, Sustainability, Environmental Education, Ethical Consumption

## 1. INTRODUCTION

Plastic pollution is detrimental to the environment, economy, social, and human health (Xanthos and Walker, 2017). Implementation of environmental education (EE), which includes education on plastic consumption, could reduce this problem (Auta, Emenike and Fauziah, 2017; Ogunola, Onada and Falaye, 2018). Notably, environmental education can increase consumer knowledge and awareness, which can potentially change consumer behaviour to be more environmentally responsible (Raman Sharma and Sharma, 2014; Ma'ruf, Surya and Apriliany, 2016). The recommended group to be the primary target of implementing this strategy are young consumers

(e.g., high school and college students) (Hartley, Thompson and Pahl, 2015; Ma'ruf, Surya and Apriliany, 2016). These demographics are future educated workers, company leaders, policymakers, and government leaders (Hammami *et al.*, 2017; Parker, Prabawa-Sear and Kustiningsih, 2018). Their essential roles as decision-makers can influence long-term sustainability and environmental health (Kong *et al.*, 2014; Ergen, Baykan and Turan, 2015).

This implementation of EE toward young consumers is substantially urgent for Indonesia (Parker, 2018; Parker, Prabawa-Sear and Kustiningsih, 2018; Prabawa-Sear, 2018; Tanu and Parker, 2018). The country is the second-largest plastics polluter after China (Jambeck *et al.*, 2015;



Ritchie and Roser, 2018), producing 3.2 million metric tons of mismanaged plastic waste (McCarthy, 2020), and having four of the most polluted rivers in the world (Lebreton *et al.*, 2017). Also, Parker *et al.* (2018) revealed that young consumers in Indonesia are unaware that consumerist culture contributes to the environmental degradation, generally acceptable to use plastic bags, and always throwing litters on the ground if bins are absent.

Several studies have investigated the efficacy of EE in Indonesia. In ethnographic research, Prabawa-Sear (2018) uncovered that senior high school students in Yogyakarta and Surabaya are more motivated to win the environmental prestige, prizes, and competitions rather than learning about the environment. In another ethnographic examination, Tanu and Parker (2018) found that high school students in Surabaya join environmental programmes for a feeling of belonging to a group. This indicates that the actual environmental education contents are unnecessary. The findings of both studies show that EE in Indonesia remains unsatisfactory (Parker, 2018), and hence there is still a need to assess other EE methodology using different sets of participants. In addition, in their exploratory analysis on university students in three different main islands (i.e., Sumatra, Java, and Bali), Ma'ruf *et al.* (2016) evidenced that environmental knowledge affects environmental attitude, and attitude affects environmental behaviour intention. Although the effort is beneficial, this latter study merely confirms the relationships among the variables. Further study should extend this attempt by testing an EE in university classes and measuring its efficacy.

To address the lacunae mentioned above, this study provided EE to students in Universitas Bina Darma in Palembang in an attempt to boost pro-environmental behaviour in reducing plastic consumption. To measure the success or failure of the EE intervention, this study investigated the students' perception, attitudes, and pro-environmental behaviour concerning plastic consumption and pollution. These measurements were conducted during pre- and post-intervention. This research offers three contributions to EE literature. First, this empirical analysis expands the ethnographic studies among high school students conducted by Prabawa-Sear (2018) and Tanu and Parker (2018). Second, 73% of EE studies are from developed countries in North America and Europe (Varela-Losada *et al.*, 2016). Thus, this research enriches the EE literature in developing countries, especially on the issue of plastics consumption in Indonesia. Third, Ma'ruf *et al.* (2016) have proven that knowledge, environmental attitude, regulatory attitude, and environmental behaviour differ significantly among their respondents in Sumatra,

Java, and Bali islands. This occurs because Indonesia is a nation with a vast territory, cultural diversity, and distinct environmental problems encountered by each region (Ma'ruf, Surya and Apriliany, 2016). Therefore, the analysis in Palembang in this study provides new evidence for the EE in Indonesia. From the practical standpoint, the applied EE and results of this study can benefit universities, governments, and non-governmental bodies for policymaking and other environmental decisions to reduce plastics consumption and pollution for more sustainable future.

## 2. LITERATURE REVIEW

### 2.1. Causes and Effects of Plastics Pollution

Based on the research by Geyer *et al.* (2017), in 2015, plastic waste in the packaging forms in the world reached 141 million tons. They also predicted that by 2050, plastic production will attain 34 billion tons, and 12 billion tons of this figure will accumulate into plastic waste. Consumers purchasing products with unnecessary plastic packaging cultivate this inordinate problem (Ohtomo and Ohnuma, 2014; Rivers, Shenstone-Harris and Young, 2017; Xanthos and Walker, 2017). This situation is further exacerbated by the sizeable number of people littering plastics (Barboza and Gimenez, 2015; Kiessling *et al.*, 2017), where the insufficient presence of litter bins is considered to be one of the causes (Hartley, Thompson and Pahl, 2015).

Plastic pollution adversely affects multifarious aspects surrounding human lives. First, it aggravates the tourism industry. For example, Hawaii and Maldives experience declining tourists due to plastic waste bestrewing their beaches (Ogunola, Onada and Falaye, 2018). In addition, plastic pollution decreases fish populations in the sea, reducing the income of the fisheries sector (Ogunola, Onada and Falaye, 2018). On a global scale, plastic pollution weakens the economy, causing estimated annual losses as much as \$13.3 billion (Ogunola, Onada and Falaye, 2018). From the environmental stance, plastic pollution deteriorates the marine ecosystem (da Costa *et al.*, 2016; Auta, Emenike and Fauziah, 2017; Geyer, Jambeck and Law, 2017). Lastly, because plastics parse and spread through the biosphere, including air, water, and soil, plastic pollution worsens the quality of these elements (da Costa *et al.*, 2016; Geyer, Jambeck and Law, 2017). This subsequently has the potential to damage human organs (e.g., lungs, liver, brain, and skin) and also to prompt cancer (Vethaak and Leslie, 2016; Hammami *et al.*, 2017).

Plastics are high in durability, and they need between 100 to 1,000 years for degradation (Wang *et al.*, 2016). To ensure sustainability in the future,



consumers must change their consumption behaviour (Ohtomo and Ohnuma, 2014; Hasan, Harun and Hock, 2015; Hammami *et al.*, 2017). This can be done by inviting others to be more pro-environment, throwing rubbish in its place, and reducing plastic usage (Hartley, Thompson and Pahl, 2015).

## 2.2 The Effects of EE on Perception, Attitude, and Pro-Environmental Behaviour

In their ethnographic studies, Tanu & Parker (2018) and Prabawa-Sear (2018) evidenced that the implemented EE failed to enhance environmental knowledge. These studies argue that insufficient EE contents cause failure. Tanu & Parker (2018) revealed that high school students in Surabaya participate in environmental activities only to belong in a group. This occurs because the EE provider focuses their contents more on 'togetherness of family' rather than the EE contents. Almost identical, Prabawa-Sear (2018) proved that high school students in Yogyakarta and Surabaya conduct pro-environmental behaviour merely to win the prestige, prizes, and competitions held by environmental bodies in their cities. The EE model encourages students and schools more to compete rather than to learn about the environment and how to sustain it.

Outside of Indonesia, a quasi-experimental design in a public high school in Israel (Gottlieb, Vigoda-Gadot and Haim, 2013) found that EE positively affects pro-environmental behaviour intention but fail to improve the self-reported pro-environmental behaviour among students. This investigation postulates that the experimental EE was effective. The lack of improvement in actual pro-environmental behaviour might not be caused by the implemented EE but by the accessibility of litter bins in the school, products sold in the cafeteria, or prices.

Other studies also provided favourable outcomes. Sipone, Abella-García, Barrera, & Rojo (2019) prove that through EE, Spanish students (aged 10 to 12) obtain new environmental knowledge that potentially leads to increased pro-environmental behaviour. More extensively, Hartley *et al.* (2015) showed that after the implementation of EE, the perception, attitude, and pro-environmental behaviour of English students (aged 8 to 13) improved significantly. In a university level, in their study of Indonesian students, Ma'ruf *et al.* (2016) evidenced that environmental knowledge affects environmental attitude, and attitude affects environmental behaviour intention. This indicates that the provision of EE for university students might improve their perception, attitude, and pro-environmental behaviour.

This study attempts to provide EE to Indonesian university students. Unlike the EE as

examined by Tanu & Parker (2018) and Prabawa-Sear (2018), this study implemented EE with neither 'togetherness' activities nor rewards. Therefore, based on preliminary findings (Gottlieb, Vigoda-Gadot and Haim, 2013; Hartley, Thompson and Pahl, 2015; Sipone *et al.*, 2019), this study predicts students' perception, attitude, and pro-environmental behaviour will improve after participating in EE classes.

## 3. METHODOLOGY

### 3.1 Design

In data collection, this study formulated the questionnaires based on preliminary studies of Hartley *et al.* (2015) and Hammami *et al.* (2017). The researchers translated the questionnaires from English to Indonesian. A pilot study then was conducted on a sample of 20 subjects to test the suitability of the questions on Indonesian students. After some reviews, the researchers conducted several modifications and wrote the questionnaires on Google Form. The final measurements of the survey were presented as follows.

#### 3.1.1 Perception

*The perceived amount of plastic waste in the world and estimated degradation time.* In this context, this research asked, "How much is plastic waste in the world?" This study provided an open answer and guided the students to use weight scales (e.g., gram, kilograms, or tons). Also, the study further queried, "How long do you think it takes for plastics to decompose?" Following Hartley *et al.* (2015), this study arranged an open response with no provision of timescales (e.g., seconds, minutes, days, months, or years).

*Perceived causes.* This study inquired 3 questions to measure the students' perception of the causes of plastic pollution. The questions are, "What does cause plastic pollution: (a) the insufficiency of litter bins; (b) the products we purchase use too much plastic packaging; (c) too many people litter in the environment?" Participants could respond either with *strongly disagree*=1; *disagree*=2; *agree*=3; or *strongly agree*=4

*Perceived negative impacts.* For the perception of plastic pollution adverse effects, this study questioned the students with, "Do you think plastic pollution is bad for: (a) marine wildlife; (b) tourism industry; (c) fishery industry; (d) quality of air; (e) quality of water; (f) quality of soil; (g) humans' hearts; (h) humans' skins; (i) humans' lungs; (j) humans' brains?" Participants could respond either with *strongly disagree*=1; *disagree*=2; *agree*=3; or *strongly agree*=4.



### 3.1.2 Attitude

For measurement of attitude toward plastic consumption and pollution, this study presented a statement, "I am willing to spread awareness about the causes and effects of plastic pollution to my friends and family." Participants could respond either with *strongly disagree*=1; *disagree*=2; *agree*=3; or *strongly agree*=4.

### 3.1.3 Pro-Environmental Behaviour

This study asked self-reported pro-environmental behaviour to examine the participants' pro-environmental behaviour. The queries for this investigation are: "Within the last 7 days, have you done the following things: (a) brought own bags for shopping; (b) reduced the usage of single-use plastics; (c) reduced purchasing on food and beverage that use plastic packaging?" Participants could respond either with *not at all*=1; *a little bit*=2; *quite a bit*=3; or *a lot*=4.

### 3.1.4 Additional Questions

In the questionnaires after the EE intervention, this study further asked 2 questions that might inform future studies and both government and non-governmental bodies. First, this investigation inquired the students, "Do you intend to join more formal environmental education in the future?" The students could choose between "Yes, I do" and "No, I don't". Second, this research explored the best media to deliver EE, according to university students. The question was, "What media do you think are the most effective to deliver

environmental education?" The answers for the question were: (a) formal class in a school/university; (b) Instagram; (c) Facebook; (d) Snapchat; (e) Twitter; (f) YouTube; (g) TV; (h) radio; (i) newspaper; (j) blog; (k) other. The participants could tick more than one answer. For the option (k) other, it was an open response. Students could propose a new medium other than those listed in the options.

### 3.2 Participants

The participants of this repeated measures design were university students from Universitas Bina Darma in Palembang, Indonesia. The researchers visited 6 classes with the total average students of 30. Before the delivery of EE, the researchers forwarded the link of the Google Form containing questionnaires to one of the students in the classes. He or she then shared the link to his or her class WhatsApp groups. The researchers emphasised that only the students attending the classes at that time of EE delivery were allowed to fill the questionnaires. The participants mostly finished filling the questionnaires within 5 minutes. After 7 days of the EE, the researchers revisited the same classes and distributed the after EE intervention questionnaires. Similar to the previous process, students completed the questionnaires in 5 minutes. The total data from before and after the EE intervention were 190 and 177, respectively. Due to double entry by the students and missing values, the final data decreased to 161.

**Table 1: Demographics of Participants**

	n	%
Residence:		
Urban	109	67.7
Suburban	26	16.1
Rural	26	16.1
Gender:		
Male	50	31.1
Female	111	68.9
Have you ever participated in at least one formal EE class before?		
Yes, I have	105	65.2
Never	56	34.8
Age:		
17	11	6.8
18	47	29.2
19	57	35.4
20	35	21.7
21	9	5.6
22	1	0.6
23	1	0.6
	Mean	SD
Age	18.95	1.11





The characteristics of the participants are tabulated in Table 1. Most of the students lived in an urban area (n=109), then followed equally by suburban and rural (both n=26). A total of 111 participants were female, and 50 of them were male. Majority of them have joined at least one formal EE class before (n=105), and the rest of them were never (n=56). The average age was 18.95 (SD=1.11), and this criterion was dominated by the age of 18 (n=47), 19 (n=57), and 20 (n=35).

### 3.3 Intervention

The researchers visited ongoing classes and asked permission from the respective lecturers to take approximately 20 minutes to conduct EE in their classes. Once allowed, the process began by distributing questionnaires. After this, the researchers educated the university students about plastic pollution. The style of teaching was formal and using the Indonesian language. The tools used were slideshows with no other extra instruments (e.g., microscopes). The total slides were 6 explaining: (1) total plastic waste in the world (Geyer, Jambeck and Law, 2017); (2) plastic decomposing time (Wang *et al.*, 2016); (3) cause of plastics pollution (Ohtomo and Ohnuma, 2014; Barboza and Gimenez, 2015; Hartley, Thompson and Pahl, 2015; Kiessling *et al.*, 2017; Rivers, Shenstone-Harris and Young, 2017; Xanthos and Walker, 2017); (4) effects of plastics pollution to the marine ecosystem and tourism and fishery industries (Ogunola, Onada and Falaye, 2018); (5) effects of plastics pollution to the quality of air, water, and soil (da Costa *et al.*, 2016; Geyer, Jambeck and Law, 2017); (6) effects of plastics pollution to humans' health (Vethaak and Leslie, 2016; Hammami *et al.*, 2017). Along with texts in the slides, the researchers also presented relevant pictures to illustrate the dire problems caused by plastic pollution.

### 3.4 Statistical Analysis

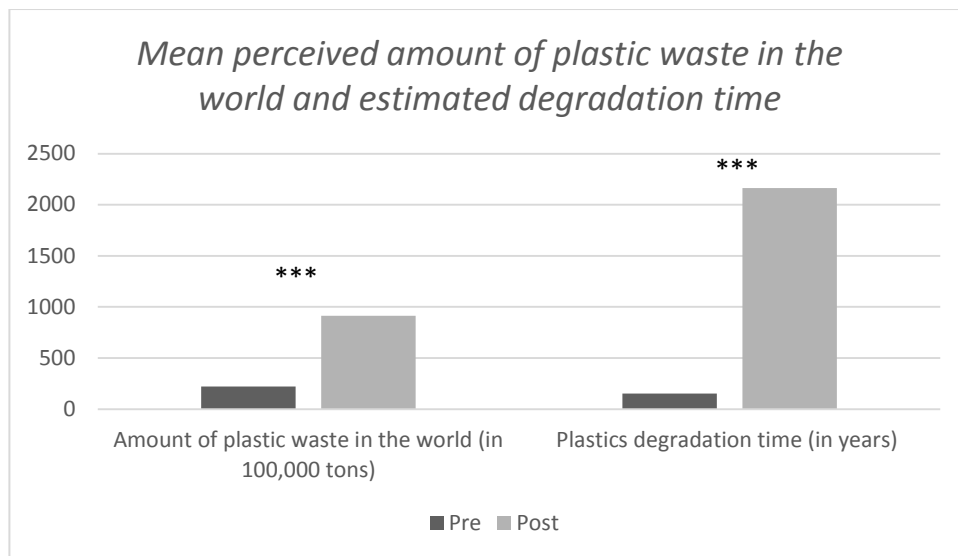
The dependent variables of this study were: (a) perceived amount of plastic waste in the world and estimated degradation time; (b) perceived causes; (c) perceived negative impacts; (d) attitude; and (e) self-reported pro-environmental behaviour. This study implemented non-parametric statistical methods considering the majority of the data were ordinal (1-4 response scale). Following previous research (Hartley, Thompson and Pahl, 2015), this study checked the difference items mean during each of the pre- and post-intervention using the Friedman test. This process was explicitly for the variables of perceived causes, perceived negative impacts, and self-reported pro-environmental behaviour. If the items within each category were significantly different, the analysis continued to post hoc Wilcoxon matched-pair tests. Lastly, this investigation applied Wilcoxon's matched-pairs signed-ranks (Z score) to determine whether EE intervention influenced students' perception (i.e., the perceived proportion of plastic waste in the world and estimated degradation time; perceived causes; and perceived impacts), attitude, and self-reported pro-environmental behaviour.

## 4. RESULTS

### 4.1 Perception of Plastics Pollution

#### *The perceived amount of plastic waste in the world and estimated degradation time*

Before the EE intervention, students believed the average amount of plastic waste in the world was merely 22.176 million tons. After the intervention, the amount significantly increased ( $p<0.001$ ) to 91.179 million tons. Also, before the intervention students presumed it would spend an average of 151.60 years to decompose plastics. After the intervention, the figure rose significantly ( $p<0.001$ ) to 2.161.93 years. These findings are in line with the predictions (Figure 1 and Appendix B).



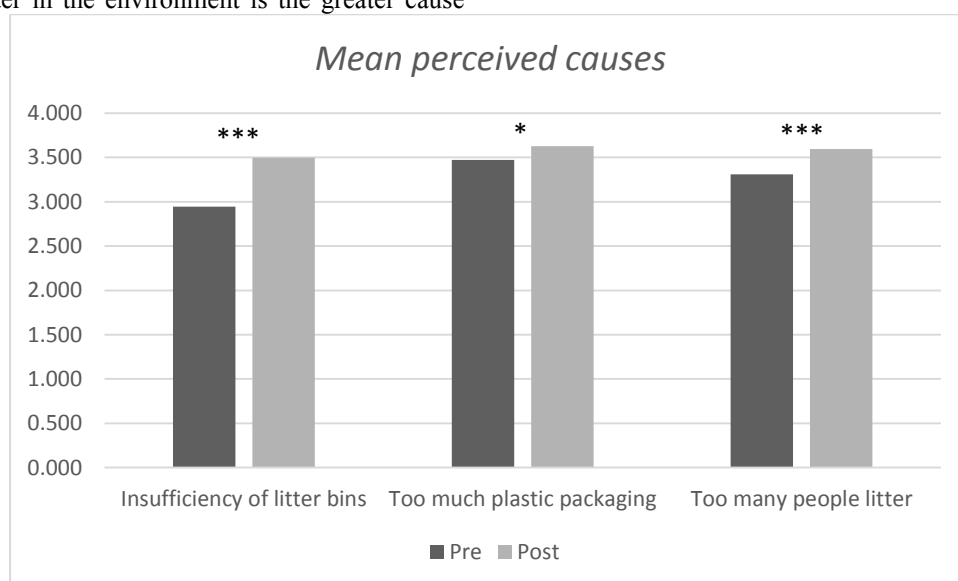
**Figure 1. University students' perceived amount of plastic waste in the world (in 100,000 tons) and estimated degradation time (in years) pre- and post-intervention. Note: asterisk signs denote significance level (\*\*\*) $p < 0.001$ .**

*Perceived causes of plastic pollution*

The pre-intervention response suggested that students perceived all the factors of litter bins insufficiency, too much plastic packaging, and too many people litter in the environment cause plastic pollution. However, after conducting a Friedman test, students perceived the causes differently ( $\chi^2(2) = 36.439, p < 0.001$ ). Thus, the analysis continued to a series of post hoc Wilcoxon matched-pair tests. The results showed that students perceived too much plastic packaging is the greater cause to plastic pollution compared to too many people litter in the environment ( $p < 0.05$ ) and the insufficiency of litter bins ( $p < 0.001$ ). Students also perceived too many people litter in the environment is the greater cause

of plastic pollution compared to the insufficiency of litter bins ( $p < 0.001$ ).

The post-intervention response revealed that the EE intervention influenced students' perception of the cause of plastic pollution, as signified by a set of Wilcoxon sign rank tests. This is evident in the significant improvement of litter bins insufficiency ( $p < 0.001$ ), too much plastic packaging ( $p < 0.05$ ), and too many people litter in the environment ( $p < 0.001$ ). A Friedman test further proved that after the intervention students perceived all the three items equally contribute to plastics pollution. These findings appear as predicted (Figure 2 and Appendix B).



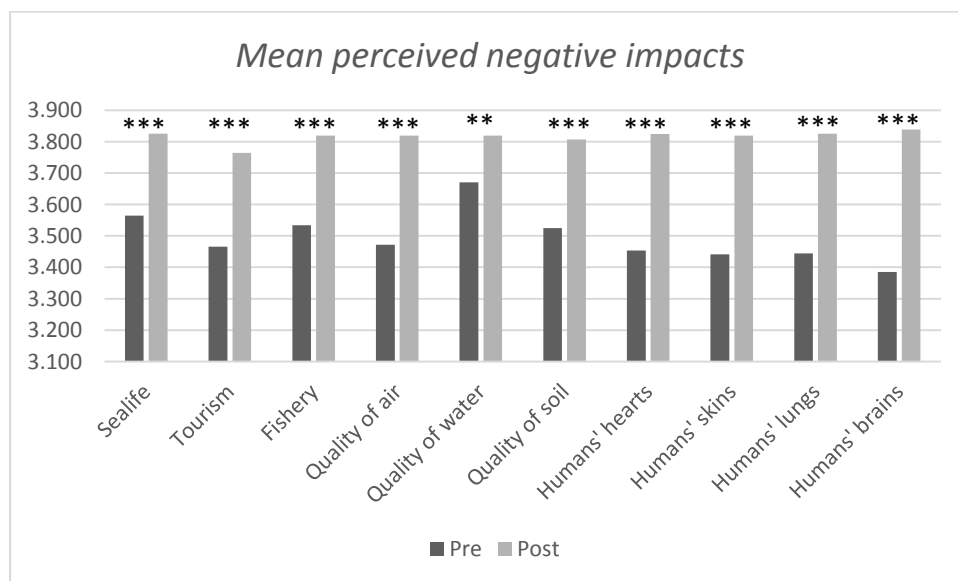
**Figure 2. University students' perceived causes of plastic pollution pre- and post-intervention (1-4 scale: strongly disagree - strongly agree). Note: asterisk signs denote significance level (\*\*\*) $p < 0.001$  and \*) $p < 0.05$ .**

### Perceived negative impacts of plastics pollution

The pre-intervention response indicates that students perceived plastics pollution potentially damages the marine ecosystem, tourism industry, fishery industry, quality of air, quality of water, quality of soil, humans' organs (i.e., heart, skins, lungs, and brain). Nonetheless, after a Friedman test, students perceived the negative impacts differently ( $\chi^2(9) = 40.803, p < 0.001$ ). Therefore, the examination proceeded to a series of post hoc Wilcoxon matched-pair tests. The results exhibited that students perceived plastics pollution has a higher negative effect on the quality of water compared to fishery industry, quality of soil, tourism industry, and

humans' organs (i.e., heart, skins, lungs, and brain) ( $p < 0.01$ ).

Further, a set Wilcoxon sign rank tests uncovered that the EE intervention improved students' perception of the plastic pollution negative impacts. This is observable in the substantial elevation of perceived negative impacts on the quality of water ( $p < 0.01$ ) and other items ( $p < 0.001$ ). A Friedman test also showed that after the intervention, students perceived plastics pollution equally affects the marine ecosystem, tourism industry, fishery industry, quality of air, quality of water, quality of soil, and humans' organs (i.e., heart, skins, lungs, and brain). These all are in line with the predictions (Figure 3 and Appendix B).

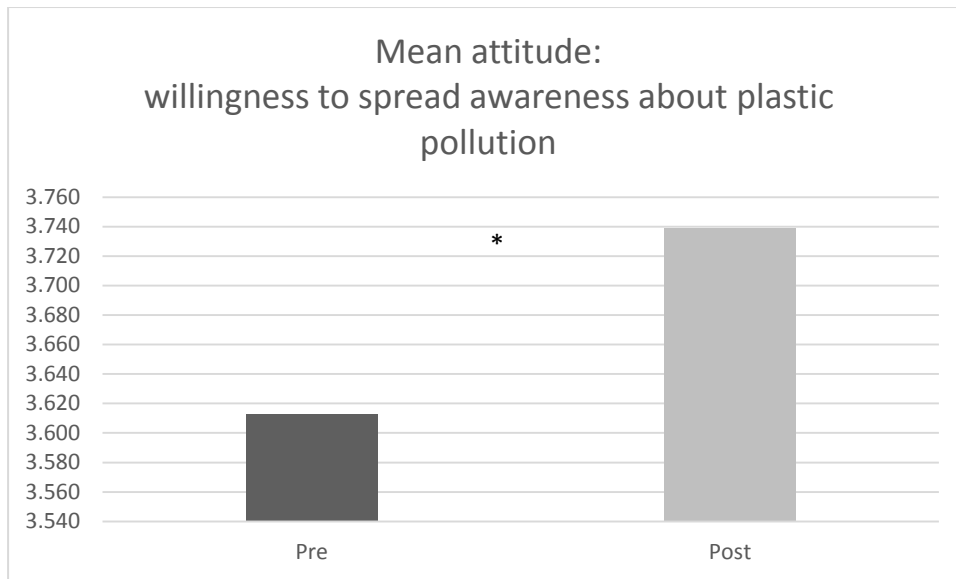


**Figure 3. University students' perceived negative impacts of plastic pollution pre- and post-intervention (1-4 scale: strongly disagree - strongly agree). Note: asterisk signs denote significance level (\*\* $p < 0.001$  and \*\* $p < 0.01$ ).**

### 4.2 Attitude

Before the intervention, students were less willing to spread awareness about plastic pollution. However, after the intervention, a Wilcoxon sign rank test proved that students' willingness to spread

awareness about plastic pollution increased significantly ( $p < 0.05$ ). This develops as expected in the prediction (Figure 4 and Appendix B).



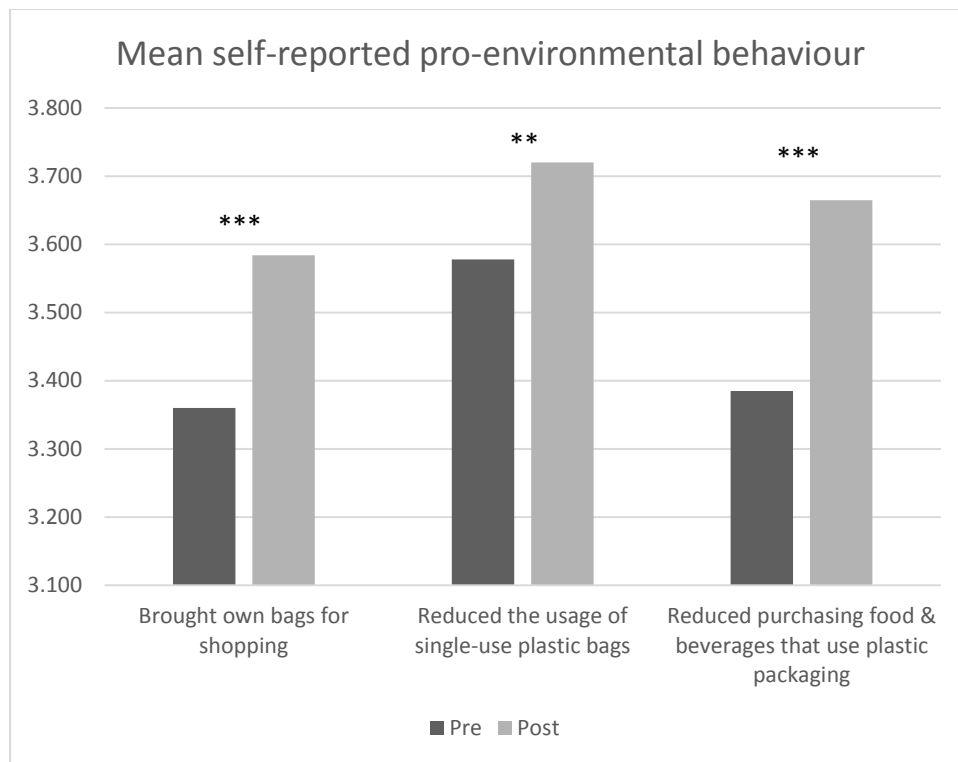
**Figure 4. University students' attitude of willingness to spread awareness about plastic pollution pre- and post-intervention (1-4 scale: strongly disagree - strongly agree). Note: asterisk signs denote significance level (\* $p < 0.05$ ).**

#### 4.3 Self-Reported Pro-environmental Behaviour

Students' response during pre-intervention exhibited that they performed pro-environmental behaviour by bringing on bags for shopping, reducing the usage of single-use plastic bags, and also reducing buying food and beverages that use plastic packaging. Nevertheless, the students performed the pro-environmental behaviour differently as proven by a Friedman test ( $\chi^2(2) = 24.863, p < 0.001$ ). Therefore, the inspection advanced to a series of post hoc Wilcoxon matched-pair tests. The analysis found that students implemented pro-environmental behaviour more on reducing the usage of single-use

plastic bags contrasted to reducing purchasing food and beverages that use plastic packaging and bringing on bags for shopping ( $p < 0.001$ ).

After the intervention, a series of Wilcoxon sign rank tests verify that there were improvements of students' pro-environmental behaviour. This is exhibited in the significant increase of self-reported pro-environmental behaviour especially in bringing on bags for shopping ( $p < 0.001$ ), reducing the usage of single-use plastic bags ( $p < 0.01$ ), and also reducing buying food and beverages that use plastic packaging ( $p < 0.001$ ). These findings follow the predictions (Figure 6 and Appendix B).

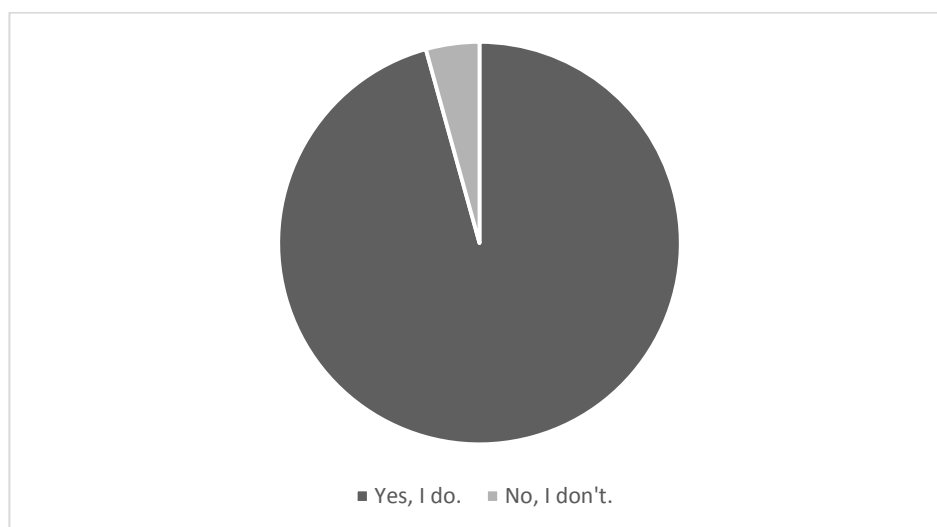


**Figure 5. University students' self-reported pro-environmental behaviour pre- and post-intervention (1-4 scale: not at all - a lot). Note: asterisk signs denote significance level (\*\* $p < 0.01$  and \*\*\* $p < 0.001$ ).**

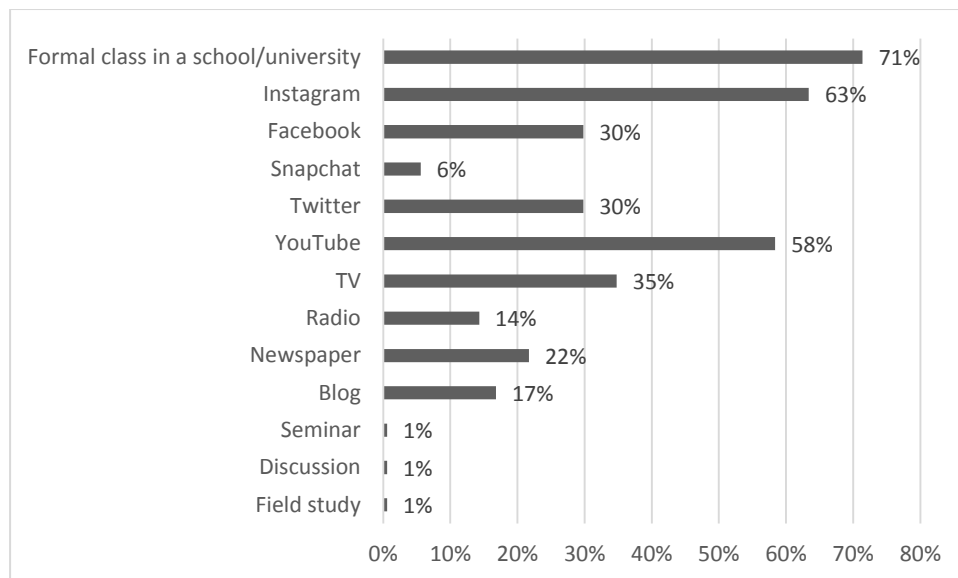
#### 4.4 Additional Information

Regarding with students' intention to join more formal EE in the future, 95.7% of them intended to participate, and 4.3% of them refused to join (Figure 6). When asked about the best media to deliver EE, 71% of students chose a formal class in a school/university. Meanwhile, in the social media category, students recommended implementing

Instagram (63%) as opposed to Facebook (30%), Twitter (30%), and Snapchat (6%). In the entertainment and information media group, students' preference fell on YouTube (58%), then followed by TV (35%), newspaper (22%), blog (17%), and radio (14%). Finally, students further proposed a seminar, discussion, and field trip as other media to deliver EE effectively. These statistics are presented in Figure 7.



**Figure 6. Students' response to the question, "Do you intend to join more formal environmental education in the future?"**



**Figure 7. Students' response to the question, "What media do you think are the most effective to deliver environmental education?"**

## 5. DISCUSSION

This study aimed to provide EE to students in Universitas Bina Darma in Palembang in an attempt to boost pro-environmental behaviour in reducing plastic consumption. To measure the success or failure of the EE intervention, this study investigated the students' perception, attitudes, and self-reported pro-environmental behaviour concerning plastic consumption and pollution. The response from the pre-intervention survey is favourable. Although the students' perception on the amount of plastic waste in the world was much lower than the actual figure, their perception about plastic degradation time was within the correct range (i.e., between 100 to 1,000 years). The students also were aware of the cause of plastic pollution. Regarding with this finding, students believed excessive usage of plastic packaging in products is the greatest cause of the issue juxtaposed to people littering and the lack of available bins. This indicates that businesses prompt plastic pollution. This result somewhat differs from those of students in England, where they perceived people littering, and businesses are respectively the primary and peripheral reasons for plastic (Hartley, Thompson and Pahl, 2015).

Additionally, the university students also were knowledgeable about the dire impacts of plastic pollution toward marine ecosystem, tourism industry, fishery industry, quality of air, quality of water, quality of soil, and humans' organs (i.e., skins, lungs, hearts, and brains). In this matter, they recognised that plastic pollution negatively affects the quality of water exceedingly compared to other aspects. This occurs maybe because it is common in Indonesia for plastics scattering around beaches, in ditches, and bodies of water. Also, 4 of the most polluted rivers in

the world are located in Indonesia. Furthermore, the survey also exhibited that students were willing to spread awareness about plastic pollution. They also had performed pro-environmental behaviour within 7 days before EE intervention, especially in the act of refusing the usage of single-use plastic bags. These encouraging findings appear maybe because 65.2% of them have attended at least one formal EE class before, and 67.7% of them live in an urban area.

After participating in the EE intervention, the university students demonstrated a higher understanding of plastic pollution problems. Specifically, their perception of the amount of plastic waste in the world and its degradation time increased significantly. They also considered the insufficiency of litter bins, immoderate use of plastic packaging, and people littering the environment equally promoting plastic pollution. Likewise, their perception of plastic pollution potential damage enhanced substantially. They apprehended that plastic pollution is equally and significantly harmful toward marine ecosystem, tourism industry, fishery industry, quality of air, quality of water, quality of soil, and humans' organs (i.e., skins, lungs, hearts, and brains). Due to all this improvement in perception, students were more informed, and hence they are more willing to spread awareness about plastic pollution to friends and family. Lastly, the EE intervention also boosted the students' pro-environmental behaviour. This is evident in the considerable increase of the act in bringing on bags for shopping, reducing the usage of single-use plastic bags, and also reducing buying food and beverages that use plastic packaging.

All these outcomes proved that the EE intervention succeeded to foster pro-environmental



behaviour among university students. The findings are in line with the studies of Sipone et al. (2019), Hartley et al. (2015), and Ma'ruf et al. (2016), but contradictory to Tanu & Parker (2018) and Prabawa-Sear (2018). This condition might relate to EE contents. In this EE intervention, the subject was full education, similar to Sipone et al. (2019), Hartley et al. (2015), and Ma'ruf et al. (2016). The class was unlike in the study of Tanu & Parker (2018), where the ethos of 'family-togetherness' comes first then followed by EE. The education in this study further offered no rewards to join EE, as in Prabawa-Sear (2018). For Indonesian young consumers context, this research argues that the provision of group identity and remuneration in an EE programme obscures the core of EE contents, which is to educate about complex human-environment interactions. Therefore, formal EE is more desirable. In addition, the success of this programme could be because the students under observation cared about the environments and enjoyed the formal EE class. This was indicated in the post-intervention survey, where more than 95% of the students intended to participate in other formal EE in the future, and more than 71% suggested that a formal class in a school or university is the most effective method to deliver EE.

The implemented EE and results of this study can benefit universities, governments, and non-governmental bodies for policymaking and other environmental decisions to reduce plastic consumption and pollution. This is even more relevant to Indonesia. Plastic pollution is detrimental for the environment, economy, social, and human health (Xanthos and Walker, 2017), and the country is the second-largest plastics polluter after China (Jambeck *et al.*, 2015; Ritchie and Roser, 2018). University students as young consumers are future educated workers, company leaders, policymakers, and government leaders (Hammami *et al.*, 2017; Parker, Prabawa-Sear and Kustiningsih, 2018). Therefore, equipping them with environmental knowledge and pro-environmental behaviour is probable to create more sustainable future in Indonesia and the world.

Finally, in the theoretical perspective, this investigation offers the following contributions. First, this empirical discussion extends the ethnographic studies among Indonesian students conducted by Prabawa-Sear (2018) and Tanu and Parker (2018). Second, 73% of EE studies are from developed countries in North America and Europe (Varela-Losada *et al.*, 2016). Thus, this research enriches the EE literature in developing countries, especially concerning plastics consumption and pollution in Indonesia. Third, Ma'ruf et al. (2016) evidenced that knowledge, environmental attitude, and environmental behaviour differ significantly among their respondents in Sumatra, Java, and Bali islands. This occurs because Indonesia is a nation with a vast

territory, cultural diversity, and distinct environmental problems encountered by each region (Ma'ruf, Surya and Apriliany, 2016). Therefore, the analysis in Palembang in this study provides new evidence for the EE in Indonesia.

## 6. LIMITATIONS AND FURTHER RESEARCH

Although this study provides satisfactory findings, it carries several limitations. First, the duration between pre- and post-intervention was only within 7 days. During this period, the students' perception was likely to remain high and thus positively influencing the self-reported pro-environmental behaviour. As such, future research should measure students' pro-environmental behaviour during the pre- and post-intervention within longer timeframes (e.g., one month, one semester, or one year). Second, students' environmental knowledge, attitude, and pro-environmental behaviour differ significantly among respondents in Indonesian regions (Ma'ruf, Surya and Apriliany, 2016). The current results from university students in Palembang might be inapplicable for other cities in the country. Ensuing studies might replicate this examination in other universities and cities in Indonesia to corroborate and allow for generalization. Third, the majority of the students under examination have participated in EE before. This might affect their perception and behaviour. Following investigations might divide the samples into two categories: those who have joined EE and those who never have. This will inform them which one needs more intensive education. Lastly, this study presents additional information regarding the most effective media to deliver EE, according to university students. From the survey, other than a formal EE class in a school or university, the majority of respondents further proposed that EE should be delivered through social media Instagram and YouTube. Future studies might implement these media in their investigation and measure their efficacy.

## REFERENCES

1. Auta, H. S., Emenike, C. U. and Fauziah, S. H. (2017) 'Distribution and importance of microplastics in the marine environment: A review of the sources, fate, effects, and potential solutions', *Environment International*. Elsevier Ltd, 102, pp. 165–176. doi: 10.1016/j.envint.2017.02.013.
2. Barboza, L. G. A. and Gimenez, B. C. G. (2015) 'Microplastics in the marine environment: Current trends and future perspectives', *Marine Pollution Bulletin*, 97(1–2), pp. 5–12. doi: 10.1016/j.marpolbul.2015.06.008.
3. da Costa, J. P. *et al.* (2016) '(Nano)plastics in the environment - Sources, fates and effects', *Science of the Total Environment*. Elsevier B.V.,



- 566–567, pp. 15–26. doi: 10.1016/j.scitotenv.2016.05.041.
4. Ergen, A., Baykan, B. G. and Turan, S. G. (2015) 'Effect of materialism and environmental knowledge on environmental consciousness among high school students: A study conducted in Istanbul province', *International Journal of Human Sciences*, 12(1), p. 511. doi: 10.14687/ijhs.v12i1.3130.
  5. Geyer, R., Jambeck, J. R. and Law, K. L. (2017) 'Production, use, and fate of all plastics ever made', *Science Advances*, 3(7), pp. 25–29. doi: 10.1126/sciadv.1700782.
  6. Gottlieb, D., Vigoda-Gadot, E. and Haim, A. (2013) 'Encouraging ecological behaviors among students by using the ecological footprint as an educational tool: A quasi-experimental design in a public high school in the city of Haifa', *Environmental Education Research*, 19(6), pp. 844–863. doi: 10.1080/13504622.2013.768602.
  7. Hammami, M. B. A. et al. (2017) 'Survey on awareness and attitudes of secondary school students regarding plastic pollution: implications for environmental education and public health in Sharjah city, UAE', *Environmental Science and Pollution Research*, 24(25), pp. 20626–20633. doi: 10.1007/s11356-017-9625-x.
  8. Hartley, B. L., Thompson, R. C. and Pahl, S. (2015) 'Marine litter education boosts children's understanding and self-reported actions', *Marine Pollution Bulletin*. Elsevier Ltd, 90(1–2), pp. 209–217. doi: 10.1016/j.marpolbul.2014.10.049.
  9. Hasan, S. N. M. S., Harun, R. and Hock, L. K. (2015) 'Application of Theory of Planned Behavior in Measuring the Behavior to Reduce Plastic Consumption Among Students at Universiti Putra Malaysia, Malaysia', *Procedia Environmental Sciences*. Elsevier B.V., 30, pp. 195–200. doi: 10.1016/j.proenv.2015.10.035.
  10. Jambeck, J. R. et al. (2015) 'Plastic waste inputs from land into the ocean', *Science*, 347(6223), pp. 764–768. doi: 10.1126/science.1260879.
  11. Kiessling, T. et al. (2017) 'Who cares about dirty beaches? Evaluating environmental awareness and action on coastal litter in Chile', *Ocean and Coastal Management*. Elsevier Ltd, 137, pp. 82–95. doi: 10.1016/j.ocecoaman.2016.11.029.
  12. Kong, D. et al. (2014) 'Survey on environmental awareness of Shanghai college students', *Environmental Science and Pollution Research*, 21(23), pp. 13672–13683. doi: 10.1007/s11356-014-3221-0.
  13. Lebreton, L. C. M. et al. (2017) 'River plastic emissions to the world's oceans', *Nature Communications*. Nature Publishing Group, 8, pp. 1–10. doi: 10.1038/ncomms15611.
  14. Ma'ruf, M., Surya, S. and Apriliyani, P. D. (2016) 'Knowledge, Attitudes and Behavior of University Students towards Environmental Issues in Indonesia', *Sains Humanika*, 8(1–2), pp. 81–88. doi: 10.11113/sh.v8n1-2.836.
  15. McCarthy, N. (2020) *The Countries Polluting The Oceans The Most*, Statista. Available at: <https://www.statista.com/chart/12211/the-countries-polluting-the-oceans-the-most/> (Accessed: 20 July 2020).
  16. Ogunola, O. S., Onada, O. A. and Falaye, A. E. (2018) 'Mitigation measures to avert the impacts of plastics and microplastics in the marine environment (a review)', *Environmental Science and Pollution Research*, 25(10), pp. 9293–9310. doi: 10.1007/s11356-018-1499-z.
  17. Ohtomo, S. and Ohnuma, S. (2014) 'Psychological interventional approach for reduce resource consumption: Reducing plastic bag usage at supermarkets', *Resources, Conservation and Recycling*. doi: 10.1016/j.resconrec.2013.12.014.
  18. Parker, L. (2018) 'Environmentalism and education for sustainability in Indonesia', *Indonesia and the Malay World*. Taylor & Francis, 46(136), pp. 235–240. doi: 10.1080/13639811.2018.1519994.
  19. Parker, L., Prabawa-Sear, K. and Kustiningsih, W. (2018) 'How young people in Indonesia see themselves as environmentalists: Identity, behaviour, perceptions and responsibility', *Indonesia and the Malay World*. Taylor & Francis, 46(136), pp. 263–282. doi: 10.1080/13639811.2018.1496630.
  20. Prabawa-Sear, K. (2018) 'Winning beats learning: Environmental education in Indonesian senior high schools', *Indonesia and the Malay World*. Taylor & Francis, 46(136), pp. 283–302. doi: 10.1080/13639811.2018.1496631.
  21. Raman Sharma, V. K. and Sharma, M. (2014) 'Plastics: Issues Challenges and Remediation', *International Journal of Waste Resources*, 04(01), pp. 1–6. doi: 10.4172/2252-5211.1000134.
  22. Ritchie, H. and Roser, M. (2018) *Plastic Pollution, Our World in Data*. Available at: <https://ourworldindata.org/plastic-pollution#citation> (Accessed: 20 July 2020).
  23. Rivers, N., Shenstone-Harris, S. and Young, N. (2017) 'Using nudges to reduce waste? The case of Toronto's plastic bag levy', *Journal of Environmental Management*. Elsevier Ltd, 188, pp. 153–162. doi: 10.1016/j.jenvman.2016.12.009.
  24. Sipone, S. et al. (2019) 'Learning about sustainable mobility in primary schools from a playful perspective: A focus group approach', *Sustainability (Switzerland)*, 11(8). doi: 10.3390/su11082387.
  25. Tanu, D. and Parker, L. (2018) 'Fun, "family", and friends: Developing pro-environmental behaviour among high school students in Indonesia', *Indonesia and the Malay World*. Taylor & Francis, 46(136), pp. 303–324. doi: 10.1080/13639811.2018.1518015.
  26. Varela-Losada, M. et al. (2016) 'Going to action? A literature review on educational proposals in formal Environmental Education', *Environmental Education Research*, 22(3), pp.





- 390–421. doi: 10.1080/13504622.2015.1101751.
27. Vethaak, A. D. and Leslie, H. A. (2016) 'Plastic Debris is a Human Health Issue', *Environmental Science and Technology*, 50(13), pp. 6825–6826. doi: 10.1021/acs.est.6b02569.
28. Wang, J. et al. (2016) 'The behaviors of microplastics in the marine environment', *Marine Environmental Research*. Elsevier Ltd, 113, pp. 7–17. doi: 10.1016/j.marenvres.2015.10.014.
29. Xanthos, D. and Walker, T. R. (2017) 'International policies to reduce plastic marine pollution from single-use plastics (plastic bags and microbeads): A review', *Marine Pollution Bulletin*. Elsevier Ltd, 118(1–2), pp. 17–26. doi: 10.1016/j.marpolbul.2017.02.048.



# EFFECT OF SODIUM ARSENITE ON THE KIDNEY AND ITS REMEDY WITH COMBINED EXTRACTS OF *ALLIUM SATIVUM* AND *GONGRONEMA LATIFOLIUM* USING RATS

Usoh, I. F.

Department of Biochemistry,  
Faculty of Basic Medical Sciences,  
University of Uyo,  
Uyo,  
Nigeria

Akwa, N. E.\*

Department of Biochemistry,  
Faculty of Basic Medical Sciences,  
University of Uyo,  
Uyo,  
Nigeria

Article DOI: <https://doi.org/10.36713/epra3286>

## ABSTRACT

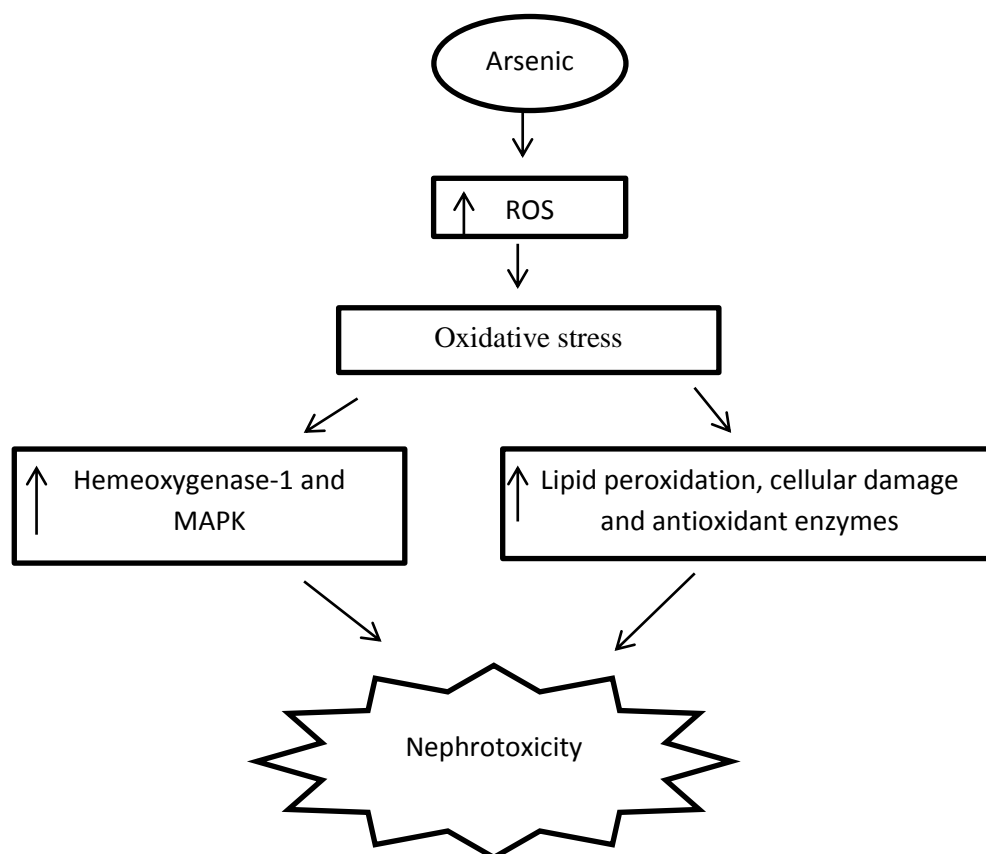
*Sodium arsenite is a toxicant with nephrotoxic potential. This study proves that combined extracts of Gongronema latifolium and Allium sativum can protect the kidney from this toxicity. Fifty male Wistar rats (115 - 280g) were obtained for this experiment. They were sustained with commercial rat's feed pellets and water. The rats were grouped into ten groups of five rats each. Group 1 rats were the normal control, Groups 2, 3 and 4 were administered with 10mg/kg bw of sodium arsenite intraperitoneally on day 1 only, day 1 - 7 and day 7 only, respectively. Groups 5 and 6 rats were administered with 200mg/kg bw of Gongronema latifolium and Allium sativum respectively through oral gavage from day 1 - 6, and 10mg/kg bw of sodium arsenite intraperitoneally on day 7, respectively. Group 7 rats were administered with 100mg/kgbw each of Gongronema latifolium and Allium sativum through oral gavage from day 1 - 6, and 10mg/kgbw of sodium arsenite intraperitoneally on day 7. Groups 8 and 9 rats were administered with 200mg/kg bw of Gongronema latifolium only and Allium sativum only, respectively through oral gavage. Group 10 rats were treated with 100mg/kg bw each of Gongronema latifolium and Allium sativum through oral gavage from day 1 to 7. The rats were sacrificed 24 hours after the last administration and blood sample was collected for kidney function tests, and also the kidney for histological analysis. The results showed that the rats treated with sodium arsenite only, for different durations, had different degrees of nephrotic damage while those treated with single extracts and the toxicant showed moderate damage. The group treated with combined extracts and the toxicant was completely protected from all forms of nephrotic damage as evidently observed.*

**KEYWORDS:** *Allium sativum; Gongronema latifolium; kidney; nephrotoxicity; rats; sodium arsenite..*

## 1.1 INTRODUCTION

The kidney is an important organ which plays a major role in excretion and homeostasis [1], so therefore it is pertinent for it to be protected from damage. Sodium arsenite is a compound with a metalloid element (arsenite), which is considered to be a threat to life because of its toxicity level [2]. It damages the kidney by the alteration of its cellular morphology and functional activities [3]. Sodium arsenite can enter the body through inhalation, contact on the skin, ingestion through food and water [4]. On entry into the body, the kidney is usually one

of the primary targeted organs. The proximal convoluted tubule is usually affected. Sodium arsenite toxicity leads to increase in oxidative stress, therefore increasing the expressing of heme oxygenase-1 and Mitogen Activated Protein Kinase which by regulating various transcription factors such as Activator Protein-1(AP-1) and Activating Transcription Factor-2 (ATF-2) leads to renal toxicity [5] as shown in figure 1.1



**Figure 1.1: Pathological mechanisms involved in arsenic - induced nephrotoxicity**  
Source: By the researcher

Researchers have been able to establish that most medicinal plants have broad spectrum therapeutic effects with minimal or no side effects [6]. *Allium sativum* (Garlic) and *Gongronema latifolium* have been found to be effective in the remedy of nephrotoxicity caused by sodium arsenite.

*Allium sativum* belong to the *Amaryllidaceae* family and classified into same genus as onion. It has been proven to be highly medicinal [7]. Glutamyl cysteins are the primary sulphur component forming the sulphur compounds that are present in *Allium sativum* which is responsible for its taste, smell and biological effects [8]. Allicin is a major active component of *Allium sativum* which is gotten when crushed by either chewing or chopping, therefore releasing alliin which reacts quickly with alliinase in thirty seconds to form the allicin [9]. Among the several protective properties of *Allium sativum* is its antioxidative effect. It has been shown to protect the kidney by reducing reactive oxygen species by enhancing antioxidative enzymes and reducing lipid peroxidation [10].

*Gongronema latifolium* is a widely known plant in Nigeria with a local name as “utazi” or “utasi”. Most Nigerians used it to make sauce as delicacy. It has broad leaves and bitter taste. It possesses anticancer, antimicrobial, and anti-

inflammatory properties, making it a very potent medicinal plant [11]. This medicinal plant has been proven to have kidney function potentials [12]

## 2.1 MATERIALS AND METHODS

All the chemicals, reagents used in this research were of analytical grades and the equipment were of international standard.

### 2.1.1 Collection and Preparation of Plants Materials

*Allium sativum* bulb and fresh leaves of *Gongronema latifolium* were purchased from Itam market, Uyo in Akwa-Ibom state. They were authenticated by the Botany Department of University of Uyo, Uyo. The *Gongronema latifolium* leaves were air dried for three days while the *Allium sativum* bulbs were cut to smaller pieces and air dried for five days at room temperature. One thousand gram each of the dried leaves of *Gongronema latifolium* and *Allium sativum* pieces, were blended separately with KENWOOD electric blender (KENWOOD LTD. ENGLAND), and soaked in 80% ethanol for 24 hours. There after it was sieved with a WhatMan No. 1 filter paper to remove the excess ethanol. The filtrates were separately concentrated in vacuo at 37-40 °C using a rotary evaporator. The concentrates were allowed open in a water bath at 40



°C for complete ethanol removal. The dried extracts were refrigerated at 2-8 °C until required for use. The concentrations of the extracts were determined by drying a volume and measuring the dried weight.

### 2.1.2 Experimental Animals and Grouping

Fifty male Wistar rats (115-280g) were obtained, grouped into ten groups of five each and housed in well ventilated cages (wooden bottom and wire mesh top) and kept under controlled environmental conditions of temperature (25±5°C), relative humidity (50 ±5%) and twelve hour light/dark cycle in the animal house of University of

Uyo, Uyo. Akwa Ibom state. The animals were fed with commercial rat pellets obtained from Uyo and also allowed free access to water.

### 2.1.3 Experimental Design

Animals were randomized into ten groups of five each as in Table 2.1. The extracts and sodium arsenite, dissolved in distilled water were administered orally and intraperitoneally, respectively.

**Table 2.1: Experimental Design**

Id	Group	Treatment
NC	1	Only normal feed
SA <sup>1</sup>	2	10mg/kg body weight of sodium arsenite only on day 1
SA <sup>1-7</sup>	3	10mg/kg body weight of sodium arsenite from day1 to day 7
SA <sup>7</sup>	4	10mg/kg body weight of sodium arsenite only on day 7
GLSA	5	200mg/kg bodyweight of <i>Gongronema latifolium</i> from day1 to 6 and 10mg/kg body weight of sodium arsenite on day 7
ASSA	6	200mg/kg bodyweight of <i>Allium sativum</i> from day1 to 6 and 10mg/kg body weight of sodium arsenite on day 7
GLASSA	7	100mg/kg body weight each of <i>Allium sativum</i> and <i>Gongronema latifolium</i> for 6days and 10mg/kg body weight of sodium arsenite only on day 7
GL	8	200mg/kg body weight of <i>Gongronema latifolium</i> from day 1 - 7
AS	9	200mg/kg body weight of <i>Allium sativum</i> from day 1 - 7
GLAS	10	100mg/kg body weight each of <i>Allium sativum</i> and <i>Gongronema latifolium</i> for 7 days

NC: Normal control, SA: Sodium arsenite, GLSA: *Gongronema latifolium* and sodium arsenite, ASSA: *Allium sativum* and sodium arsenite, GLASSA: *Gongronema latifolium*, *Allium sativum* and sodium arsenite, GL: *Gongronema latifolium*, AS: *Allium sativum*, GLAS: *Gongronema latifolium* and *Allium stadium*

### 2.1.4 Collection of Samples for Analysis

The animals were sacrificed 24hrs after the last administration, by euthanizing them under chloroform vapour and sacrificed, then whole blood was collected via cardiac puncture using sterile syringes and needles and put in plain container. Serum was separated by centrifugation (3000rpm at 4°C for 5mins) in a centrifuge machine (model 800-1, Zeny Inc. Salt Lake, USA). The kidney was harvested and rinsed in normal saline, and was preserved in 10% formalin for histological analysis.

### 2.1.5 Determination of Kidney Function Test

#### Rat Serum Urea Concentration (Diacyl monoxime Colorimetric Method)

Urea reacts directly with diacyl monoxime under strong acidic conditions to give a yellow condensation product. The reaction is intensified by the presence of ferric ions and thiosemicarbazide. The intense red colour formed is measured at 540nm [13].

#### Rat Serum Creatinine Estimation Assay (Jaffe's Reaction Method)

Alkali Creatinine + Sodium Picrate → Creatinine - Picrate complex (yellow-orange)



Creatinine reacts with picric acid in alkaline conditions to form a colour complex, which absorbs at 510 nm [14].

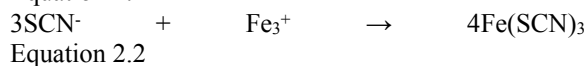
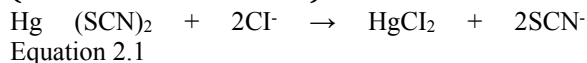
### Rat Potassium Estimation Assay (Colorimetric method)

This is a colorimetric method where the amount of potassium was determined by using sodium tetraphenylboron in a specifically prepared mixture to produce a colloidal suspension. The turbidity of which is proportional to potassium concentration [15].

### Rat Sodium Estimation Assay (Colorimetric Method)

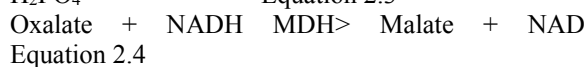
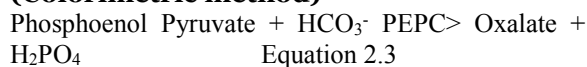
This method is based on modifications in which sodium is precipitated as the triple salt, sodium magnesium uranyl acetate, with the excess uranium then being reacted with ferrocyanide, producing a chromophore whose absorbance varies inversely as the concentration of sodium in the test specimen [15].

### Rat Chloride Estimation Assay (Colorimetric method)



red complex chloride ions form a soluble, non-ionized compound, with mercuric ions and will displace thiocyanate ions from non-ionized mercuric thiocyanate. The released thiocyanate ions react with ferric ions to form a colour complex that absorbs light at 480 nm. The intensity of the colour produced is directly proportional to the chloride concentration [15].

### Rat Serum Bicarbonates Assay (Colorimetric method)



Phosphoenol pyruvate carboxylase (PEPC) catalyzes the reaction between phosphoenol pyruvate and carbon dioxide (bicarbonate) to form oxalacetate and phosphate ion. Oxalacetate is reduced to malate with simultaneous oxidation of an equimolar amount of reduced nicotinamide adenine dinucleotide (NADH) to NAD; the reaction is catalyzed by malate dehydrogenase (MDH). This results in a decrease in absorbance at 340 nm that is directly proportional to CO<sub>2</sub> concentration in the sample [16].

### Histological Analysis

The kidneys were carefully dissected out, trimmed of all fat and blotted dry to remove any blood. They were weighed and volume determined by water displacement and then fixed in 10% formal

saline (fixation). The fixed tissues were transferred to a graded series of ethanol (dehydration). On day 1, they were placed in 70% alcohol for 7 hours, then transferred to 90% alcohol and left in the latter overnight. On day 2, the tissues were passed through three changes of absolute alcohol for an hour each, and then cleared in xylene (clearing). Once cleared, the tissues were infiltrated in molten paraffin wax in the oven at 58°C. Three changes of molten paraffin wax (impregnation) at one-hour intervals were made, after which the tissues were embedded (embedding) in wax and blocked out. Prior to embedding, it was ensured that the mounted sections to be cut by the rotary microtome were oriented perpendicularly to the long axis of the tissues. The sections were designated “vertical sections”. Serial sections of 5µm thick were obtained from a solid block of tissue (microtomy) fixed on clean albuminized slides to prevent sections from pulling off the slides and later stained with haematoxylin and eosin staining techniques, after which they were passed through grades of alcohol, cleared in xylene and mounted in DPX (Distyrene - Plasticizer and xylene) mountant and observed under digital light microscope [17].

### 2.1.6 Statistical analysis

All values were expressed as mean ± standard deviation (SD) of five animals in a group. The test of significance between two groups was estimated by student's t-test with P-values < 0.05 considered statistically significant.



## 1. Results and Discussion

Table 3.1: Effect of combined extracts of *Allium sativum* and *Gongronema latifolium* on kidney function of sodium arsenite induced toxicity in rats

Group	1d	Creatinine (Mg/dl)	Urea (Mg/dl)	Bicarbonate (Mmol/L)	Sodium (Mmol/L)	Potassium (Mmol/L)	Chloride (Mmol/L)
1	NC	0.312 ± 0.065 <sup>abc</sup>	17.22 ± 3.382 <sup>abc</sup>	27.6 ± 2.302 <sup>abc</sup>	143.6 ± 4.037 <sup>ab</sup>	3.71 ± 0.352 <sup>abcd</sup>	99.8 ± 6.943 <sup>abc</sup>
2	SA <sup>1</sup>	0.598 ± 0.234 <sup>*abd</sup>	26.14 ± 2.397 <sup>*abd</sup>	36.0 ± 2.739 <sup>*ad</sup>	149.2 ± 4.658 <sup>a</sup>	6.40 ± 0.345 <sup>*bd</sup>	109 ± 4.301 <sup>*abd</sup>
3	SA <sup>1-7</sup>	0.99 ± 0.056 <sup>*bcd</sup>	41.97 ± 6.536 <sup>*bcd</sup>	44.5 ± 7.674 <sup>*bcd</sup>	162 ± 3.606 <sup>*bcd</sup>	7.29 ± 1.286 <sup>*bd</sup>	154.7 ± 28.43 <sup>*bcd</sup>
4	SA <sup>7</sup>	0.718 ± 0.069 <sup>*acd</sup>	33.03 ± 3.043 <sup>*acd</sup>	37.0 ± 3.769 <sup>*ad</sup>	155.75 ± 8.77 <sup>*d</sup>	6.57 ± 0.508 <sup>*d</sup>	114 ± 6.633 <sup>*ad</sup>
5	GLSA	0.65 ± 0.0496 <sup>*ad</sup>	24.75 ± 1.068 <sup>*abd</sup>	34.0 ± 2.160 <sup>*ad</sup>	149.3 ± 6.994 <sup>a</sup>	5.21 ± 0.376 <sup>*bd</sup>	100.75 ± 5.439 <sup>abcd</sup>
6	ASSA	0.51 ± 0.113 <sup>*abd</sup>	21.82 ± 1.769 <sup>*abd</sup>	30.8 ± 2.588 <sup>abc</sup>	141.6 ± 3.646 <sup>ab</sup>	4.514 ± 0.404 <sup>*abc</sup>	91.4 ± 11.41 <sup>abc</sup>
7	GLASSA	0.33 ± 0.054 <sup>abc</sup>	14.28 ± 1.18 <sup>abc</sup>	26.7 ± 2.533 <sup>abc</sup>	146.3 ± 8.180 <sup>b</sup>	4.22 ± 0.692 <sup>abc</sup>	86.75 ± 10.9 <sup>abc</sup>
8	GL	0.575 ± 0.09 <sup>*abd</sup>	24.85 ± 1.64 <sup>*abd</sup>	34.0 ± 1.825 <sup>*ad</sup>	146.5 ± 5.066 <sup>b</sup>	5.088 ± 0.177 <sup>*abc</sup>	100.25 ± 3.59 <sup>abcd</sup>
9	AS	0.304 ± 0.04 <sup>abc</sup>	15.24 ± 2.057 <sup>abc</sup>	26.4 ± 3.209 <sup>abc</sup>	139.4 ± 1.341 <sup>abc</sup>	4.0 ± 0.2246 <sup>abc</sup>	97.4 ± 10.45 <sup>abcd</sup>
10	GLAS	0.228 ± 0.032 <sup>*abcd</sup>	11.56 ± 5.85 <sup>*abc</sup>	25.820 ± 1.54 <sup>abc</sup>	141.4 ± 9.48 <sup>ab</sup>	4.192 ± 0.48 <sup>abc</sup>	99.4 ± 4.97 <sup>abcd</sup>

Values are expressed as Mean ± SD, \* = p < 0.05 vs normal control (Group 1); a = p < 0.05 vs SA<sup>1-7</sup> (Group 3); b = p < 0.05 vs SA<sup>7</sup> (Group 4); c = p < 0.05 vs SA<sup>1</sup> (Group 2), d = p < 0.05 vs GLASSA (Group 7)

Source: Field data

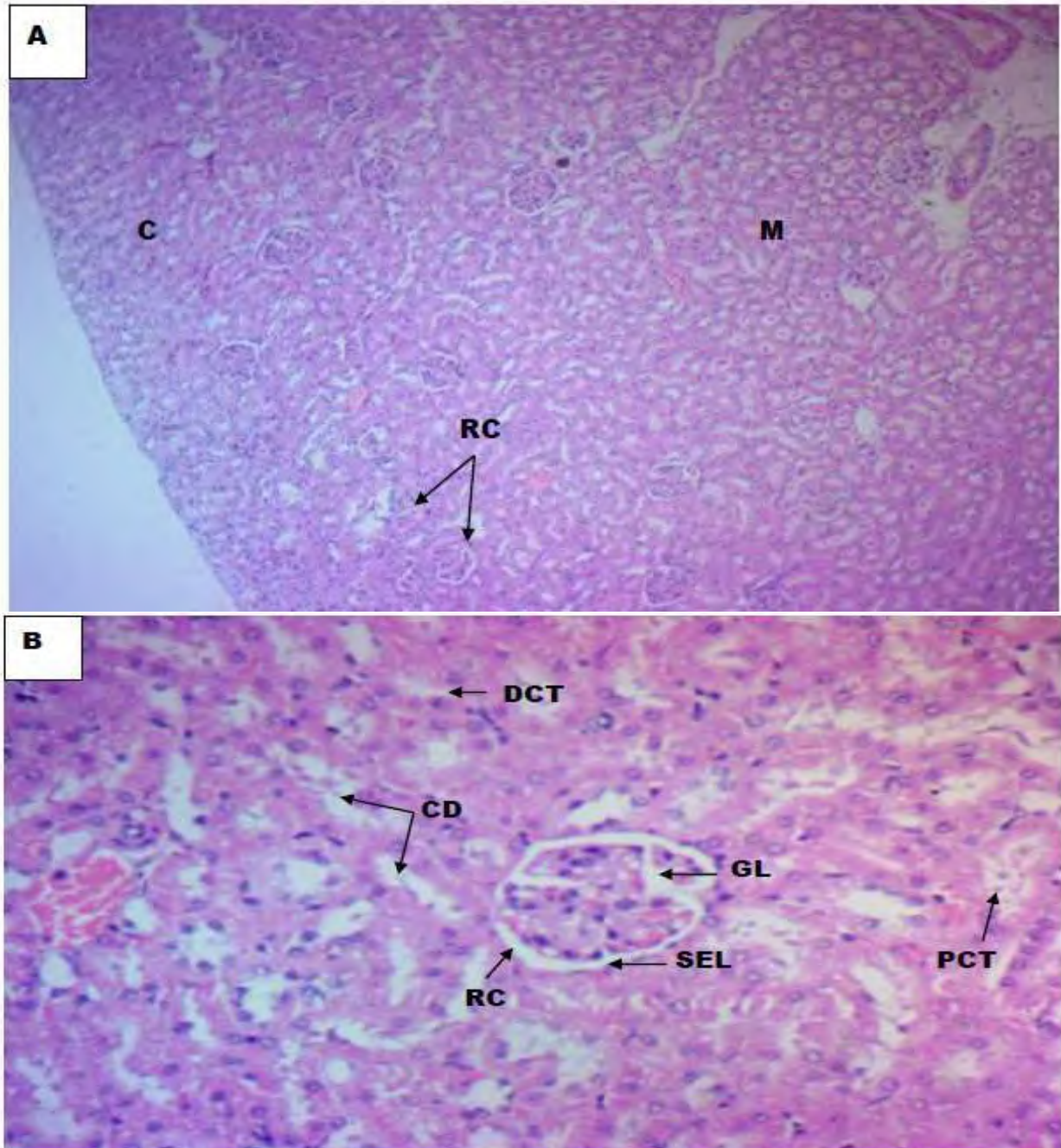


Table 3.1 showed that urea and creatinine levels were significantly ( $p < 0.05$ ) higher in all the groups treated with sodium arsenite exception of Group 7 animals, while a significant reduction was observed in Group 10 animals when compared to the control group (Group 1). The group with the longest duration of exposure to sodium arsenite only (Group 3) had significantly raised urea and creatinine levels when compared to all other groups.

The table also showed that the electrolytes levels were significantly raised in all the groups treated with sodium arsenite only, except in Group 2 when compared to the control group (Group 1).

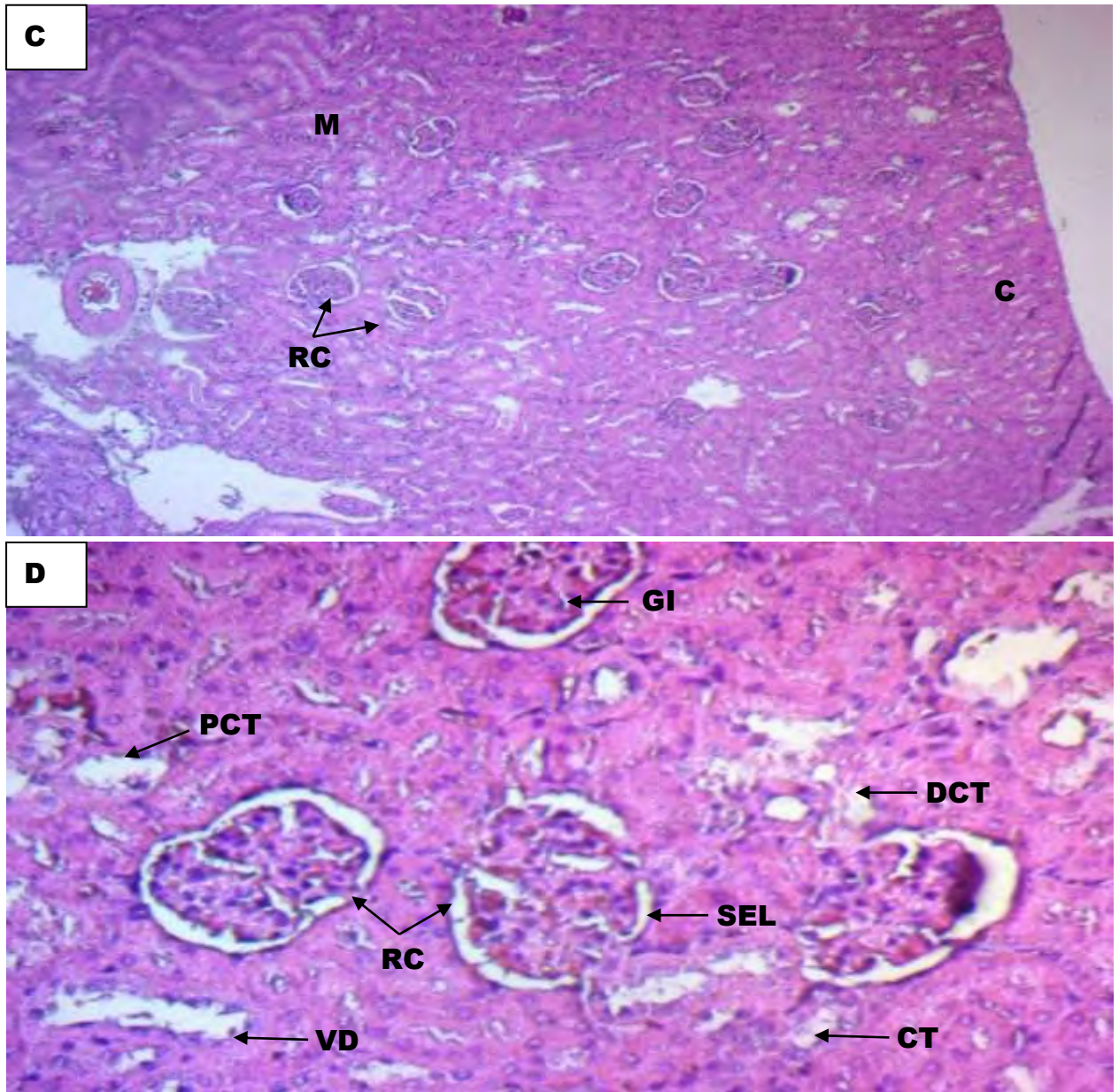
The electrolytes levels were same with control group in all the extract treated groups exception of significant increase in potassium level of Groups 5, 6, and 8. Bicarbonate level was also significantly raised in Groups 5 and 8 only.

### Histopathology of the kidney



**Figure 3.1:**

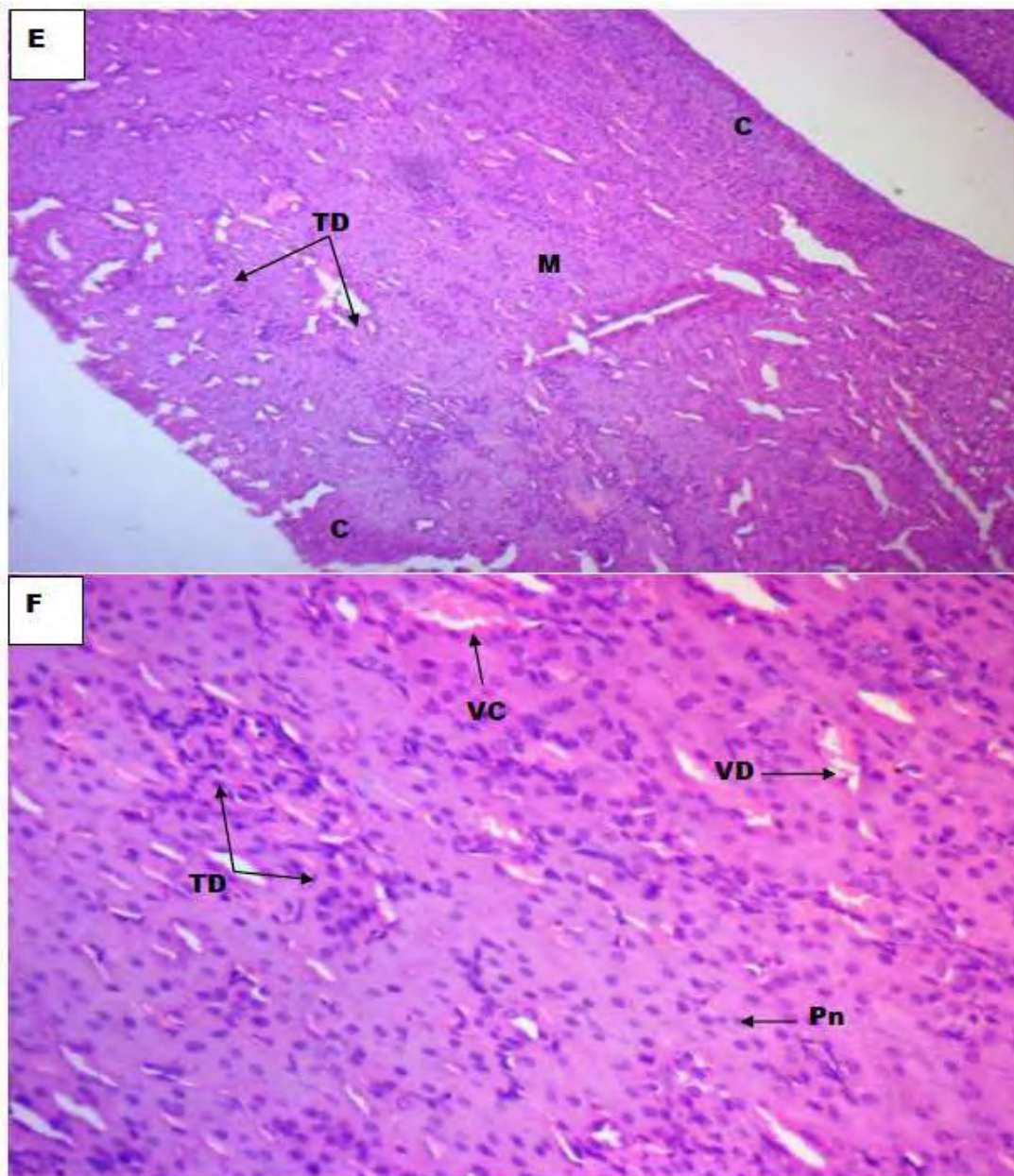
Photomicrographs of control kidney (Group 1) without treatment stained with H and E method at Mag. A (X100) and B (X400). Keys: Renal corpuscle (RC), Cortex (C), Medulla (M), Squamous Epithelial Lining (SEL), Proximal Convulated Tubules (PCT), Distal Convulated Tubules (DCT) and Collecting Duct CD, Glomerulus (GL) Source: Field data



**Figure 3.2:** Photomicrographs of Kidney of Group 2 rats, stained with H and E method at Mag.C (X100) and D (X400).

Keys: Renal corpuscle (RC), Cortex (C), Medulla (M), Squamous Epithelial Lining (SEL), Proximal Convulated Tubules (PCT), Distal Convulated Tubules (DCT) and Vascular degeneration (VD), Glomerular Inflammation (GI) and Pyknotic nucleus (Pn) Source: Field data

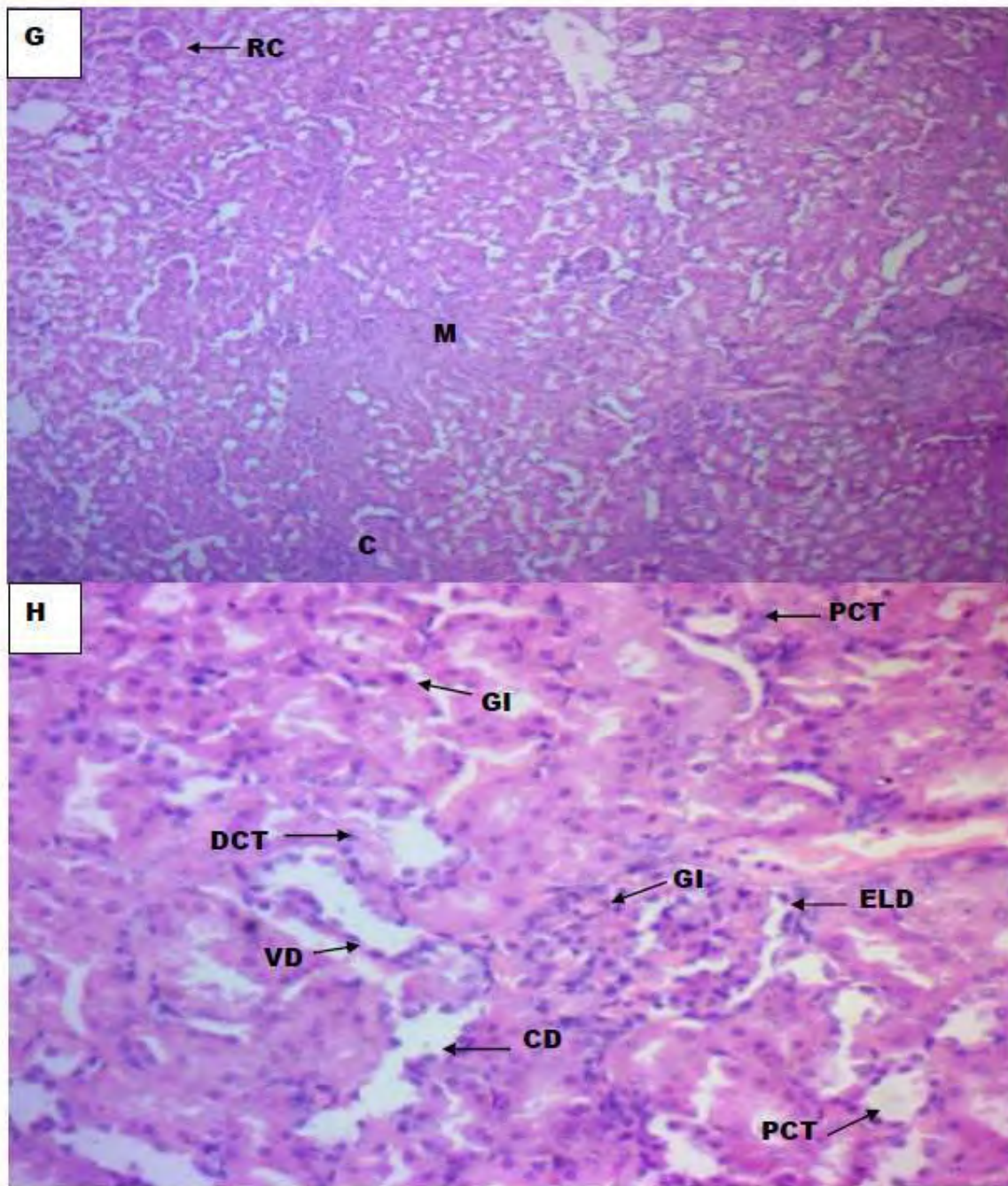




**Figure 3.3:** Photomicrographs of Kidney of Group 3 rats, stained with H and E method at Mag. E (X100) and F (X400).

Keys: Tubular Degeneration (TD), Cortex (C), Medulla (M), Vascular congestion (VC), Vascular degeneration (VD) and Pyknotic nucleus (Pn)

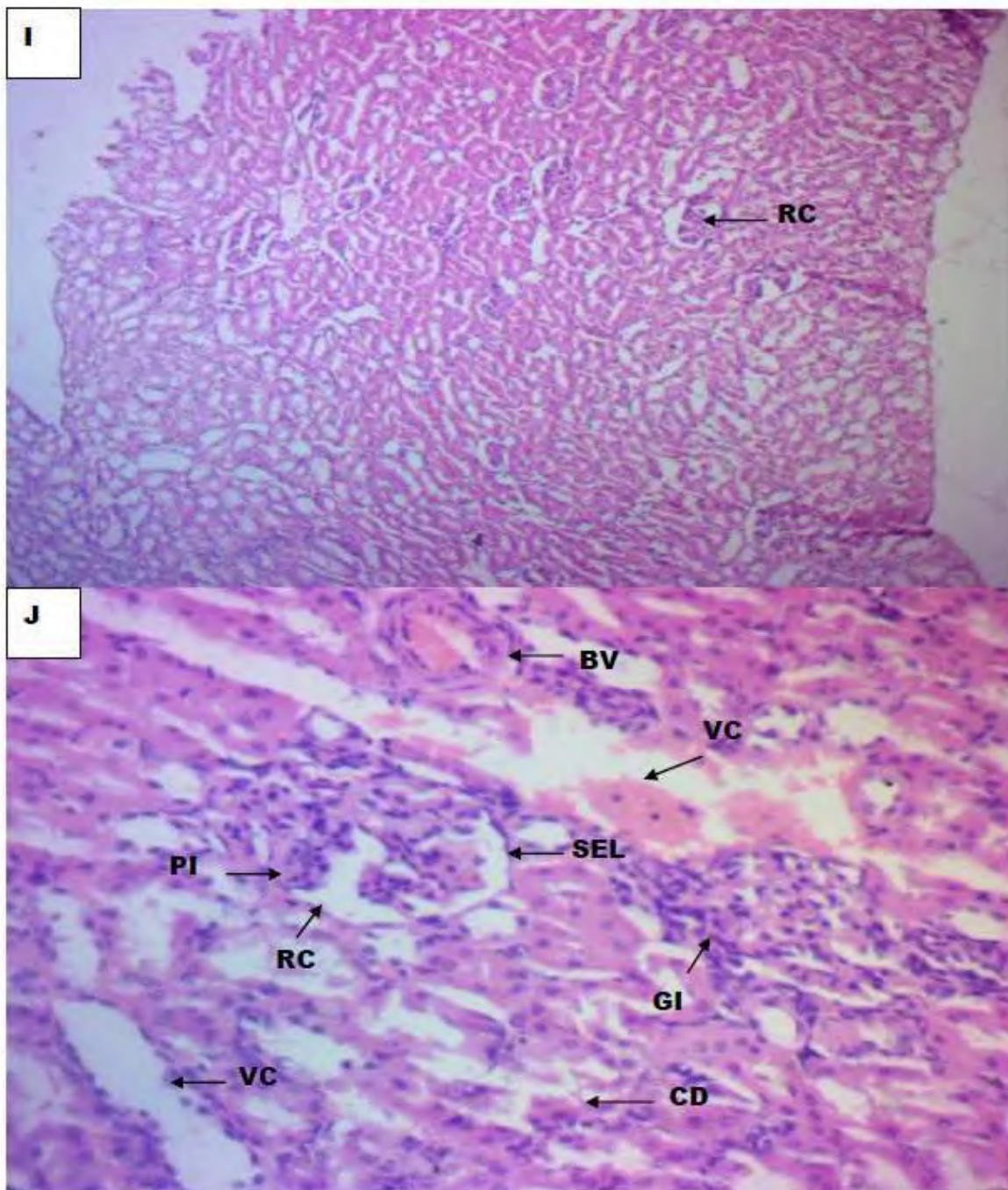
Source: Field data



**Figure 3.4:** Photomicrographs of Kidney of Group 4 rats, stained with H and E method at Mag. G (X100) and H (X400).

Keys: Renal corpuscle (RC), Cortex (C), Medulla (M), Epithelial lining degeneration (ELD), Proximal Convulated Tubules (PCT), Distal Convulated Tubules (DCT) and Vascular degeneration (VD), Glomerular Inflammation (GI) and Pyknotic nucleus (Pn)

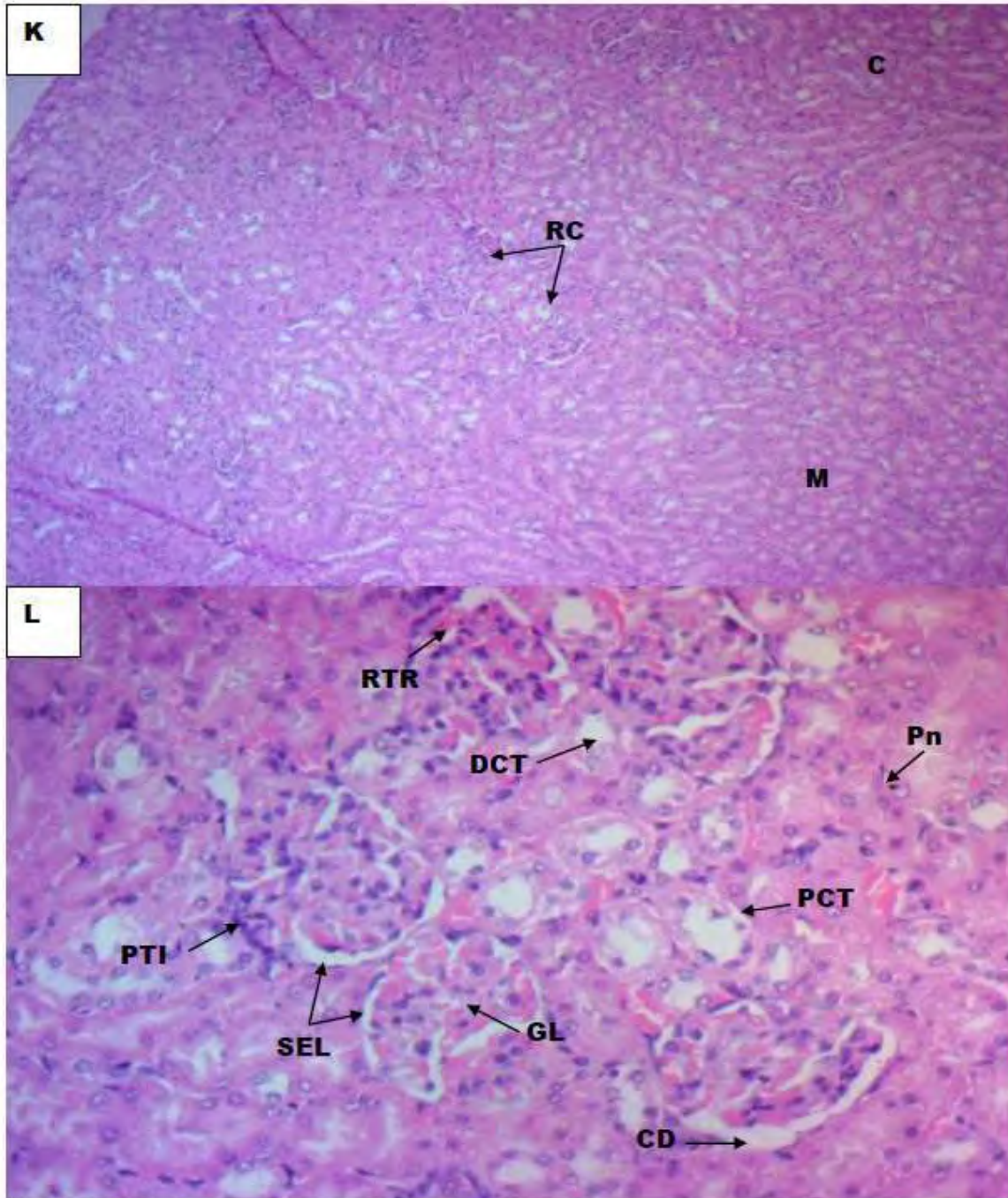
Source: Field data



**Figure 3.5:** Photomicrographs of Kidney of Group 5 rats, stained with H and E method at Mag. I (X100) and J (X400).

Keys: Renal corpuscle (RC), Squamous Epithelial lining (SEL), Proximal Convulated Tubules (PCT), Distal Convulated Tubules (DCT), Collecting ducts (CD) and Glomerular Inflammation (GI), Blood vessel (BV) and Peritubular Inflammation (PI)

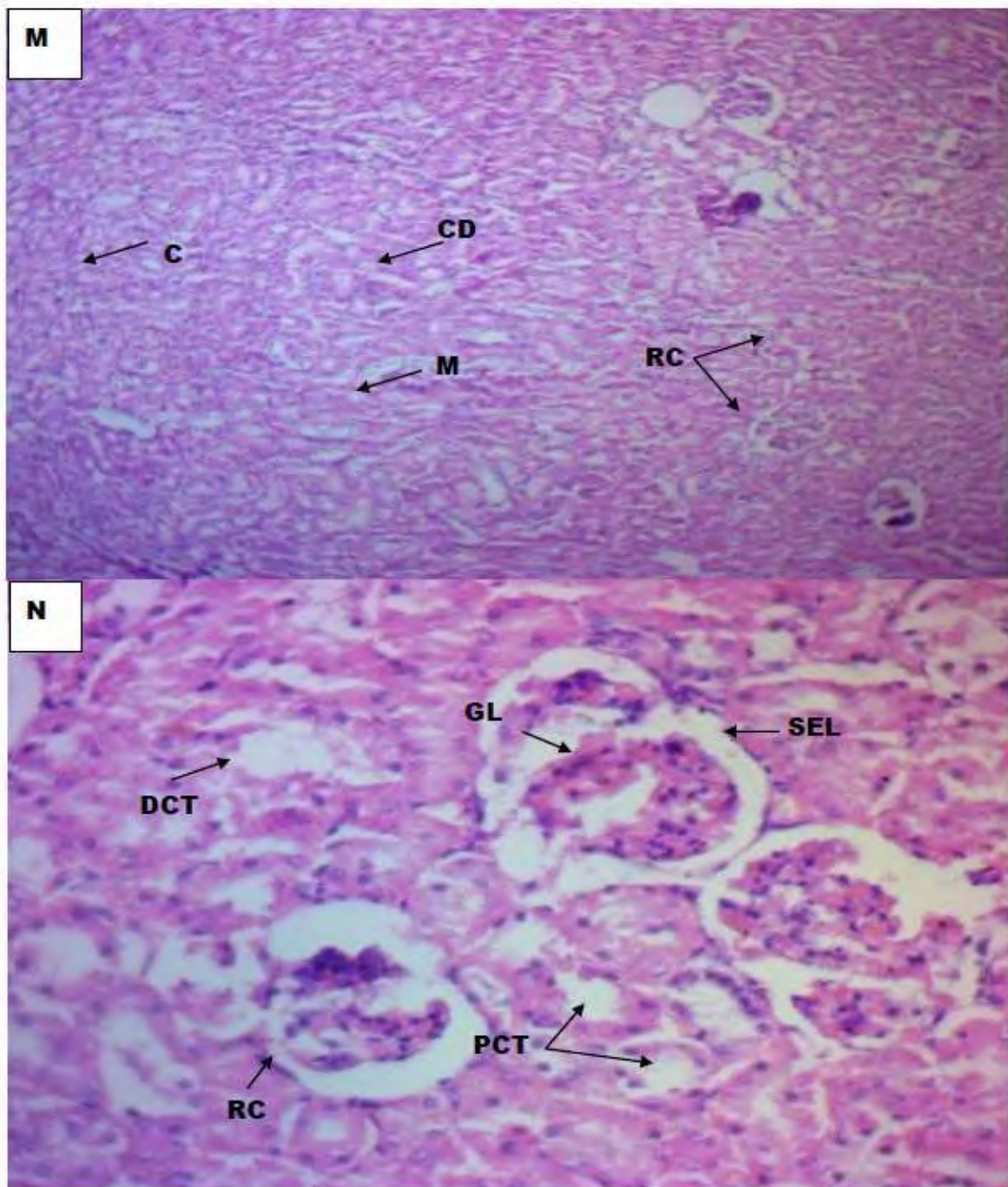
Source: Field data



**Figure 3.6:** Photomicrographs of Kidney of Group 6 rats, stained with H and E method at Mag. K (X100) and L (X400).

Keys: Renal corpuscle (RC), Cortex (C), Medulla (M), Squamous Epithelial lining degeneration (SEL), Proximal Convulated Tubules (PCT), Distal Convulated Tubules (DCT) and Collecting ducts (CD), Renal Tubular Restoration (RTR) and Peritubular Inflammation (PTI)

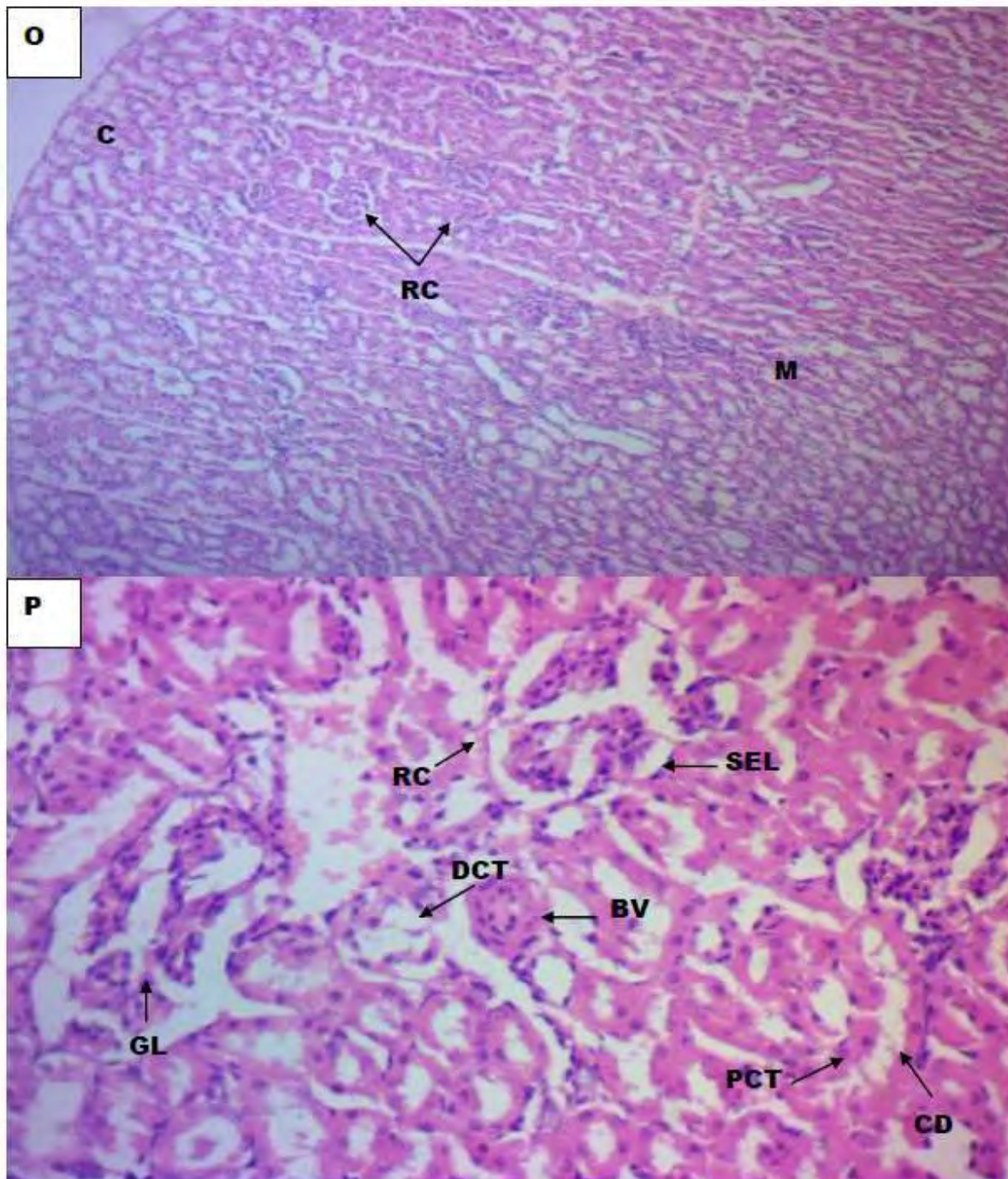
Source: Field data



**Figure 3.7:** Photomicrographs of Kidney of Group 7, stained with H and E method at Mag. M (X100) and N (X400).

Keys: Renal corpuscle (RC), Cortex (C), Medulla (M), Squamous Epithelial lining (SEL), Proximal Convulated Tubules (PCT), Distal Convulated Tubules (DCT) Collecting ducts (CD) and Glomerulus (GL).

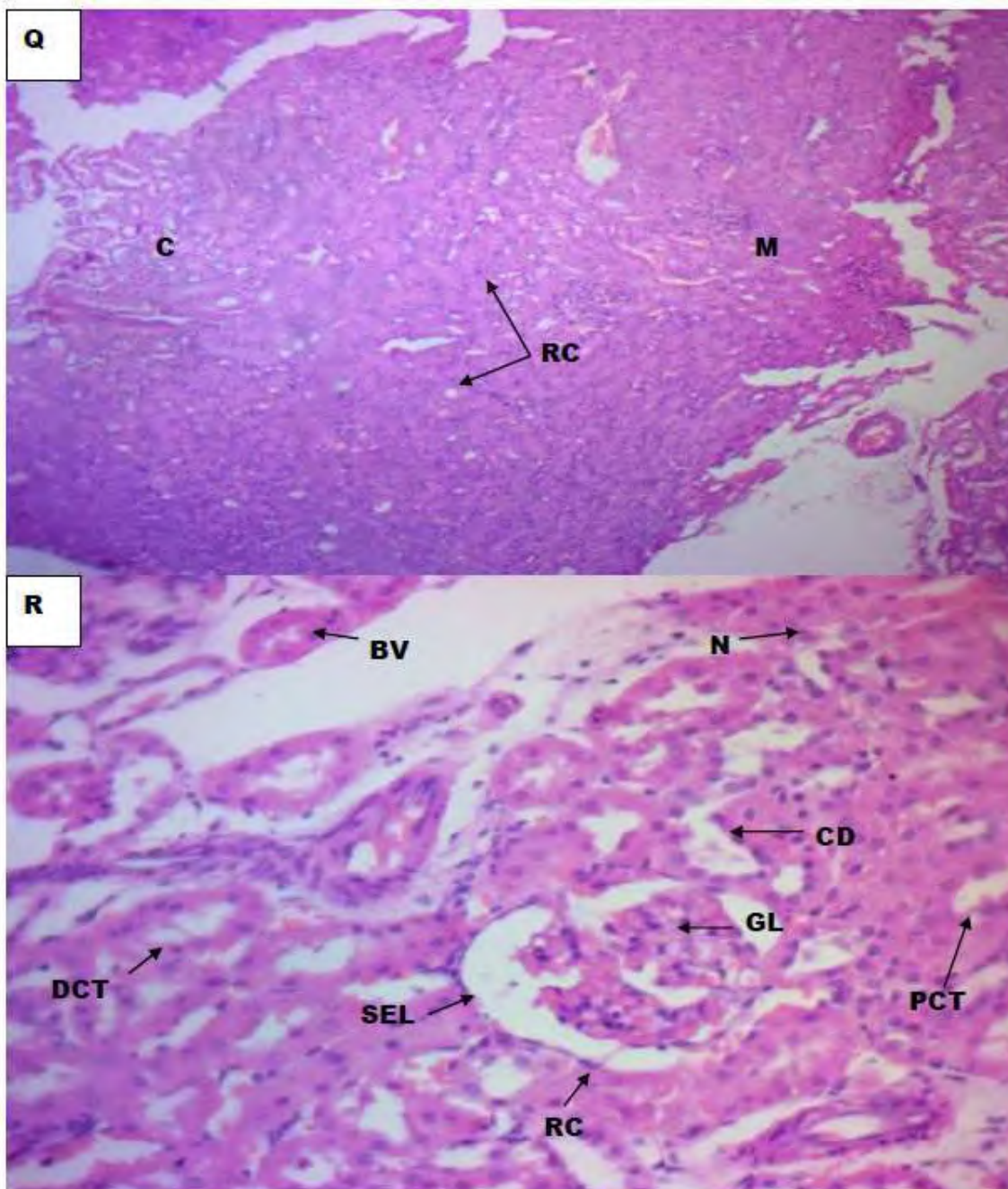
Source: Field data



**Figure 3.8:** Photomicrographs of kidney of Group 8 rats, stained with H and E method at Mag. O (X100) and P (X400).

Keys: Renal corpuscle (RC), Cortex (C), Medulla (M), Squamous Epithelial lining (SEL), Proximal Convulated Tubules (PCT), Distal Convulated Tubules (DCT) Collecting ducts (CD) Blood vessel (BV) and Glomerulus (GL).

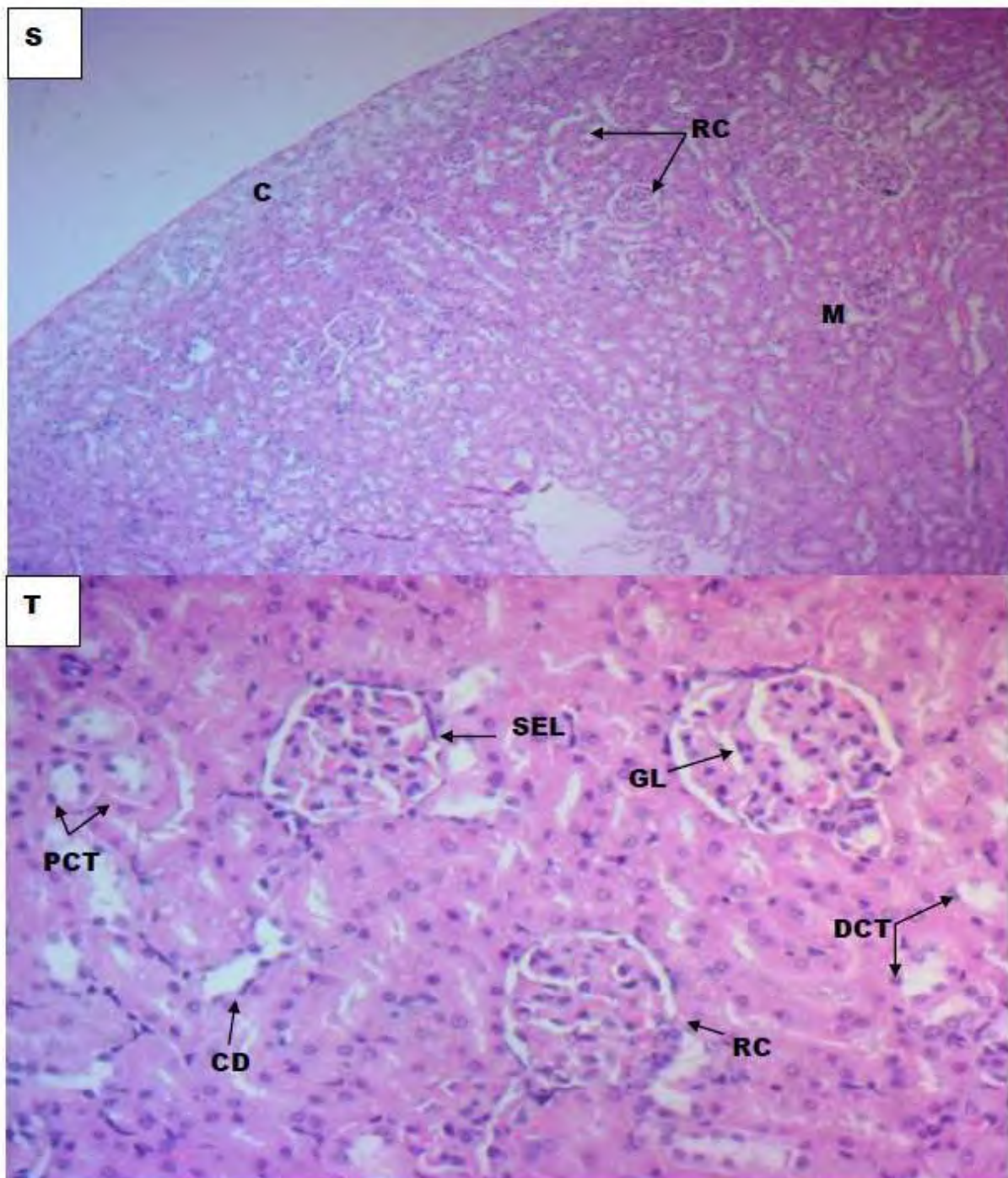
Source: Field data



**Figure 3.9:** Photomicrographs of kidney of Group 9 rats, stained with H and E method at Mag. Q (X100) and R (X400).

Keys: Renal corpuscle (RC), Cortex (C), Medulla (M), Squamous Epithelial lining (SEL), Proximal Convulated Tubules (PCT), Distal Convulated Tubules (DCT), Collecting ducts (CD) and Glomerulus (GL).

Source: Field data



**Figure 3.10:** Photomicrographs of kidney of Group 10 rats, stained with H and E method at Mag. S (X100) and T (X400).

Keys: Renal corpuscle (RC), Cortex (C), Medulla (M), Squamous Epithelial lining (SEL), Proximal Convulated Tubules (PCT), Distal Convulated Tubules (DCT) Collecting ducts (CD) and Glomerulus (GL).

Source: Field data





Figure 3.1 -3.10 presents the histological sections of the kidney of the rats in various groups.

Figure 3.1 represents Group 1(control group) rats without treatment at magnification A (x100) and B (x400) which revealed normal cellular profile of renal corpuscle containing distinct glomerulus, and lined with squamous epithelium within the cortex layer, the medulla region constitute the central area with numerous distal and proximal convoluted tubules with well - defined collecting ducts all within normal cellular architecture without any form of abnormality.

Figure 3.2 showed histologic sections of the kidney of Group 2 rats at magnification C (x100) and D (x400) which revealed onset of glomerular inflammation without cellular abnormality when compared to control group. It was slightly affected.

Figure 3.3 showed histologic sections of the kidney of Group 3 rats at magnification E (x100) and F (x400) which revealed chronic tubular degeneration, vascular congestion, vascular degeneration against the background of numerous pyknotic nuclei when compared to control group. It was severely affected.

Figure 3.4 showed histologic sections of the kidney of Group 4 rats at magnification G (x100) and H (x400) which revealed epithelial lining degeneration, glomerular inflammation against the background of numerous pyknotic nuclei when compared to control group. It was moderately affected.

Figure 3.5 showed histologic sections of the kidney of Group 5rats at magnification I (x100) and J (x400) which revealed glomerular and peritubular inflammation with slight changes in the cellular profile when compared to control group. It was slightly affected.

Figure 3.6 showed the histologic sections of the kidney of Group 6 rats at magnification of K (x100) and L (x400) which revealed active reversible effect with renal tubular restoration, though there was a strong evidence of peritubular inflammation when compared to control group. It was slightly affected.

Figure 3.7 showed the histologic sections of the kidney of Group 7 rats at magnification M (x100) and N(x400) which revealed complete restorative effect characterized with renal normal profile without any form of cellular abnormality when compared to control group. It was not affected.

Figure 3.8 showed the histologic sections of the kidney of Group 8 rats at magnification O (X100) and P (X400) which revealed cellular profile without any form of abnormality when compared to control group. It was not affected.

Figure 3.9 showed the histologic sections of the kidney of Group 9 rats at magnification Q (x100) and R (x400) which revealed well preserved cellular profile without any form of abnormality when compared to control group. It was not affected.

Figure 3.10 showed the histologic sections of the kidney of Group 10 rats at magnification S (x100)

and T (x400) which revealed well preserved cellular profile without any form of abnormality when compared to control group. It was not affected.

The kidney is a functional organ for excretion alongside many other functions. A normal kidney functions in formation, acidification, concentration and or dilution of urine, along with filtration of blood at glomeruli and selective reabsorption of essential substances. Controlled reabsorption of salts and water, and secretion of certain substances depend upon an adequate flow of blood to the kidneys. Any situation interfering with this renal blood supply results in kidney dysfunction which alters the amount and composition of urine which result in the accumulation of metabolic waste product in blood [18]. During excretion of sodium arsenite, the proximal convoluted tubule is usually affected. There is occurrence of renal toxicity leading to tubular necrosis, cast formation and increased blood urea nitrogen and creatinine levels [5, 19]. The kidney function tests (urea, creatinine and electrolytes) usually give valuable information about the status of the kidney function and frequently about the location of the defect. These defects and dysfunctions can also be confirmed by histological analysis of the kidneys [20].

This study showed that the animals that were treated with different duration of exposure to sodium arsenite only, suffered different degrees of kidney damage, with the one having the longest duration of exposure being severely affected as evident in their histological sections and in the significant rise in urea, creatinine and electrolyte levels, as well when compared to the control group. This proves that sodium arsenite has nephrotoxicity potential in which its severity depends on duration of exposure [21].

It was also observed from this study that although Group 2 and 4 animals had the same duration of exposure, Group 2 animals had lesser level of kidney damage compared to Group 4 animals as evident in their urea and creatinine levels significant difference as well as their kidney histology. This indicates that the kidney can recover to some extent after acute kidney injury [22].

The combined extracts and sodium arsenite treated group (Group7) was seen to confer a complete protective potential on the kidney compared to the *Allium sativum* and sodium arsenite treated group (Group 6) and the *Gongronema latifolium* and sodium arsenite treated group (Group 5). This was evident on the well preserved cellular profile without any form of abnormality of the histology section when compared to control group as well as the urea, creatinine and electrolyte levels being same with the control group.

In the groups treated with only extracts, it was observed that Group 8 (*Gongronema latifolium* only) had significant increase in urea, creatinine, bicarbonate and potassium levels whereas the histological sections indicated no damage. This finding is in line with researched by Nwangwu *et al.*,



(2011), in which *Gongronema latifolium* was observed to increase the level of some kidney function parameters [23].

#### 4.1 CONCLUSION

This study confirms that sodium arsenite has toxic effect on the kidney and this toxicity can be prevented by the use of combined extracts of *Gongronema latifolium* and *Allium sativum*.

#### Acknowledgments

This research was not supported by any organisation or funding body. However, the authors contributed collectively to carry out the research.

#### REFERENCES

1. Bello – Reuss, E. and Reuss, L. (1983). Homeostatic and excretory functions of the kidney, pp 35 - 63 In: Klahr, S. (Editor). *The kidney and body fluids in health and disease*. Springer, Boston, MA, 593p.
2. Hughes, M. (2002). Arsenic toxicity and potential mechanism of action. *Toxicology Letters*, 133 (1): 1-16.
3. Nandi, D., Patra, D. and Swarup, D. (2005). Effect of cysteine, methionine, ascorbic acid and thiamine on arsenic induced oxidative stress and biochemical alterations in rats. *Toxicology*, 211:26 -35.
4. Singh, A., Goel, R. and Kaur, T. (2011). Mechanism pertaining to arsenite toxicity. *International Journal of Toxicology*, 211: 26 – 35.
5. Kimura, A., Ishida, Y., Hayashi, T., Wada, T., Yakoyama, H. and Sugaya, T. (2006). Interferon-gamma plays protective roles in sodium arsenite-induced renal injury by up regulating intra renal multidrug resistance- associated protein 1 expression. *American Journal of Pathology*, 169:1118-1128.
6. Alam, K., Hoq, M. and Uddin, S. (2016). Medicinal plant. *Allium sativum* = a review. *Journal of Medicinal Plant Studies*, 4 (6): 72 -79.
7. Milner, J. (1996). Garlic: Its anticarcinogenic and antitumour properties. *Nutrition Review*, 54: S 82 – 86.
8. Powolny, A. and Singh, S. (2008). Multitargeted prevention and therapy of cancer by diallyl trisulfide and related *Allium* vegetable – derived organosulfur compounds. *Cancer Letters*, 229: 305 – 314.
9. Harunobu, A., Peteseh, B., Matsuura, H., Kasuga, S. and Itakura, Y. (2001). Intake of garlic and its bioactive component. *Journal of Nutrition*, 131: 955S – 962S.
10. Borek, C. (2001). Antioxidant health effects of aged garlic extract. *Journal of Nutrition*, 131 (3s): 1010s-1015s.
11. Usuh, I. F., Akwa, N. E., Oyebadejo, S. A. and Ekpo, N. D. (2009). Protective potential of *Gongronema latifolium* and *Allium sativum* extracts against hyperlipidaemia and oxidative stress in albino Wistar rats with sodium arsenite induced toxicity. *World Journal of Pharmacy and Pharmaceutical Sciences*, 8 (12): 1-12.
12. Orok, U., Eneji, E., Luke, O., Eyo, R., Sampson, E., Iwara, A. and Oko, O. (2012). Effect of ethanolic root and twig extracts of *Gongronema latifolium* (Utazi) on kidney function of streptozotocin induced hyperglycemic and normal Wistar rats. *Journal of Medicine Sciences*, 3 (5): 291- 296.
13. Wybenga, D., Di Glorgio, J. and Pileggi, V. (1971). Manual and automated methods for urea nitrogen measurement in serum. *Clinical Chemistry*, 17, (9): 891-895.
14. Henry, J. (1974). *Clinical diagnosis and management by laboratory method*. 16<sup>th</sup> Edition. Saunders, Philadelphia, 263p.
15. Tietz, N.W. (1996). *Fundamentals of Clinical Chemistry*. W.B. Saunders. Philadelphia 299p.
16. Young, D. (1997). Effect of drugs on clinical laboratory tests. *Annals of Clinical Biochemistry: International Journal of Laboratory Medicine*, 34: 579-581.
17. Bancroft, J., Stevens, A. and Turner, D. (1996). *Theory and practice of histological techniques*. 4<sup>th</sup> Edition, Churchill Livingstone, New York, Edinburgh, London, Melbourne, San Francisco, Tokyo.
18. Hounkpatin, H., Fraser, S., Glidewell, L., Blakeman, T., Lewington, A. and Roderick, P (2019). Predicting risk of recurrent acute kidney injury: A systematic review. *Nephron*, 21:1-8.
19. Sasaki, A., Oshima, Y. and Fujimura, A. (2007). An approach to elucidate potential mechanism of renal toxicity of arsenic trioxide. *Experimental Haematology*, 35: 252-262.
20. Yousef, I. El- Demerdash, M. and Radwan, F. (2008). Sodium arsenite induced biochemical perturbations in rats: Ameliorating effect of curcumin. *Food and Clinical Toxicology*, 48:3506-3511.
21. Connell, D. Yu, Q. and Verma, V. (2016). Influence of exposure time on toxicity: an overview. *Toxicology*, 355-356, 49-53.
22. Ronco, C. Ferrari, F. and Ricci, Z. (2016). Recovery after acute kidney injury: a new prognostic dimension of the syndrome. *American Journal of Respiratory and Critical Care Medicine*. 195 (6), 711 -714.
23. Nwangwu, C. Josiah, J., Abubakar, E., Ajeighe, O. and Akintola, A. (2011). Comparative effect of aqueous and ethanolic extracts of *Gongronema latifolium* on serum kidney and liver biomarkers of normal male rats. *Asian Journal of Biological sciences*, 4(7):540-547.



## A SELF LOCALIZED ALGORITHM FOR PACKET FORWARDING IN SENSOR NETWORKS

**Sunita Kumawat<sup>1</sup>**

<sup>1</sup>Research Scholar,  
Department of CSE,  
Bhagwant University,  
Ajmer (Rajasthan) India.

**Dr. Pushpneel Verma<sup>2</sup>**

<sup>2</sup>Associate professor,  
Department of CSE,  
Bhagwant University,  
Ajmer (Rajasthan) India

---

### ABSTRACT

*Sensing and monitoring are the main purposeful aspects of wireless sensor networks (WSNs) and since these networks are densely populated in terms of number of sensor nodes, a large amount of redundancy either in terms of data or in terms of sensor nodes is often observed. Redundancy is an inherent feature of WSNs that has to be very carefully examined in order to improve the purposeful aspects of their functioning. This paper briefly explains the existing gossip protocol that aims to control the redundancy during message transmission or packet forwarding in WSNs and presents a novel technique “self-localized algorithm for packet forwarding (SLAPF)”. The SLAPF utilizes the existing gossip protocol and helps to achieve an optimum packet delivery ratio (PDR) during message/packet broadcast in WSNs. The proposed technique imbues the aspects of the gossip protocol for forwarding packets. The simulator SNetSim is used to perform the simulation of the proposed algorithm and the end to end performance is evaluated for various values of node densities in the deployment area.*

**KEYWORDS:** Redundancy, Node Density, Localization, Packet Forwarding, Wireless Sensor Network.

---

### INTRODUCTION

WSNs consist of spatially scattered, autonomous sensors that are fabricated using thin film devices to visualize physical or environmental conditions such as pressure, humidity, sound, temperature, volatile organic compounds, light, and many other sensations. Are [1–4]. In the network, sensor nodes are designed with transceivers, power sources, a radio frequency, and a memory. They float information wirelessly as messages / packets over a specified protocol [5]. Packet forwarding is a common way for sensor nodes to share their packets with each other. The packet sharing mechanism can serve as an efficient technique to localize sensor nodes. [5] The simplest way to forward packets is flooding, under which each sensor node resends the packet when it is first received. It is a very simple technique, but has high redundancy, bandwidth dissipation and packet collision [7]. So, an efficient packet-forwarding technique is necessary to reduce packet-forwarding redundancy [8]. Several prospective broadcast protocols have been anticipated in the literature as flood amendments. Gossiping is one of the basic extensions of flooding [9, 10], where every sensor node forwards a packet in a possible routine. The proposed technique avoids the

above mentioned problems and provides alternative solutions to flooding.

In this paper, a self-localized algorithm for packet forwarding (SLAPF) for governor redundancy is proposed. The proposed method uses a chat protocol with regularly increasing node density for packet forwarding between sensor nodes and for a changing network topology. The simulator SNetSim is used to perform simulations and is the highpoint that SLAPF operates in a self-localized manner and is lightweight in its approach to the limited resources available with sensor nodes. Self-localization allows sensor nodes to reattach their Ambani, cooperate to form topologies, and acclimatise to environmental changes without human intervention. Position information relative to neighboring nodes (eg, directional estimation or distance estimation or) is required in sensor networks. The basis of the localization algorithm is the ability to derive these estimates. Redundancy is associated with the provision of adding duplicate resources to produce similar results in WSNs, redundancy is both friend and foe, with researchers challenging it to emphasize positive aspects and minimize negative ones [11]. This should be evaluated to increase data accuracy, sensory reliability, system lifetime, and security, taking into



account the fact that high redundancy indicates poor network utilization and high energy consumption [12].

### GOSSIP PROTOCOL ROLE IN WSNs

The basic theory of information propagation was proposed for achieving communication with limited goals and objectives. However the proposed theory opened new areas for one to all communication and was later on implemented by means of protocols like flooding and gossiping. The routing protocols for WSNs are efficient to fuse the data collected from neighbours in order to reduce the communication cost and achieve low end to end delay. Various routing protocols [13, 14, 15] have been proposed for WSNs considering their different application demands. The extensions to the protocols for information dissemination in WSNs have been widely proposed and their importance is well accepted but results often fall short of supporting a persuasive argument in their support for redundancy and localization improvement as these protocols focus mainly on resource discovery, information propagation, packet delay, and PDR in WSNs.

The performance of gossip is promising in WSNs as they are high density networks, the actual quantity of deployed sensor nodes is much higher than the actual need and without certain sensor nodes, and the network can still retain its effective connectivity. Secondly, there exists a large number of analogous or redundant data in WSNs, since the sensor nodes are in close proximity with each other, therefore removing few of them from the network also does not make much difference. The Gossip protocol uses the forwarding rule. Its maintenance does not require an expensive topology or an algorithm for complex routing constraints. If a sensor node is needed to transmit the message, then that sensor node will want to broadcast the message. When it first receives the message it selects a sensor node at random and this node repeats its process. When a message is received twice from the same sensor node, it leaves the message to allow. Each sensor node should keep track of the messages that have been received earlier. This approach avoids implosion problem encountered in flooding but distributes the information slowly but also satisfies a variety of tasks such as inter process interactions, information exchange, maintaining database, and node sorting, it relies on peer-to-peer communication,

making it more useful for networks that are completely not connected offering desirable properties like; scalability to large numbers of nodes and resilience to node failures due to redundancy. Most routing protocols follow that approach to cluster nodes. Thereby reducing the amount of data and saving energy. To address the fact of the Gossip protocol, a four-level data descriptor is used to eliminate redundant information through interaction. Conversation messages are sent to nodes to prevent or suppress the exchange of duplicate or unwanted information which ensures that only limited or ideally any unnecessary information can be produced [16, 17]. Apart from this, it can be said that there are fewer bottlenecks in terms of gossip delays and localization, which makes the change in topology stronger. Therefore it is considered more attractive and purposeful for WSNs to cover other issues such as sensing, coverage, communication, measurement and data storage.

### SELF LOCALIZED ALGORITHM FOR PACKET FORWARDING (SLAPF)

SLAPF has been proposed for packet forwarding in high-density WSNs with varying numbers of nodes to analyze the detailed effect of scalability. The position of sensor nodes is not known in any arbitrary coordinate system because it is assumed that the neighbors of a particular sensor node are determined only on the basis of packet forwarding decisions. Sensor nodes decide to forward packets locally (act like active nodes) and ignore packets received earlier. The major collision associated with this type of packet exchange lies in the PDR's exact estimate for the number of sensor nodes within the network, which is limited to the total number of packets forwarded. SLAPF does not require any topology information and all sensor nodes are static and have common features (similar communication and sensing limits). SLAPF is based on the assumption that sensor node N is deployed randomly in a specified region A, allowing them to transmit an E message, for an event EN, corresponding to a high-density wireless networked network. With the increase in the number of sensor nodes. The steps of the proposed SLAPF are indicated in Table 1.1.



Table 1.1: The SLAPF

---

**Algorithm: Self-Localized Algorithm for Packet Forwarding (SLAPF)**

---

- 1: START
- 2: Declare  $A$ ,  $N$  and  $m$ , where about  $m$  and  $N \subset A$
- 3: Initialize  $N = 50, 100, 200 \dots 500$  and  $m = 1$ .
- 4: define  $E_N$ , deploy  $N$  such that  $N \in A$ .
- 5: Start
- 6: Packet forwarding and forward initial packet,  $m$
- 7: Gossip selects the neighboring sensor node as the target which is  $n$ .
- 8: If its neighbor sensor node receives the packet for the first time, we will go to step 9;
- 9: Else go to step 12
- 10: End
- 11: If a neighboring sensor node receives the packet twice
- 12: then discard packet forwarding: Update, if  $N$  gave up his attempt to return the packet
- 13: Repeat step 6 for  $N = \{100, 200, 300, 400, \text{ and } 500\}$  with  $m = 1$
- 14: Then estimate the packet delivery ratio
- 15: END

The SLAPF incorporates the logic of the Gossip protocol and also guarantees sensor node localization that the sensor node is activated only for message transmission and no node has to localize with respect to the global coordinate system. The proposed algorithm is scalable to an increasing number of sensor nodes and works well for a small network topology with 50 sensor nodes with a large network topology with 500 sensor nodes in the same deployment region. This scheme guarantees that the sensor nodes with the shortest distance from their neighboring sensor node will satisfy the minimum insulation to control the redundancy. This algorithm is useful in networks where small packets dominate network traffic, further employing a localized implementation strategy for packet forwarding. SLAPF employs the concept of active networks with high computing capacity and is

useful in reducing packet traffic in WSNs. SLAPF is intended for packet forwarding in high-density WSNs, as scalability is an important issue in sensor networks as hundreds and thousands of sensor nodes are deployed in a single position. The localization of sensor node density increases with the increase in sensor node density as each sensor node decides to forward the packet according to the local information received from its neighboring sensor node. SLAPF incorporates the benefits of the gossip protocol in a self-local way to control redundant packet forwarding and also ensures that any action implemented by the sensor node does not affect the network overall. The simulation parameters are shown in Table 1.2.



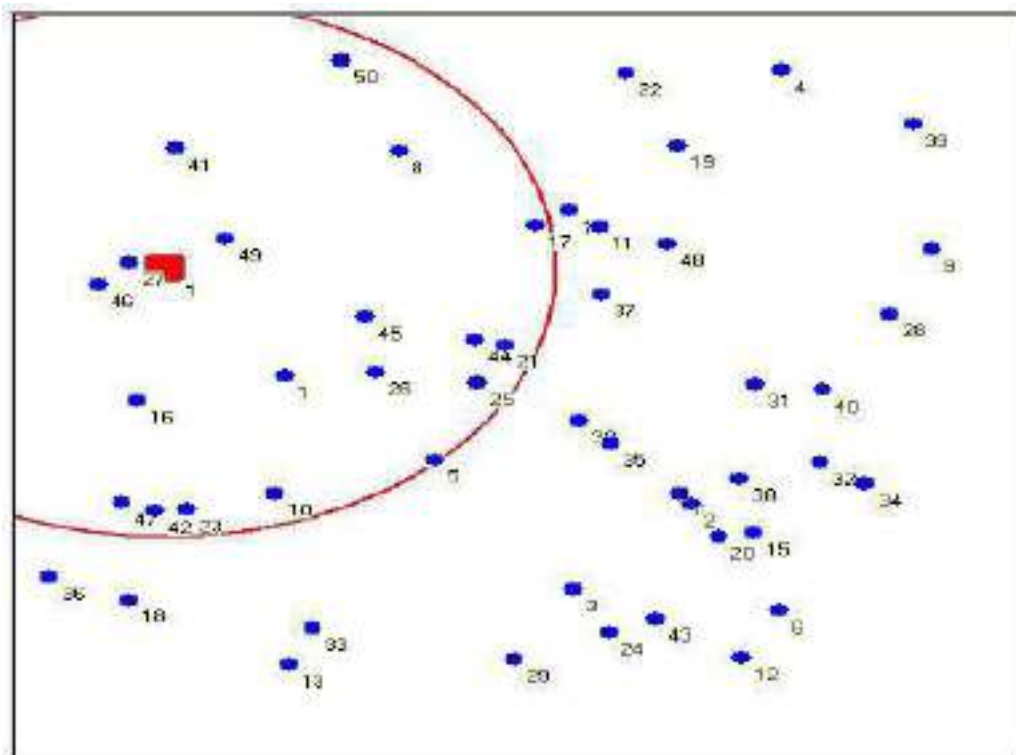
Table 3.2: Parameters used in simulation

Parameter	Value
Dimension of Network	550m x 550m
Transmission range of sensor nodes	200 m
Protocol	Gossip
Event	1
Sensor node distribution	Delphi Random

### PROPOSED METHOD'S SIMULATION RESULTS

Simulators are performed on SNetSim simulators, this simulator has a full stack for the Gossip protocol and provides a central management with functionality to set the deployment area before the sensor area is created. The sensor nodes are randomly placed in an area of 550 m × 550 m, so that each sensor node can communicate with the neighboring sensor

node. It is observed that SLAPF promoted efficient packets within the entire network in addition to maintaining a controlled level of redundancy with increasing number of sensor nodes. The stability of the proposed algorithm in high density sensor networks is guaranteed because N has been simulated individually for different values of N ranging from 50 to 500 (in multiples of 50/100 nodes). Simulation results of different values of n. This is shown in Figure 1.1.

Figure 1.1 (a): Network model (a)  $N = 50$ , dimension (550m x 550m)

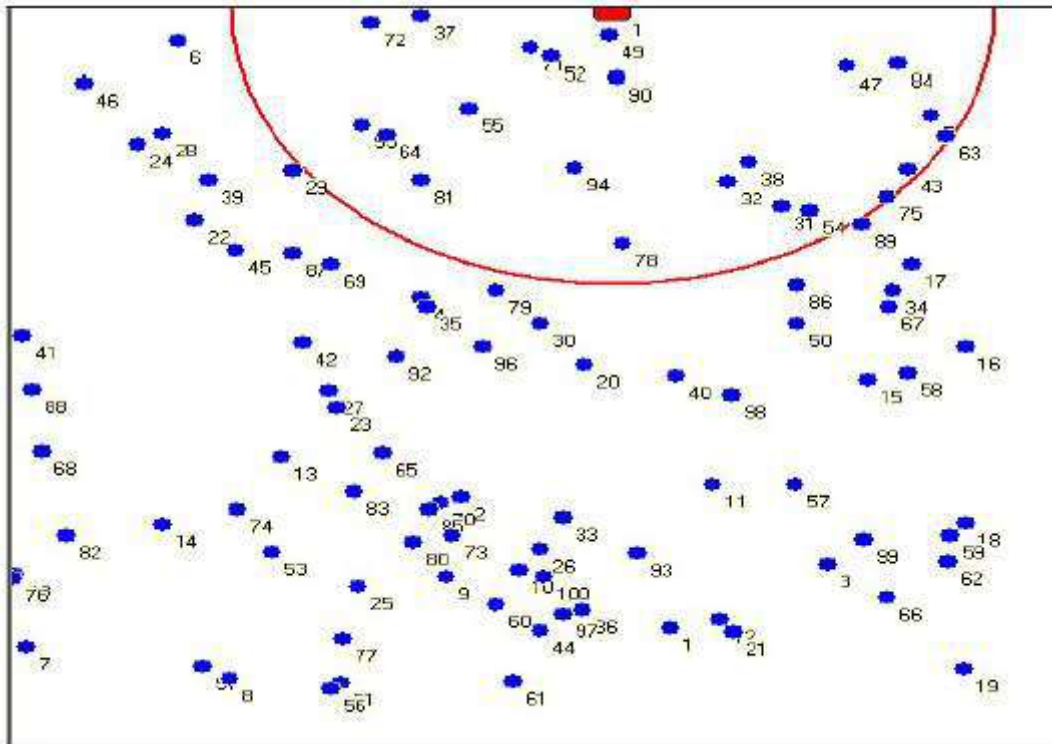


Figure 1.1 (b): Network model (a)  $N = 100$ , dimension (550m x 550m)

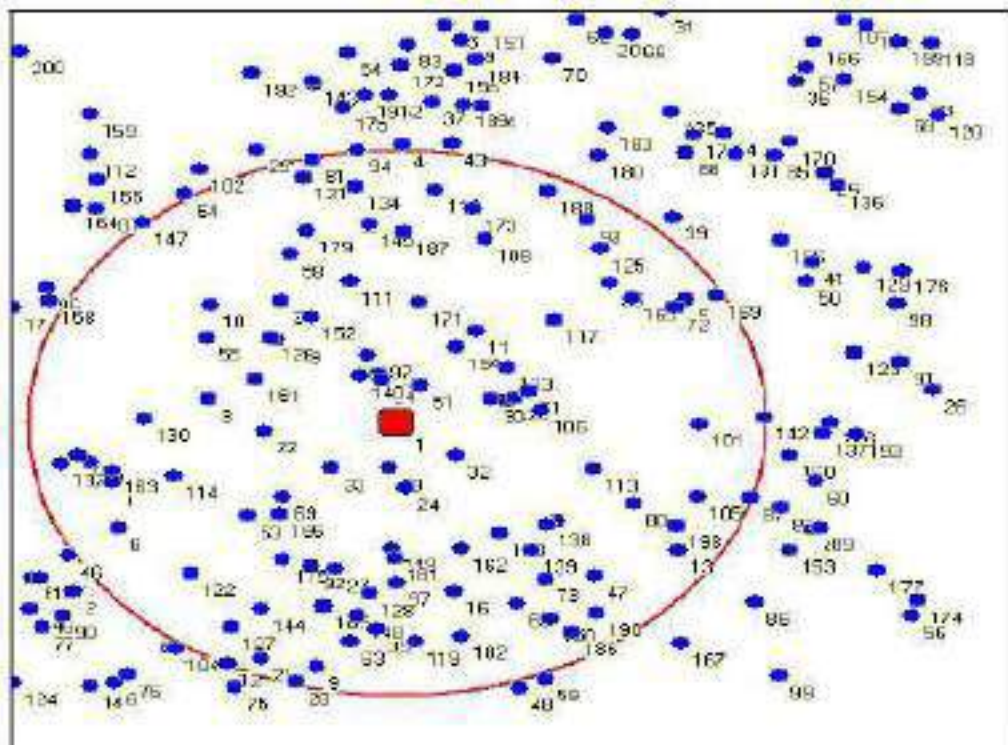


Figure 1.1 (c): Network model (a)  $N = 200$ , dimension (550m x 550m)

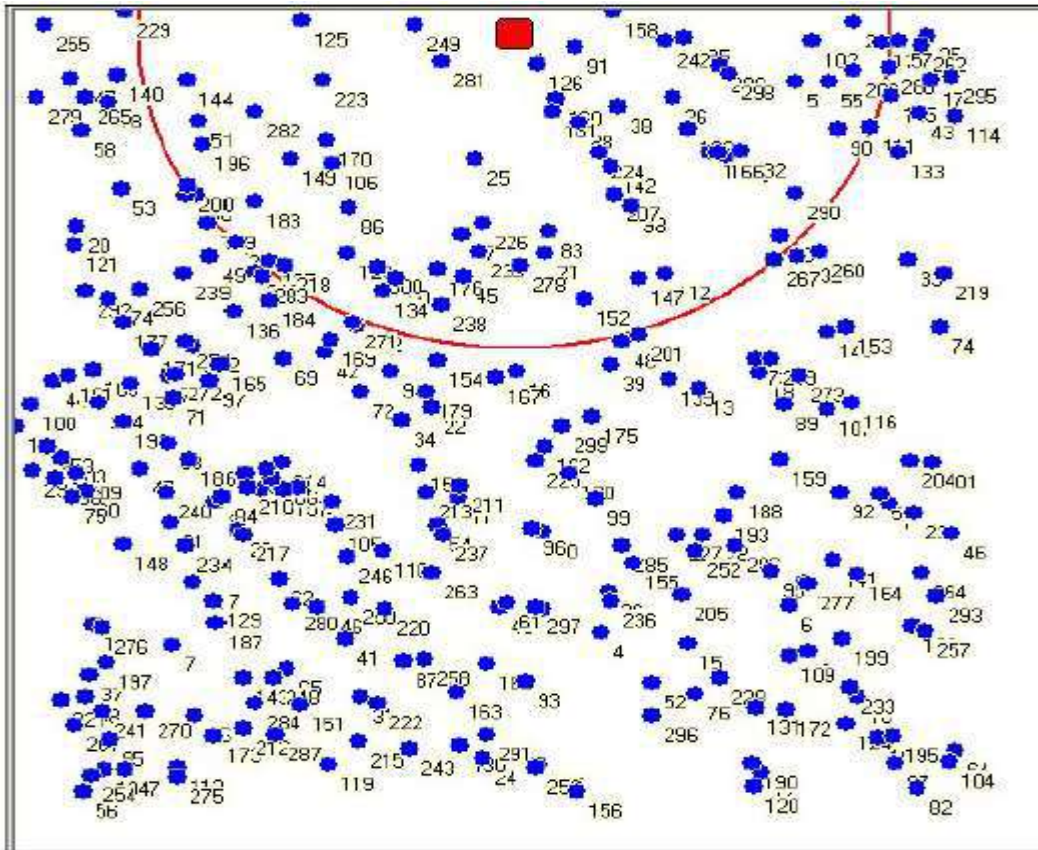


Figure 1.1 (d): Network model (a)  $N = 300$ , dimension (550m x 550m)



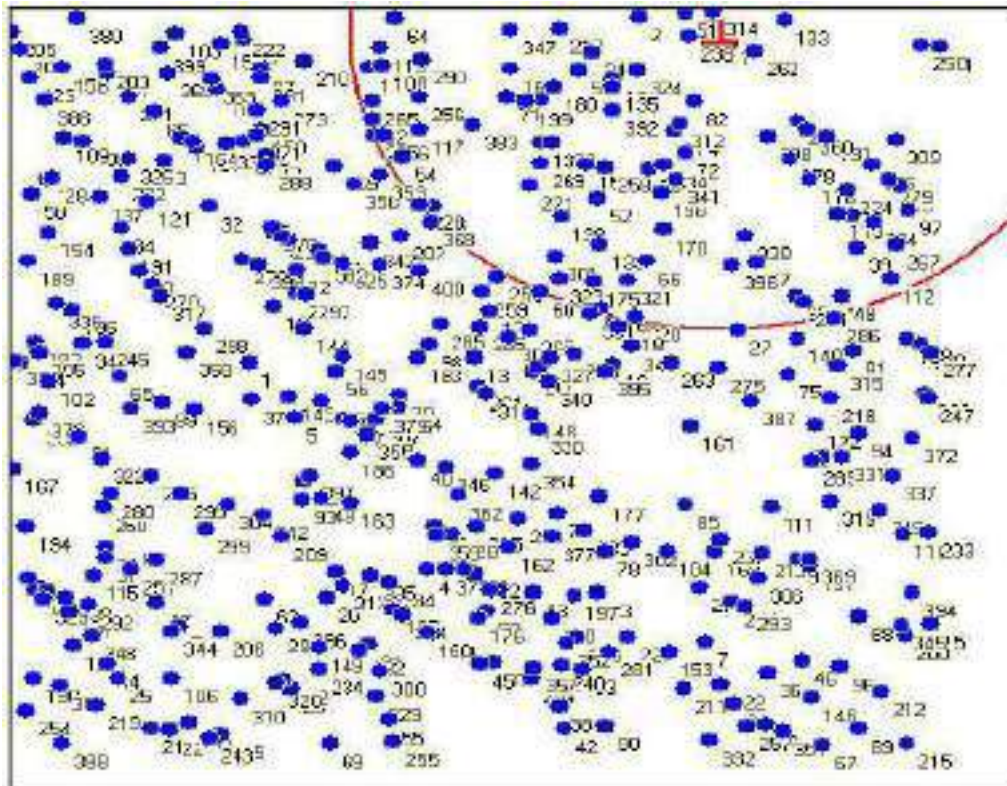


Figure 1.1 (e): Network model (a)  $N = 400$ , dimension (550m x 550m)

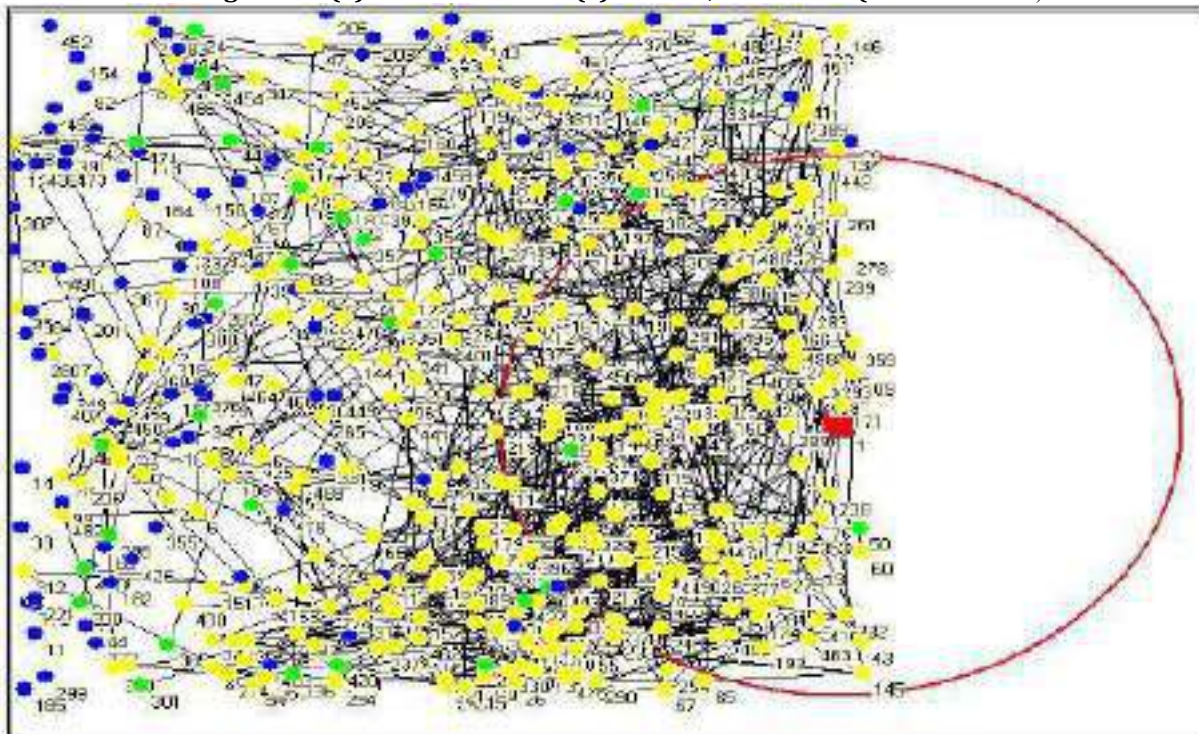
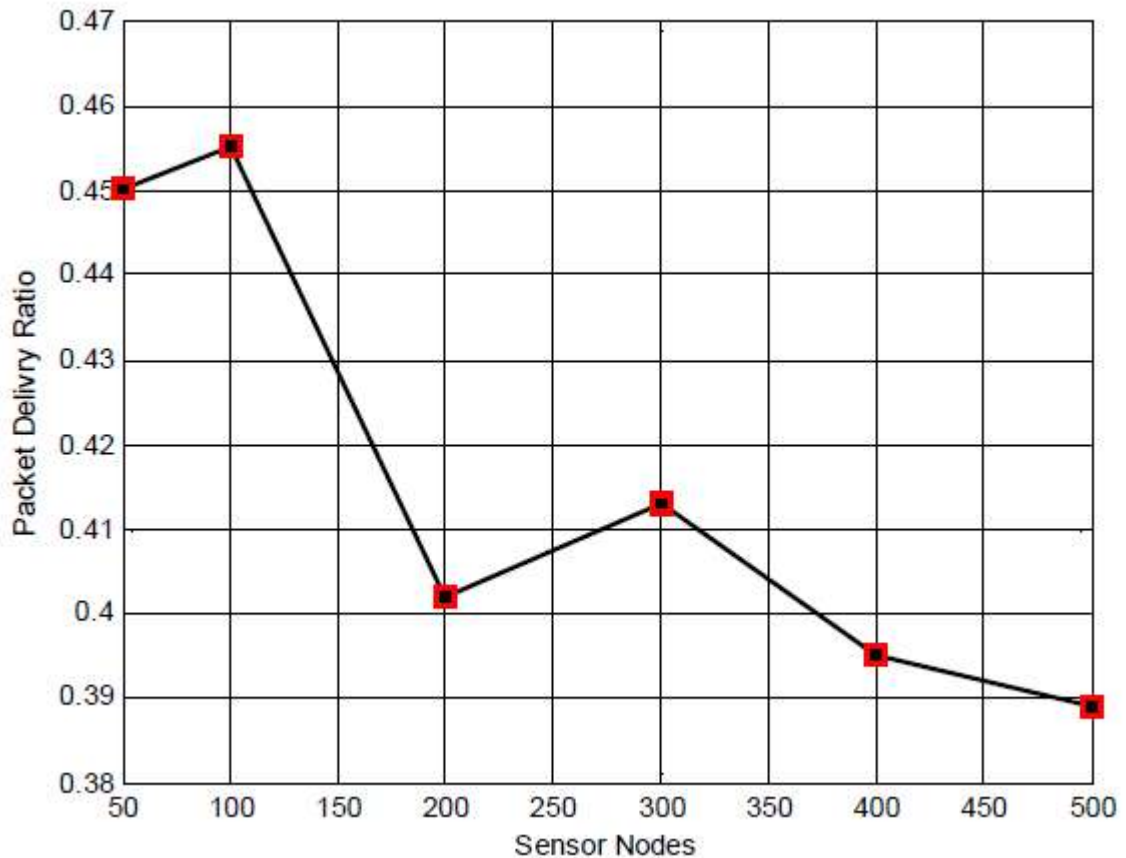


Figure 1.1 (f): Network model (a)  $N = 500$ , dimension (550m x 550m)

Table 1.3 highlights the estimated PDR with respect to the increasing number of sensor nodes and the throughput of the proposed algorithm is evaluated in terms of number of PDR v/s sensor nodes as shown in Figure 1.2.

**Table 1.3: PDR estimated with respect to number of sensor nodes**

Sensor nodes	Forwarded packets	Received packets	PDR
50	100	45	0.450
100	200	91	0.455
200	400	161	0.402
300	600	248	0.413
400	800	316	0.395
500	1000	389	0.389



**Figure 1.2: Sensor Nodes v/s Packet Delivery Ratio**

## CONCLUSIONS

The simulation results of the SLAPF show that it effectively utilizes the existing gossip protocol in order to provide an optimum PDR with respect to the increase in number of sensor nodes during message/packet broadcast. SLAPFA uses the gossip

protocol in the direction of monitoring the redundancy. It moreover precisely appraisals the received redundant packets without knowledge of neighbouring sensor node's location. SLAPF gives good results for a small network topology of 50 nodes to a large network with 500 nodes over similar deployment area. The proposed



approach may be applied to improve the self-localization in dense networks of irregularly arranged sensor nodes.

## REFERENCES

1. H. J. Pandya, V. S. Vaishnav, 2009. *Detection and Classification of Volatile Organic Compounds using Indium Tin Oxide Sensor Array and Artificial Neural Network*, Vol. 7(1), (pp. 72-79) *International Journal of Intelligent Systems Technologies and Applications*.
2. Pishyar, S., Ghiasian, A., Khayyambashi, 2015. *M.R.: Gossip based energy aware routing algorithm for wireless sensor network*. (pp. 164–172) *J. Comput. Netw. Commun. Secur.*
3. R.John Stephen, K.Rajanna, Vivek Dhar, K.G.Kalyan Kumar and S.Nagabushanam 2004. *Thin film strain gauge sensors for ion thrust measurement*. Vol.4 (3), (pp. 373-377). *IEEE Sensors Journal*.
4. Sundaran, K., Ganapathy, V. 2016. *Energy efficient wireless sensor networks using dual cluster head with Sleep/Active mechanism*. *J. Sci. Technol.*
5. Altoaimy, Lina & Kurdi, Heba & Alromih, Arwa & Alomari, Amirah & Alrogi, Entisar & Ahmed, Syed. (2019). *Enhanced Distance-Based Gossip Protocols for Wireless Sensor Networks*. (pp.1-4). [10.1109/CCNC.2019.8651701](https://doi.org/10.1109/CCNC.2019.8651701).
6. I.F. Akyildiz, W. Su, Y. Sankarasubramaniam and E. Cayirci, 2004. *A Survey on Sensor Networks*, Vol. 40(8), (pp. 102-114), *IEEE Communications Magazine*.
7. J. N. Al-Karaki and A. E. Kamal, 2004. *Routing Techniques in Wireless Sensor Networks: A Survey*, Vol. 11(6), (pp. 6-28), *IEEE Journal of Wireless Communications*.
8. Jiang, Zhanhong & Chinde, Venkatesh & Kohl, Adam & Sarkar, Soumik & Kelkar, Atul. (2016). *Scalable supervisory control of building energy systems using generalized gossip*. (pp. 581-586). [10.1109/ACC.2016.7524976](https://doi.org/10.1109/ACC.2016.7524976).
9. K. Sohrawy, D. Minoli and T. Znati, 2007. *Wireless sensor networks: technology, protocols, and applications*, John Wiley and Sons, ISBN 9780471743002, (pp. 203-209, 2007).
10. B. Carbunar, A. Grama and J. Vitek, 2006. *Redundancy and Coverage Detection in Sensor Networks*, *ACM Transactions on Sensor Networks*, Vol. 2(1), (pp. 94-128).
11. L. Junhai, X. Liu and Y. Danxia, 2008. *Research on Multicast Routing Protocols for Mobile Ad hoc Networks*, Vol.52, (pp. 988-997) *Computer Networks*.
12. W.R. Heinzelman, J. Kulik, and H. Balakrishnan, 1999. *Adaptive Protocols for Information Dissemination in Wireless Sensor Networks*, (pp. 174-185). *Proceedings of the 5th Annual ACM/IEEE International Conference on Mobile Computing and Networking*.
13. Z. J. Haas, J. Y. Halpern, and L. E. Li, "Gossip-Based Ad Hoc Routing," *IEEE/ACM Transactions on Networking*, Vol. 14(3), pp. 479-491, 2006.
14. J. Kulik, W. R. Heinzelman, and H. Balakrishnan, 2002. *Negotiation Base Protocols for Disseminating Information in Wireless Sensor Networks*, Vol. 8, (pp.169-185), *Wireless Networks*.
15. R. Chandra, V. Ramasubramanian and K. P. Birman, 2001. *Anonymous Gossip: Improving Multicast Reliability in Mobile Ad Hoc Networks*, (pp. 275-283) *IEEE ICDCS*.
16. A.M. Kermarrec and M.V. Steen, 2007. *Gossiping in Distributed Systems*, (pp. 2-7), *Operating Systems Review*.
17. C.L. Barrett, S.J. Eidenbenz, L. Kroc, M. Marathe and J.P. Smith, 2003. *Parametric Probabilistic Sensor Network Routing*, (pp. 122-131) *Proceedings of the 2nd ACM International Conference on Wireless Sensor Networks and Applications*.
18. R. Zhao, X. Shen, Z. Jiang, and H. Wang, 2012. *Broadcasting with Least Redundancy in Wireless Sensor Networks*, (pp.1-23), *International Journal of Distributed Sensor Networks*.
19. Lucia Keleadile Ketshabetswe, Adamu Murtala Zungeru, Mmoloki Mangwala, Joseph M. Chuma, Boyce Sigweni, 2019. *Communication protocols for wireless sensor networks: A survey and comparison*, Volume 5, Issue 5 *Heliyon*, ISSN 2405-8440.
20. AK Das, R Chaki, KN Dey, 2016. *Secure energy efficient routing protocol for wireless sensor network*, (pp. 3-27). *J Foundations of Computing & Decision Sciences*.
21. S. Halder, A. Ghosal and S. Das, 2011. *A Pre-determined Node Deployment Strategy to Prolong Network Lifetime in Wireless Sensor Network*, Vol. 34 (11), (pp. 1294 -1306) *Computer Communications*.



# A STUDY ON JOB SATISFACTION AND WORK LIFE BALANCE OF WOMEN EMPLOYEES IN SELECTED ORGANISATIONS WITH SPECIAL REFERENCE TO BANGALORE CITY

**Dr. S. Ramesh**

Head External Communications,  
Vignan,  
Visakhapatnam

**Dr. Haniefuddin Shaik**

Director CMT,  
Visakhapatnam

**Dr. Shaik Shamshuddin**

Assistant Professor,  
GITAM Institute of Management,  
GITAM University,  
Visakhapatnam

Article DOI: <https://doi.org/10.36713/epra3247>

## ABSTRACT

*The present study aims at examining the Job Satisfaction of female executives in Visakha steel plant which is a public sector organization. To be specific the following are the objectives of the present study. The attitude towards working women seems to be that while people have no objection to availing of their talents and abilities outside the home; women are not allowed to compromise on home life. And if they do, they should be made to feel the error of their ways. In the first place, the term 'working mother' is a misnomer as mothers are working round the clock even if they don't go to an office. Job satisfaction is in regard to one's feelings or state-of-mind regarding the nature of their work. Job satisfaction can be influenced by a variety of factors, eg, the quality of one's relationship with their supervisor, the quality of the physical environment in which they work, degree of fulfillment in their work, etc. Job satisfaction describes how content an individual is with his /her job. This Research paper intends to study on Job satisfaction and Work Life Balance of women employees in selected organisations of Bangalore City. The study confines with only Bangalore City the findings and outcomes may not applicable for other parts of the country.*

## A. INTRODUCTION

The status of women in India has been subject to many great changes over the past millennium, women in ancient time were enjoying equal status with men in the society. Due to the promotion of equal rights by many reformers, the history of women in India has been eventful. Traditions among some communities such as sati, jauhar, and devadasi have been banned and are largely defunct in modern India. However, some cases of these practices are still found in remote parts of India. Women are able to handle modern appliances which require intelligence and training and not merely physical strength. Thus, India has

now several women working as pilots, driving locomotives, buses, tractors and machinery in workshops. Modernity has resulted in a growing flexibility and changes in the gender roles of men and women. The earlier conception that man was the provider of basic necessities for family and women the child bearer and care taker of home, is no longer valid in the changing social structure and economic compulsions. The socialization process forces males and females into behavioral modes, personality characteristics, and occupational roles deemed appropriate by society. Most important, these constraints bring about system that is biased in favor of males. Men have the opportunity to



develop their talents while women may only within a severely limited range.

The consequences are as follows:- Relative Powerlessness of Women, Limited Range of Occupations for Women, Loss of Academic Potential for Women, Lack of Respect for Women's Abilities, Low Self-esteem among Women, Trials of the Aging Women. Working women i.e., those who are in paid employment, face problems at the workplace just by virtue of their being women. Social attitude to the role of women lags much behind the law. The attitude which considers women fit for certain jobs and not others, causes prejudice in those who recruit employees. Thus women find employment easily as nurses, doctors, teachers, secretaries or on the assembly line. Even when well qualified women are available, preference is given to a male candidate of equal qualifications. A gender bias creates an obstacle at the recruitment stage itself. When it comes to remuneration, though the law proclaims equality, it is not always practiced. "Work-family balance" is a term that refers to an individual's perceptions of the degree to which s/he is experiencing positive relationships between work and family roles, where the relationships are viewed as compatible and at equilibrium with each other. Like a fulcrum measuring the daily shifting weights of time and energy allocation between work and family life, the term, "work-family balance," provides a metaphor to countervail the historical notion that work and family relationships can often be competing, at odds, and conflicting.

## B. REVIEW OF LITERATURE

Safia Ahmad, (1975),<sup>36</sup> "A Study of Job Satisfaction of Women Workers In Indian Industries", in her thesis she concluded the theoretical foundations of job satisfaction can be applied to any modern industry. The findings of the study suggest that the good numbers of respondents are satisfied with the job. Surya Kumar Srivastava, (1984),<sup>37</sup> "Relationship between Job Satisfaction and Organizational Climate: A Comparative Study of Private and Public Sectors" in his thesis submitted to University Of Roorkee he opined the out comes of job satisfaction depends on the Organizational Climate. He further opined the outcomes of job related aspects plays a vital role in the job satisfaction of employees for the purpose of this study he has chosen Private and Public Sectors. Hodson, R. (1989),<sup>39</sup> "Gender Differences In Job Satisfaction". This study analyzes gender differences in job satisfaction among full-time workers. Why do women report equal or greater job satisfaction than men in spite of objectively inferior

jobs? Analysis reveals few differences between men and women in the determinants of job satisfaction when considering job characteristics, family responsibilities, and personal expectations. Little support is found for theories that men and women: (1) focus on different aspects of work in arriving at a given level of job satisfaction; (2) differentially condition their job satisfaction according to the extent of their family responsibilities; and (3) employ different personal expectations in evaluating their jobs. Fields, D. L. and Blum, T. C. (1997),<sup>43</sup> "Employee satisfaction in work groups with different gender composition," This study investigates the relationship between the gender composition of an employee's work group and the employee's job satisfaction, using a random sample over 1600 U.S. workers. After controlling possible confounding variables, our analysis shows that the level of an employee's job satisfaction is related to the gender composition of the employee's work group, and that the relationship of these variables does not differ between male and female employees. Arunima Shrivastava and Pooja Purang, (2009),<sup>69</sup> "Employee Perceptions Of Job Satisfaction: Comparative Study On Indian Banks, This study used independent samples t-test and qualitative analysis to study the differences in employee attitudes. Results indicated that the means of the public and private banks were significantly different from each other. Gash, V., Mertens, A. And Gordo, L. R. (2012),<sup>80</sup> "The Influence Of Changing Hours Of Work On Women's Life Satisfaction" this research study tests this assumption by measuring the impact of changes in working hours on life satisfaction in two countries (the UK and Germany using the German Socio-Economic Panel and the British Household Panel Survey). Researchers found decreases in working hours bring about positive and significant improvement on well-being for women. Madhu et al. (1990)<sup>40</sup> conducted a study on role stress: differential influences of some antecedental factors. 173 managerial personnel from steel manufacturing organization and 76 from petroleum organization participated in the study. This study attempted to compare the influence of the antecedental factors namely, personal, organizational, job, superior, leadership styles and communication factors on role conflict and role ambiguity.

## C. OBJECTIVES OF THE STUDY

- (I) To Examine and analyze the Nature of Job in Selected organisations of Bangalore City
- (II) To study the Working Conditions at Selected Organisations.



- (III) To know the Analysis of Job Satisfaction in selected Organisations of Bangalore City.
- (IV) To suggest measures to make the Job Satisfaction of Women Employees in selected Organisations of Bangalore City.

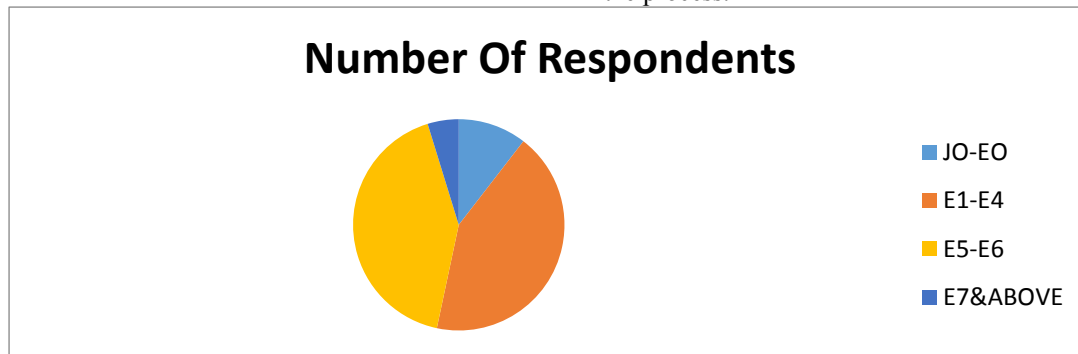
#### D. RESEARCH METHODOLOGY

Research in common parlance refers to a search for knowledge. One can also define research as a scientific and systematic search for pertinent information on a specific topic. In fact, research is an art of scientific investigation. Research is an academic activity and as such the term should be used in a technical sense. According to Clifford Woody research comprises defining and redefining problems,

formulating hypothesis or suggested solutions; collecting, organising and evaluating data; making deductions and reaching conclusions; and at last carefully testing the conclusions to determine whether they fit the formulating hypothesis.

i. Tools for investigation:

Different methods are adopted for investigation of the different aspects relating to the sample, which includes primary and secondary data. The researcher has personally visited the organizations in Bangalore region and administered the schedule to the employees, and collected first hand information through personal interviews. Secondary data were also collected through various documented feedback sessions on Job Satisfaction, previous internal survey reports, the number of training programs conducted on implementation and effective Job process and percentage of participation in the process.



The schedule contains five-point scale and for each statement the respondents were asked to assign rating on the five-point scale as felt by them at the time of answering. The rating pattern is as follows. Several statistical tools have been applied to find out the association between the demographic variables and the four dimensions of the Job Satisfaction. In Research we have used SPSS 16.0 Version Software and Statistica 14.0 and M S Excel. Analysis was used to find out the associations between various demographic variables with the four dimensions of Job Satisfaction and the relations among the four dimensions of Job Satisfaction respectively.

ii. Reliability of the questionnaire

Cronbach's Alpha is an internal consistency reliability analysis test, associated with scores or composite scores which can be derived using a scale or composite score. Reliability is important because in the absence of reliability it is impossible to have a validity of scale or question included in the questionnaire.

Cronbach's Alpha per dimension (s=1,...,p):

$$\alpha_s = \frac{m_s(\lambda_{1/2s} - 1)}{\lambda_{1/2s}(m_s - 1)}$$

Total Cronbach's Alpha is

$$\alpha = \frac{m_s(\sum_s \lambda_{1/2s} - 1)}{\sum_s \lambda_{1/2s}(m_s - 1)}$$

With  $\lambda_s$  the sth diagonal element of  $\Lambda$  as computed in step during the last iteration.

Cronbach's alpha is a measure of internal consistency that is, how closely related a set of items as a group. For conceptual purposes, the formula for the standardized Cronbach's alpha is given below.

$$\alpha = \frac{N \cdot \bar{c}}{\bar{v} + (N - 1) \cdot \bar{c}}$$

Here N is equal to the number of items, c-bar is the average inter-item covariance among the items and v-bar equals the average variance.

#### E. LIMITATIONS

Since the important method used in the enquiry is the case study, it has all the limitations associated with the method. The generalizations of the study cannot be expected to have universal application. Even when we try to apply to the organization of similar nature, these must be applied with caution. During the collection of information, it was found that officials were rather hesitant and ambivalent in providing the desired information and sometimes officials tolerated to discuss in some cases. This study being a case analysis of Bangalore its conclusions need not necessarily apply to all Companies or organisations of other parts of the



country. Employees were hard pressed for time in view of the job demands and rigorous work schedule. The researcher had to persuade them for sparing time for responding to the schedule and interviews. To overcome the suspicion of the executives, team leader and managers, we took the help of the organisation's HR Department and welfare officers in establishing identity and explaining the nature and purpose of the study.

**F. DATA ANALYSIS**

This chapter deals with the assessment, analysis and Interpretation of Job Satisfaction Women Executives in the selected unit. The Over all mean scores of each and every item of the Job Satisfaction of Women Executives shown below

**OPINIONS ON HUMAN RECURSE POLICIES OF THE ORGANISATIONS**

S.No.	STATEMENT	MEAN
1	Organizations recruitment policy is effective	3.8904
2	Working conditions are satisfactory	3.8952
3	Salary is up to my experience	4.0380
4	Organizations identify the need for training regularly	3.6142
5	Organizations conducts stress relieving counseling programs highly effective	4.1142
6	Flexibility of work hours ensured	3.0047
7	Opportunity to work on interesting projects is given	3.4428
8	Management has created an open and comfortable work environment	3.6428
9	Increments are linked to performance	2.7380
10	Promotions are linked to targets	2.9238
11	Performance appraisal system followed by the organization is satisfactory	3.1761
12	Regular meetings are held in the unit for job review	3.3571
13	Meetings are used by members to air their grievances at work	2.9476
14	Grievances are attended immediately	2.97619
15	There is little scope for innovation of work	2.95714
16	Organization sponsors our participation for the HRD. Programmers like Team working Management of change, Business English, Improving communication skills etc.,	4.21904
Overall Mean		3.4335



Overall Mean score: 3.4335, The Mean scores of all the statements stands 3.4. This reflects that a good collaboration exists in the company regarding Human Resources Policies.

**OPINIONS ON WORKING ENVIRONMENT OF ORGANISATIONS**

S.No.	STATEMENT	MEAN
1.	Work environment is motivating	3.6821
2.	Female colleagues are kept out of informal discussions on dept issues	2.2021
3.	Meetings are dominated by males	2.3222
4.	Male colleagues are ready to accept work adjustments when required	3.5076
5	The boss has reservation praising any good work done by female	2.1878
6	Staff is not supportive to the women employees	2.1324
7.	There is a bias in the allocation of tasks in the department	2.5553
8.	Tasks with monetary benefits are given to male workers	1.8753
9.	Male colleagues underplay their female counterparts achievements	2.0033
10.	Women are not invited to participate in union activities	1.7432
11.	The job knowledge and skills of women employees are underestimated	1.2443
12.	Women are taken for granted on different issues	1.5764
Overall Mean		<b>2.2526</b>

Overall Mean score: 2.2526, The Mean scores of all the statements stands 2.2, This reflects that a rational working environment exists in the company

**OPINIONS ON WORKING RELATION OF ORGANISATIONS**

S.No.	STATEMENT	MEAN
1	Female colleagues are more understanding & cooperative	4.0905
2	Women have good working relations with senior colleagues	4.3000
3	Women have good working relations with juniors colleagues	4.1095
4	Women in higher positions are not easily approachable	3.3190
5	There is gender bias in promotions in the industry	2.5238
6	Gender stereotyping exist at the workplace	2.8524
7	Women colleagues discuss gender related issues within themselves	3.2286
8	Women have to face career based rivalry at the work place	2.7143
9	A successful female is always alone	2.9810
10	I consider myself a competent decision maker	4.5048
11	People consider feminine jobs as unnecessary	2.1857
12	Women are better in nursing, doctors, teaching not in industrial organizations	2.0667
Overall Mean		<b>3.2397</b>

Overall Mean score: 3.2397, The Mean scores of all the statements stands 3.2, This reflects that a good collaboration exists among employees in the company regarding working relations.





**OPINIONS ON WORK LIFE BALANCE:**

S.No.	STATEMENT	MEAN
1	Balancing the demands of work and personal life is more on women	4.5762
2	My spouse's work burden increases my responsibilities at home	2.3952
3	My head/superior is liberal in permitting me to attend my family responsibilities	3.0810
4	I cannot spare more time for work due to my household commitments	2.6333
5	Women have to take greater responsibility in dual career couples	4.3667
6	I have to undertake both house and other external jobs	4.2762
7	Women are better managers with respect to work life balance	4.7333
Overall Mean		3.7231

Overall Mean score: 3.7231, The Mean scores of all the statements stands 3.7, This reflects that employees are able to establish relationship between family and work. Analysis of Opinion of the Respondents on Four Dimensions of Job Satisfaction – Family Total Income.

3. Involve and increase employee engagement
4. Develop the skills and potential of female executives
5. Evaluate and measure job satisfaction
6. Promotions basing on pure performance

**G. MAJOR FINDINGS**

- 1) Overall opinion of the respondents on the dimension of Human Recourse Policies of the Organisation has evoked a positive response.
- 2) Overall opinion of the respondents on the dimension of Opinion on Working Environment which suggest a rational response from respondents.
- 3) Overall opinions of the respondents on the said dimension of working relation in the organisation suggest women executives are having exceptional working environment.
- 4) It is also observed from the analysis that almost all the respondents of the total sample are positively able to manage their work family life.
- 5) Women are better managers with respect to work life balance.
- 6) also found that skills of women are not under estimated.
- 7) It is found from study female colleges are more understanding & cooperative compared to male executives. It is further evident that female executives are having good understanding with superiors and subordinates.
- 8) Finding from analysis also suggest that women employees occupying higher positions are easily accessible.

Senior management should resist the temptation to become too personally close to their staff members. However, management should take the effort to know their employees. Management should give briefings to staff regular feedback of their performance, attitude, and value to the team and the company. Organisation should take advantage of women executives' mindset and improve operations. Maintain a training and education program for all levels of staff. If possible, create a mentoring program for newer or junior level women executives.

**I. CONCLUSION**

Investigated by several disciplines such as psychology, sociology, economics and management sciences, job satisfaction is a frequently studied subject in work and organizational literature. This is mainly due to the fact that many experts believe that job satisfaction trends can affect labour market behavior and influence work productivity, work effort, employee absenteeism and staff turnover. Moreover, job satisfaction is considered a strong predictor of overall individual well-being, as well as a good predictor of intentions or decisions of employees to leave a job. Woman is an element of source of income in modern society. The civilized pattern of life system needs the support of viable economic resources and that can be brought by more than one earning in every family. Job satisfaction may seem to be an intuitive concept that is easily understood, but the diversity of recent research on job satisfaction, also indicated in the national contributions to this comparative analytical report, still raises conceptual and methodological debates. Although this may highlight the topical interest of this issue, it also calls for further and more in-depth research into job satisfaction.

**H. SUGGESTIONS**

The findings from the study indicate gaps in Job satisfaction of female executives in Selected Organisations of Bangalore City may take following initiatives to set a right path for women executives:

1. Provide a positive working environment
2. Reward and recognition



## REFERENCES

1. Kendall, D. E. (1996). *Sociology in our times*. Belmont: Wadsworth.
2. Arvey, R. D. (1995). *Job satisfaction*. In N. Nicholson (Ed.), *Eppyclol2edia: Dictionary of organizational behavior*. Cambridge, MA: Blackwell Publishers. pp. 272-274.
3. Spector, P. E. (1997). *Job Satisfaction*. Thousand Oaks, CA: Sage Publications.
4. Saleh, S. D., and Hosek, J. (1976). *Job involvement: Concepts and measurements*. *Academy of Management Journal*, pp. 213-223.
5. Hope, K. (Ed). (1972). *The analysis of social mobility: Methods and approaches*. Oxford: Clarendon Press.
6. Syptak, J.M., Marsland, D.W., & Ulmer, D. (1999). *Job satisfaction: Putting theory into practice*. *Family Practice Management*.
7. Farhad Analoui, (1999) "Eight parameters of managerial effectiveness: A study of senior managers in Ghana", *Journal of Management Development*, Vol. 18 Iss: 4, pp.362 - 390
8. Laurence Siegel, Irving M. Lane, "Psychology in industrial organizations", R. D. Irwin, 1974. Pp. 235-289.
9. Farrell, D. (1983). *Exit, voice, loyalty, and neglect as responses to job dissatisfaction: A multidimensional scaling study*. *Academy of Management Journal*, 26(4), 596-607.
10. Safia Ahmad, (1975), "A Study of Job Satisfaction of Women Workers In Indian Industries", Thesis submitted to University of Delhi. Pp, 194-199.
11. Bindu Gupta, (2009), "Employees' perception of workplace stressors and their attitude towards work and organisation: a study of Indian managers", *International Journal of Indian Culture and Business Management*, Volume 2, Number 6, pp.686-706.
12. Shalini Srivastava, (2009), "Locus of Control as a Moderator for Relationship between Organisational Role Stress and Managerial Effectiveness", *the Journal of Business Perspective*, vol. 13 no. 4 pp. 49-61.
13. Benjamin Artz, (2010) "Fringe benefits and job satisfaction", *International Journal of Manpower*, Vol. 31 Iss: 6, pp.626 – 644
14. Jacob Eskildsen, Kai Kristensen, Henrik Gjesing Antvor, (2010) "The relationship between job satisfaction and national culture", *The TQM Journal*, Vol. 22 Iss: 4, pp.369 – 378.
15. Arya P. P. *Work satisfaction and its correlates*. *Indian Journal of Industrial Relations*, 20(1), (1984).
16. Atwater, E. (Ed) (1995): "Psychology for living Adjustment Growth and Behavior Today" New Delhi Practice Hall Inc. P. 99
17. Austin, T. (2011). *Relationship between nurse leader emotional intelligence and registered nurse job satisfaction*. (Doctoral dissertation, The University of Texas School of Nursing at Houston). *Dissertation Abstracts International*, 72(11).
18. Axel R. fugl-meyer, Roland melin and Kerstin s. – Meyer (2002): *Life satisfaction in 18 to 64 year-old Swedes: in Relation to gender, age, partner and immigrant status* Uppsala University, Sweden, 239-246.
19. C. A. Heaney; R. H. Price; J. Rafferty (1995): *Increasing Coping Resources at Work: A Field Experiment to Increase Social Support, Improve Work Team Functioning, and Enhance Employee Mental Health*, *Journal of Organizational Behavior*, Volume 16 Issue4, pages 335 – 352.
20. C. Shobha Rani and M. Saradadevi (2007): "life satisfaction of married working and none working women. *Prachi, journal of psycho-cultural dimensions* 23(2): 153-159.
21. Caplan, R.D., Cobb, S., & French, J.R.P. (1975): "Relationships of cessation of smoking With job stress, personality and social support." *Journal of Applied Psychology*. 60:pp211 219.
22. Chan KB. (1977): *Individual differences in reactions to stress and their personality and situational determinants: some implications for community mental health*. *Soc Sci Med* 1977; pp89-103.



## THE EFFECTS OF CERTAIN AMINES ON THE CORROSION BEHAVIOR OF STEEL

**Oserbaeva Alfiya Kurbanbaevna**

Assistant of the Department  
(Doctor of philosophy PhD)  
“Analytical, physical and colloidal chemistry” of the  
Tashkent Chemical-Technological Institute,  
Republic of Uzbekistan,  
Tashkent

### ANNOTATION

*In this work, the protective effect of new nitrogen, amine and phosphorus containing inhibitors synthesized on the basis of local raw materials and bottoms from the vacuum distillation on of monoethanolamine in the chemical industry of the Republic of Uzbekistan was studied. It has been shown that a multi-component inhibitor containing hydroxyethylidiphosphonic acid (HEDP), sodium hydroxide, zinc oxide, glycerol, water and the bottom residue of the vacuum distillation of monoethanolamine (COMEA) can be used to protect steel equipment and gas industry. Parameters such as the current of corrosion, stationary potential, corrosion rate degree of protection, and the value of the effective activation energy  $\Delta E_{eff}$  are determined corrosion.*

**KEYWORDS:** inhibition, gravimeter, thermodynamic, inhibitor, protective mechanism, activation energy, corrosion rate, protective effect

### Влияния некоторых аминов на коррозионное поведение стали

**Осербаева Альфия Курбанбаевна -ассистент кафедры (доктор философ PhD)  
«Аналитическая, физическая и коллоидная химия» Ташкентского химико-технологического института**

**Аннотация.** В данной работе исследована защитное действие новых азот и фосфорсодержащих ингибиторов, синтезированных на основе местного сырья и кубовых остатков вакуумной перегонки моноэтаноламина химической про-мышленности республики Узбекистан. Показано, что много компонентный ингибитор, содержащий оксиэтилдендифосфонную кислоту (ОЭДФ), гидро-окись натрия, окись цинка, глицерина, воду и кубового остатка вакуумной перегонки моноэтаноламина (КОМЭА) может быть применен для защиты сталей оборудования и трубопроводов нефтегазовой промышленности. Определены такие параметры, как ток коррозии, стационарный потенциал, скорость коррозии, степень защиты и значение эффективной энергии активации  $\Delta E_{эфф.}$  коррозии.

**Ключевые слова:** ингибирование, гравиметрия, термодинамика, ингибитор, защитный механизм, энергия активации, скорость коррозии, защитный эффект,

## Введение

В настоящее время наметилась тенденция создание высоко эффективных экологически чистые ингибиторов коррозии углеродистых сталей нефти и газовой промышленности [1-3]. Основной причиной разрушения и износа металлических оборудования и трубопроводов установок является коррозионное разрушения их в кислых и сероводородных средах. В качестве основных факторов, определяющих агрессивность среды большинство исследователи считают степень минерализации и солевой (анионный) состав пластовых вод, изменение содержания (в основном увеличение содержания)  $H_2S$ ,  $CO_2$ ,  $CO$ ,  $S$ ,  $R-SH$ , органических кислот, температуры, pH среды и т.д. [4-5]. Сероводород обладает уникальными агрессивными свойствами и вызывает коррозионное повреждение оборудования и трубопровод. Поэтому в этом случае применение ингибиторов коррозии это один из самых эффективных способов борьбы с коррозией металлов и их сплавов в различных агрессивных средах. В республику Узбекистан импортируются ингибиторы и потребность в них огромна, особенно в химической, электрохимической, нефтехимической, газовой промышленности, в сетях водоснабжения и циркулирующих водах.

**Объект и методика исследования.** Объекты исследования в данной работе этот – азот, амин и фосфорсодержащие органические соединения, синтезированные на кафедре « органическая химия и технология тяжелого органического синтеза» на основе местного сырья и отходов химической промышленности республики Узбекистан, а именно кубовый остаток вакуумной перегонки моноэтаноламина, много тоннажный отход производства АО СП «Махам

Чирчик» и АО «Фергана азот». Ингибиторы, условно обозначенные по ИКА-1÷3 представляют собой прозрачную жидкую массу, хорошо растворимое в водных и кислых средах. При хранении образование самостоятельной фазы не наблюдается и ингибиторы эффективно работают как в мягкой, так и в жесткой воде (жесткость общая составляет  $2\pm 18$  мг-экв/л.). В разных регионах республики жесткость воды находится в этом интервале которые вводили в количестве от 0,001 до 1,0% масс. Действие кислых и сероводородсодержащих сред на коррозионное поведение образцов стали марки Ст.3 в присутствии примененных ингибиторов определяли методами гравиметрии по убыли массы металлических пластинок после коррозионных испытаний и исследованы электрохимическим методом. Поляризационные кривые стального электрода в кислых и сероводородных средах в присутствии ингибиторов при различных концентрациях и температурах снимали на потенциостате ПИ-50.1. с программатором ПР-8 и потенциометром ПДА-1. При проведении экспериментов площадь рабочего электрода подбирали исходя из возможностей потенциостата и максимальных токов ( $i$ ) в области активного растворения стали марки Ст.3. Скорость коррозии ( $K$ ), коэффициент торможения ( $\gamma$ ) и степень защиты ( $Z$ ) рассчитывали по формулам приведенным в [5].

**Результаты и их обсуждение.** Результаты коррозионно-электрохимического поведения электрода из низкоуглеродистой стали Ст.3 и Ст.10 в  $3\cdot 10^{-3}$  моль/л растворе  $H_2S$  и  $Na_2S$  без добавки (1) и с добавкой ингибиторов ИКА-1 (2), ИКА-2 (3) и ИКА-3(4) представлены на рис.1 и рис.2.

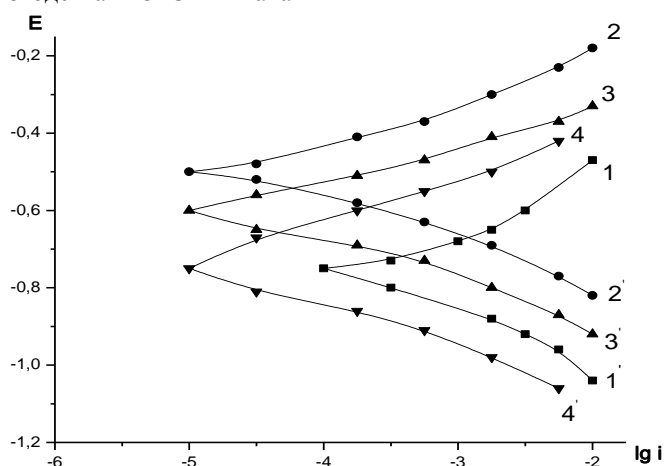
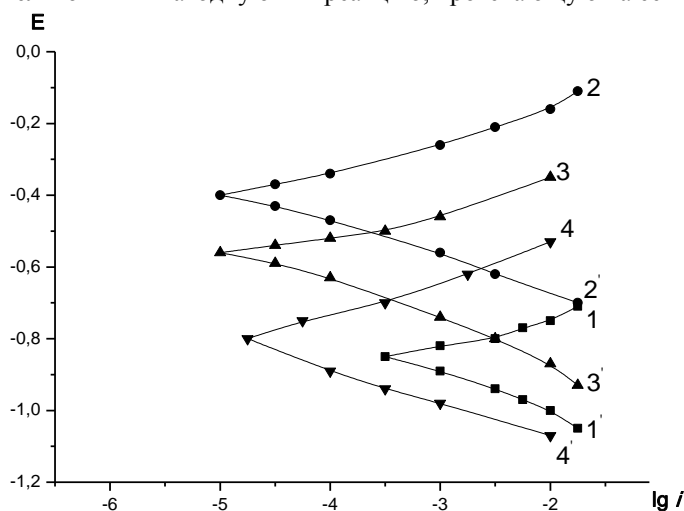


Рис. №1: Поляризационные кривые стального электрода в фоновом растворе  $3\cdot 10^{-3}$  моль/л  $H_2S$  (1) в присутствии  $1\cdot 10^{-3}$  моль/л вода ИКА-1 (кривые 2), ИКА-2 (кривые 3) и ИКА-3(кривые 4)

По отношению к низкоуглеродистой стали Ст.3 1,0 % раствор ИКА-1 оказывает более эффективное влияние в слабо кислых средах, чем остальные ингибиторы. На это указывают

поляризационные кривые стали Ст.3 представленные на рис.2. Как и в случае рассмотренных выше ингибиторов, преимущественно подавляя анодное растворение

стали замедляет значительно и катодную реакцию, протекающую на ее поверхности.



**Рис.2.** Поляризационные кривые стального электрода в фоновом растворе  $3 \cdot 10^{-3}$  моль/л  $\text{Na}_2\text{S}$  (1) в присутствии  $(\text{H}_2\text{S}) 1 \cdot 10^{-3} \%$  раствора ИКА-1(кривые-2), ИКА-2 (кривые 3 ) и ИКА-3 (кривые 4).

Таким образом, для защиты стали Ст.3и Ст.10. от коррозии в водных и сероводородных средах может быть рекомендовано ингибиторы ИКА-1 и ИКА-2, для сероводородных сред ИКА-3. Для выявления защитного механизма действия рекомендованных ингибиторов на коррозию стали марки Ст.3 и Ст.10 в фоновом растворе (растворы  $\text{Na}_2\text{S}$  в присутствии  $\text{H}_2\text{S}$ ) были определены эффективные энергии активации процесса коррозии  $\Delta E_{\text{эф}}$  в присутствии этих ингибиторов.

Результаты исследования ингибирующей способности азот и фосфор содержащих соединений на коррозию стали марки Ст.3 и Ст.10. в фоновом растворе в зависимости от их концентрации представлены на таблице-1. Исходя из приведенного экспериментального результатов опытов можно сказать, что оптимальная концентрационная область ингибиторов в процессе коррозии равен от 100 до 200мг/л (или 0,01 до 1%), после которой наблюдается незначительное уменьшение скорость коррозии.

**Таблица 1**

Значения эффективной энергии активации при коррозии Ст.3 в фоновом растворе (рН = 5,3) в зависимости от концентрации ингибиторов

$C_{\text{ИКА-3}}$ , мг/л		0	5	20	50	100	200
Фон(без ингибитора) рН=5,3	$\Delta E_{\text{эф}}$ , кДж/моль	30,85	-	-	-	-	-
3% $\text{H}_2\text{SO}_4$	$\Delta E_{\text{эф}}$ , кДж/моль	-	93,86	92,99	93,56	93,21	92,94
с ингибитором	$\Delta E_{\text{эф}}$ , кДж/моль	-	71,79	71,85	71,78	71,86	71,87
3% $\text{H}_2\text{S}$	$\Delta E_{\text{эф}}$ , кДж/моль	-	89,41	88,98	89,39	87,92	87,81
3% $\text{Na}_2\text{S}$ в присутствии $\text{H}_2\text{S}$	$\Delta E_{\text{эф}}$ , кДж/моль	-	50,59	50,68	50,41	50,34	50,25

Проведенные исследования по коррозии Ст.3 в кислых растворах в присутствии ингибиторов содержащих амино- и фосфатные группы, показали их высокую эффективность. Лучшим ингибитором коррозии Ст.3 в изученных условиях признан, в ряду алкиламинов, фосфат-диэтилминоэтилметакрилат, по-видимому, из-за большого числа радикалов в его молекуле и их

размера, благодаря чему требуемая защитная концентрация этой ингибирующей системы минимальна, по сравнению с другими изученными аминами.



## Литература

1. Улиг Г.Г. *Коррозия и борьба с ней. Введение в коррозионную науку и техники*, Л.Химия, 1989.С- 456.
2. Кузнецов Ю.И. *Защита металлов*/Ю.И. Кузнецов, Р.К.Вагаров. 2000.Т.36 №5. - С.520.
3. Волошин В.Ф.*Исследование влияния на электродные процессы четвертичных солей 2-алкилимидазолинов*//*Вопросы химии и химической технологии.*-2003. №5.- С.105-108.
4. Oserbaeva A.K. *Protective properties of amino- and phosphate containing inhibitors in different mediums* // XXXIX Международная научно-практическая конференция “Естественные и технические науки в современном мире” Научный журнал “Chronos” Москва 2019.№2,С63-66.
5. А.К.Осербаева., Нуруллаев Ш.П. *Влияние температуры и продолжительности и коррозионных испытаний на эффективность защиты сталей ингибиторами* // *Научно-методический журнал “Вестник науки и образования”* №8(62) Ч.1.2019,С.15-20.



# FACTORS AFFECTING INTERNATIONAL VISITORS' PREFERENCE FOR LOCAL FRUITS IN THE MEKONG DELTA, VIETNAM

**Nguyen Quoc Nghi**  
Can Tho University,  
Mekong Delta,  
Vietnam

**Bui Thi Yen Ni**  
Can Tho Lottery Company,  
Mekong Delta,  
Vietnam

Article DOI: <https://doi.org/10.36713/epra4910>

## ABSTRACT

*The objective of this study is to identify the factors affecting the taste of specialty fruits in the Mekong Delta of international visitors. The quota sampling method was used to interview 180 international visitors who have visited fruit orchards and enjoyed specialty fruits in the Mekong Delta. Applying the linear regression with the study has identified 4 factors affecting the preference for fruit specialties in the Mekong Delta of international tourists, namely "Culinary culture", "Information and experience", "Product features", and "Perceived value". In particular, the factor "Information and experience" most strongly influences international visitors' preference for fruit specialties in the Mekong Delta.*

**KEYWORDS:** *Preference, specialties, fruit, Mekong Delta*

## 1. INTRODUCTION

The Mekong Delta owns about 300.000 ha of fruit orchards (accounting for 37.5% of the country's total fruit plantation area). The total output is about 3.8 million tons/year, accounting for over 70% of the total production over the country. The Mekong Delta locates in the lower Mekong River with interlace river systems. With the favorable climatic conditions and a considerable amount of alluvial from the Mekong River, the Mekong Delta has become the most generous fruit bowl in Vietnam. There are plenty of specialty fruits such as Hoa Loc mango in Tien Giang Province, Lai Vung tangerine in Dong Thap Province, and green-skin grapefruit in Ben Tre Province, etc. Many fruit orchards in the Mekong Delta are famous for both domestic and oversea tourists such as Cai Be and Vinh Kim (Tien Giang Province), Cai Mon (Ben Tre Province), An Binh islet (Vinh Long Province), and My Khanh (Can Tho City). Farmers in the Mekong Delta have combined fruit orchards with the eco-tourism to diversify income sources and promote fruit specialties for domestic and foreign tourists. With the above advantages, the Mekong Delta is a favorite destination for international travelers in the journey to explore the ecological environment and experience unique cultures. To further clarify the attractiveness of local fruit to international tourists, this study was conducted to find out factors that influence the preference for specialty fruit in the Mekong Delta of international visitors.

## 2. LITERATURE REVIEW

There have been numerous studies proving the role of cuisine in tourism development, especially the attraction of culinary specialties for tourists. Studies

by Mak et al. (2012), Chang et al. (2011), Atkins & Bowler (2001) suggested that culture is an essential factor influencing visitors' eating behaviors. Culture and religion affect the ability to consume food of visitors. According to Yurtseven & Kaya (2011), visitors spend new types of cuisine because they have the opportunity to expand their knowledge and understanding of the culture of different regions. Kim & Scarles (2009) and Mak et al. (2012) argued that the attraction of culinary specialties could stimulate visitors to buy more products, and the characteristics of things are decisive factors. As reported by Mak et al. (2012), Yurtseven & Kaya (2011), Kim & Scarles (2009), the culinary experience influences the ability to consume food during the trip. Besides, Yurtseven & Kaya (2011) and Chang et al. (2011) said that product quality is an essential factor affecting the consumption of local cuisine of visitors. Research by Chang et al. (2010, 2011) has shown that the product price has a particular impact on tourists' culinary consumption behavior.

Based on the literature review, the study used a group discussion (qualitative research) with 6 international visitors who have enjoyed specialty fruits in the Mekong Delta. The results of the group discussion set out the research hypotheses and appropriate scales for the research model. Specifically, research hypotheses are proposed as follows: H1: Culinary culture positively influences the preference for the Mekong Delta specialty fruits of international tourists. H2: Information and experience positively

impact the choice for specialty fruits in the Mekong Delta of international tourists. H3: Product features positively affects the preference for the Mekong Delta specialty fruits of international tourists. H4: Perceived

value positively influences the taste for specialty fruits in the Mekong Delta of international tourists. Hence, the research model is stated as follow:

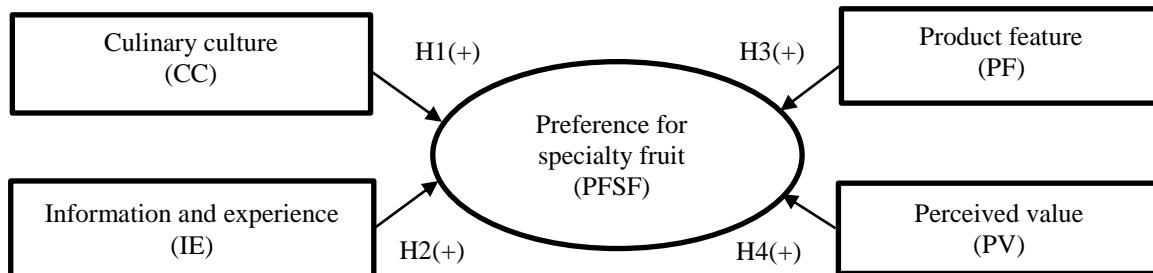


Figure 1: Proposed research model

Table 1  
Interpretation of observed variables in the research model

Factor	Sign	Observed variables	Reference resources	Scale
Preference for specialty fruit (PFSF)	PFSF1	Enjoying specialty fruits in the Mekong Delta is an exciting experience.	Hassan & Hall (2003), Kim et al. (2009), Yurtseven & Kaya (2011), Duttagupta et al. (2013)	Likert 1-5
	PFSF2	I am excited when enjoying specialty fruits in the Mekong Delta.		
	PFSF3	I want to enjoy more specialty fruits in the Mekong Delta.		
	PFSF4	I would recommend Mekong Delta specialty fruits to my relatives and friends.		
Culinary culture (CC)	CC1	My culinary culture is consistent with the specialty fruits of the Mekong Delta.	Atkins and Bowler (2001), Kim et al. (2009), Chang et al. (2011), Yurtseven & Kaya (2011), Mak et al. (2012)	Likert 1-5
	CC2	The culinary culture of the Mekong Delta people is fascinating.		
	CC3	I enjoy the specialty fruits of the Mekong Delta to expand my knowledge.		
	CC4	Specialty fruits in the Mekong Delta follow culinary diversity.		
Information and experience (IE)	IE1	There are many communication channels on the specialty fruits of the Mekong Delta.	Kim et al. (2009), Yurtseven & Kaya (2011), Chang et al. (2011), Mak et al. (2012), Duttagupta (2013)	Likert 1-5
	IE2	My friends and relatives introduced me specialty fruits of the Mekong Delta.		
	IE3	I have experience in specialty fruits in the Mekong Delta.		
	IE4	I get used to consuming the Mekong Delta's fruits.		
Product feature (PF)	PF1	Types and grades of specialty fruits in the Mekong Delta are diverse.	Kim et al. (2009); Yurtseven & Kaya (2011), Chang et al. (2011); Mak et al. (2012);	Likert 1-5
	PF2	The shape and color of specialty fruits in the Mekong Delta are eye-catching.		
	PF3	The quality of specialty fruits in the Mekong Delta is always ensured.		
	PF4	Specialty fruits' brands in the Mekong Delta are		





Factor	Sign	Observed variables	Reference resources	Scale
		reputable.		
Perceived value (PV)	PV1	The price is always consistent with the quality of Mekong Delta specialty fruits.	Kim et al. (2009), Chang et al. (2010, 2011), Yurtseven & Kaya (2011);	Likert 1-5
	PV2	The price of Mekong Delta specialty fruits is affordable.		
	PV3	With the cost, I and satisfied with the specialty fruits of the Mekong Delta.		

Source: Author's synthesis, 2019

### 3. RESEARCH METHODOLOGY

In this study, quantitative methods were used follow these steps, (1) Use the Cronbach's Alpha to test the internal correlation among observed variables; (2) Use the exploratory factor analysis (EFA) assesses the convergent and discriminant validity of observed variables; (3) Use the linear regression to test the research hypotheses. The scales used in the model are in the form of a 5-level Likert scale with the choice range from level 1 = strongly disagree, and level 5 = strongly agree.

The quota sampling was applied to survey 180 international visitors who have visited the Mekong Delta and enjoyed specialty fruits. During the survey, demographic criteria were used to group the survey subjects. According to Hair et al. (1998), the exploratory factor analysis (EFA) requires the proportion of observations/the measurement variable is 5:1, meaning that a measurement variable needs a minimum of 5 statements. Tabachnick et al. (2007) pointed out that the appropriate sample size for regression analysis is  $N \geq 50 + 5*m$  (where m is the number of independent variables). Thus, the sample

size meets the reliability requirement for testing hypotheses.

### 4. RESEARCH RESULTS AND DISCUSSIONS

#### 4.1 Evaluate the reliability of scales

##### *Cronbach's Alpha test*

The rankings are assessed for reliability through Cronbach's Alpha coefficient. Cronbach's Alpha is used to eliminate variables with "garbage" values and those with a corrected item-total correlation of less than 0.3 (Nunnally, 1978; Peterson, 1994; Slater, 1995). A scale is chosen if its Cronbach's Alpha value is greater than 0.6 (Nunnally & Bernstein, 1994). According to the result in Table 2, the scales (preference for specialty fruits, culinary culture, information and experience, product features, perceived value) have high reliability ( $\alpha \geq 0.7$ ). The corrected item-total correlation values of all observed variables are more generous than 0.3. Therefore, it is suggested that the scales proposed in the research model are reliable.

**Table 2**  
Scale reliability test result

Factor	Cronbach's Alpha	Minimum item-total correlation	Cronbach's Alpha if item deleted
Preference for specialty fruit	0.865	0.678	0.829
Culinary culture	0.783	0.570	0.740
Information and experience	0.811	0.580	0.786
Product feature	0.842	0.664	0.805
Perceived value	0.828	0.651	0.798

Source: Survey data, 2019

#### *Exploratory factor analysis (EFA)*

According to the EFA result for the independent variables (culinary culture, information and experience, product feature, and perceived value), the indicators are ensured as follows: Significance level of the model (Sig) is less than 0.05 and the KMO value = 0.85 (in the range of 0 and 1). The factor loading values of all observed variables are greater than 0.5. The average variance extracted is 67.58% > 50%. This shows that the research data is satisfactory (Anderson and Gerbing, 1988). The analytical result creates 4 factors, and the observations belong to factors as in the proposed model, so there is no change in the factors' names. Similarly, the EFA result for the dependent variable (preference for specialty fruit) is satisfactory. The significance level (Sig) is less than 0.05, and the KMO = 0.82 (between 0 and 1). The factor loading values of all observed variables are greater than 0.5. The



average variance extracted is 71.32% > 50%. This implies that the research data is satisfactory (Anderson and Gerbing, 1988). Thus, the result forms 1 factor with the unchanged observations. All factors are summarized in the table below.

**Table 3**  
**Summary of factors formed from the exploratory factor analysis**

Sign	Observed variable	Factor
CC	4 variables: CC1, CC2, CC3, CC4	Culinary culture
IE	4 variables: IE1, IE2, IE3, IE4	Information and experience
PF	4 variables: PF1, PF2, PF3, PF4	Product feature
PV	3 variables: PV1, PV2, PV3	Perceived value
PFSF	4 variables: PFSF1, PFSF2, PFSF3, PFSF4	Preference for specialty fruit

Source: Survey data, 2019

#### 4.2 Linear regression

The linear regression is used to test the research hypotheses. The testing result is shown in Table 4.

**Table 4**  
**Hypotheses test result**

Factor	Standardized coefficient	Significance level (Sig.)	Variance inflation factor VIF	Hypothesis
Culinary culture	0.155	0.014	1.639	H1: accepted
Information and experience	0.310	0.000	1.832	H2: accepted
Product feature	0.245	0.000	1.734	H3: accepted
Perceived value	0.240	0.000	1.631	H6: accepted
Adjusted R <sup>2</sup>				0.573
Durbin - Watson coefficient				1.936
Sig.F				0.000

Source: Survey data, 2019

Based on Table 4, the adjusted R<sup>2</sup> value is 57.3% which proves that factors explain the preference for specialty fruit in the Mekong Delta of international tourists at a high level. The Sig.F = 0.00, showing that the research model is statistically significant. Durbin-Watson = 1.936 and VIF < 4, this indicates that there is no autocorrelation and multicollinearity. Besides, the independent variables in the model are statistically significant at the 95% level, which means culinary culture, information and experience, product feature, and perceived value influence overseas visitors' interest in specialty fruits in the Mekong Delta. In other words, specialty fruits in the Mekong Delta are accordance with the culinary culture of most international tourists. Communication channels providing certain information on specialty fruits in the Mekong Delta influence the interest of international tourists. The various types and quality assurance have created a prestigious brand of the Mekong Delta fruits among international tourists. In addition to this, the pricing which is consistent with the product quality and affordability of tourists that has improved international tourists' preference for specialty fruits in the Mekong Delta.

#### 5. CONCLUSION

Overall, the study has demonstrated 4 factors that positively influence the preference for specialty fruits in the Mekong Delta of international tourists. They are culinary culture, information and experience, product feature, and perceived value. In which, the "information and experience" factor has the most decisive influence on the preference for specialty fruits in the Mekong Delta of international visitors. Based on the above results, some policy implications are proposed. Firstly, develop and implement a professional communication strategy to promote the image of the Mekong Delta's specialty fruits. Secondly, improve the quality of specialty fruits to meet international tourists' demands. Thirdly, strictly manage the pricing for specialty fruits, ensuring that they are in line with the willingness to pay of international travelers.

#### REFERENCES

- Anderson, J. C., & Gerbing, D. W. (1988). *Structural equation modeling in practice: A review and recommended two-step approach*. *Psychological Bulletin*, 103(3), 411-423.
- Atkins, P., & Bowler, I. (2001). *Food in Society: Economy, Culture and Geography*. London: Arnold.



3. Chang, R. C., Kivela, J., & Mak, A. H. (2010). Food preferences of Chinese tourists. *Annals of tourism research*, 37(4), 989-1011.
4. Chang, R. C., Kivela, J., & Mak, A. H. (2011). Attributes that influence the evaluation of travel dining experience: When East meets West. *Tourism Management*, 32(2), 307-316.
5. Duttagupta, S. (2013). Foreign travelers' recommendation of culinary tourism in India based on cuisine image and satisfaction with experiences at culinary establishments: an exploratory study. Master's thesis. University of Waterloo.
6. Hair, J. F., Tatham, R. L., Anderson, R. E., & Black, W. C. (1998). *Multivariate Data Analysis (5th ed.)*. New Jersey: Prentice-Hall.
7. Hassan, M. W., & Hall, C. M. (2003). The demand for halal food among Muslim travelers in New Zealand. In C. M. Hall, L. Sharples, R. Mitchell, B. Cambourne, and N. Macionis (Ed.). *Food tourism around the world: Development, Management, and Markets* (pp. 81-101). Oxford: Butterworth-Heinemann.
8. Kim, Y. G., Eves, A., & Scarles, C. (2009). Building a model of local food consumption on trips and holidays: A grounded theory approach. *International journal of hospitality management*, 28(3), 423-431.
9. Mak, A. H., Lumbers, M., Eves, A., & Chang, R. C. (2012). Factors influencing tourist food consumption. *International Journal of Hospitality Management*, 31(3), 928-936.
10. Nunnally, J. (1978). *Psychometric Theory*. New York: McGraw-Hill.
11. Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory (3rd ed.)*. New York: McGraw-Hill.
12. Peterson, R. (1994). A Meta-Analysis of Cronbach's Coefficient Alpha. *Journal of Consumer Research*, 21(2), 381-391.
13. Slater, S. (1995). Issues in Conducting Marketing Strategy Research. *Journal of Strategic*, 3(4), 257-270.
14. Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2007). *Using multivariate statistics (Vol. 5)*. Boston, MA: Pearson.
15. Yurtseven, H. R., & Kaya, O. (2011). Local Food In Local Menus: The Case Of Gokceada. *TOURISM'S: An International Multidisciplinary Journal of Tourism*, 6(2), 263-275.



# APPLICATION OF THE EXPERION SYSTEM IN THE DEVELOPMENT OF PROCESS CONTROL SYSTEMS

**Abdumalikova Zulfiya Ismatullaeva**

Senior Teacher of Department  
“Metrology standardization and  
Quality Control of Products”  
Ferghana Polytechnic Institute  
Republic of Uzbekistan,  
Ferghana

---

## ABSTRACT

*The software covers various aspects of control, management, diagnostics, analysis, documentation and advanced management and contains a number of original algorithms based on the study of specific properties of the automated object.*

**KEYWORD:** *management, Experion PKS, an application program, a graphical Configurator, the algorithm of the model function.*

---

## DISCUSSION

Experion PKS system software covers various aspects of control, management, diagnostics, analysis, documentation and advanced management and contains a number of original algorithms based on the study of specific properties of the automated object.

Control Execution Environment (CEE) software environment.

The general CEE software environment for the execution of monitoring and control algorithms covers 3 technical means:

- Controller C200, which implements typical functions of monitoring and control of the lower level;
- Experion PKS server, which implements more complex and voluminous (supervisory) control applications, the output of which is to influence the setpoints of the lower-level control loops or direct commands to the actuators;
- a personal computer that simulates the operation of the controller and the server (without connecting the latter to a computer), which is necessary for checking and debugging the developed application control and management software and for training and training operators. Simulation of the automated process itself (if required) is performed by a special software package Shadow Plant Honeywell. When debugging

the software, the computer that implements the simulation is connected to the existing Experion PKS system and reads data from the controller working in it (naturally, without control actions).

For the operation of the same application programs on different hardware, certain software functions are added to the general software environment, therefore, specific software environments are divided into a control solution environment for a controller, an application management environment for a server, and a simulation control environment for a computer that implements the model. The control decision environment of the controller operates in 2 performance options: with a basic processing time of one functional module of 5 and 50 ms. At 50 ms, the execution period of individual software modules can be 50, 100, 200, 1000, 2000 ms, and with a fast cycle of 5 ms, the execution period of individual software modules can be 5, 10, 20, 100, 200 ms.

Programming control and management tasks. The tool for programming monitoring and control tasks in all three software environments is the Control Builder n graphical configurator, based on an extensive library of typical algorithms of mathematical, logical,



management functions, which are grouped into control, regulation, and sequential control modules.

The library of standard software gram modules include:

- general mathematical operations such as linearization, lead / lag, time dead zone;
- logical operations and functions of sequential control of mechanisms. In separate software modules for controlling a group of mechanisms, various options for actions in the event of emergency situations in the process of sequential actions are implemented, which prevent the possibility of emergency events. There are also modules that provide interactive interaction of automatic and manual actions in the process of sequential control of mechanisms;
- control programs, including typical PID algorithms, PID feedforward , cascade control, ratio control.

In addition, the library includes a number of special modules, in particular, interfaces with drives of the Allen Bradley family, calculations of the flow rates of various gases taking into account the ambient temperature, pressure and gas composition.

The Control Builder is used to design, document and monitor the control and management algorithms. It supports hierarchical nesting of some software modules into others; allows you to copy and use the designed modules many times; implements multi-user design, when several users configure and download programs from different workstations. User application programs can be written in C / C ++, Visual Basic, Visual C / C ++ and implemented on the server, workstations and controllers.

## REFERENCES

1. Yusupbekov N.R., Mukhamedov Sh.M., Gulomov Sh.M. *Technological process control and automation*. –T.: teacher, 2011.3.
2. Klyuev A.S. and others. *Design of automation systems for technological processes; 2nd edition*. –M.: Energoatomizdat, 1990.
3. Klyuev A.S. and other *Technique for reading automatic control and technological control schemes. 3rd edition*. –M.: Energoatomizdat, 1990.
4. Tregub and others. *Design, installation and operation of automation systems in the food industry*. –M.: Agropromizdat, 1991.
5. Yusupbekov N.R. etc., *Technological Process Management Systems*. - Tashkent: teacher, 1997.
6. *Adjustment of measuring instruments and technological control systems*. Edited by A.S. Klyuev. 2nd edition. - M.: Energoatomizdat, 1990.
7. Minaev P.A. *Installation of control systems and automation. 2nd edition*. - M., Stroyizdat, 1990.
8. Klyuev AS *Adjustment of automatic systems and control devices for technological processes*. –M.: Energoatomizdat, 1990.
9. Martynenko I.I. and other *Design of automation systems 2nd edition*. - M.: Energoatomizdat, 1991.
10. Emelyanov A.I. and other *Design of systems for the automation of technological processes. 2nd edition*. - M.: Energoatomizdat, 1991.
11. Mimikonov A.G. *ACS design*. –M.: Higher school, 1987.
12. *Instructions for drawing up projects for the installation of automation systems. VSN / 61-82 / Minmontazhspetsstroy*. –M., 1984.
13. SNiP 3.0507-85. *Automation systems*.
14. Kotov KI and others. *Installation, operation and repair of automatic*
15. Under. ed. A. V. Kalinichenko, *Engineer's Handbook for Instrumentation and Automation. Educational and practical guide*. - M.: Infra - Engineering, 2008.
16. Kaminsky M.L., Kaminskiy V.M. "Installation of automation devices and systems", T.Teacher, 1997.-304 p.
17. Numonjonov S. D. *Innovative methods of professional training //ISJ Theoretical & Applied Science, 01 (81)*. – 2020. – C. 747-750.

## INTERNET SITES

- a. [www.techno.Edu.ru](http://www.techno.Edu.ru)-educational site for technical specialties
- b. [www.referat.ru](http://www.referat.ru) - information and auxiliary site



## INSTALLATION OF AUXILIARY TECHNICAL DEVICES INSIDE THE PANELS

**Rakhmonov Dilmurod Khusanboyevich**

Assistant of Department

“Electronics and instrumentation”

Ferghana Polytechnic Institute

Uzbekistan,

Ferghana

---

### ABSTRACT

*The main purpose of the panels is to centralize the means of controlling and regulating the operation of the unit, process plant or workshop.*

**KEYWORDS:** *installation of devices, automation, installation of controls, boards, frame.*

---

### DISCUSSION

Appointment and classification of shields. Automation systems shields are the link between the control object and the operator. The main purpose of the shields is to centralize the means of monitoring and regulating the operation of a unit, a technological unit or a workshop. At the same time, they serve as a supporting structure for the installation of instruments, automation equipment, supply and strapping wiring. By appointment, the shields are divided into local, aggregate, block, central and auxiliary. Instruments and controls for a part of a technological installation (an individual installation) are mounted on local boards. Basically, local shields are cupboards and are placed near the controlled object, i.e. in the production area.

Aggregate shields are intended for the installation of monitoring and control devices for one technological unit, as well as for the same type of units or technological installations located in a proper room. Such shields are usually supplied by the unit manufacturer, complete with it. Block shields are used to accommodate devices and controls for the operation of interconnected aggregates, which represent a complex installation. Central boards (control rooms) are boards on which the means of control and regulation of technological processes of a shop, a plant or a complex of technologically related industries are

concentrated. Central panels are installed in special rooms of instrumentation and automation.

Auxiliary shields are non-operational shields. They are subdivided into:

- Relay boards, on which all possible electrical equipment, elements of electrical signaling systems are placed;
- Power boards (service for supplying electricity to the instrumentation system);
- Panels with heating (small-sized), which are used when installing devices in open areas and in unheated rooms.

Block diagram of the construction of panel structures according to OST 36.13-76 Terms of panel products:

The cabinet is a three-dimensional frame on a support frame with a panel, walls, a door, and a lid installed on it.

Frame - a rigid supporting volumetric or flat metal frame, intended for installation of panels, walls, doors, covers and installation of devices, apparatus, electrical and pipe wiring, etc.

Rack - a volumetric or flat frame on a support frame.

Panel with a frame - a volumetric frame on a support frame with a panel installed on it.

The body of the control panel is a volumetric frame with installed inclined table-top, walls, doors.

Cabinet board - a cabinet with equipment, fittings, installation products and with electrical and pipe wiring prepared for connecting external circuits and devices installed on unified mounting structures, a rotary or stationary frame, installed at the facility.

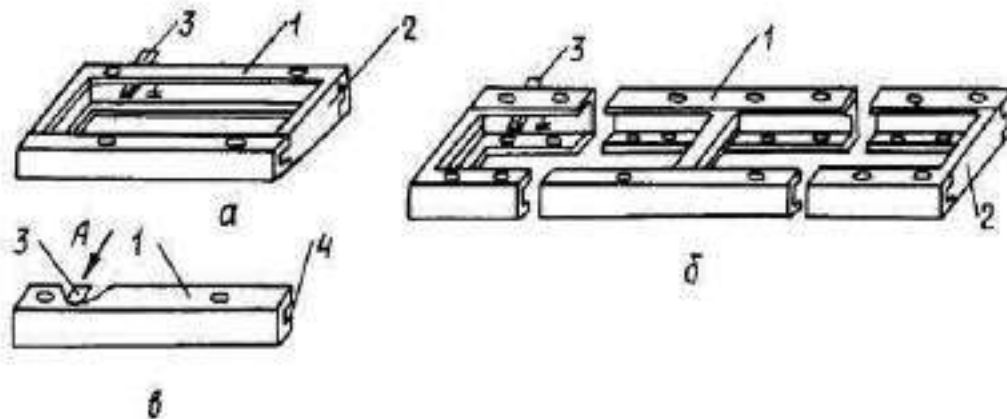
Panel board with a frame - a panel with a frame with equipment, fittings, installation products and with electrical and pipe wiring, installed on unified mounting structures, a rotary or stationary frame, connection of external circuits and devices installed at the facility.

A cabinet is a rack with a volumetric frame and installed on unified mounting structures, equipment, fittings, installation items and with electrical and pipe wiring, prepared for connecting external circuits and devices installed on object.

Flat cabinet - a rack with a flat frame and installed on unified mounting structures, equipment, fittings, installation items and with electrical and pipe wiring, prepared for connecting external circuits and devices installed at the facility...

Decorative panel - a panel designed for decorative design of the upper part of panel boards with a frame, as well as for mounting elements of mnemonic diagrams.

Corner insert is an element designed to connect two adjacent panels or panels installed at an angle to each other.



Panels with a frame are used as metal structures for panel panels with a frame. The latter are used to build dispatching and operator stations from ready-made switchboard sections.

Fig. 3. The support frame is multi-section (a), single (b), flat (c): 1-longitudinal channel, 2-

Shield designs. The main supporting structure of the boards is the frame (volumetric and flat). The three-dimensional frame (Fig. 1) consists of four struts connected by bolts with the upper and lower frames. In places of contact between frames and racks, gaskets made of plastic material are installed, closing the cracks and playing the role of a shock absorber.

On the front side of the frame, one or two channels are installed between the posts, forming a jumper for attaching the front panels. The frame parts are made of steel sheet 2.5 mm thick. The stand is made in the form of a channel with brackets welded along the edges. The frame is welded from two uprights and fastened U-shaped parts of the channel type.

The frame is flat (Fig. 2) consists of two racks, bolted to two frames. Support frames are designed for installation of panels of panel structures on them. The support frame (Fig. 3.) is a welded assembly unit of longitudinal and transverse channels. Frames are attached to the support frames, forming one-, two-, three-section racks.

C Panels with a frame are formed by assembling uniform frames on a support frame with the installation of facade panels and side walls.

channel, 3- grounding bracket, 4- sheet. Cabinets of closet panels are formed in a similar way. Cabinet boards have side panels, covers and doors.

Panel-type protective and supporting elements are rectangular box-shaped parts made of sheet steel with a thickness of 1.2-1.5 and 2.5 mm, respectively.

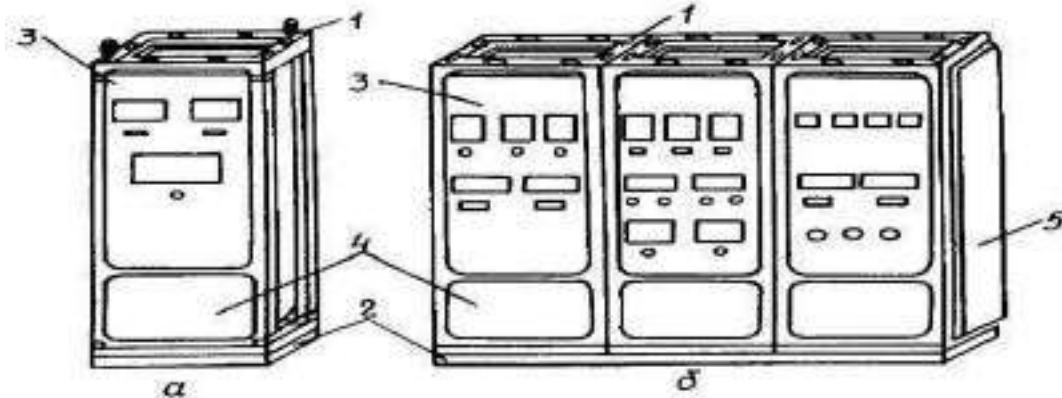


Fig. 3. Panel with frame: 1-frame, 2-support frame, 3-eyebolt, 4-panel, 5-screws connecting the frames.

## REFERENCES

1. Yusupbekov N.R., Mukhamedov Sh.M., Gulomov Sh.M. *Technological process control and automation. -T. : teacher, 2011.3.*
2. Klyuev A.S. and others. *Design of automation systems for technological processes; 2nd edition. -M. : Energoatomizdat, 1990.*
3. Klyuev A.S. and other *Technique for reading automatic control and technological control schemes. 3rd edition. -M. : Energoatomizdat, 1990.*
4. Tregub and others. *Design, installation and operation of automation systems in the food industry. -M. : Agropromizdat, 1991.*
5. Yusupbekov N.R. etc., *Technological Process Management Systems. - Tashkent: teacher, 1997.*
6. Minaev P.A. *Installation of control systems and automation. 2nd edition. - M., Stroyizdat, 1990.*
7. Klyuev AS *Adjustment of automatic systems and control devices for technological processes. -M. : Energoatomizdat, 1990.*
8. Martynenko I.I. and other *Design of automation systems 2nd edition. - M.: Energoatomizdat, 1991.*
9. Emelyanov A.I. and other *Design of systems for the automation of technological processes. 2nd edition. - M. : Energoatomizdat, 1991.*
10. Mimikonov A.G. *ACS design. -M. : Higher school, 1987.*
11. *Instructions for drawing up projects for the installation of automation systems. VSN / 61-82 / Minmontazhpetsstroy. -M., 1984.*
12. Under. ed. A. V. Kalinichenko, *Engineer's Handbook for Instrumentation and Automation. Educational and practical guide. - M. : Infra - Engineering, 2008.*
13. Numonjonov S. D. *Innovative methods of professional training //ISJ Theoretical & Applied Science, 01 (81). - 2020. - C. 747-750.*
14. Kaminsky M.L., Kaminskiy V.M. *"Installation of automation devices and systems", -T.Teacher, 1997.-304 p.*





## "MEASUREMENT OF PHYSICAL PARAMETERS OF A THREAD"

**Kipchakova Gavkharoy Mirzasharifovna**

Assistant,  
Department of Electronics and Instrument Engineering  
Ferghana Polytechnic Institute.  
Uzbekistan,  
Ferghana

### ABSTRACT

*A narrow label is applied to the test fiber sample with a paint whose reflectance for the wavelength used is very different from the reflectance of the sample itself.*

**KEYWORDS:** *Fibers, paints, photodetector, degree of unwinding, silkiness, stiffness, thickness, shell, linear density.*

## "ИЗМЕРЕНИЕ ФИЗИЧЕСКИХ ПАРАМЕТРОВ НИТИ"

**Кипчакова Гавхарой Мирзашарифовна**  
ассистент кафедры «Электроника и приборостроение»  
Ферганского политехнического института  
Узбекистан, Фергана

### АННОТАЦИЯ

На образец испытуемого волокна наносят узкую метку краской, отражательная способность которой для используемой длины световой волны резко отличается от отражательной способности самого образца.

**Ключевые слова:** Волокна, краски, фотоприемник, степень разматываемость, шелконостность, жесткость, толщина, оболочка, линейная плотность.

При исследовании прочностных свойств волокон текстильных материалов на разрывной машине фирмы «Симадзе» [28] для измерения растяжения образцов используется фотоэлектрический преобразователь, работающий в режиме слежения. На образец испытуемого волокна наносят узкую метку краской, отражательная способность которой для используемой длины световой волны резко отличается от отражательной способности самого образца. На некотором расстоянии выше метки той же краской покрывают сравнительно

протяженный участок. Рекомендуется использовать алюминиевые краски, не препятствующие растяжению покрытого ею участка образца.

Осветитель дает поток света, отражающийся от образца и поступающий на два фотоприемника, смонтированные в корпусе вместе с осветителем корпуса и включенные в два плеча мостовой схемы. Эти фотоприемники имеют узкую спектральную характеристику, максимум которой находится в области 580 мкм. На первый фотоприемник попадает поток света,



отраженный от поверхности узкой метки, а на второй фотоприемник, отстоящий на некотором расстоянии от первого, попадает свет, отраженный от покрытого краской сравнительно протяженного участка нити. При этом мост уравнивается.

При растяжении образца метка смещается относительно первого фотоприемника, в результате чего поступающий а этот фотоприемник световой поток уменьшается. В то же время световой поток, поступающий на второй фотоприемник, остается неизменным. В результате равновесие моста нарушается, и а его выходе появляется напряжение. Это напряжение усиливается усилителем и используется для управления серводвигателем, перемещающим мост с фотоприемниками по направляющей, параллельно испытываемому образцу волокна до тех пор, пока первый фотоприемник не окажется расположенным снова точно напротив метки в результате равновесие моста восстанавливается.

Схема охвачена обратной связью, для чего используется соединенный с серводвигателем тахогенератор, вырабатывающий напряжение для предварительного усилителя. Перемещение моста измеряется по углу поворота серводвигателя.

В случае необходимости влияние рассеянного света на работу фотоэлектрического преобразователя можно устранить, моделируя световой поток осветителя. Для определения линейной плотности испытываемого волокна используют зависимость частоты собственных колебаний натянутого волокна от его длины натяжения, упругости.

Частота поперечных упругих колебаний  $f$  в волокне длиной  $l$  и напряжением  $P$  связана с линейной плотностью волокна  $M_l$  соотношением

$$f = \frac{1}{2l} \left( \frac{P}{M_l} \right)^{\frac{1}{2}} \left[ 1 + \frac{d^2}{4l} \left( \frac{E\pi}{P} \right)^{\frac{1}{2}} \right],$$

где,  $E$  – модуль Юнга;  $d$  – диаметр волокна.

Если длина волны не менее 2 см и член в скобках оказывается равным приблизительно единице для текстильных волокон, то линейная плотность будет выражаться как

$$M_l = P / (2\pi f)^2.$$

Для определения линейной плотности  $M_l$  волокон и нитей можно использовать известную зависимость от ниже частоты  $f$  собственных колебаний нити:

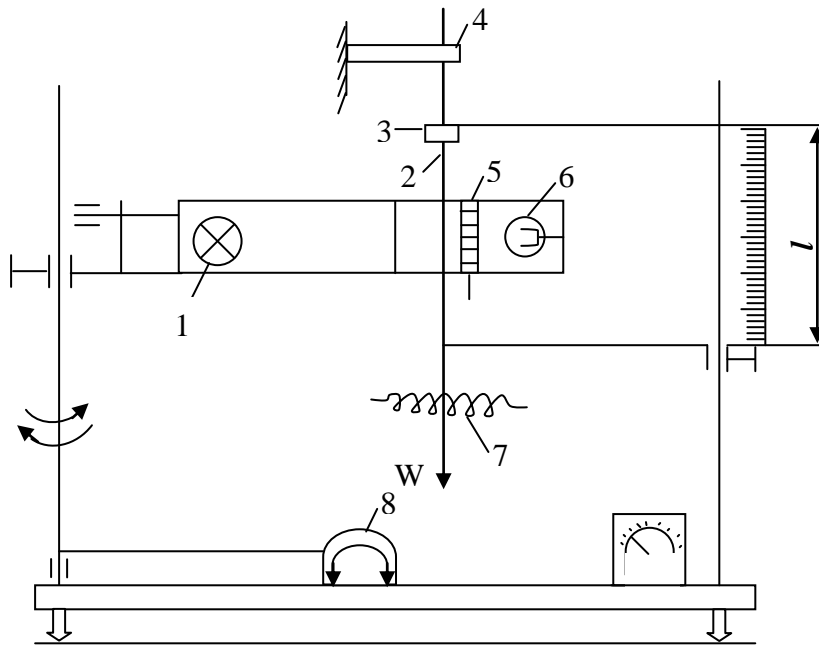
$$f = (1/2l) \sqrt{P / M_l}.$$

На этом принципе работает ряд приборов, сконструированных различными фирмами, но не получивших широкого распространения из-за несовершенства аппаратной реализации.

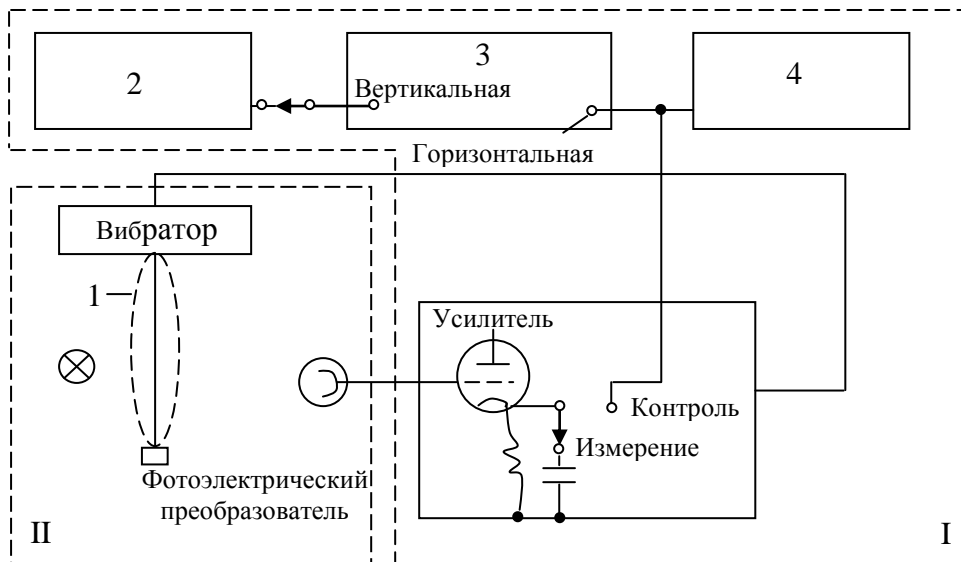
Удачным решением является прибор дениерской (Япония) [29]. Этот прибор состоит из двух блоков: вибратор и электронного осциллографа. В блоке вибратора (рис. а) образец 2 исследуемой нити длиной не менее 25 мм закрепляется одним концом в верхнем на подвижном зажиме 4, а другим - в зажиме груза 7 создающего необходимое напряжение образца. При этой образец нити вследствие напряжения, создаваемого пружинным грузом 7, прижимается к призме 3 и ограничительной пластине. Поворотом винта 8 в исследуемом отрезке нити возбуждаются собственные колебания. Вибрирующий участок нити пересекает световой поток, направленный от источника 1 на диафрагму со щелью 5, за которой расположена фотоприемник 6.

В зависимости от положения нити щель затемняется в большей или меньшей степени, в результате чего на выходе фотоприемника появляется переменный сигнал, частота которого зависит от частоты вибрации нити. Эту переменная составляющая передается в блок электрического осциллографа (рис. б), в котором она усиливается усилителем 1 и смешивается с колебаниями генератора переменной частоты. Получаемая таким образом комбинационная частота подается на одну пару отклоняющихся пластин катодно-лучевой трубки. Вторая пара отклоняющихся пластин катодно-лучевой трубки подключена к камертонному генератору 2. Генератор переменной частоты 4 настраивают так, чтобы на экране катодно-лучевой трубки 3 получить неподвижную фигуру Лиссажу.

К прибору приложена таблица, позволяющая по значению частоты, даваемой генератором 4, считываемому по лимбу ручки управления генератора 4, определять измеряемую плотность нити, образец которой при этом должен иметь расчетную длину 5 см.



a)



б)

Точность измерения в значительной степени зависит от правильного подбора расчетной длины образца нити к растягивающей массы. Растягивающую массу подбирается выбрать из набора 0,4; 1,4; 144 20; 30; 40 г, пользуясь формулой

$$a_d = M_l / \gamma l \sqrt{m 5,62}$$

где  $a_d$  – допустимая ошибка, %;  $M_l$  – линейная плотность образца, текс;  $\gamma$  – плотность вещества образца, г/см<sup>3</sup>;  $l$  – расчетная длина образца, см;  $m$  – груз напряжения, г.



Прибор позволяет измерять линейную плотность пряжи в пределах 0,11 . . . 50 текс.

Испытания прибора показали, что вариация результатов измерения лежит в пределах 10%, расхождение получаемых с его помощью и методом взвешивания значений линейной плотности (волокно вилол, монопить капроновая, пряжа хлопчатобумажная) лежит в пределах 5 . . . 8%.

### СПИСОК ЛИТЕРАТУРЫ

1. Ахмедов Н.А. и др. Основы шелководства. Ташкент: Фан, 2008. 274 с
2. Мирсаатов Р.М., Бурханов Ш.Д., Определение шелконосности через жесткость оболочки коконов.//Научная дискуссия: вопросы технических наук . сб. ст. по материалам XLVI междунар. науч.-практ. конф. – № 5 (35). –М., Изд. «Интернаука», 2016
3. Фазилов Н.Ф. Автоматизация технологических процессов. Ташкент, 1985
4. Ю.В. Федотов, О.А. Матросова, М.Л. Белов, В.А. Городничев, В.И. Козинцев. Лазерный дистанционный метод классификации нефтяных загрязнений. Вестник МГТУ им. Н.Э. Баумана. Сер. "Приборостроение". 2011
5. Н.В. Барышников, В.В. Карачунский, О.А. Свигач. Современные методы проектирования систем автоюстировки высокоточных оптико-электронных приборов. Вестник МГТУ им. Н.Э. Баумана. Сер. "Приборостроение". 2011.
6. Пат. 2168151 РФ, G01B 11/06. Дистанционный способ измерения толщины пленок/М.Л. Белов, С.В. Березин, В.А. Городничаев, В.И. Козинцев// Изобретения. – 2001.
7. Мамасадыков Ю. Оптоэлектронное устройство для автоматического контроля и сортировки коконов по плотности оболочки, //Тез.докл. XII Всесоюзной научной конференции по текстильному материаловедению. "Надежность, экономичность и качество текстильных материалов" / Киевский технологический инс-т легкой промышленности. 1988 - Т.3.
8. Мухитдинов М.М. Оптоэлектронные измерительные преобразователи. Ташкент, «ФАН» 1983
9. Мухитдинов М.М. Оптоэлектронные устройства контроля и измерения в текстильной промышленности. -М.: Легкая и пищевая промышленность, 1982



# COMPUTER-AIDED DESIGN OF AUTOMATED SYSTEMS

**Mirzayev Sardor Abdullajon ugli**

Assistant of department  
“Electronics and instrumentation”  
Ferghana Polytechnic Institute  
Republic of Uzbekistan, Ferghana

---

## ABSTRACT

*The efficiency of the enterprise (labor productivity, quality and competitiveness of products, etc.) implies the ability to quickly access reliable and accurate information from any point of production management.*

**KEYWORDS:** *nodes, automation, programs, local network, information, document flow, aggregate, top-level processing.*

---

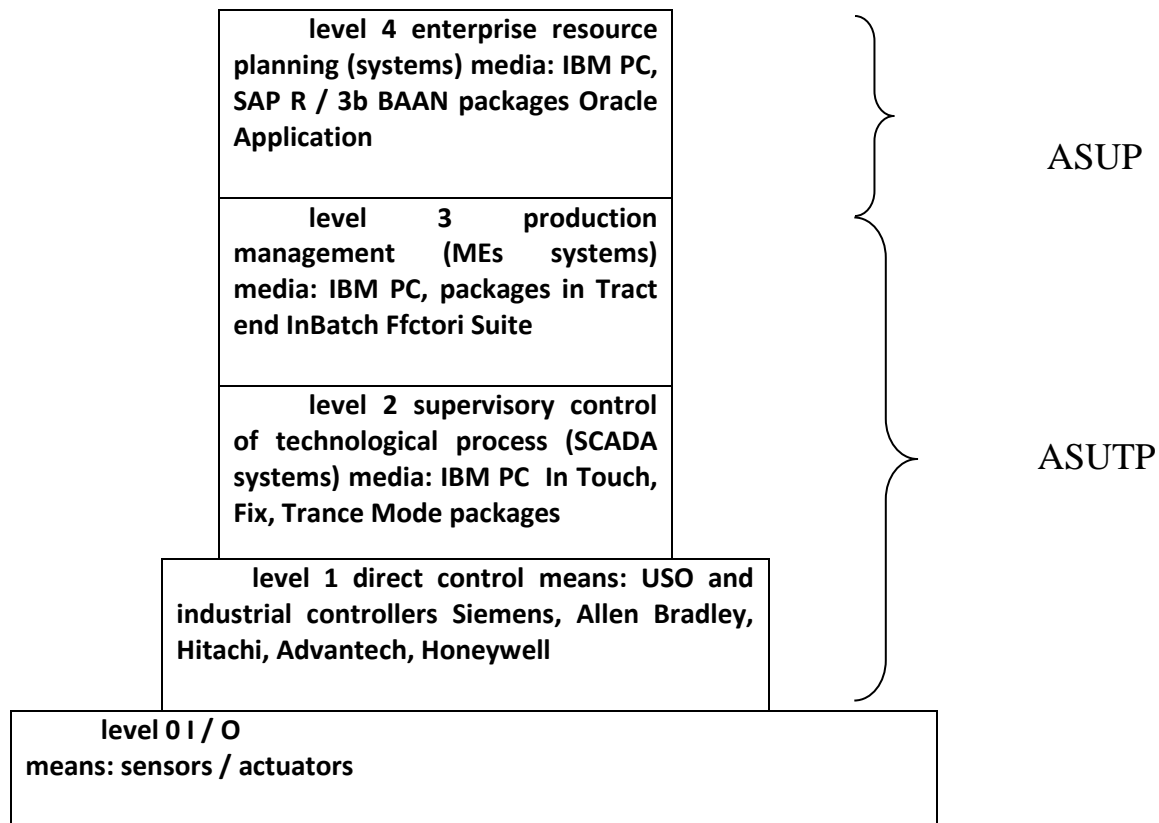
## DISCUSSION

Taking into account the hierarchical structure of the enterprise, this problem is solved on the basis of a multilevel ACS, shown in Fig. 4.1.1. in the form of a five-level pyramid. Zero level (I / O –input / output–input / output level). Includes a set of primary converters (sensors) and actuators built into structural units of technological equipment and intended, respectively, for inputting primary (technological) information and output (implementation) of control actions.

The first level (control - direct control). Serves for direct automatic control of technological processes using industrial controllers (programmer logic controller - PLC), for example, Allen-Bradley, Simatic, Honeywell, Advantech, etc. The need to exchange information between the zero and the second levels at the rate of a real process imposes rather severe restrictions on this mode. Programs and data from computers of the second level (SCADA-level) are loaded into the PLC (for example, settings that ensure coordination and control of the unit according to the criteria of optimality of control as a whole), and on the second, it displays operational, diagnostic and service information, i.e. data on the state of units, technological process.

The second level (SCADA - Supervisory Control and Data Acquisition - data collection and supervisory control). Designed to display (visualize) data on the production process and operational integrated control of various units with the participation of dispatching personnel. (see p. 4.3.) Computers of the second level are united into a homogeneous local network of the enterprise (such as Ethernet) with access to the third level of control. The third level (MES - Manufacturing Execution System). Performs orderly processing of information on the progress of manufacturing products in the shop, and is also a source of necessary information in real time for the upper level of enterprise management - enterprise resource planning (MRP and ERP levels) and optimization of shop resource management as a single organizational and technological object according to tasks, coming from the upper level.

The fourth level (MRP - Manufacturing Resource Planning and ERP - Enterprise Resource Planning - enterprise resource planning). Designed to automate production planning and financial activities, procurement and sales, analysis and forecasting, etc. The most famous systems of this level are offered by SAP, Oracle, BAAN, etc.



**Fig. 1. Integrated and distributed ICS levels**

Exchange in local industrial networks is carried out in the standards Bitbus, Profibus, etc.

ACS design stages. The following main stages are distinguished: pre-design survey, technical design, detailed design, implementation. Recently, the stage of system (software product) maintenance has been added. Pre-design survey. The goal is to study the existing model of the enterprise, improve it and justify the feasibility of introducing an automated control system.

Here, a special emphasis is placed on the systems approach, which is best mastered by the specialists in automated control systems (“system specialists”).

During the pre-design survey, the following components are distinguished.

- Work schedule for individual groups of researchers with the approval of these works;
- Forms of primary documents that are filled in during the survey;
- The results of the survey in the form of workflow diagrams, allowing you to give recommendations for improving the enterprise model.

The stage lasts up to six months, starting with an order for the organizations of the contractor and the customer, and ends with a report on the results of the

survey. Based on the results of the report, a feasibility study is drawn up for the development of an automated control system, which must be defended at a technical council from representatives of the customer and the contractor.

At this stage, an integrated calculation of the payback period of the system is carried out. If the payback period does not exceed 3.3 years, then the development of an automated control system is considered appropriate. In this case, a technical assignment (TOR) is drawn up for the development of an ACS.

Technical design. The goal is to test all fundamental technical solutions. At this stage, which begins with the approval of the terms of reference, the following work is carried out:

- determine the schedule for the development of ACS, the composition of the subsystems, the complex of tasks to be solved and form their statements;
- choose and order the appropriate set of technical means;
- make up a technical assignment for non-serial equipment (for example, various kinds of displays);
- create information languages, classifiers and encryption systems, develop a database;



- form a library of programs with which you can solve all available types of tasks;
- form the user interface;
- make up a list of measures to prepare the facility (enterprise) for the implementation of ACS.

Working design. The goal is to fully implement all the functions and technical solutions that were adopted at the technical design stage. This stage ends with the preparation of detailed design documentation.

Implementation. Two stages are envisaged: pilot implementation and industrial implementation. The goal of the first stage is the transition from manual control to parallel manual and automated control to test the system's performance. At this stage, the actual payback period of the system is determined. The goal of the second stage is the final industrial implementation of automated control.

## REFERENCES

1. *Adjustment of measuring instruments and technological control systems. Edited by A.S. Klyuev. 2nd edition. - M.: Energoatomizdat, 1990.*
2. *Minaev P.A. Installation of control systems and automation. 2nd edition. - M., Stroyizdat, 1990.*
3. *Klyuev AS Adjustment of automatic systems and control devices for technological processes. -M.: Energoatomizdat, 1990.*
4. *Martynenko I.I. and other Design of automation systems 2nd edition. - M.: Energoatomizdat, 1991.*
5. *Emelyanov A.I. and other Design of systems for the automation of technological processes. 2nd edition. - M.: Energoatomizdat, 1991.*
6. *Yusupbekov N.R., Mukhamedov B.I., Gulyamov Sh.M. Control and automation of technological processes. - Tashkent: teacher, 2011.*
7. *Klyuev A.S. and others. Design of automation systems for technological processes; 2nd edition. -M.: Energoatomizdat, 1990.*
8. *Klyuev A.S. and other Technique for reading automatic control and technological control schemes. 3rd edition. -M.: Energoatomizdat, 1990.*
9. *Tregub and others. Design, installation and operation of automation systems in the food industry. -M.: Agropromizdat, 1991.*
10. *Yusupbekov N.R. etc., Technological process control systems. - Tashkent: teacher, 1997.*
11. *16. Kaminsky M.L., Kaminskiy V.M. "Installation of automation tools and systems", Teacher, 1997.*



## METHOD FOR PRODUCING DOUBLE-LAYER WEFT KNITTING FABRIC

**A.Jurabayev<sup>1</sup>**

<sup>1</sup>Researcher Student of Namangan Engineering and Technology Institute

**K.Holikov<sup>2</sup>**

<sup>2</sup>DSc, Professor of Namangan Engineering and Technology Institute

**M.Mukimov<sup>3</sup>**

<sup>3</sup>DSc,  
professor of “Textile Fabrics Technology” Department,  
Tashkent institute of Textile and Light Industry

**I.Sh.Xakimjonov<sup>4</sup>**

Assistant of Namangan Engineering and Technology Institute

### ABSTRACT

*One of the indicators of the quality of knitwear for top products is its shape stability. In the article, the structure and method for producing a new type of double-layer weft knitting fabrics, where the form stability of knitting fabrics is achieved by including the weft yarn in its structure, are developed with the aim of increasing the shape stability of knitwear.*

**KEY WORDS:** *quality, structure, products, knitting fabric, double-layer, weft, form stability.*

**АННОТАЦИЯ:** Одним из показателей качества трикотажа для топовых изделий является стабильность его формы. В статье разрабатываются структура и способ производства нового типа двухслойных уточных трикотажных тканей, в которых стабильность формы трикотажных тканей достигается путем включения в ее состав уточной пряжи, с целью повышения стабильности формы. трикотажные изделия.

**КЛЮЧЕВЫЕ СЛОВА:** качество, структура, изделия, трикотажное полотно, двухслойная утка, стабильность формы.

### I.INTRODUCTION

In order to increase the knitwear's form-stability, we developed a structure and method for producing a new type of two-layer weft knitwear, where the knitwear's form-stability is achieved by including a weft thread in its structure. On the basis of a two-layer knitwear, where a press method of joining with warp threads is used to connect the layers of knitwear, 3 versions of a two-layer weft knitwear have been developed and developed.

The proposed options for a two-layer weft knitwear differ from each other in a weave structure. The first version of a two-layer weft knitwear is obtained on the basis of weaving fangs.

Fang is called press weaving, consisting of single press loops with single-needle drafts. Fang has the same structure on the front and wrong sides [1].

On both sides of the fang, like the 1 + 1 eraser, the front and back loop stitches alternate through one. A feature of the appearance of the fungus is that its facial looped posts do not touch each other. This is explained by the fact that in his sketches striving for straightening, elastic forces arise, pushing adjacent looped posts. Therefore, the knit weave of the fangs is much wider than the knit weave of the eraser and, when removed from the machine, has a smaller percentage of shrinkage in width.

The fang is produced on double-loop knitting machines under the following conditions: if loops are formed on the needles of one needle bed, then drafts



are produced on the needles of the other at that time and vice versa, if drafts are formed on the needles of one needle needle, then loops are formed on the needles of the other. With such a convoy, during the development of the fungus, the formation of sketches and the release of press loops occurs on the front and rear needle beds alternately.

The hinged posts on one side of the knitwear are offset relative to the posts on the other by 0.5 B. The thickness of the fungus, due to the presence of sketches on all loops, is increased:  $Mf \geq 6d$  [2]. To obtain one loop series of fungus, two looping cycles, or a set of two looping systems for the fungus based on the eraser, are required. The loops of one side of the fungus are connected to the loops of the other by outline, which are located inside the knitwear and are almost invisible on each side of it. Therefore, on the basis of double fungus, knitwear can easily be obtained, each side of which is made of threads of various kinds or colors, for example, one side is made of woolen and the other is made of cotton yarn.

This feature is used to save expensive raw materials by knitting loops backstitches from cheaper raw materials in the manufacture of the top products

and to improve the hygienic properties of articles made of synthetic backstitches by knitting loops from a natural feedstock.

Fang can be developed in ways without switching and without culling.

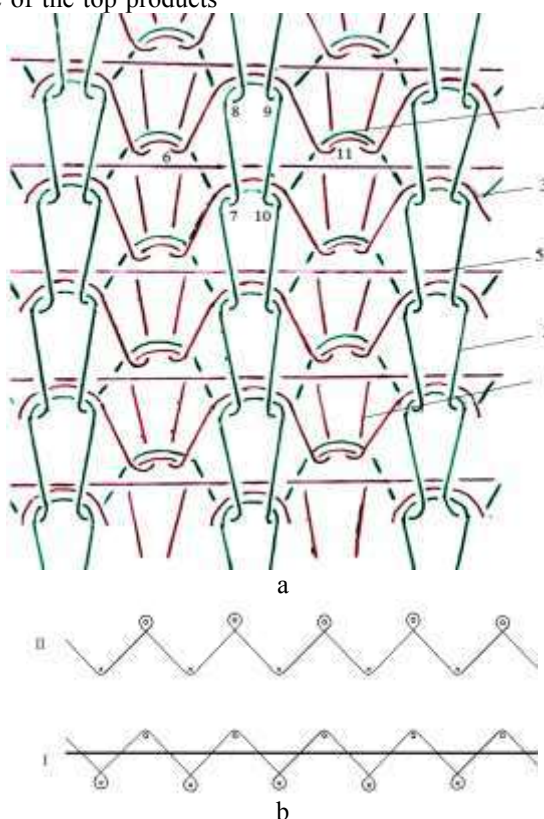
On a flat-wing machine, a fang is obtained without a method by means of a specific installation of culinary wedges. When installing the locks on the fungus, the needles of the front and rear needle beds are alternately lowered to an incomplete depth to form drafts on them [3].

The disadvantage of a two-layer knitwear developed on the basis of weaving of fangs is a large elongation in width and less dimensional stability.

## II. DEVELOPMENT OF DOUBLE-LAYER WEFT FABRICS

In order to expand the range of knitted fabrics and increase dimensional stability, a weft thread is introduced into the structure of a two-layer knitwear developed on the basis of weaving of fangs.

The structure and graphic record of a two-layer weft knitwear is shown in Fig. 1.



**Fig. 1. The structure and graphic recording of the production of a two-layer weft knitwear based on fang weaving**

The knitwear (Fig. 1, a) consists of elongated purl 1, front loops 2, drafts 3 of one layer and a sketch 4 of another layer of knit. An additional weft thread 5 is located along the loop series between the

loops of the rear and front needle bars and the press drafts.

In the formation of one rapport of the proposed two-layer weft knitwear on a flat-wing machine, two loop-forming systems are involved.

Two-layer weft knitwear on a flat-wing machine of the LongXing type LXA252SC is obtained as follows. When the carriage moves from

left to right, the first system knits the press row, for this, in the loop-forming system of the front needle bar, the upper closing wedge is turned off and the lower closing wedge is turned on completely. As a result of this, all the needles of the front needle bar rise to an incomplete conclusion, grab the thread, but the old loops are not reset, they form press drafts. The needles of the rear needle bar rise to full conclusion and form closed loops, for this the upper and lower enclosing wedges are fully included. In this system, using the second yarn guide, an additional weft thread is laid on the press drafts between the needles of the needle beds (Fig. 1, b). When the loop-forming system moves from right to left, press sketches are formed by the needles of the rear needle bar, and the needles of the front needle bar knit closed loops (II-loop row).

Located between the loops and drafts, the additional weft thread is firmly fixed to the sections

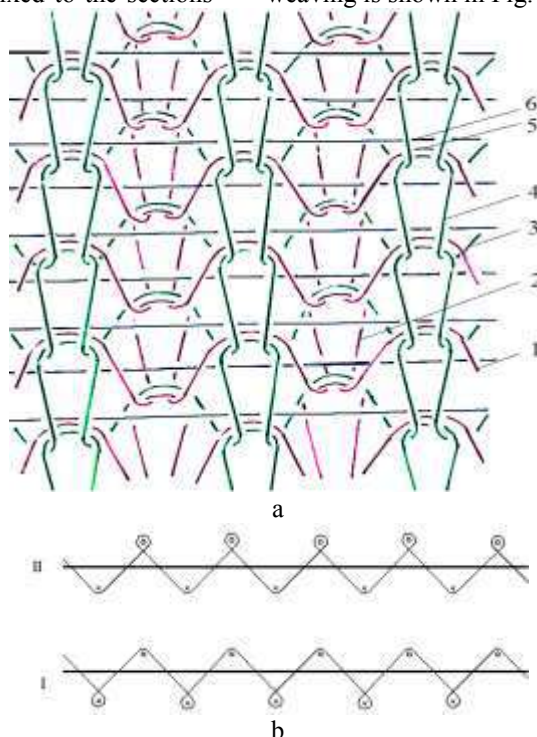
of the soil thread 6-7-8 and 9-10-11, which increases the contact points of the weft thread with soil loops and press drafts.

The presence of press drafts in the structure of the knitwear provides a strong fixation of the weft thread.

The resulting knitwear has a high dimensional stability. The presence of additional weft yarns in the structure of the knitwear reduces the stretchability of the knitwear in width, and press drafts and elongated loops contribute to a decrease in the stretchability of the knitwear in length.

The II-variant of a two-layer weft knitwear is also obtained on the basis of weaving of fangs, in contrast to the I-variant, a weft yarn is laid in each loop of a knitwear.

The structure and graphical representation of a two-layer weft knitwear obtained on the basis of fang weaving is shown in Fig. 2.



**Fig. 2. The structure and graphic recording of the production of a two-layer weft knitwear.**

In a two-layer weft knitwear from the yarn 1, knit rows of loops 2 from one layer of knitwear are knitted, and from the yarn 3, knit rows from loops 4 of another layer of knitwear. The layers of knitwear are connected using drafts 5. The weft thread 6 is laid on top of the press drafts (Fig. 2, a).

A two-layer weft knitwear on a flat-wing machine is obtained as follows. When the loop-forming system moves, the press row is knitted from left to right, the press drafts are formed by the needles of the front needle bar, and the needles of the rear needle bar knit closed loops.

In this looper row, using the second thread guide, a weft thread is laid on the press drafts

between the needle beds and needles (Fig. 2, b). In the second row of knitwear, the press row is knitted, the press drafts are formed by the needles of the rear needle bar, and the needles of the front needle bar knit closed loops.

In this row, with the help of an additional yarn guide, a weft thread is laid.

The third version of a two-layer weft knitwear is obtained on the basis of a combined weave. In this knitwear, press stitch rows alternate with stitch rows of smoothness.

The structure and graphic recording of a two-layer weft knitwear based on combined weaving is shown in Fig. 3.

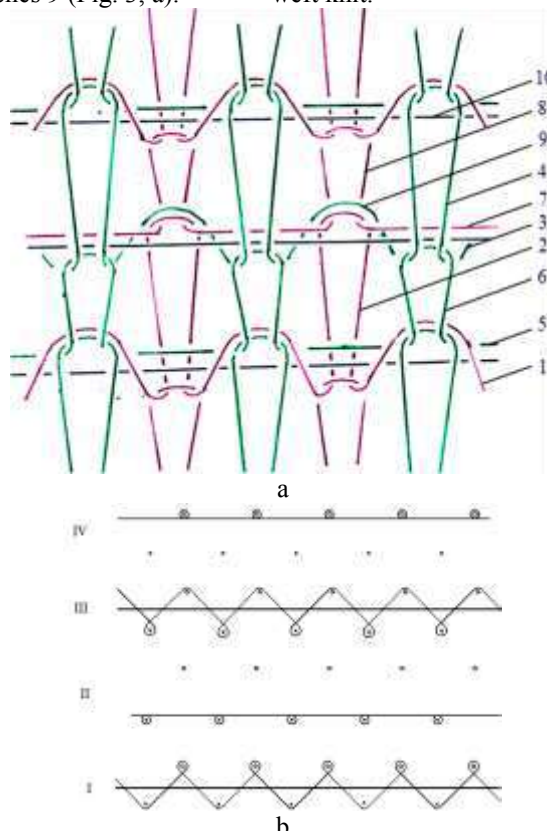
From the structure of the weave it is seen that from the yarn 1, knit rows of loops 2 of one layer of knitwear are knitted and from the yarn 3 of knit rows of loops 4 of another layer of knitwear.

From the yarn 5, knit rows of ironing from the loops 6, on one side of the knit, and from the yarn 7 from the loops 8, knit rows of iron on the other side of the knit. The connection of the layers of knitwear is carried out using press sketches 9. The weft thread 10 is laid on top of the press sketches 9 (Fig. 3, a).

The proposed knitwear on a flat-wing machine is obtained as follows (Fig. 3, b).

When the loop-forming system moves from left to right, a press row is knitted with a weft thread, as in the second version of a two-layer weft knit.

In the second row, the needles of the front needle bar knit looped rows of smoothness. In the third row of knitwear, press loops with a weft thread are formed, as in the second version of a two-layer weft knit.



**Fig. 3. The structure and graphic record of the production of a two-layer weft knitwear based on combined weaving**

In the fourth stitch row, the needles of the rear needle bar knit stitch rows of smoothness.

Two-layer knitwear, in which the layers are connected by press drafts, is effective, since this knitwear does not require any additional devices or changes in the design of the machine. As a result, two layers are formed in the resulting two-layer knitwear, which differ in the kind of fiber, while the loops of the front layer do not extend to the back layer, and the loops of the back layer do not protrude to the front side.

### III. EXPERIMENTS AND DISCUSSION

Using yarns of natural silk as one thread and for another layer of cotton yarn that meets the purpose of the resulting knitwear, it is possible to develop a two-layer knitwear of good quality with

good hygienic properties and minimal material costs, while practically not reducing the performance of the machine due to the simplicity of the proposed knitwear without changing the design of the flat-wing machine and only more fully using its technological capabilities.

Located between the loops and drafts, the additional weft thread is firmly fixed to the sections of the soil thread 6-7-8 and 9-10-11, which increases the contact points of the weft thread with soil loops and press drafts (Fig. 1).

The presence of press drafts in the structure of the knitwear provides a strong fixation of the weft thread.



#### IV. FINALY COMPARISON ANALYS AND CONCLUTION

The resulting knitwear has a high dimensional stability. The presence of additional weft yarns in the structure of the knitwear reduces the stretchability of the knitwear in width, and press drafts and elongated loops contribute to a decrease in the stretchability of the knitwear in length.

The proposed options for a two-layer weft knitwear can be successfully used in the development of knitwear and children's assortment.

#### REFERENCES

1. *Shalov I.I., Dalidovich A.S, Kudryavin L.A. Texnologiya trikotajного proizvodstva. M.: Legkaya i pishevaya promishlennost. 1984. - s.89.*
2. *Maxmudova G.I., Xolikov K.M., Mukimov M.M., Djuraev A.D. Osnovi texnologii virabotki formoustoychivogo plyushevogo trikotaja. Tashkent. Izdatelstvo "Fan". 2013g. -s. 183.*
3. *Nergis Emirhanova, Yasemin Kavusturan. Effects of Knit Structure on the Dimensional and Physical Properties of Winter Outerwear Knitted Fabrics / SIBRES & TEXTILES in Eastern Europe. -2008. – Vol. 16, No. 2 (67). –s 69474.*



# PROFESSIONAL ACTIVITY OF FUTURE TEACHERS INTEGRATED INNOVATION FORMS OF THE PREPARATION PROCESS

**Samidjonova Mukhabbat Kholiqjonovna**

Teacher

Lecturer RCPRO Namangan region

Uzbekistan, Namangan

---

## ANNOTATION

*In this article, we will discuss future teachers' professional activities the integrated forms of innovation in the preparation process are described.*

**KEYWORDS:** *interpersonal education, innovation, quality of education, practical integration.*

---

## DISCUSSION

President Sh.M.Mirziyoyev's decree "On the strategy of action for the further development of the Republic of Uzbekistan " and the decision "On measures for the further development of the higher education system" as well as other normative-legal documents have created favorable conditions for the formation of a continuous education system in accordance with world education standards. [1.29]

The present and future fate of our republic depends on the professional skills, spiritual development, physical health of the younger generation, they are the future of the nation, the future of our people.

To solve these issues, the first president of the Republic of Uzbekistan "We need persons who have received school education and training, and not graduates" highlighted by I.Karimov. Relying on these ideas, the legal base of the education system of our country was initially created, on the basis of the law of the Republic of Uzbekistan "On education", the National program of training of personnel, the national system of training of highly qualified personnel meeting high moral and moral requirements was restored. Special attention was paid to the task of educating young people who are independent and new-thinking, capable of taking responsibility for the tomorrow of our motherland.

In accordance with the specified purpose, the following tasks should be addressed:

- \* improving the content of state educational standards, qualification requirements, training plans and programs on the basis of improving the pedagogical opportunities of practical integration in ensuring the quality of training of future personnel on

the basis of requirements of the labor market, improving the development of techniques and technology in the spheres of production and service;

- \* development of integrated forms of innovation in the process of training future teachers;

- \* improving the educational opportunities of practical integration with integrated textbooks and manuals in ensuring the quality of training of future teachers;

- \* development of technologies for the implementation of quality monitoring of educational content and process of practical integration of future teachers; creation of a program in the process of training future teachers and introduction of educational technology into practice;

- \* in the preparation of future teachers, it is important to create a model of practical integration as well as forms of integration with customers.

In achieving the goal and solving the tasks set, the following set of methods were used: systematic analysis of psychological and pedagogical phenomena, modeling of the pedagogical process, comparative, comparison, analysis, direct and indirect observation; it is desirable to use diagnostic methods, questionnaires, interviews, tests, etc.

If a model of practical integration is created to ensure the quality of training of future teachers, the forms and methods of consistent teaching effectiveness that allow to ensure the quality of training of future teachers will be determined and implemented into practice, which will be the basis for the development of practical integration educational content and technologies in the preparation of future The directions of education of higher educational institutions provide for the integration and



optimization of the state standard of education, curriculum, educational science programs. Higher education directly dictates their integration with consumers in the training of personnel for the economic, social and cultural sectors of society.

In the conditions of Uzbekistan, the integration of training and employment of personnel is based on the following requirements:

1. General requirements of the state and society.
2. Specific requirements of the industry and industries.
3. Specific requirements of higher education.
4. Modern requirements for the quality of personnel.

In education, it is necessary to interpret one systematism and sequence as an effective interrelated factor of understanding, laws and theories of various educational sciences, since the integration of these Sciences allows to form a generalized knowledge, to deepen and enrich its content. Linking this opportunity to practice has served to ensure the continuity and continuity of the work in this area, to establish public control, to ensure social partnership, to ensure a thorough programming of future collaborative activities, to improve the cooperation of family, neighborhood, educational institutions and civil society institutions in the development of the future pedagogue as a modern, leading personnel.

Based on the results of the work carried out, creation of a program of cooperation with educational institutions and institutions of civil society in further improvement of pedagogical norms of the principles of continuity and continuity in the professional formation of future teachers, its application to practice through innovative technologies, improvement of the content of subjects taught in the system of continuous education and, in the process of professional development and retraining of pedagogical personnel, it is desirable to carry out professional training of future teachers in pedagogical higher educational institutions, to organize traditional scientific and practical work on this problem at the Republican and international level.

## REFERENCES

1. *Decree of the President of the Republic of Uzbekistan "On the strategy of actions for the further development of the Republic of Uzbekistan" // Collection of laws of the Republic of Uzbekistan.* - T., 2017.- P.39
2. *The harmonious generation is the foundation of Uzbekistan's development.* - T., 1998.
3. *Khakimova M., Khujaev N., Akhmedov D. Pedagogical technologies: instruction manual.* - T.: TSEU, 2007. –P.166.
4. *Khujaev N., Tojiboeva D., Mamarakhimov B., Shamuratova N. Methods of professional*

*education: instruction manual.* - T.: TSEU, 2007. – P.190.



# BOTNET ATTACK IN COMPUTER NETWORK SECURITY

**S.Nagendra Prabhu**

Department of CSE,  
Malla Reddy College of Engineering and Technology  
Hyderabad, India

**D.Shanthi**

Department of CSE  
PSNA College of Engineering  
Dindigul, India

Article DOI: <https://doi.org/10.36713/epra4905>

## ABSTRACT

*Among the various forms of malware, Botnet is the serious threat which occurs commonly in today's cyber attacks and cyber crimes. Botnet are designed to perform predefined functions in an automated fashion, where these malicious activities ranges from online searching of data, accessing lists, moving files sharing channel information to DDoS attacks against critical targets, phishing, click fraud etc. Existence of command and control(C&C) infrastructure makes the functioning of Botnet unique; in turn throws challenges in the mitigation of Botnet attacks. Hence Botnet detection has been an interesting research topic related to cyber-threat and cyber-crime prevention in network security. Various types of techniques and approaches have been proposed for detection, mitigation and prevention to Botnet attack. Here I discuss in detail about Botnet and related research including Botnet evolution, life-cycle, command and control models, communication protocols, Botnet detection, and Botnet mitigation mechanism etc. Also an overview of research on Botnets which describe the possible attacks performed by various types of Botnet communication technologies in future.*

**KEYWORDS**— Bot; Botnet; C&C mechanism; communication protocols; honeynet; passive traffic; attacks; defense; prevention; mitigation

## I. INTRODUCTION

The term "Bot" is nothing but a derived term from "ro-Bot" [2] which is a generic term used to describe a script or sets of scripts designed to perform predefined function in automated fashion. Botnet is the collections of bots or collection of compromised computers that are remotely controlled by its BotHerder [1]. Even though Botnets shows the trace of existence for several years ago, Botnet have only recently sparked the interest of the research community.

Generally *Botnet* is used to define networks of infected end-hosts, called *bots* that are under the control of a human operator commonly known as a *Botmaster*. Botnets recruit vulnerable machines using methods utilized by other classes of malware (*e.g.*, remotely exploiting software vulnerabilities, social engineering, etc.) [3], these machines create a C&C infrastructure between them to perform malicious activity.

Now in general the main difference between Botnet and other kind of malwares is the existence of C&C infrastructure. Hence in the mechanism of detection of Botnet, if we identify the location of C&C then Botnet can be detected, removed and prevented from various types of cyber-crimes. But this depends on the weakness and strengths in communication protocol which is adopted by Botnet to perform malicious attacks. Now on the other side, bots are used by search engines to spider online website content and by online games to provide virtual opponents.

More specifically on Internet relay chat (IRC) network bot's function in channels include managing

access lists, move files, share users, share channel information, anything else if right scripts are added. IRC bots are automated and controlled by events which could be commands given in a channel by other IRC bot or client with necessary privileges.

In this paper, an overview of current Botnets technology research has been provided. The remainder of the paper is organized as follows: Section 2 discusses background of Botnets. Section 3 described about literature review, in this section, Botnet characteristics, and Botnet life-cycle are explained to provide better understanding of Botnet technology, Classification of bots & also describe about the communication protocols used by Botnet to communicate. In Section 4, classifies Botnet detection approach which is explained in two classes: First identify the cryptographic key of the botnet communications for figuring out the botnet operations. We then compromise the botnet entities for tracing back to the botmaster across the stepping-stones. In section 6, concludes the total work done in this paper and we explain about the further Botnet attacks possible or Botnet developments in future.

## II. BACKGROUND OF BOTNET

Botnets have been in existence for about 10 years [13]. Security experts have been cautioning the public about the threat posed by botnets for some time. Still, the scale and magnitude of the problem caused by botnets are underrated and most users do not comprehend the real threat they pose [13].



### A. How Does a Botnetwork work ?

Most botnets are designed as distributed-design systems, with the main botnet operator (*botmaster*) issuing instructions directly to a small number of systems. These machines propagate the instructions to other compromised machines, usually via Internet Relay Chat (IRC) [14]. The constituents of a typical botnet include a server program, client program for operation, and the program that embeds itself on the victim's machine (*bot*). All three of these usually communicate with each other over a network and may use encryption for stealth and for protection against detection or intrusion into the botnet control network. Botnets are effective in performing tasks that would be impossible given only a single computer, single IP address, or a single Internet connection. Originally, botnets were used for distributed denial of service attacks. (See Figure 1) Most modern web servers have developed strategies to combat such DDoS attacks, making this use of a botnet less effective [14]. When infecting a computer, the bots connect to IRC servers on a predefined channel as visitors and waited for messages from the botmaster. The botmaster could come online at any time, view the list of bots, send commands to all infected computers at once, or send a private message to one infected machine.

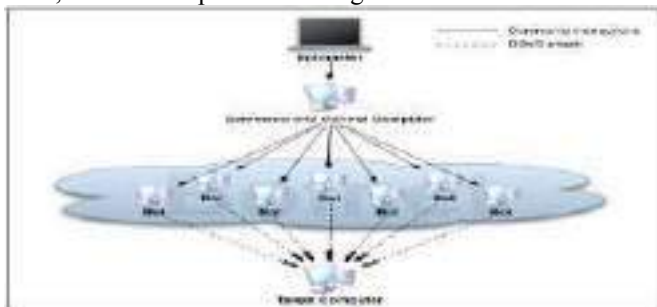


Figure 1 Example of Botnet Attack

### B. Why are Botnets dangerous today?

Botnets today are one of the most dangerous species of network-based attack because they use large, coordinated groups of hosts to execute both brute-force and subtle attacks. A collection of bots, when controlled by a single command and control (C&C) infrastructure, forms a botnet [15]. Since the bots work together in large groups taking orders from a centralized botmaster, they can cripple a large-scale networks in a short time. A lot of work has been done trying to mitigate the efforts of botnets to avoid data and financial loss. However hard the industry works towards patching the known vulnerabilities in hosts and networks, there are always more unpatched or unknown vulnerabilities that malicious developers and cyber criminals may exploit.

## III. LITERATURE REVIEW

This section reviews selected literature to discuss the current research that has been published about botnets. We

first identify the motivations behind building and operating botnets and how these motivations have evolved over time. Then, we discuss the current research on how to track and disable botnets.

### A. Botnet Life cycle

A typical Botnet can be created and maintained in five phases. This is depicted in Fig. 2.

1. In first phase, firstly Botmaster infect victim host with Bot through the social engineering, mail attachments, automatic scan, exploit and compromise etc mechanisms.
2. In second phase, Bot connected to command and control channel
3. In third phase, Botmaster send command through IRC/HTTP/P2P C&C Channel to bots
4. In fourth phase, repeat, soon the Botmaster has a large number of army bots to control from a single point.
5. And in last phase, bots are updated with a new version or new business functionally through their operator which issue payload command.

Hence the above discussion elaborates all five steps about how a bot is infected to other hosts. In addition it also gives insight into how the Bot increase their quantity means its capacity on a network to perform malicious activity and harm the users.

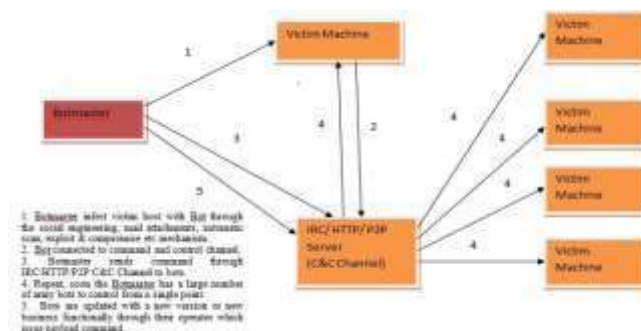


Figure 2 A Typical Botnet Life-cycle

### B. Classification of Botnet

#### 1. Based on Network Protocols

For a Botmaster to send commands to a bot, it is essential that a network connection must be established between the zombie machine and the computer transmitting commands to control it. Here all network connections are based on protocols that define rules for the interaction between computers on the network. Botnets can be classified according to network protocols follow as:

- a. *IRC-oriented*: This is one of the very first types of Botnet in which bots are controlled via IRC channels. Each infected computer connected to the IRC server (master) indicated in the body of the Bot program, and waited for commands [48]





from its master on a certain channel (eg-IRC Botnet).

- b. *IM-oriented*: This type of Botnet is not particularly common. It differs from IRC-oriented Botnets only in that it uses communication channels provided by IM (instant messaging) services such as AOL, MSN, and ICQ etc and due to the difficulty of creating individual IM accounts for each bot. The Biggest problem in this, Bots should be connected to the network and must remain online all the time [4] and each bot needs its own IM account to perform malicious activity. As result, owners of IM-oriented Botnets only have a limited number of registered IM accounts at their disposal, which limits the number of bots that can be online at any one time. Of course, they can arrange for different bots to share the same account, come online at predefined times, send data to the owner's number and wait for a reply for a limited period of time, but this is inefficient because it takes such networks too long to respond to their masters' commands to perform an activity.
- c. *Web-oriented*: This is a relatively new and rapidly evolving type of Botnet designed to controlling zombie networks over the World Wide Web. A bot connects to a predefined web server (master), receives commands from it and transfers data to it in response. And wait to get a signal from its master to perform some activity for eg-HTTP Botnet.
- d. *Other*: In this, there are other types of Botnets that communicate via only their own protocol that is only based on the TCP/IP stack, i.e., they only use transport-layer protocols such as TCP, ICMP and UDP.

## 2. Based on communication topologies

In this section we will describe about "how bot communicate" between each other. So according to the C&C channel, we categorized Botnet topologies into three different models, the Centralized model and the Decentralized model and Unstructured C&C Model [3].

a. *Centralized model*: Hossein et al [5] explain the model where, one central point (C&C server) has been used for exchanging commands and data between the Botmaster and Bots. Actually C&C server runs certain network services such as IRC or HTTP. So advantage of this model is small message latency which cause Botmaster easily arranges Botnet and launch attacks. Here, all connections and action performs through the C&C server; therefore, the C&C is a critical (weak) point in this model. If somebody manages to

discover and eliminates the C&C server, the entire Botnet will be useless and ineffective.

b. *Decentralized model*: In this model the communication system does not completely depend on some selected servers, for discovering and destroying a number of Bots. As a result, attackers exploit the idea of Peer-to-Peer (P2P) communication as a Command-and Control pattern which is more resilient to failure in the network. Figure 4 shows that, depicts the decentralized (P2P) model where there is no Centralized point for communication. In this, each bot keeps some connections to the other Bots of the Botnet where Bots act as both Clients and servers. A new bot must know some addresses of the Botnet to connect there. Here if Bots are offline, the Botnet can still continue to operate under the control of Botmaster. Since P2P Botnets usually allow commands to be injected at any node in the network, the authentication of commands become essential to prevent other nodes from injecting incorrect commands [5] for eg: DNS, P2P protocol based botnet.

## C. Communication Protocol in Botnet

A communications protocol is a system of digital message formats and rules for exchanging those messages in or between computing systems and in telecommunications [6]. Today Botnet usually use well defined communication protocols to perform attack. So studying about communication protocols can help us determine the origins of a Botnet attack and decode conversations between the bots and the Botmasters [3].

Communication protocol can be classified in three different categories:

1. **IRC protocol**: A most common protocol used by Botmasters to communicate with their Bots. IRC protocol mainly designed for one to many conversations but can also handle one to one, which is very useful for Botmasters control their Botnet. However, security devices can be easily configured to block IRC traffic [3].

### Weaknesses of IRC bots:

- Usually unencrypted
  - Easy to get into, take over or shut down
  - Due to the dependability more on C&C Server, Single point of failure is there [7].
2. **HTTP protocol**: Generally HTTP protocol is a popular Botnet due to its communication method by sending message as HTTP response and HTTP GET response to perform attack which is difficult to be detected. So Using the HTTP protocol, Botnet usually bypass security devices.

#### Weaknesses of HTTP based bots:

- Due to the dependability more on C&C Server, single point of failure is there [7].
- Bypass attack possible

3. **P2P protocol:** Recently, more advanced Botnet used decentralized model for their communications [3, 8]. For eg; Phatbot[7], Storm, Nugache [7], Peacomm [7], Conficker and Slapper[9] used P2P communication protocols to perform malicious activity.

#### Weaknesses of P2P based bots:

- Strict Dependent ability on previous or others nodes
- These will not generate a sound Botnet
- Not mature
- If these have poor connectivity then easily traced
- Compared to HTTP Botnet, these have no hardly encryption /authentication code
- For large number of nodes, creates a complex structure and generates a large amount of traffic
- WASTE P2P protocol [8] is not scalable across a large network.

#### IV. BOTNET DETECTION TECHNIQUES

In this paper, We present our Pebbletrace scheme for the traceback to the botmaster. It first identifies cryptographic keys of the botnet communications for configuring botnet operations and then traces back to the botmaster. First identify the cryptographic key of the botnet communications for figuring out the botnet operations. We then compromise the botnet entities for tracing back to the botmaster across the stepping-stones.

##### A. Key Identification

A major difficulty for analyzing botnet attack traffic is that communication between bots and C&C servers are usually encrypted, and the encryption keys are to be identified first. Traditional memory forensic key identification problem was studied (e.g. [15]), however, we have to meet the following new challenges:

- *No source code.*

Traditional key identification schemes usually investigate source code, e.g. [16]. However, it is hard to obtain bot source code — often not even the bot binaries. Static analysis on source code and binaries cannot be conducted as in memory forensic.

- *Abnormal code pattern*

Attackers do not follow the standards to implement their encryption schemes even though they are mathematically equivalent. Identification schemes based on standard key

words, such as prefixes and formats usually do not apply.

- *Hard to verify candidate keys*

– Traditional memory forensic often verifies candidate keys either by checking key scheduling properties and entropy of keys, or by applying them to encrypted text to obtain plain text that is meaningful for manual checking. The former scheme is prone to false positives. The latter one does not work well either, for the plaintext of the sniffed botnet traffic may not be meaningful by the design of the botmaster. Therefore, one cannot verify a candidate key by manual checking for decrypted botnet traffic.

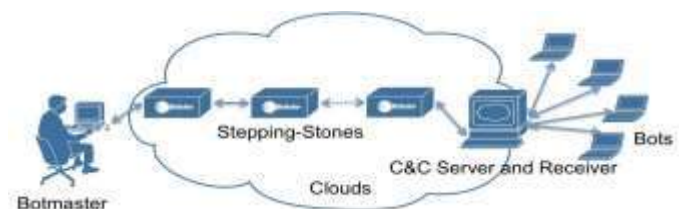
– Keys should be identified for traceback before attackers disappear from the C&C servers and stepping-stones. Therefore, manual checking is often ruled out due to the short duration of botnet attacks, and we have to consider automated verification of candidate keys.

- *Low false positives*

It alerts the attacker if we apply an incorrect key to manipulate the botnet traffic for a traceback; he will quickly tear down the C&C server and stepping-stones. Therefore, low false positives are required, and it is not well studied or emphasized in the published literature.

##### B. Stepping-stones

Attackers usually hide behind stepping-stones from Web proxy, VPN and SSH tunneling. The latest botnets also leverage social networks and anonymous networks. In this article, we mainly consider proxy, VPN and SSH tunneling. We are focused on the two main challenges: key identification and stepping-stones, and present our Pebbletrace method for tracing back to botmasters in the network.



**Figure 3: A Botnet Attack**

##### C. Pebbletrace solution for Botnet attack

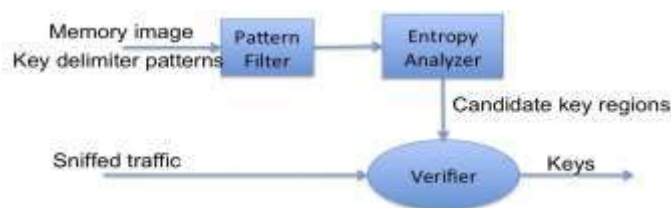
In the advent of a botnet attack we collect information of attack traffic for an analysis. We first identify the encryption keys for decrypting the traffic. We then intercept the botnet traffic by entering our code – Pebbleware that enables us to traceback to the botmaster.

### A. Information Collection

To traceback the botmaster, victims' local network administrator collects information from victim machines. Intrusion detection before information collection is out of scope of this paper. We assume that a local network administrator can obtain network traffic between bots and C&C servers, which communicate periodically. A network administrator can also collect memory image of victim machines and basic information of the attack event. The information includes hostname of the C&C server, the drop-zone URL and the types of botnets (e.g. Zeus). The local network administrator submits collected information — traffic records, memory image, and other basic information to traceback server and requests for a traceback service.

### B. Key Identification and Extraction

When the traceback server receives traceback requests with the needed information, it first identifies the encryption key of attack traffic for: (i) Decrypting the attack traffic and figure out the needed information for traceback; and (ii) Embed Pebbleware in the botnet traffic and traceback botmasters through stepping-stones. Our key identification scheme works without source codes and with vague traffic patterns only, is time efficient, and has low false positives. Given a memory image of victim machines, network traffic (ciphertext) and the type of botnets, we propose a three-phase detection scheme that consists of (i) a pattern filter; (ii) an entropy analyzer; and (iii) a verifier for identifying the symmetric keys used by bots. Figure 4 is an overview of the key identification scheme.



**Figure 4: An Overview of Key Identification Scheme**

*Phase 1: Pattern Filter* identifies suspected regions, which contain the key. We know the key size (number of bytes) yet not its location. However, we have information of the bit pattern before and after the key — its delimiters. We obtain such information from the previous works on botnets of their particular symmetric encryption schemes. Unfortunately, the delimiter pattern information is supposed to be vague so that it can adapt to multiple versions of the botnets. For example, a delimiter pattern for Zeus botnet where RC4 is used for encryption could be 2 consecutive zero bytes followed by 256 to 400 other bytes and another 2 consecutive zero bytes. The

256 to 400 bytes include RC4 256-byte S array (equivalent to symmetric key) and other overheads for Zeus. Given a memory image of a victim machine, we apply the Pattern Filter that contains key delimiter pattern information and obtain suspected regions, which may contain the key. However, the number of the suspected regions is usually large and we reduce it by an entropy analysis in Phase 2.

*Phase 2: Entropy Analyzer* further analyzes the suspected regions from Phase 1 and identifies several candidate keys for verification. The design idea is: a strong symmetric encryption scheme achieves security goal by constructing a pseudorandom string for encrypting a plaintext by an XOR with it. Hence a region that contains a pseudorandom string has high entropy value. Entropy search is first proposed in [12]. The entropy value of a string is:

$$E = - \sum_{i=0, \dots, 255} p_i \log(p_i)$$

where  $p_i$  is the empirical probability of value  $i$  in the string. Since each byte has 8 bits of values from 0 to 255, a pseudorandom string has an entropy value closed to  $\log(256) = 8$ . We compute entropy of each suspected region from Phase 1 and rule out the ones with entropy lower than a threshold value, thus greatly reduce the number of suspected regions, resulting in candidate key regions for further analysis. The threshold value can be varied by different types of botnets.

*Phase 3: Verifier* validates the candidate key regions and identifies the key in two steps. We first examine each candidate key region with a sliding window of the key size and check whether all properties of key scheduling are satisfied. For example, for RC4, it checks whether there are 256 bytes with 256 different values; it is the property of RC4 key scheduling. Similar approaches have been used in [18]. If we consider all of them, the false positives are too high. The second step of the verifier explores the idea that normal plaintext and customized encryption are usually weak for crypto-analysis. That is, the randomness of ciphertext mostly comes from symmetric key encryption schemes, rather than a plaintext of customized encryption. Therefore, if a correct key is found and applied to decrypting ciphertext traffic string, the string will have a significant drop in the entropy values after decryption. On the contrary, if an incorrect key is used for decryption, the entropy value remains high. Consequently, only the right key significantly reduces the entropy value by decrypting the ciphertext.

Algorithm I summarizes the algorithm of the key identification that contains three phases. The time to check a memory with size  $N$  is  $O(C_0N + C_1M_1 + C_2M_2)$

where  $C_0$  is the time to check by Prototype Filter,  $C_1$  and  $C_2$  are time for computing entropies and time for verifying keys, and  $M_1$  and  $M_2$  are the number of suspected regions after the Pattern Filter and Entropy Explorer, respectively. Note that  $C_1, C_2 \gg C_0$ , and  $N \gg M_1 \gg M_2$ . Our algorithm avoids expensive checking on the whole memory image by narrowing down candidate keys at each phase.

**Algorithm 1: Suggested Key Identification Scheme**

```

Require: memory_image, network_traffic,
key_delimiter_prototype,
    Lowest_entropy = 8;
    Detected_key = NULL;
    while EOF != (byte=read_a_byte(memory_image))
do
suspect_region = update(suspect_region, byte);
if true!= check_pattern(suspect_region,
key_delimiter_prototype) then
    continue;
else if entropy(suspect_region) < entropy_threshold then
    continue;
else
    while key = sliding_window(suspect_region) do
if false== satisfy_key_scheduling(key) then
        continue;
else
        plaintext = decrypt(key, network_traffic);
        key.entropy = entropy(plaintext);
        if key.entropy < lowest_entropy then
            lowest_entropy = key.entropy;
            detected_key = key;
        end if
    end if
    end while
end if
    end while
return detected_key;
    
```

**D. Pebbleware for Pebbletrace**

A traceback is possible when a botmaster wants to communicate with victims to obtain information. However, botmaster usually does not communicate directly with the victims or C&C servers. Instead, he may communicate through one of his accomplices through stepping-stones. Consequently, we can initiate our traceback process from the victim and/or receiver machine. We want to keep track of the communication path from the victim/receiver machine to the botmaster by spreading “pebbles” — Pebbleware. A Pebbleware is a piece specially designed executable code that reveals its host machine information. We piggyback Pebbleware on the communication packets from the victim/receiver to the

botmaster. When it reaches the botmaster, it reports to us the host machine information.

Figure 5 shows an overview of our Pebbletrace scheme for cloud-based botnets. The traceback starts from the receiver, i.e. C&C server, or from the victim. A local network administrator submits a request to traceback server providing sniffed traffic, memory image and basic information of victim. Traceback server then extracts encryption key of botnet communication by our key identification algorithm. After that traceback server creates a Pebbleware and encrypts it with the detected botnet key.



**Figure 5: An Overview of Pebbletrace for Cloud-based Botnets**

Pebbleware is then spread (piggybacked) from the receiver or the victim to the botmaster’s machine along the same path as the responses from the victims while pebbleware is executed at its host machine. As a result, the botmaster’s machine is forced to send its IP address to the traceback server when Pebbleware reaches and executes there. Sometimes botmaster launches attacks outside their home domain, e.g. Starbucks. In this case private IP address does not reveal his identification, and Pebbleware should also collect other information, such as the hostname, routing table, files, directories, and screen snapshots.

Pebbleware is designed by exploring the zero day vulnerabilities of: (1) Vulnerabilities of C&C servers. As other software developers, botnet developers can also make mistakes, leaving vulnerabilities on C&C servers. In [18], a vulnerability of Zeus C&C server due to careless input examination is reported. In [19], vulnerabilities of Unreal IRCd botnet are studied. The vulnerabilities enable us to take down botnets and also to compromise C&C servers for a Pebbletrace through stepping-stones. (2) Vulnerabilities of clients. Client side zero-day vulnerabilities can be explored to traceback through stepping-stones across clouds, if botmaster uses the client in his local machine. Typical client side vulnerabilities include web browser vulnerabilities and SSH client vulnerabilities. Pebbleware, which exploits such vulnerabilities, is usually embedded in the application layer payload to be relayed by stepping-stones. Finally, when it reaches the botmaster’s machine it is executed and sends the host machine IP address to the traceback server.

## V. CONCLUSION

As well discussed above since 1988, Botnet have evolved from the beginning assistant tool to the predominant threat in modern internet and as discussed in this paper, in 1988 Botnet was not a malicious activity but later in 1998, attacker use the bot to perform malicious activity via cyber crime. That is Botnets pose a significant and growing threat against cyber-security as they provide a key platform for many cybercrimes such as DDoS attacks against critical targets, malware dissemination, phishing, and click fraud etc. Although the number of bots to each Botnet seems to be decreasing, the monetary damaging power of the Botnets is continuously increasing given the development of internet bandwidth due to change in technology.

This study is focused on the attacks that a botmaster attempts to steal sensitive data from the victim machines and we can spread our tracing pebbles along with the stolen data all the way back to the botmaster. However, if a botmaster only wants to communicate with the victims, more intelligence has to be integrated in the Pebbleware. As most of the botnet traffic is encrypted by symmetric keys for efficiency, we only study symmetric key identification.

Asymmetric key identification is a challenging research topic in general. However, our results on symmetric key identification and the specific botnet application environment may shed light on future investigation.

Anonymous network and social network services, such as Twitter and Facebook, might be moved into clouds. Their security, particular defense against botnets, is an intriguing research topic.

## Acknowledgment

We would like to thank Dr. VSK Reddy, Principal, Malla Reddy College of Engineering and Technology and Dr. D. Sujatha, HOD, CSE dept., MRCET for their kind help and motivation of doing research.

## REFERENCES

1. Hossein Rouhani Zeidanloo, Azizah Bt Manaf, Payam Vahdani, Farzaneh Tabatabaei, Mazdak Zamani, "Botnet Detection Based on Traffic Monitoring" *IEEE transaction*, 2010.
2. SANS Institute InfoSec Reading Room provided a description on "Bot & Botnet: An overview" research on topics in information security, 2003.
3. Generation of a robust Botnet capable of maintaining control of its remaining bots even after a substantial portion of the Botnet population has been removed by defenders.
4. S. Nagendra Prabhu, Kemal Sultan Abdo & Gashaw Bekele Kabtimer, 'Introducing Proxy Cloud Storage Using Internet Information Services in University and Utilization Of Its

*Resources in the Academic Institution' in Journal of Network communications and Emerging Technologies, Volume 8, issue 2, February 2018.*

5. Hossein Rouhani Zeidanloo, Farhoud Hosseinpour, Farhood Farid Etemad, "New Approach for Detection of IRC and P2P Botnets", *International Journal of Computer and Electrical Engineering*, Vol.2, No.6, December, 2010, 1793-8163.
6. Prabhu S, Chandrasekar V & Shanthi S, *Improving the performance of IDS using Arbitrary Decision Tree in Network Security, International Journal of Advanced Science and Technology* Vol. 29, No. 3, (2020), pp. 3453 - 3462
7. Hossein Rouhani Zeidanloo, Azizah Abdul Manaf, "Botnet Command and Control Mechanisms", *IEEE transactions*, 2009.
8. Nagendra Prabhu, S & Shanthi, D 'A Survey on Anomaly Detection of Botnet in Network' published in *Volume 2, Issue 1 of International Journal of Advance Research in Computer Science and Management Studies in the year of 2014.*
9. Robert F. Erbacher, Adele Cutler, Pranab Banerjee, Jim Marshall, "A Multi-Layered Approach to Botnet Detection", *IEEE conference*, 2010.
10. Nagendra Prabhu, S & Shanthi Saravanan, D, 2017, 'An Efficient Botnet Detection System in Large Scenario Networks Using Adaptive Neuro Fuzzy Inference System Classifier', *Journal of Computational and Theoretical Nanoscience* Vol. 14, 1-5, 2017
11. P. Wang, S. Sparks, and C. C. Zou, "An advanced hybrid peer-to-peer botnet," in *Proc. In Workshop on Hot Topics in understanding Botnets*, 2010.
12. Prabhu, SN & Shanthi, D, 'Cloud Computing Defense Threats and Responses against DDOS Attack', published in *Volume 5, Issue 4 in International Journal of Science, Engineering and Technology Research (IJSETR) in Vol. 5, 1-4, April 2016.*
13. [http://www.kaspersky.com/reading\\_room?chapter=207716701](http://www.kaspersky.com/reading_room?chapter=207716701)
14. S. Nagendra Prabhu, The title name "Examining Zeus Botnet by Adopting Key Extraction and Malicious Traffic Detection Framework using DNS" in *International Journal of Applied Engineering Research* ISSN 0973-4562 Volume 10, Number 3 (2015) pp. 6987-7007 © Research India Publications
15. K. Harrison and S. Xu, "Protecting cryptographic keys from memory disclosure attacks," in *International Conference on Dependable Systems and Networks*, 2007, pp. 137-143.
16. S. Nagendra Prabhu, S. Shanthi & V. Chandrasekar, 'Botnet Revealing By Consuming Data Mining Techniques In Cloud System', *International Journal For Recent Development In Science & Technology (IJRDST)*, Volume 03, Issue 12, Dec 2019 ISSN 2581 - 4575..
- A. Shamir and N. Van Someren, "Playing 'hide and seek' with stored keys," in *Financial Cryptography*, 1999, pp. 118-124.
17. J. Li et al., "Large-scale IP traceback in high-speed Internet: Practical techniques and theoretical foundation," in *IEEE Symposium on Security and Privacy*, 2004, pp. 115-129.
18. Y. Zhang and V. Paxson, "Detecting stepping stones," in *USENIX Security Symposium*, vol. 171, 2000, p. 184.



# EFFECTS OF CAPACITY PLANNING AND CONTROL ON CUSTOMER SATISFACTION IN SELECTED BANKS IN NORTH CENTRAL STATES, NIGERIA

**Boluromi, Samuel Sunday**

Department of Arts and Social Sciences,  
School of Preliminary Studies,  
Kogi State Polytechnic,  
Lokoja.  
Nigeria

**Olorunnipa, Samuel Atteh**

Department of Sciences,  
School of Preliminary Studies,  
Kogi State Polytechnic,  
Lokoja. Nigeria

**Saliu Adekunle Ekundayo**

Department of Arts and Social Sciences,  
School of Preliminary Studies,  
Kogi State Polytechnic,  
Lokoja. Nigeria

**Research is funded by Tertiary Education Trust Fund (TETFUND)**

## ABSTRACT

*The research project considered effects of capacity planning and control on customer satisfaction in selected banks in North Central States, Nigeria. Banks key elements of effective capacity factors such as Automatic Teller Machine (ATM), Bank Hall aesthetic and comfortability, and Process factor in terms of time it takes for service delivery were examined. The objective was to ascertain whether each of these elements has any influence on customer satisfaction. Primary source of data was employed for this study. Data for this study was collected with the aid of a structured questionnaire. Questionnaire was shared to 1,050 customers of selected banks. Data was analyzed through Grand Mean test. Findings revealed that ATM, Banking Hall and Process factor have significant influence on customer satisfaction. On the basis of these findings, the study recommends that Banks should provide ATMs that are of high quality so that the rate at which customers account are debited without dispensing cash would be reduced. More seats are to be added to the existing sitting arrangement since there is increase in the number of people that are making use of banks in their transactions. It is equally recommended that the average time customers spent in the banking hall to access service should be looked into. There should be switching of staff when necessary.*

**KEY WORDS:** *Capacity Planning and Control, Customer Satisfaction, Nigeria*

## 1.1 INTRODUCTION

The take-off and the continued growth and expansion of a bank depend on the level of capacity available. Usually, type of activities engaged in, technology available and responsiveness to competitive trends are contributing factors that shape the progressiveness or otherwise of a bank's capacity structure. In some instances, capacity choices are made regularly as part of an ongoing process. The aim of the capacity planner is to plan so well that new capacity is

added just in time to meet the anticipated need but not so early that resources go unused for a long period (Fitzsimmons and . Fitzsimmons, 2001; Wisner and Stanley, 2008

## 1.2 STATEMENT OF THE PROBLEM

Demand volatility presents problem for capacity planners. It tends to be higher for services than for goods, not only in timing of demand but also in the time required to service individual customers. The fact



that services cannot be stored means service system cannot turn to inventory to smooth demand requirements on the system the way the goods-producing systems are able to do (Saloner et al., 2001; Wisner and Stanley, 2008; Jhingan and Stephen, 2009; and Madueme, 2009). Due to this, customers do spend their productive hours in banks awaiting services. Customer satisfaction in the banks in the North Central States, Nigeria remains largely unattended to, upon this backdrop; the study will provide both short and long term solution to time wasting while accessing services at the bank by customers.

### 1.3. RESEARCH QUESTIONS

- i. What is the effect of ATM on customer satisfaction?
- ii. What is the effect, if any, of aesthetic appeal of bank building and comfortability on customer satisfaction?
- iii. What is the effect of process factor in terms of time taken on customer satisfaction?

### 1.4. AIMS, GENERAL AND SPECIFIC OBJECTIVES OF THE STUDY

The general objective of this study is effects of capacity planning and control on customer satisfaction in selected banks in north central states of Nigeria. The specific objectives are:

1. To find out the effects of Automatic Teller Machine (ATM) service on customer satisfaction.
2. To identify the effect of banking hall aesthetic and comfortability on customer satisfaction.
3. To determine whether the time taken for service delivery has significant effect or not on customer satisfaction.

### 1.5. RESEARCH HYPOTHESES

- i. Ho ATM service has no significant effect on customer satisfaction.
- ii. Ho Banking Hall aesthetic and comfortability does not significantly contribute to customer satisfaction.
- iii. Ho Time Taken for service delivery has no significant influence on customer satisfaction.

### SIGNIFICANCE OF THE STUDY

The indispensability of banking hall on customer satisfaction cannot be overemphasized in banks. Previous studies carried out on customer satisfaction include the following. Okoh, Agavwe, and Aghadiuno (2009) investigated imperatives of effective management of customers' relationship, marketing for

efficient operations in industrial marketing organizations. Amue (2006) examined relationship marketing as the development, growth, and maintenance of long-term, cost-effective exchange relationships with individual customers, suppliers, employees, and other partners for mutual benefit. Okoroafor (2010) examined the exact timing and magnitude of fixed asset expansion through maintenance of a close relationship with the customers. However, this study would bridge the gap by focusing on effective and efficient service delivery in banks through effects of capacity planning and control on customer satisfaction in selected banks in North Central States, Nigeria. This study would be of significance for some reasons. It will contribute to knowledge by filling a gap in the area of meeting service delivery effectively and efficiently in selected banks in North Central States, Nigeria. Banks would also be better directed on policy decisions with regards to requirements needed for efficient service delivery. Findings of this study can help stimulate government blueprint for capacity planning and control measures in banks. In addition, the study would enhance conceptual issues relating to capacity planning. Future researchers in similar or related fields would find the material of invaluable use. Finally, it will serve as a pointer to ginger new research efforts in areas not touched in this study.

### 2.0. LITERATURE REVIEW

The initial take-off, as well as continued growth and expansion of an organization hinges on the level of capacity available. Usually, type of activities engaged in, technology available and responsiveness to competitive trends are contributing factors that shape the progressiveness or otherwise of an organization's capacity structure. This is buttressed by Stevenson (2002) that capacity is an upper limit or ceiling on the load that an operating unit can handle. The operating unit might be a plant, department, machine store or worker. This clearly indicates that capacity is the maximum amount of work that an organization is capable of completing in a given period of time. Therefore, there is a need to make capacity issues part of both long term and operating strategy. For example, a strategy of capacity expansion may be used to provide a presence in geographical locations before competitors gain access to a market (Chase, Aquilano, and Jacobs, 2007; Greasley, 2009; Patel and Nangle, 2008).

In some instances, capacity choices are made very infrequently; in others, they are made regularly, as part of an ongoing process. Generally, the factors that influence this frequency are the stability of demand, the rate of technological change in equipment and product



design, and competitive factors. In any case, management must review product and service choices periodically to ensure that the company makes capacity changes when they are needed for cost, competitive effectiveness, or other reasons. If a firm has excess capacity, or can quickly add capacity that may serve as a barrier to entry by other firms. In addition, capacity can affect delivery speed, which can be a competitive advantage (Stevenson,2002; Kasimoglu,2018; Saloner, Shepard, and Podolny, 2001 ; and Jhingan and Stephen, 2009).

A typical capacity concern of many enterprises is whether resources (labour, machine, etc.) will be in place to handle an increasing number of requests as the number of users or interactions increases. The aim of the capacity planner is to plan so well that new capacity is added just in time to meet the anticipated need but not so early that resources go unused for a long period. The successful capacity planner is one that makes the trade-offs between the present and the future that overall prove to be the most cost-efficient. The capacity planner, using business plans and forecasts, tries to imagine what the future needs will be.

A discrepancy between the capacity of an organization and the demands of its customers results in inefficiency, either in underutilized resources or in unfulfilled customers. The goal of capacity planning minimizes this discrepancy. Demand for an organization's capacity varies based on changes in production output, such as increasing or decreasing the production quantity of an existing product, or producing new products. Better utilization of existing capacity can be accomplished through improvements in overall equipment effectiveness (OEE). Capacity can be increased through introducing new techniques, equipment and materials, increasing the number of workers or machines, increasing the number of shifts, or acquiring additional production facilities (Uwanna, 2010). Knowing the significance capacity planning plays in giving sense of direction to capacity requirements, organizations should take it seriously.

### 3.0. RESEARCH METHODOLOGY

The research design considered appropriate for this study was survey research. The population of this study comprised of all bank customers in the north central states of Nigeria.

Accidental (convenience) sampling was used for this study. Accidental sampling method was adopted because questionnaire was given to customers who were available at the bank and willing to fill on the days of sharing the questionnaire. Questionnaire was used to draw data from the respondents

Both descriptive and inferential statistics was used for data analysis.

Grand Mean was used to determine the effects of the independent variable on the dependent variable.

#### 3.1. The Study Location

The study location is the north central states of Nigeria. It comprises the following states: Kogi, Kwara, Benue, Plateau, Nassarawa, Niger and Federal Capital Territory, Abuja.

### 4.1. DISCUSSION OF RESULTS ON ATM

Hypothesis 1 states that Automated Teller Machine service has no significant effect on customer satisfaction.

1,050 questionnaires were served, 50 at each bank (First Bank, United Bank for Africa (UBA), and Polaris Bank) of each bank in all the North Central States, Nigeria and Abuja. 1, 001 questionnaire was retrieved from customers.

Summary of responses on indication of customer satisfaction with each of the statement describing the ATM usage are below.

#### 4.1.1: Experience in ATM Usage in terms of Efficiency in Dispensing of Cash without Error

In terms of the experience in ATM usage in terms of efficiency in dispensing of cash without error, the results obtained are in Table 4.1.1.

**Table 4.1.1: Summary of Response on Experience in ATM Usage in terms of Efficiency in Dispensing of Cash without Error**

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	33	41	67	141	14.1	14.1	14.1
Satisfactory	186	135	138	459	45.9	45.9	60
Just Satisfactory	55	53	74	182	18.2	18.2	78.2
Unsatisfactory	48	82	25	155	15.5	15.5	93.7
Very Unsatisfactory	7	25	32	64	6.4	6.4	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020





The result in Table 4.1.1 was tested with Grand Mean and Table 4.1.2 shows that the calculated value of Mean is 2.54 which is less than the bench mark (Average) which is 3.

**Table 4.1.2: Result of Grand Mean Test on Experience in ATM Usage in terms of Efficiency in Dispensing of Cash without Error**

	Result
Valid	1,001
Missing	0
Mean	2.54

Source: Survey Data, 2020

**Decision Rule:** The Mean (2.54) is less than the cut or bench mark (3). Therefore, the null hypothesis is rejected because the Grand Mean result is satisfactory. It does mean that customers are satisfied with their experience in ATM usage in terms of efficiency in cash withdrawal. This result supports the works of Fitzsimmons and Fitzsimmons (2001) and Saloner et al., (2001).

#### 4.1.2.: Satisfaction in terms of the Time it Take to Correct ATM Error in Cash Withdrawal

In terms of the satisfaction of the time it takes to correct ATM error in cash withdrawal, the results obtained are in Table 4.1.3.

**Table 4.1.3: Summary of Response on Satisfaction in terms of the Time it Take to Correct ATM Error in cash withdrawal**

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	35	7	10	52	5.2	5.2	5.2
Satisfactory	94	87	135	316	31.6	31.6	36.8
Just Satisfactory	99	106	109	314	31.4	31.4	68.2
Unsatisfactory	54	89	51	194	19.4	19.4	87.6
Very Unsatisfactory	47	47	31	125	12.5	12.5	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.1.3 was tested with Grand Mean and Table 4.1.4 shows that the calculated value of Mean is 3.02 which is greater than the bench mark (Average) which is 3.

**Table 4.1.4: Result of Grand Mean Test on Satisfaction in terms of the Time it Take to Correct ATM Error in cash withdrawal**

	Result
Valid	1,001
Missing	0
Mean	3.02

Source: Survey Data, 2020

**Decision Rule:** The Mean (3.02) is greater than the cut or bench mark (3). Therefore, the null hypothesis is accepted because the Grand Mean result is unsatisfactory. It does mean that customers are unsatisfied with the time it takes to correct ATM error in cash withdrawal when it occurred. This result supports the works of Chase et al., (2004) and Stevenson (2002).

#### 4.1.3: Satisfaction on the Availability of Cash at the ATM

In terms of satisfaction on the availability of cash at the ATM, the results obtained are in Table 4.1.5.

**Table 4.1.5: Summary of Response on Satisfaction on the Availability of Cash at the ATM**

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	57	52	36	145	14.5	14.5	14.5
Satisfactory	115	101	149	365	36.5	36.5	51
Just Satisfactory	79	111	111	301	30.1	30.1	81.1
Unsatisfactory	67	50	19	136	13.6	13.6	94.7
Very Unsatisfactory	11	22	21	54	5.4	5.4	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.1.5 was tested with Grand Mean and Table 4.1.6 shows that the calculated value of Mean is 2.56 which is less than the bench mark (Average) which is 3.

**Table 4.1.6: Result of Grand Mean Test on Satisfaction on the Availability of Cash at the ATM**

	Result
Valid	1,001
Missing	0
Mean	2.56

Source: Survey Data, 2020

**Decision Rule:** The Mean (2.56) is less than the cut or bench mark (3). Therefore, the null hypothesis is rejected because the Grand Mean result is satisfactory. It does mean that customers are satisfied with availability of cash when the need to withdraw arises. This result supports the works of Jhigan and Stephen (2009) and Patel and Nangle (2008).

#### 4.1.4: Satisfaction on Supply of Power to the ATM

In terms of satisfaction on supply of power to the ATM, the results obtained are in Table 4.1.8

**Table 4.1.7: Satisfaction on the Supply of Power to the ATM**

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	68	44	42	154	15.4	15.4	15.4
Satisfactory	167	96	142	405	40.5	40.5	55.9
Just Satisfactory	54	108	94	256	25.6	25.6	81.5
Unsatisfactory	40	88	29	157	15.7	15.7	97.2
Very Unsatisfactory	0	0	29	29	2.9	2.9	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.1.8 was tested with Grand Mean and Table 4.1.9 shows that the calculated value of Mean is 2.50 which is less than the bench mark (Average) which is 3.

**Table 4.1.8: Result of Grand Mean Test on Satisfaction on the Supply of Power at the ATM**

	Result
Valid	1,001
Missing	0
Mean	2.50

Source: Survey Data, 2020



**Decision Rule:** The Mean (2.56) is less than the cut or bench mark (3). Therefore, the null hypothesis is rejected because the Grand Mean result is satisfactory. It does mean that customers are satisfied with the supply of power at the ATM. This result supports the works of Amue (2006) and Kasimoglu (2010).

#### 4.1.4: Satisfaction on Supply of Power to the ATM

In terms of satisfaction on supply of power to the ATM, the results obtained are in Table 4.1.9.

**Table 4.1.9: Satisfaction on the Time Spent at the ATM during Transactions**

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	53	5	32	9	9.0	9.0	9.0
Satisfactory	137	114	132	383	38.3	38.3	47.3
Just Satisfactory	75	48	94	217	21.7	21.7	69
Unsatisfactory	39	127	46	212	21.2	21.2	90.2
Very Unsatisfactory	25	42	32	99	9.9	9.9	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.1.9 was tested with Grand Mean and Table 4.1.10 shows that the calculated

value of Mean is 2.85 which is less than the bench mark (Average) which is 3.

**Table 4.1.10: Result of Grand Mean Test on Satisfaction on the time spent at the ATM during transactions**

	Result
Valid	1,001
Missing	0
Mean	2.85

Source: Survey Data, 2020

**Decision Rule:** The Mean (2.85) is less than the cut or bench mark (3). Therefore, the null hypothesis is rejected because the Grand Mean result is satisfactory. It does mean that customers are satisfied with the time spent at the ATM during transactions. This result supports the work of Uwanna (2010).

## 4.2. DISCUSSION OF RESULTS ON BANKING HALL

Hypothesis 2 states that Banking Hall aesthetic and comfortability does not significantly contribute to customer satisfaction.

1,050 questionnaires were served, 50 at each bank (First Bank, United Bank for Africa (UBA), and Polaris Bank) of each bank in all the North Central States, Nigeria and Abuja. 1, 001 questionnaire was retrieved from customers.

Summary of responses on indication of customer satisfaction with each of the statement describing the Banking Hall are below.

#### 4.2.1: Level of Ventilation in the Banking Hall while Awaiting Service

In terms of the level of ventilation in the Banking Hall while awaiting service, the results obtained are in Table 4.2.1.

**Table 4.2.1: Summary of Response on Level of Ventilation in the Banking Hall While Awaiting Service**

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	50	38	12	100	10.0	10.0	10.0
Satisfactory	108	55	32	195	19.5	19.5	29.5
Just Satisfactory	150	220	208	577	57.7	57.7	87.2
Unsatisfactory	21	8	44	73	7.3	7.3	94.5
Very Unsatisfactory	0	15	40	55	5.5	5.5	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.2.1 was tested with Grand Mean and Table 4.2.2 shows that the calculated value of Mean is 2.79 which is less than the bench mark (Average) which is 3.

**Table 4.2.2: Result of Grand Mean Test on Level of Ventilation in the Banking Hall While Awaiting Service**

	Result
Valid	1,001
Missing	0
Mean	2.79

Source: Survey Data, 2020

**Decision Rule:** The Mean (2.79) is less than the cut or bench mark (3). Therefore, the null hypothesis is rejected because the Grand Mean result is satisfactory. It does mean that customers are satisfied with the level of ventilation in the banking hall while awaiting services. This result supports the work of Stevenson (2002).

#### 4.2.2: Effectiveness of Air Conditioners in the Banking Hall

In terms of the effectiveness of air conditioners in the Banking Hall, the results obtained are in Table 4.2.3.

**Table 4.2.3: Summary of Response on the Effectiveness of air conditioners in the Banking Hall**

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	40	29	15	84	8.4	8.4	8.4
Satisfactory	136	69	27	232	23.2	23.2	31.6
Just Satisfactory	125	206	210	540	54.0	54.0	85.6
Unsatisfactory	28	32	51	111	11.1	11.1	96.7
Very Unsatisfactory	0	0	33	33	3.3	3.3	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.2.3 was tested with Grand Mean and Table 4.2.4 shows that the calculated value of Mean is 2.78 which is less than the bench mark (Average) which is 3.

**Table 4.2.4: Result of Grand Mean Test on Effectiveness of Air Conditioners**

	Result
Valid	1,001
Missing	0
Mean	2.78

Source: Survey Data, 2020



**Decision Rule:** The Mean (2.78) is less than the cut or bench mark (3). Therefore, the null hypothesis is rejected because the Grand Mean result is satisfactory. It does mean that customers are satisfied with the effectiveness of air conditioners in the banking hall while awaiting services. This result supports the work of Wisner and Stanley (2008).

#### 4.2.3: Availability of Seat in the Banking Hall

In terms of the availability of seat in the Banking Hall, the results obtained are in Table 4.2.5.

**Table 4.2.5: Summary of Response on the Availability of Seat in the Banking Hall**

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	30	20	59	109	10.9	10.9	10.9
Satisfactory	67	36	116	219	21.9	21.9	32.8
Just Satisfactory	46	71	64	181	18.1	18.1	50.9
Unsatisfactory	85	92	59	236	23.6	23.6	74.5
Very Unsatisfactory	101	117	38	256	25.6	25.6	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.2.5 was tested with Grand Mean and Table 4.2.6 shows that the calculated value of

Mean is 3.31 which is greater than the bench mark (Average) which is 3.

**Table 4.2.6: Result of Grand Mean Test on Availability of Seat**

	Result
Valid	1,001
Missing	0
Mean	3.31

Source: Survey Data, 2020

**Decision Rule:** The Mean (3.31) is greater than the cut or bench mark (3). Therefore, the null hypothesis is accepted because the Grand Mean result is Unsatisfactory. It does mean that customers are unsatisfied with the availability of seat when the need to seat arises in the banking hall while awaiting

services. This result supports the works of Chase et al.,(2004) and Patel and Nangle (2008).

#### 4.2.4: The Neatness of the Banking Hall

In terms of the neatness of the Banking Hall, the results obtained are in Table 4.2.7.

**Table 4.2.7: Neatness of the Banking Hall**

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	65	49	25	139	13.9	13.9	13.9
Satisfactory	215	214	199	628	62.7	62.7	76.6
Just Satisfactory	34	48	64	146	14.6	14.6	91.2
Unsatisfactory	15	25	48	88	8.8	8.8	100.0
Very Unsatisfactory	-	-	-	-	-	-	
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.2.7 was tested with Grand Mean and Table 4.2.6 shows that the calculated value of

Mean is 2.18 which is less than the bench mark (Average) which is 3.

**Table 4.2.8: Result of Grand Mean Test on Neatness of the Banking Hall**

	Result
Valid	1,001
Missing	0
Mean	2.18

Source: Survey Data, 2020

**Decision Rule:** The Mean (2.18) is less than the cut or bench mark (3). Therefore, the null hypothesis is rejected because the Grand Mean result is Satisfactory. It does mean that customers are satisfied with the neatness of the banking hall. This result supports the work of Okoh et al., (2009).

#### 4.2.4: Gaining Access into the Banking Hall through Security Door

In terms of gaining access into the Banking Hall, the results obtained are in Table 4.2.9

**Table 4.2.9: Gaining Access into the Banking Hall through Security Door**

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	61	81	108	250	25.0	25.0	25.0
Satisfactory	124	146	158	428	42.8	42.8	67.8
Just Satisfactory	67	53	50	170	17.0	17.0	84.8
Unsatisfactory	52	44	20	116	11.6	11.6	96.4
Very Unsatisfactory	25	12	0	37	3.7	3.7	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.2.9 was tested with Grand Mean and Table 4.2.10 shows that the calculated value of

Mean is 2.26 which is less than the bench mark (Average) which is 3.

**Table 4.2.10: Result of Grand Mean Test on Gaining Access into the Banking Hall through Security Door**

	Result
Valid	1,001
Missing	0
Mean	2.26

Source: Survey Data, 2020

**Decision Rule:** The Mean (2.26) is less than the cut or bench mark (3). Therefore, the null hypothesis is rejected because the Grand Mean result is Satisfactory. It does mean that customers are satisfied with gaining access in to the banking hall. This result supports the work of Greasley (2009).

States, Nigeria and Abuja. 1, 001 questionnaire was retrieved from customers.

Summary of responses on indication of customer satisfaction with each of the statement describing the process in term of Time Taken are below.

### 4. 3. DISCUSSION OF RESULTS ON PROCESS IN TERM OF TIME TAKEN

Hypothesis 3 states that Time Taken for service delivery has no significant influence on customer satisfaction.

1,050 questionnaires were served, 50 at each bank (First Bank, United Bank for Africa (UBA), and Polaris Bank) of each bank in all the North Central

#### 4.3.1: Time Taken during Opening of an Account

The level of satisfaction in terms of time taken during opening of an account, the results obtained are in Table 4.3.1.

**Table 4.3.1: Summary of Response on Level of Satisfaction in Terms of Time Taken during Opening of an Account**

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	0	0	35	35	3.5	3.5	3.5
Satisfactory	38	61	192	291	29.1	29.1	32.6
Just Satisfactory	90	72	22	184	18.4	18.4	51
Unsatisfactory	58	89	54	201	20.1	20.1	71.1
Very Unsatisfactory	143	114	33	290	29.0	29.0	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.3.1 was tested with Grand Mean and Table 4.3.2 shows that the calculated value of Mean is 3.42 which is greater than the bench mark (Average) which is 3.

**Table 4.3.2: Result of Grand Mean Test on Time Taken in Opening of an Account**

	Result
Valid	1,001
Missing	0
Mean	3.42

Source: Survey Data, 2020

**Decision Rule:** The Mean (3.42) is greater than the cut or bench mark (3). Therefore, the null hypothesis is accepted because the Grand Mean result is Unsatisfactory. It does mean that customers were dissatisfied with the time taken to open accounts. This result supports the works of Okoroafor (2010) and Stevenson (2002).

#### 4.3.2: Time Taken during Withdrawal at the Counter

The level of satisfaction in terms of time taken during withdrawal at the counter, the results obtained are in Table 4.3.3

**Table 4.3.3: Summary of Response on Level of Satisfaction with the Time Taken during Withdrawal at the Counter**

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	0	0	28	28	2.8	2.8	2.8
Satisfactory	51	45	110	206	20.6	20.6	23.4
Just Satisfactory	68	73	58	199	19.9	19.9	43.3
Unsatisfactory	92	83	66	241	24.1	24.1	67.4
Very Unsatisfactory	118	135	74	327	32.7	32.7	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.3.3 was tested with Grand Mean and Table 4.3.4 shows that the calculated value of Mean is 3.63 which is greater than the bench mark (Average) which is 3.

**Table 4.3.2: Result of Grand Mean Test on Time Taken during Withdrawal at the Counter**

	Result
Valid	1,001
Missing	0
Mean	3.63

Source: Survey Data, 2020



**Decision Rule:** The Mean (3.63) is greater than the cut or bench mark (3). Therefore, the null hypothesis is accepted because the Grand Mean result is Unsatisfactory. It does mean that customers were dissatisfied with the long time taken to withdraw at the counter. This result supports the works of Amue (2006) and Greasley (2009).

#### 4.3.3: Time Taken for Request and Delivery of ATM Card

The level of satisfaction in terms of time taken for request and delivery of ATM card, the results obtained are in Table 4.3.5

**Table 4.3.5: Summary of Response on Time Taken for Request and Delivery of ATM Card**

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	0	0	40	40	4.0	4.0	4.0
Satisfactory	58	60	76	194	19.4	19.4	23.4
Just Satisfactory	75	116	180	371	37.1	37.1	60.5
Unsatisfactory	93	101	40	234	23.4	23.4	83.9
Very Unsatisfactory	103	59	0	162	16.2	16.2	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.3.5 was tested with Grand Mean and Table 4.3.6 shows that the calculated value of

Mean is 3.63 which is greater than the bench mark (Average) which is 3.

**Table 4.3.6: Result of Grand Mean Test on Time Taken for Request and Delivery of ATM Card**

	Result
Valid	1,001
Missing	0
Mean	3.28

Source: Survey Data, 2020

**Decision Rule:** The Mean (3.28) is greater than the cut or bench mark (3). Therefore, the Null hypothesis is accepted because the Grand Mean result is Unsatisfactory. It does mean that customers were dissatisfied with the time taken for request and delivery of ATM Card. This result supports the works of Kasimoglu (2010) and Saloner et al., (2001).

#### 4.3.4: Time Taken to Withdraw Cash at the ATM

The level of satisfaction in terms of time taken to withdraw cash at the ATM, the results obtained are in Table 4.3.7

**Table 4.3.7: Summary of Response on Time Taken for Cash Withdrawal at the ATM**

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	-	-	-	-	-	-	-
Satisfactory	52	66	34	154	15.4	15.4	15.4
Just Satisfactory	75	86	64	225	22.5	22.5	37.9
Unsatisfactory	95	97	110	302	30.2	30.2	68.1
Very Unsatisfactory	107	85	128	320	32.0	32.0	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.3.7 was tested with Grand Mean and Table 4.3.8 shows that the calculated

Value of Mean is 3.79 which is greater than the bench mark (Average) which is 3.



**Table 4.3.8: Result of Grand Mean Test on Time Taken for Cash Withdrawal at the ATM**

	Result
Valid	1,001
Missing	0
Mean	3.79

Source: Survey Data, 2020

**Decision Rule:** The Mean (3.79) is greater than the cut or bench mark (3). Therefore, the null hypothesis is accepted because the Grand Mean result is Unsatisfactory. It does mean that customers were dissatisfied with the time taken for cash withdrawal at the ATM. This result supports the works of Amue (2006) and Okoroafor (2010).

#### 4.3.5: Time Taken to Correct ATM Withdrawal Error

The level of satisfaction in terms of time taken to correct ATM withdraw error, the results obtained are in Table 4.3.9

**Table 4.3.9: Summary of Response on Time taken to Correct Withdrawal Error**

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	35	7	10	52	5.2	5.2	5.2
Satisfactory	94	87	135	316	31.6	31.6	36.8
Just Satisfactory	99	106	109	314	31.4	31.4	68.2
Unsatisfactory	54	89	51	194	19.4	19.4	87.6
Very Unsatisfactory	47	47	31	125	12.5	12.5	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.3.9 was tested with Grand Mean and Table 4.3.10 shows that the calculated value of Mean is 4.11 which is greater than the bench mark (Average) which is 3.

**Table 4.3.10: Result of Grand Mean Test on Time Taken for Correction of ATM Withdrawal Error**

	Result
Valid	1,001
Missing	0
Mean	4.11

Source: Survey Data, 2020

**Decision Rule:** The Mean (4.11) is greater than the cut or bench mark (3). Therefore, the null hypothesis is accepted because the Grand Mean result is Unsatisfactory. It does mean that customers were dissatisfied with the time it takes to correct ATM withdrawal error. This result supports the works of Chase et al., (2004) and Uwanna (2010).

#### 4.4. Research Findings

On running a Grand Mean test on three Capacity Planning and Control factors (ATM, Banking Hall and Process in term of Time Taken) the results revealed are as follows.

On ATM, there was a significant relationship between ATMs efficiency in dispensing of cash without error and customer satisfaction. Timely ATMs

error correction in dispensing of cash has significant effect on customer satisfaction. Customers were satisfied when cash was available at the ATMs when withdrawal was made. There was a significant relationship between the supply of power to the ATMs and customer satisfaction. The time spent during withdrawal at the ATMs significantly affects customer satisfaction.

On Banking Hall, the study revealed that customers were satisfied with the level of ventilation in the banking hall while awaiting services. It was revealed that customers were satisfied with the effectiveness of air conditioners in the banking hall. The study revealed that customers were dissatisfied with sitting arrangement in the banks under study. It was also established that banking halls were in good



sanitary condition. This research unraveled the fact that the security doors of the selected banks are in good condition.

On the issue of Process in terms of time taken, customers were dissatisfied with the time it took to open accounts, withdrawal at the counter, and request and delivery of ATM cards. Customers were also grossly not satisfied with the time taken to withdraw cash at the ATM as well as the time it took to correct ATM withdrawal errors.

#### 4.5. DISCUSSION OF FINDINGS

The major thrust of this study is to ascertain the “Effects of Capacity Planning and Control on Customer Satisfaction in Selected Banks in North Central States, Nigeria.

On running a Grand Mean test on ATM variables, it was found that customers were fairly satisfied on all the variables tested except one (time taken to correct ATM error in cash withdrawal). Findings revealed that bank equipment in terms of ATM is an influencing factor on customer’s satisfaction ( see tables 4.1.2, 4.1.4, 4.1.6, 4.1.8, and 4.1.10). Fitzsimmons and Fitzsimmons (2001); Stevenson (2002); and Chase et al., (2004) note that equipment is an effective determinant of capacity hence ATMs. The functionality and availability of ATMs will determine the rate and number of customers that can be attended to at a time, hence, customer satisfaction.

Banking Hall Grand Mean test revealed that customers were satisfied with all variables tested except one (the non availability of seats when there was a need to sit). Findings revealed that Banking Hall has great influence on customer satisfaction (see tables 4.2.2, 4.2.4, 4.2.6, 4.2.8 and 4.2.10). Wisner and Stanley (2008); and Okoh et al., (2009); submit that the aesthetic and comfortability of Banking Hall has gross impact on customer satisfaction.

On Process factor in terms of Time Taken, the Grand Mean test showed that all the variables were above bench mark. Customers were highly dissatisfied. Findings revealed that the time taken for service delivery affect customer satisfaction (See tables 4.3.2, 4.3.4, 4.3.6, 4.3.8, and 4.3.10). This supports the works of Amue (2006), Okoroafor (2010); Greaseley (2006); and Jhingan and Stephen (2009). The process of doing a work will determine the number of customers that would be attended to. When the process of doing a work is long and staff of the organization is unnecessarily rigid, the effectiveness of capacity will be affected. Staying long in the process before receiving service can negatively affect customer satisfaction.

## 5.0: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Summary

This study investigated the Effects of Capacity Planning and Control on Customer Satisfaction in Selected Banks in North Central, Nigeria. The study used a structured questionnaire as data collection instrument and Grand Mean as the tool of data analysis. The key findings of the study are summarized below:

Findings revealed that availability and functionality of ATM have great influence on customer satisfaction. When cash was available for withdrawal and transactions were error free, customers were very satisfied.

Customers were also satisfied when Banking Hall was neat, functional air conditioners and ability to sit when there was a need.

Findings revealed that the time customers spent play a significantly influence on customer satisfaction. Customers were dissatisfied when the process of performing transactions was long and they stayed for a long time on the queue. However, when the process of performing transactions was short and they stayed for a minimal time on the queue, they were very satisfied.

### 5.2 Conclusions

In line with findings summarized above, conclusions can be drawn as follows:

ATMs significantly influence customer satisfaction. Customers expressed satisfaction when ATMs dispensed cash without error, promptly correct error when it occurred, when there is availability of cash at the ATMs, when limited time is spent at the ATMs during transactions and when there is constant supply of power to the ATMs.

Banking Hall significantly affects customer satisfaction. Customers appreciate the aesthetic nature of the banking hall, functional air conditioners, spending short time at the withdrawal point. However, they were dissatisfied with non availability of seat when there was a need to sit.

Evidence revealed from findings that the time it takes to perform a transaction has great influence on customer satisfaction. Customers were dissatisfied when they stayed long in the process of receiving services.

### 5.3 Recommendations

Based on the above summary and conclusions drawn, the following recommendations are hereby made:

Banks should provide ATMs that are of high quality so that the rate at which customers account are debited without dispensing cash would be reduced. Debiting of a customer account without dispensing



cash is made worst when the customer did not have money in other account which could be withdrawn to meet the customer immediate needs. ATMs that automatically correct errors should be installed. A situation where a customer has to fill form for correction, that should be done within a reasonable hours. Customer is dissatisfied when ATM error correction runs into weeks if not months. There should be availability of cash in ATMs provided as this will lead to prompt withdrawal hence customer satisfaction. Customers are dissatisfied when ATMs display temporary out of cash. Given the facts that banks are having more customers, more functional ATMs should be provided. This will ease long queue and reduce the long time spent at the ATM thereby increasing customer satisfaction.

More seats are to be added to the existing sitting arrangement since there is increase in the number of people that are making use of banks in their transactions. Though neat interior already exist, this feat can still be improved upon to enhance higher service delivery. The security doors should be upgraded even at the current functional state with emerging technology.

The average time customers spent in the banking hall to access service should be looked into. Customers spent long period of time in First Bank and UBA. There should be switching of staff when necessary. Unnecessary procedures should be avoided as this will reduce the time spent hence customer satisfaction.

## RESEARCH IS FUNDED BY TERTIARY EDUCATION TRUST FUND (TETFUND)

## REFERENCES

1. Amue, G. J. (2006). *Industrial Marketing, Integrated Approach*. Davidstones Publishers Ltd., Port-Harcourt.
2. Chase R. B., Jacobs F. R., and Aquilano N. J. (2004). *Operations Management for Competitive Advantage (10<sup>th</sup> Ed.)*. Tata McGraw Hill Publishing Company Ltd., New Delhi.
3. Fitzsimmons, J. A. and Fitzsimmons, M. J. (2001). *Service Management: Operations, Strategy, and Information Technology (3<sup>rd</sup> Ed.)*. Irwin/ McGraw-Hill, New York.
4. Greasley, A. (2009). *Operations Management (2<sup>nd</sup> Ed.)*. West Sussex, John Wiley and Son Ltd., England.
5. Jhigan, M. L. and Stephen, J. K. (2009). *Managerial Economics (2<sup>nd</sup> Ed.)*. Vrinda Publication Ltd., Delhi.
6. Kasimoglu, M. (2010). *Survival Strategies for Companies in Global Business World- a Case*. Accessed from

<http://www.opf.slu.c2/vvr/athce/turecko/pdf/kasimoglu.pdf> on 1 December, 2018.

7. Okoh J., Agavwe O. E., and Aghadiuno P. (2009). "Imperatives of Effective Management of Customers' Relationship Marketing for Efficient Operations in Industrial Marketing Organisations." *International Journal of Business and Common Market Studies*. Vol. 6, No. 182, Pp. 80-87.
8. Okoroafor, P. C. (2010). "Identifying Borrowing Causes." *Financial Development and Finance Journal*. October Issue, Pp. 22-25
9. Patel, S. and Nangle, D. (2008). "Access Bank: Rising Star of the New Generation." *Renaissance Capital*. March Issue, Pp. 22-40.
10. Saloner, G., Shepard, A., and Podolny, J. (2001). *Strategic Management*. John Wiley and Sons, Inc., New York.
11. Stevenson, W. J. (2002). *Operation Management (7<sup>th</sup> Ed.)*. McGraw Hill, New York.
12. Uwanna, I. (2010). "Expanding the Professional Service Industry Through Business Process Outsourcing." *Financial Development and Finance Journal*. May Issue, Pp. 102-119.
13. Wisner, J. D. and Stanley L. L. (2008). *Process Management: Creating Value Along the Supply Chain; Text and Cases*. Thompson Higher Education, OH, U.S.A.



# OPERATIONAL PERFORMANCE OF KINFRA INDUSTRIAL PARKS IN KERALA: SELECT INFERENCES

**Dr. P. Noufal**

Head,

Department of Development Economics

Dr. B.R. Ambedkar Memorial Government Arts & Science College

Balussery-673612,

Kozhikode District,

Kerala, India.

Article DOI: <https://doi.org/10.36713/epra4925>

## ABSTRACT

*Kerala aims to become one of the top 10 ranking States in the country in terms of ease of doing business and in promotion of a typical business and entrepreneurial culture at par with global standards. Being an active facilitator and industrial catalyst of the State, the Kerala Industrial Infrastructure Development Corporation (KINFRA) has a saga of success in making Kerala as one of the most promising and vibrant business cynosure with leading-edge infrastructure. The industrial parks set up by KINFRA are today recognised as important instruments for promoting rapid industrial development, innovation, competitiveness, productivity and focused growth of the regional economy of the State. It is in the context, the paper attempts to explore the operational performance of KINFRA industrial parks within the ambit of the extent of realisation of its objectives.*

**KEYWORDS:** Kerala Industry, Industrial Development, Industrial Parks, Operational Efficiency, KINFRA.

## 1.1. INTRODUCTION

The Industrial and Commercial Policy of the State visualises the setting up and strengthening of theme-based industrial parks in the core competency sectors of the State so as to achieve a 10 per cent industrial growth rate within a couple of years. The vision is to transform Kerala into a vibrant investment destination with an effervescent entrepreneurial society through inclusive and sustainable industrial growth strategies and practices. Industrial parks provide an excellent institutional framework, support services and physical infrastructure and thereby act as policy drivers to foster sufficing investments, employment, competitiveness, sustainable and innovative business strategies and regional economic development. They can provide fertile grounds for leveraging new technologies, learning and innovations, jobs and markets and also prime support for startups and new enterprise incubations. By providing a strong legal and institutional framework, industrial parks pool resources and reduce costs, risks and the delays associated with land acquisition, zoning and permitting. At their best, they align infrastructure

provision and agglomeration economies to jolt the industrial growth of the economy. As an innovative industrial initiative, the establishment of industrial parks attempts to explore an ecosystem where productive entrepreneurship germinates, sustains and grows leading to the creation of a more vibrant and dynamic industrial economy in Kerala.

The Kerala Industrial Infrastructure Development Corporation, popularly known as KINFRA acts as the 'industrial catalyst' of the State by promoting the concept of 'industrial parks' in Kerala. It is a statutory body established by the Kerala Industrial Infrastructure Development Act, 1993. As the industrial facilitator of Kerala, KINFRA has completed 25 years of its operation and is having 22 fully operational parks, 7 premier ongoing projects and about 9 major projects on anvil at present. The ambience and flawless infrastructure facilities available in the industrial parks aim to provide a typical business or entrepreneurial culture in the State for the development of a high-tech, non-polluting and export-oriented industries and thereby create top-notch 'industrial townships' in Kerala. It is in the context, the study attempts to explore the



operational performance of KINFRA industrial parks within the framework of the extent of realisation of objectives as laid down in the KINFRA Act.

## 1.2. LITERATURE REVIEW

Kiselakova (2014)<sup>1</sup> states that industrial parks contribute significantly to regional development and revitalise the overall economic situation of the country. It promotes job creation in regional labour market, creates favourable conditions for entrepreneurship and increases the support for innovative businesses to enhance competitiveness and support for export growth. Mani (2014)<sup>2</sup> observes that Kerala is one of the least industrialised States although it has all the potential of being one. The degree of entrepreneurship from the State is at a very low level and it has continued to be so for a very long time. Given the constraints, he argues that the government has to make concerted efforts to lessen the negative effects of these constraints if it were to promote industrialisation through the manufacturing route. Saha (2014)<sup>3</sup> assays how industrial clusters allow firms to stimulate economic growth through increasing their competitiveness and performance of businesses; stimulate innovation through efficient use of research and development; promote new businesses by attracting foreign investments and increasing exports as well as employment opportunities in the domestic economy of Kerala.

Hugar (2013)<sup>4</sup> manifests industrial estates as important instruments of local industrial development. The high quality infrastructure and other support services in a well-planned layout provides a tending environment for them and thereby enhances the operational efficiency of the small and medium scale industries operating in the industrial estates. Saleman (2013)<sup>5</sup> examines how industrial

parks are built and how they fail. At their best, industrial parks align infrastructure provision and agglomeration economies to jolt industrial growth. Schwab (2012)<sup>6</sup> explores the opportunities to improve the image and competitiveness of industrial parks by capitalising three contemporary concepts, namely: sustainable development with 'green' principles as well as economic stability, the 'creative class' work force and the popularity of mixed use development.

Boja (2011)<sup>7</sup> states that economic development based on cluster models can bring multiple benefits in terms of regional development and competitiveness in an industry. The major benefits include a more facile access to resources; decreased transportation costs and supply chains; offers a higher degree of specialisation in products and services; technology cooperation or acquisitions; specialised workforce pool and better access to skilled labour; an increased market and opportunities and finally a more cooperative and highly competitive business environment. Srikumar (2011)<sup>8</sup> sifts that the development of industrial parks by KINFRA with ready-to-use infrastructure facilities provides a strong industrial environment in the State. It covers up the inadequacy of industrial infrastructure in the backward areas and thus finds a solution to the problems of low levels of industrialisation and unemployment in Kerala. Das (2011)<sup>9</sup> states that cluster development will provide competitive advantage to the firms in terms of productivity, innovation and formation of new businesses which will definitely have its impact on the rural economic and industrial development of India. Innovations like the setting up of general industrial parks, product specific industrial parks, industrial estates and special economic zones (SEZs) have been initiated by the government to give an impetus to the rural industrial base of the economy which provides opportunities for the firms to work and grow in their host place.

Vidova (2010)<sup>10</sup> opines that industrial parks are one of the most important factors supporting positive

<sup>1</sup> Kiselakova, Dana and Alexander Kiselak (2014). 'Analysis of Macroeconomic Factors for the Establishment of Industrial Parks and their Effects on Regional Development—Empirical Study from Slovakia'. *Asian Economic and Financial Review*. 4(9): 1220-1236.

<sup>2</sup> Mani, Sunil. (2014). 'Industrial Investments in Kerala: Trends, Constraints and Future Prospects'. *The Journal of Industrial Statistics*. 3(2): 169-198.

<sup>3</sup> Saha, Nibedita, Drahomira Pavelkova and Petr Saha (2014). 'Cluster Activities and the Firms Competitiveness: An Empirical Study of the Clusters in India (Kerala)'. *Strategic Management Quarterly*. 2(2): 109-126.

<sup>4</sup> Hugar, S.S. and S.S. Nadkarni (2013). 'A Comparative Study of Cuncolim and Canacona Industrial Estates of Goa'. *Indian Streams Research Journal*. 3(3): 1-5.

<sup>5</sup> Saleman, Yannick and Luke Simon Jordan (2013). *The Implementation of Industrial Parks: Some Lessons Learned in India*. Washington, DC: World Bank.

<sup>6</sup> Schwab, Suzanne (2012). *A New Class for Industrial Parks*. Irvine: Department of Planning, Policy and Design, University of California.

<sup>7</sup> Boja, Catalin. (2011). 'Cluster Models: Factors and Characteristics'. *International Journal of Economic Practices and Theories*. 1(1): 34-43.

<sup>8</sup> Srikumar, K.N. (2011). 'KINFRA—A Saga of Success'. *Kerala Calling*. 8(2011): 16-19.

<sup>9</sup> Das, R. and A.K. Das. (2011). 'Industrial Cluster: An Approach for Rural Development in North-East India' in *International Journal of Trade, Economics and Finance*. 2(2): 161-165.

<sup>10</sup> Vidova, Jarmila (2010). 'Industrial Parks: History, Their Present and Influence on Employment' in *Review of Economic Perspectives*. 10(1): 41-58.



economy development. If an industrial park is linked with a clearly defined goal and intention, it must have a positive influence on revitalising the business environment, transfer of modern technologies, creation of new working places and modernisation of the industry, which all will definitely bring certain synergic effects in the domestic industrial economy. Lai (2005)<sup>11</sup> pinpoints that firms located in an industrial cluster enjoy strong local demand, reduced search costs, technology spillovers, specialised labour, infrastructure benefits and informational spillovers which will generate positive externalities from knowledge spillovers, transactional efficiencies and cluster-level scale economies. Cote (2002)<sup>12</sup> states that industrial parks are large tracts of land, sub-divided and developed for the use of several business entities simultaneously and is distinguished by its shareable infrastructure and close proximity of firms. As self designing systems, they exhibit immense possibility and if they are seeded with sufficient diversity, they can design their own solutions to their problems. At present, industrial parks have begun to address the issue of sustainability as well as ecological integrity and efficiency.

### 1.3. RESEARCH PROBLEM

The low level of industrial development in the backward regions of Kerala is one of the major developmental issues confronting the State today. Development of adequate and commendable infrastructure is an essential pre-requisite for rapid industrialisation and the inadequacy of appropriate infrastructure is a major factor hindering the industrial development of the backward regions of the State. Having been analysed various existing literature, it can be observed that the development of industrial parks has attracted the attention of policymakers as a constructive channel of industrial infrastructure. Industrial parks can develop certain synergies and a typical entrepreneurial culture in the industrial economy of any country. They generally provide an excellent institutional framework, support services and physical infrastructure and are aptly treated as policy drivers to foster sufficing investments, employment, competitiveness, sustainable business strategies and regional economic development. Though the development of industrial

parks is of vital importance in the industrial economy of the country, we do not have much study to explore its economic imperative and efficacy. Thus, it becomes significant to examine the operational efficiency and performance of KINFRA industrial parks with particular reference to the fulfillment of its objectives as laid down in the Kerala Industrial Infrastructure Development Act, 1993.

### 1.4. OBJECTIVES OF THE STUDY

Within the last 25 years of its operation, KINFRA is busy with a mission to make Kerala the most favoured destination for competitive industrial development with the provision of commendable infrastructure and support services. In the context, the study attempts the following objectives:

1. To examine the operational efficiency of KINFRA industrial parks in Kerala.
2. To examine the extent of which KINFRA has fulfilled its objectives.

### 1.5. METHODOLOGY

The methodology of the study is arranged in certain subsections such as: Period of study, Sampling design, Data source(s), Data collection, Tools of analysis, Criteria and scale for measurement and the List of variables for the study.

**Period of Study:** KINFRA has completed 25 years of its operation in Kerala. The study takes into account only a decennial period of its operation, that is, from February, 2003 to February, 2015 for exploration and analysis.

**Sampling Design:** There are a total of 22 fully operational industrial parks set up by KINFRA as on 31<sup>st</sup> March, 2019. There are certain ongoing projects along with some other projects on anvil. The study takes into account only the case of those industrial parks which have been set up before the year 2010. So the total number of sample is 18 fully operational parks out of a total of 22.

**Data Source(s):** The study uses both primary and secondary data. Primary data have been collected from the Head Quarters of KINFRA and also from the sample industrial parks. Secondary data have been collected from various existing sources in print and electronic media.

**Data Collection:** Two questionnaires were used for collecting data and other information. The first set is used for collecting information from the Head Quarters of KINFRA and the second set is used for collecting information from the sample industrial parks. Both set of questionnaires consists of 6 sections such as: general information, extent of realisation of objectives, growth performance, operational efficiency, major problems and constraints and the future prospects.

<sup>11</sup> Lai, Hsein-Che, Yi-Chia Chiu and Horng-Der Leu (2005). 'Innovation Capacity Comparison of China's Information Technology Industrial Clusters'. *Technology Analysis & Strategic Management*. 17(3): 293-315.

<sup>12</sup> Cote, Raymond P. and E. Cohen Rosenthal (1998). 'Designing Eco-Industrial Parks: A Synthesis of Some Experiences'. *Journal of Cleaner Production*. 6: 181-188.



**Tools of Analysis:** Data have been collected and arranged by using appropriate Likert Scales of different dimensions. Statistical measures such as Mean, Range, Percentages and Weighted Scores were used. Karl Pearson's Coefficient of Correlation is used to measure the degree of association between different parameters. Mood's Median Test, Wilcoxon Signed Rank Test and Friedman's Test of Equality were used to test the major hypotheses.

**Criteria & Scale of Measurement:** Likert Scales of different dimensions were used in the study. In order to measure the extent of realisation of objectives, a 7-Point Likert Scale is used and to measure the operational efficiency of industrial parks and to explore the problems and constraints of the parks, 5-Point Likert Scales were used.

**List of Variables:** The study uses as much as 42 variables arranged under 7 categories for measuring the operational efficiency of industrial parks and about 16 variables for measuring the extent of realisation of objectives of KINFRA.

## 1.6. SCOPE AND SIGNIFICANCE OF THE STUDY

By pioneering the concept of 'industrial parks', KINFRA provides an ambience for the enterprise and innovation to flourish and thereby profoundly influence the industrial economy of Kerala. KINFRA unleashes the industrial potential of the State and thereby enables its progressive and sustainable industrial development. In the context, it becomes imperative to look into the present status, growth performance, operational efficiency, problems, extent of realisation of objectives and the impact of KINFRA industrial parks on the industrial economy of Kerala, especially within the purview of the new vision, strategy and policies adopted by the Government.

## 1.7. OPERATIONAL PERFORMANCE AND EFFECTIVENESS OF KINFRA INDUSTRIAL PARKS IN KERALA

Operational efficiency encompasses the major strategies and practices meant to improve a company's processes to accomplish the goal of providing consistent and quality services to its stakeholders. It looks at an organisation's capabilities and performance measured against certain prescribed indicators of effectiveness. The study attempts to explore the operational efficiency and performance of KINFRA industrial parks within the ambit of the extent of fulfillment of its objectives as laid down in the Kerala Industrial Infrastructure Development Act, 1993. Select parameters of operational effectiveness such as ease of doing business, support systems and services, client relationship management, standards of business operations, responsive commitments, opportunities for sustainable entrepreneurship and extension services are used. About 42 variables as categorised under 7 major heads are used. Responses were gathered on each of the sub-parameters and the observance status and the weighted score of the major parameter is obtained by using a 5-point likert scale. The operational efficiency in terms of the select parameters is tested and interpreted by using Wilcoxon Signed Rank Test. A snapshot of the list of variables used for assessing the operational effectiveness and performance of KINFRA industrial parks is given in Table-1.



**Table-1**  
**Operational Performance of KINFRA Industrial Parks**  
 (List of Variables)

No.	List of Variable(s)
<b>1.</b>	<b>Ease of Doing Business:</b>
	(i) Affordability of the lease out period and premium.
	(ii) Flexibility of the terms and conditions.
	(iii) Provision of infrastructure and support services.
	(iv) Provision of common facilities.
	(v) Maintenance of a hassle free business environment.
	(vi) Consistent and continuous communication of key initiatives to the entrepreneurs.
<b>2.</b>	<b>Support Systems and Services:</b>
	(i) Better and updated information to the entrepreneurs.
	(ii) Framework for the realisation of business objectives.
	(iii) Better administration and initiatives for business elaboration.
	(iv) Promotion of the creative initiatives of the entrepreneurs.
	(v) Controls on the managerial actions of the entrepreneurs.
	(vi) Feasible solutions to the issues and problems of the units.
<b>3.</b>	<b>Client Relationship Management:</b>
	(i) Existence of a cordial relationship and cooperative environment.
	(ii) Commitment and support of the KINFRA management.
	(iii) Professionalism and courtesy of the KINFRA team.
	(iv) Platform for the innovative ideas and initiatives of the entrepreneurs.
	(v) Freedom of the entrepreneurs to question the decisions and actions of the management.
	(vi) Freedom of the entrepreneurs to revise and modify their business plans.
<b>4.</b>	<b>Standards of Business Operations:</b>
	(i) Affordable cost and shortest time span.
	(ii) Fullest utilisation of capacity.
	(iii) Optimum use of resources.
	(iv) Management of operating risk.
	(v) Promotional activities.
	(vi) Quality benchmarks.
<b>5.</b>	<b>Responsive Commitments:</b>
	(i) Locational and localised advantages.
	(ii) Provision of a congenial and innovative environment.
	(iii) Provision of training and development activities.
	(iv) Adherence to the time schedule.
	(v) Leveraging of technology.
	(vi) Efforts to enhance the productivity of employees.
<b>6.</b>	<b>Opportunities for Sustainable Entrepreneurship:</b>
	(i) Inducement to prospective entrepreneurs.
	(ii) Scope and opportunities for business expansion.
	(iii) Opportunities for the diversification of businesses.
	(iv) Growing relationships with the customers.
	(v) Community involvement and societal commitment.
	(vi) KINFRA as a better choice to start and sustain business.
<b>7.</b>	<b>Extension Services:</b>
	(i) Strong focus on development.
	(ii) Easy access for optimal performance.
	(iii) Better and effective marketing assistance.
	(iv) Measures for the promotion of exports.
	(v) Better and improved way of doing things.
	(vi) KINFRA as a good place for the prospective entrepreneurs and investors.

Each parameter is presumed a composite index as they are having definite subsets of related aspects. The major observations regarding the operational efficiency and performance of KINFRA industrial

parcs in the industrial landscape of Kerala is listed below:

1. KINFRA is a statutory body set up by the Kerala Industrial Infrastructure Development





Act, 1993 with the mandate of catering to the industry-specific infrastructure requirements of the State with state-of-the-art facilities in ready- to-use industrial complexes.

2. Being the industrial catalyst of the State, KINFRA aims at the economic development of the industrially backward regions by the setting up of 'theme- based' industrial parks with leading-edge infrastructure and support services so as to promote a typical entrepreneurial culture in Kerala.

3. KINFRA encourages the rapid development of potential industries in the core competency sectors of the economy so as to transform the State into a most favoured investor-friendly business hub with globally accepted standards in quality, technology and management.

4. As the industrial facilitator of Kerala, KINFRA has successfully completed 25 years of its operation and has at its credit 22 fully operational industrial parks, 7 premier ongoing projects and 9 flagship projects on anvil.

5. In terms of the parameter 'ease of doing business', it is observed that the operational efficiency of KINFRA industrial parks is 'mostly effective.' By providing a typical business ambience at par with global standards, KINFRA industrial parks assure quality standards and environment for the start up and sustainable growth of industries in Kerala.

6. In terms of the parameter 'support systems and services', it is observed that the operational efficiency of KINFRA industrial parks is 'mostly effective.' KINFRA industrial parks provide the most specific assistance for the development of industries through the services ranging from information, management, technology, entrepreneurship, policy and extension.

7. In terms of the parameter 'client relationship management', it is observed that the operational efficiency of KINFRA industrial parks is 'mostly effective.' KINFRA attempts to uphold a better client relationship management strategy over the entire period of its operation.

8. In terms of the parameter 'standards of business operations', it is observed that the operational efficiency of KINFRA industrial parks is 'mostly effective.' KINFRA stimulates diverse avenues of business by following certain quality benchmarks and standard ways of doing things and thus drives the direction and pace of innovation that underpins the industrial growth of Kerala.

9. In terms of the parameter 'responsive commitments', it is observed that the operational efficiency of KINFRA industrial parks is 'mostly effective.' KINFRA works in line with the Industrial and Commercial Policy of the Government and thus, continually seeks to improve its services so as to make it as a genuinely purpose-led organisation.

10. In terms of the parameter 'opportunities for sustainable entrepreneurship', it is observed that the operational efficiency of KINFRA industrial parks is 'mostly effective.' KINFRA plays a pivotal role in promoting a typical entrepreneurial culture in Kerala and drives innovations so as to contribute positively to the industrial development of the State.

11. In terms of the parameter 'extension services', it is observed that the operational efficiency of KINFRA industrial parks is 'mostly effective.' KINFRA always attempts to provide the entrepreneurs opportunities for assessing their capabilities for the sustained growth, expansion and diversification of their businesses.

Thus, in terms of the select parameters, the operational efficiency of KINFRA industrial parks is marked as 'mostly effective', signifying KINFRA has proved the premise that a cluster of competing and complementary industries has more to offer on the industrial arena of the State than the very same industries taken in isolation from one another. A snapshot of the operational efficiency of KINFRA industrial parks across the State over the entire period of its operation is given in Table-2.



**Table-2**  
**Operational Efficiency of KINFRA Industrial Parks**  
 (Summary of Responses)

Parameter(s) of Operational Efficiency		Performance Status
1	Ease of doing business.	Mostly Effective
2	Support systems and services.	Mostly Effective
3	Client relationship management.	Mostly Effective
4	Standards of business operations.	Mostly Effective
5	Responsive commitments.	Mostly Effective
6	Opportunities for sustainable entrepreneurship	Mostly Effective
7	Extension services.	Mostly Effective

Source: Survey Information.

### 1.8. EXTENT OF REALISATION OF OBJECTIVES BY KINFRA

With the objective of boosting the pace of industrial growth in Kerala, KINFRA has been promoting the concept of industrial parks and has taken the lead in the setting up of specialised industrial parks throughout the State. Regarding the extent of realisation of objectives of KINFRA and its industrial parks, as much as 16 parameters based on the explicit objectives as laid down in the KINFRA Act, 1993 were identified. The responses were measured on a 7-point likert scale. The most significant observation is that the responses on any of the parameters never fall on the negative range of the scale. None of the parameters fall on the ineffective zones of the scale. To what extent KINFRA has realised its objectives reveal the following inferences:

- As far as the listed parameters are concerned, it can be observed that the responses on any of the parameters never fall on the ineffective zones of the scale. They spread only on 'completely effective', 'mostly effective' and 'somewhat effective' categories of choice.
- The objectives upon which the responses reveal the status of 'completely effective' are: (1) effective organisational structure and ambience, (2) attracting entrepreneurs and investments for regional industrial development and (3) promotion of industrial development by developing appropriate 'industrial spots' in the core competency sectors of the economy.

3. The objectives upon which the responses reveal the status of 'mostly effective' are: (1) identification of appropriate industrial sites and developed land for the businesses, (2) establishment of ready-to-use built-up spaces, (3) development of industry-specific infrastructure and support services, (4) allotment of developed land to the entrepreneurs on flexible terms and conditions, (5) coordination with other agencies for the provision of quality infrastructure, (6) generation of sufficient employment opportunities, (7) realisation of the vision and mission of KINFRA and (8) effective control techniques, coordination mechanism and management practices.

4. The objectives upon which the responses reveal the status of 'somewhat effective' are: (1) developing and managing industrial estates, (2) undertaking of different schemes of for the orderly development of different industries, (3) adherence to the time schedule from the procuring of land to its allotment and (4) adherence to the cost estimates for the establishment and maintenance of industrial parks.

Based on the responses obtained on the select parameters of objectives, the Wilcoxon Signed Rank Test (based on Median) is applied and the test results and its interpretation are summarised as follows:



<b>H<sub>0</sub></b>	The operational performance of KINFRA in realising its objectives is nugatory.
<b>Test</b>	Wilcoxon Signed Rank (Median) Test
<b>Hypothetical Median</b>	4
<b>P-value</b>	1.233 <sup>-5</sup>
<b>Observed Median</b>	2 (True location is less than 4)
<b>Decision</b>	Reject the null hypothesis (H <sub>0</sub> ) and accept the alternative hypothesis (H <sub>1</sub> ).
<b>H<sub>1</sub></b>	The operational performance of KINFRA in realising its objectives is 'mostly effective' with a standard score of 83 per cent.

Having been set the null hypothesis as 'the operational performance of KINFRA in realising its objectives is nugatory', the study uses Wilcoxon Median Test for testing the hypothesis. Assuming a hypothetical median value of 4 in a 7-point likert scale, the observed median is 2 with a P-value of 1.233<sup>-5</sup>. The null hypothesis is therefore rejected and the study accepts the alternative hypothesis, signifying 'the operational performance of KINFRA in realising its objectives is mostly effective.' Being the industrial facilitator of the State, KINFRA always attempts to fulfill its objectives maximum so as to give a fillip to the industrial development of Kerala. KINFRA is equipped to usher better and new avenues of entrepreneurship for the State and has commendable success at its credit throughout the entire period of its operation.

### 1.9. CONCLUSION

Providing exemplary industrial infrastructure to meet the demands of emerging businesses is one of the major challenges facing by the industrial economy of Kerala. KINFRA operates with the mandate of creating a feasible and conducive business environment with state-of-the-art infrastructure so as to boost the process of hasty industrial development in the State. The industrial parks set up by KINFRA are today recognised as important instruments for promoting rapid industrial development, innovation, competitiveness, productivity and focused growth of the regional economy of the State. It has successfully completed 25 years of operation in the provision and development of quality industrial infrastructure with benchmarks of global standards. In terms of the parameters ease of doing business, support systems and services, client relationship management, standards of business operations, responsive commitments, opportunities for sustainable entrepreneurship and extension services, the operational efficiency and performance of KINFRA

industrial parks is marked as mostly effective. KINFRA has proved the premise that a cluster of competing and complementary industries has more to offer on the industrial arena of the State than the very same industries taken in isolation from one another.

### SELECT REFERENCE

1. Government of Kerala. (2019). *Economic Review 2018*. Thiruvananthapuram: Kerala State Planning Board.
2. --- (2019). *The Kerala Industrial and Commercial Policy 2018*. Thiruvananthapuram: Department of Industries and Commerce.
3. Institute for Studies in Industrial Development (ISID). (2010). *SME Clusters in India: Identifying Areas of Intervention for Inclusive Growth*. New Delhi: ISID.
4. Noufal, P. (2020). 'The Present Status and Growth Performance of KINFRA Industrial Parks in Kerala' in *Strads Research*. 7(8): 95-109.
5. --- (2019). *Operational Efficiency of KINFRA Industrial Parks and Its Impact on the Industrial Development of Kerala*. Unpublished Ph.D. Thesis. University of Calicut.



## LIBRARY RESOURCE SHARING: AN OVERVIEW

**Ajay Kumar Saini**  
Library professional  
&  
Teacher,  
School Education Department,  
Govt. of Jammu and Kashmir (UT)

### ABSTRACT

*Library resource sharing is a tool and is very important due to enormous explosion of information in every field of knowledge. In today's world, the demand of information is increasing and an individual library cannot fulfill the information need of its users. Library resource sharing is a powerful tool which is helpful to fulfill the information requirements of users. It is playing a vital role to increase the library users by satisfying them and also maximise the use of libraries. It saves the cost and building spaces. In this paper, we will discuss in detail about library resource sharing, need of resources sharing, its different types and also discuss its advantages and disadvantages.*

**KEY WORDS:** *Library resource sharing, Library network, Internet.*

### INTRODUCTION

The growth of information is increasing so rapidly due to publication work in each and every field and the demand of information is also increasing day by day. An individual library cannot fulfil the demands of library users or we can say that an individual library cannot meet the requirements with its resources. Therefore, the resource sharing is method of overcoming the limitations of an individual library. It is a method of sharing resources such as man power, equipments, building space, reading materials, catalogue, etc. among two or more participating libraries. The resource sharing is a mutual cooperation among the participating libraries. It saves the cost, time, and space of the member libraries. The users of the participating libraries can use the resources of not only their own library but

also those of, all the participating libraries. It develops the spirit of cooperation, and collection among the member libraries.

### Concept of library resource sharing:

Library resources such as print and non-print materials, equipments, storage, etc. which support library services and personal need of the users; resource sharing is the process of give and take on the principle of cooperation. Resource sharing is a method of sharing resources among the participating libraries on the principle of cooperation. The sharing of resources such as reading material, catalogues, building space, manpower, equipments etc. increase the usability of participating libraries. It increases the collection and resources of member libraries and these libraries can fulfil the requirements of the users.

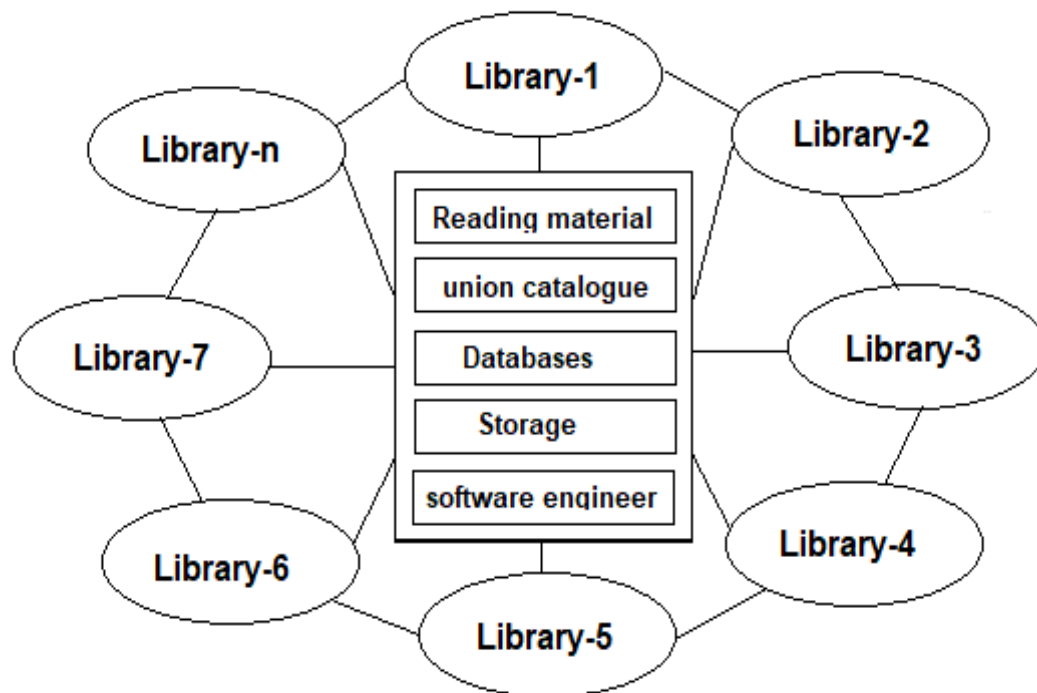


Figure1. Structure of library resource sharing

According to Cargil and Graves (1990), "no library can afford to acquire even half of all published material, both in terms of cost, and the investment in space and personnel time required to process and provides access to burgeoning quantity of Information"

#### Need of resource sharing

The committees of different libraries experience the need of resource sharing due to the following reasons.

- **Shortage of resources:** There is need of resource sharing due to the shortage of resources in all individual libraries. To fulfill the need of resources, there must be resource sharing among other libraries.
- **Lack of environment:** Each individual library has no such type of environment having all the equipments such as costly IT equipments, so there is a need of resource sharing among other libraries for better environment.
- **Growth of new knowledge, subjects and specializations:** The growth of new subjects, knowledge and specialization in different fields are increasing so fast. So, it is difficult for an individual library to acquire the reading material of all the new subjects having high cost. Therefore, there is need of resource sharing.
- **Increase in the cost of publication:** Day by day, the cost of publication is increasing

so high that is why, the budget of all the individual libraries cannot allow for purchasing all the different types of publications.

- **Demand of full-scale, quick and latest information:** Due to the enormous explosion of information, the demand of information is also increasing. Researcher, students, and seekers of information want complete and latest information in quick as early as possible.
- **Limited funding:** All the individual libraries have limited funds to use for library resources.
- **Increase in numbers of users:** Due to population explosion, awareness of education and competition, the users of libraries increasing day by day and it is impossible for all the individual libraries to full fill the requirements of different users.
- **Variety needs of students:** All the different users of library having different choices of information, to meet the information choices of different users, there is need of resource sharing.

#### Objectives of library resource sharing

Following are the objectives of library resource sharing:

- **To co-operate member libraries:** The main purpose of resource sharing is to cooperate all the member libraries in each



and every field to enhance the creditability of libraries.

- **To control the library budget:** The main reason behind resource sharing is to control the budget of all the individual libraries. Each library has limited funds to purchase all the new resources. The resource sharing helps to overcome this issue.
- **To solve space problem:** There is need of building space for the entire individual library due to increasing growth of publication and increase in ICT equipment. So, one of the objectives of resource sharing is to solve the space problem.
- **To fulfil the increasing demand of users:** The purpose of resource sharing is to fulfil the information requirements of different users.
- **To maximize library use:** The resource sharing is the best option to increase the creditability of all the individual libraries by satisfying the user's need.
- **To increase library users:** To increase the library users is also one of the objectives of resource sharing.
- **To improve the library environment:** To share manpower, equipments, reading materials and building space among the member libraries, improve the library environment of each participating libraries.
- **To reduce duplication of resources:** This is also an objective of resource sharing is to reduce the duplication of resources.
- **To exchange the resources:** Exchanging of resources is also a purpose of library resource sharing.
- **To share experience:** Sharing of experience among member libraries enhance the creditability of libraries, is also one of the objectives of resource sharing.

#### Areas of library resource sharing

The library resource sharing covers the following common areas for sharing:

- **Storage:** Every individual library has no. of book and non-book material that is not useable but requires space for storage that is why resource sharing overcomes this issue by sharing storage space.
- **Training:** Any type of refresher courses, workshops, seminars are to be conducted at common in cooperative way by all the participating libraries to achieve the common goal.
- **Softwares:** There are different library management softwares available in the

market with high cost, so the member libraries, share he common software to save the money.

- **Inter-library loan:** Inter library loan sometimes called inter-loan, inter-landing, or inter library service in which a user of one library can borrow the books, DVD, music, etc. that are owned by another library due to non-availability of such materials required by a particular user from his/her own library.
- **Cooperative acquisition:** Cooperative acquisition is also an important area of resource sharing in which all the member libraries form a common committee for purchasing books and non-book materials. The common committee members select the books, place the order, send reminder to supplier, then they purchase the books in cooperative manner for their common or individual requirements which save the time, labour and have maximum discount.
- **Union catalogue:** In resource sharing system, the member libraries prepare a common catalogue to describe their collection called union catalogue which saves the time and cost of each individual library.
- **Reference and information service:** The sharing of essential services like reference service and information service through the medium of Internet, telephone, fax, etc.
- **Sharing of equipments:** Some of the equipments of library are so costly, so there is no need of purchasing these equipments for all the member libraries. They share the equipments on time sharing basis.
- **Sharing of manpower:** The resource sharing also include the sharing of staff such as software engineer, or other technical staff.
- **Creation of common databases:** In resource sharing, all the member libraries create common computerized databases and exchange these among the member libraries.
- **Translation service:** The research papers in foreign languages and other reading materials are to be translated in cooperative manner and share those translated research papers among the cooperative libraries.

## Levels of library resource sharing

These are four levels of resource sharing.

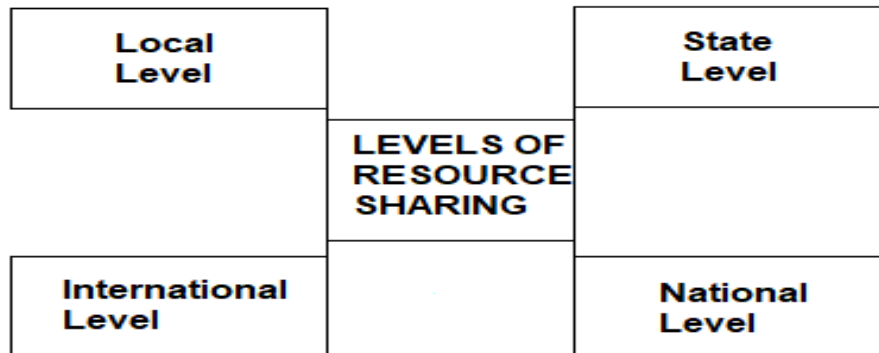


Figure2. Levels of resource sharing

- **Local level:** This level covers the libraries of local area such as Town, City, etc. for resource sharing through the possible medium
- **State or regional level:** This level covers the libraries within the region for resource sharing.
- **National level:** This level covers the libraries of national level for resource sharing.
- **International level:** This level covers the libraries of international level for resource sharing.

### Advantages of library resource sharing

These are the following advantages of library resource sharing.

- **Fulfil the user's need:** Resource sharing among member libraries satisfies the users/researcher of each library.
- **Develop efficient communication:** Resource sharing among the libraries develops the efficient communication among the member libraries.
- **Cost effective:** The cooperative activities among the member libraries in resource sharing save the cost.
- **Saves library space:** The cooperative storage among the participating libraries saves the library space.
- **Develop cooperation:** The resource sharing develops the cooperation among the member libraries.
- **Avoid duplication:** Resource sharing among the participating libraries, avoid the duplication.
- **Enhance the quality of resources:** Resource sharing enhances the quality of resources.

### Disadvantages of library resource sharing

Following are the disadvantages of library resource sharing.

- Negative impact on the publishing trade due to their sale gets reduced.
- Copyright violation can be possible.
- Some libraries are willing only to share some resources.
- Lack of awareness or training for sharing activities.
- If all the member libraries depend on each other that may cause impact on the development of library collection.

### CONCLUSION

This paper concludes that, in present days, the demand of information is increasing day by day due to enormous explosion of information in every field of knowledge. Library resource sharing is very important tool to meet the demand of library users. Resource sharing is playing a crucial role to fulfil the demands of the users or researchers. This tool saves the time, money and building space of libraries and enhances the creditability of libraries. This paper also concludes that there are some barriers in the way of resource sharing such as delay in communication, cost involved, lack of library automation, lack of training of staff members and lack of awareness about resource sharing. Information and communication technology is the best solution to break down the barriers in the way of resource sharing. To breakdown these barriers, all the individual libraries should be automated and strong computer network should be established among all the member libraries. The computer network among all the member libraries would be helpful to enhance the creditability of library resource sharing with the help of Internet.



## REFERENCES

1. *Resource sharing and networking. (n.d).* Retrieved from [https://shodhganga.inflibnet.ac.in/bitstream/10603/96223/6/06\\_chapter2.pdf](https://shodhganga.inflibnet.ac.in/bitstream/10603/96223/6/06_chapter2.pdf)
2. *Interlibrary loan. (2020, April 25).* In Wikipedia. [https://en.wikipedia.org/wiki/Interlibrary\\_loan](https://en.wikipedia.org/wiki/Interlibrary_loan)
3. *Keshava, Dr. (2017). Resource sharing and Networking. [Power point slides]. TUDLIS.* <https://www.slideshare.net/tudlis/resource-sharing-and-networking>
4. *N, I. Prakash. (2017). RESOURCE SHARING: A LIBRARY PERCEPTIVE. International Journal of Library & Information Science (IJLIS). 6(1), pp. 20-22.* [https://www.iaeme.com/MasterAdmin/uploadfolder/IJLIS\\_06\\_01\\_002/IJLIS\\_06\\_01\\_002.pdf](https://www.iaeme.com/MasterAdmin/uploadfolder/IJLIS_06_01_002/IJLIS_06_01_002.pdf)
5. *Definition of resource sharing.(n.d).* Retrieved from [https://shodhganga.inflibnet.ac.in/bitstream/10603/95270/10/10\\_chapter%203.pdf](https://shodhganga.inflibnet.ac.in/bitstream/10603/95270/10/10_chapter%203.pdf)





## EMERGING PARADIGMS OF ETHICS IN HOSPITALS: AN INSIGHT

**Dr. Sumeet Dastidar\***

\*Assistant Professor,  
Department of M.Com,  
Gauhati Commerce College,

**Niva Kalita\*\***

\*\* M.Com 4<sup>th</sup> Semester,  
Gauhati Commerce College,

---

### ABSTRACT

*Ethics is a set of moral principles that guides a person to address his or her conscience. Lately, business houses have been confronting with various unethical practices resulting into ebbing of their reputation. Though ethics is termed as superfluous by many organizations, prioritization of ethical behavior has become the need of the hour. Healthcare being an industry based on the doctrine of 'utmost good faith and trust', since antiquity, cannot afford to undermine the importance of ethics in their functioning. The growing awareness regarding the ethical conduct of medical practitioners and hospital management appears to be escalating. In hospitals, ethical dilemmas could become more challenging as unethical activities may be in the form of billing of services not rendered, over-utilization of services, false or unnecessary issuance of prescriptive drugs, incorrect reporting diagnoses to name a few. This study aims to highlight the relevance of ethics in the hospitals in the wake of increasing unscrupulous practices and to know the perception of the patients/family regarding the compliance of the basic principles of medical ethics i.e. autonomy, justice, beneficence and non-maleficence. Further the study also aims to shed light regarding the ethical practices of doctors, nurses and other medical staffs.*

**KEYWORDS:** *Ethics, Healthcare Industry, Hospitals and Unethical Practices*

---

### INTRODUCTION

In ancient Greece ethical concepts like right, good and duty were discussed by Plato and Aristotle in the 3<sup>rd</sup> and 4<sup>th</sup> century BC. Ethics is viewed to have derived from genetic inheritance, religion, philosophical system, code of conduct, legal system and cultural experiences (Sciortino, 1994). However, ethics is the code of conduct that guides an individual while dealing in a situation. It relates to the social rules that influence people to be honest in dealing with other people (Murthy, 2004). Healthcare in the 21<sup>st</sup> century has taken paradigm shifts concerning ethical practices from the times of antiquity. Ever since the inception of medical care, ethical standards have been devised that go beyond the pragmatic medical approach. The 'Hippocratic Oath' or the 'Corpus Hippocraticism', that dates back to the 5<sup>th</sup> century B.C., provides an insight to the importance of ethics in health care ever since its emergence. The alteration of the societal norms and education system has also witnessed the changed in the ethics followed in the medical profession, wherefrom 'Paternalism' (the doctors knows the best) modified to

'Individual Autonomy' (patient must be consulted). Health care ethics, used synonymously as medical ethics, is the meticulous prognosis of the nodus which is capable of binding the faith of all the parties. It is the adherence to conscience backed by rationality. Though medical care has been accredited as a religion, emphasizing the utmost faith in the profession, the rise of unscrupulous events has shadowed the belief of the masses in recent times. Corrosion in the ethics has undermined the noble art of healing. Bribes, embezzlement, forgery, absenteeism from work, overbilling in insurance claims, unprofessionalism are some of the chief issues in the healthcare sector that pose as stumbling blocks for the public. Considering the momentousness of the need of health care ethics, Tom Beauchamp and James Childress had compiled the 'Principles of Biomedical Ethics' back in 1985 to safeguard the interest of the patients. These principles are:

1. **Autonomy:** The patient is at his discretion to follow the advice of medical practitioners and



any attempt to exercise coerciveness would be violation of this principle.

2. **Beneficence:** This principle aims to secure the best advice for the beneficiary from qualified and skilled healthcare professionals at any circumstance.
3. **Non-maleficence:** The decision taken for an individual patient's well being should not be at the cost of the general good.
4. **Justice:** This principle seeks to emphasize the need of fair and equal distribution of scarce resources for the benefit of all.

The physicians in India follow the Code of Medical Ethics enunciated in the Indian Medical Council (Professional Conduct, Etiquette and Ethics - Regulation, 2001 which was amended in 2016) as personal prejudice has no place in a doctor's life. This code assists the doctors in understanding and working more efficiently on ethical guidelines.

### I. BRIEF REVIEW OF LITERATURE

Egyptian papyri dating back to the 16<sup>th</sup> century are considered to be the first known records in support of ethics in healthcare. They mention the structure of fees according to the social and economic position of women and also lay down the code of conduct for the medical professionals. With the sophistication of healthcare, many malpractices have crept in healthcare sector inciting researchers to stress on the importance of ethics in hospitals.

**Walker (1998)** in his research paper highlighted the essence of ethics in the hospitals, concluded morality to be essentially interpersonal, existing in the contemporary times and guided by social conscience.

**Vilma et al. (2010)** analyzed the ethical dilemmas that concern decision making in healthcare industry in the management. It was inferred that there is lack of focus by the management on ethical dilemmas which needs to be changed in order to maintain a healthy administration and interpersonal relationship.

**Avasthi et al. (2013)** stated that some unique ethical issues arise in psychiatric researches and which needs to be vigilantly taken care of. Maintaining confidentiality of information on mental health and substance abuse treatment patients is important as they are highly sensitive. Practicing of ethical guidelines in India is only a recommendation and not a binding law.

**Chatterjee et al. (2013)** while evaluating the ethical issues underline the poor indicators of ethics in the Indian healthcare system and also

emphasizes on the necessity for regulating the healthcare services to curb corruption in the sector.

**Chattopdhyay (2013)** highlighted the forms and dynamics of corruption in the healthcare sector. The study inferred that the healthcare sector is facing ethical crisis in the contemporary times due to the prevalence of widespread corruption.

**Peter (2018)** in her study analyzed on how nurses respond to the ethical dilemmas engulfing the healthcare sector, highlights the corrosion of morality in healthcare and also stress on the vehement struggle of the nurses in aiding the patients.

### II. SIGNIFICANCE OF THE STUDY

The bond between the doctor and the patient is based on trust and any unethical doing by the former can shake the latter's trust which is difficult to repair. The physicians and nurses need to address to the kinds of ethical dilemmas that specially arises in case of obstetricians & gynecologists and pediatricians. There are few ethical issues which can be addressed easily but others may be quite challenging in deciding about two conflicting value systems of the doctor and the patient. Ethical decisions should respect the values and attitude of the patients too. Ethical standards promote the values that are pre-requisite for good communication, viz; trust, accountability, mutual respect and fair medical care. This study will help the patients/family in understanding the ethical working of the medical and non-medical staff. It will shed light on the adherence of ethical practices, so that they can improve on the areas which needs special attention as far as ethics is concerned.

### III. OBJECTIVES OF THE STUDY

The main objectives of the study are;

- i. To study the compliance of the basic principles of medical ethics by the select hospital;
- ii. To examine the ethical behavior of doctors and other medical staff towards the patient; and
- iii. To analyze the satisfaction level of the patients/family regarding the essential services provided by the select hospital.



#### IV. METHODOLOGY OF THE STUDY

**Research Design:** This study is a Descriptive Research Design as it involves knowing the perception of the patient/ attendant regarding the adherence of basic ethical principles as well as observing the ethical behaviour of the doctors and other medical staff towards the patients without influencing it any way.

**Population:** The population of the study comprises of all the patients/ attendant (including both Indoor and Outdoor) of Pratiksha Hospital, Guwahati.

**Sampling Technique(s):** Convenience sampling technique has been adopted in the selection of the private hospital and the departments as well as in the selection of the respondents.

**Sampling Units:** The sampling unit of the study consist of only one private hospital i.e. Pratiksha Hospital. There from, only patients of Paediatric and Obstetrics & Gynaecology department were selected in which the hospital specialises.

**Sample Size:** 125 structured questionnaires have been distributed among the patients/ attendant of the selected department. However, only 116 questionnaires were received back.

**Data Collection:** Primary data was collected through a structured questionnaire which was distributed amongst the patient/ attendant both in digital form as well physically. Observation method was also followed in order to understand the actual practice of ethics by the doctors, other medical staff as well as administrative staff. Secondary data were collected from e- journal, books and research articles.

**Data Analysis:** The demographic data are analysed by using percentage analysis method and to measure the degree of agreeableness the composite/mean score was calculated and

to know the degree of variability standard deviation has been calculated. Cone diagram is used to give a graphical representation of the data.

#### V. OVERVIEW OF ETHICAL PRACTICES IN THE HOSPITALS

Ethics in healthcare refers to the rules of etiquette adopted by the medical profession to regulate professional conduct with each other. The most unethical act was done by the Nazi doctors who exploited the convicts and performed experiments on them. The revelation of this fact left the entire world in the state of shock and led into the formulation of Nuremberg code, (Avasthi et al., 2013). There are a number of ethical dilemmas which the doctors or the medical staff encounters which can be listed as under:

- i. Where the treatment needs to be withhold if the treatment cost is not paid by the patient/family or insurance company on time.
- ii. Where mistake is done and they try to cover it.
- iii. Referring a specific laboratory for test in order to avail high commission from the pharmaceutical companies.
- iv. Cherry-picking the patients.
- v. Contravening patient's confidentiality norm.
- vi. Prescribing non-integral tests.
- vii. Incorporation of complex norms for settlement of medical insurance.
- viii. Not maintain the dignity of the patient.

## VI. DATA ANALYSIS AND INTERPRETATION

**Table 1: Showing the demographical details of the respondents**

Variable	No.	Percentage (%)
<b>Gender</b>		
Male	29	25
Female	87	75
<b>Age</b>		
Younger than 30	34	29
31-40	46	40
41-50	29	25
51-60	07	06
60 & above	00	00
<b>Place of Residence</b>		
Rural	12	10
Urban	104	90

Source: Field Survey, February 2020

**Interpretation:** It can be observed from the above table that 75% respondents are female and 25% male. Similarly, 40% of the respondents are in the age bracket 31-40 years and 29% comprises the age group

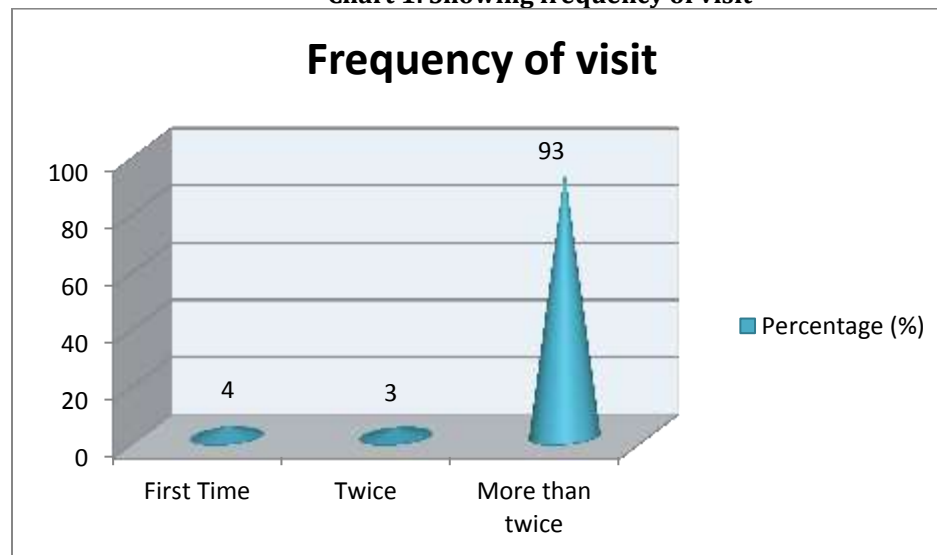
Younger than 30. Again 90% of the respondents are from urban area.

**Table 2: Showing the frequency of visit**

Frequency of Visit	No.	Percentage (%)
First Time	05	04
Twice	03	03
More than twice	108	93
TOTAL	116	100

Source: Field Survey, February 2020

**Chart 1: Showing frequency of visit**



Source: Table 2

**Interpretation:** 93% of the respondents visited the selected hospital more than twice and a meagre 3%

visited twice and 4% respondent visited the hospital for the first time.



**Table 3: Showing the compliance of basic principles of medical ethics**

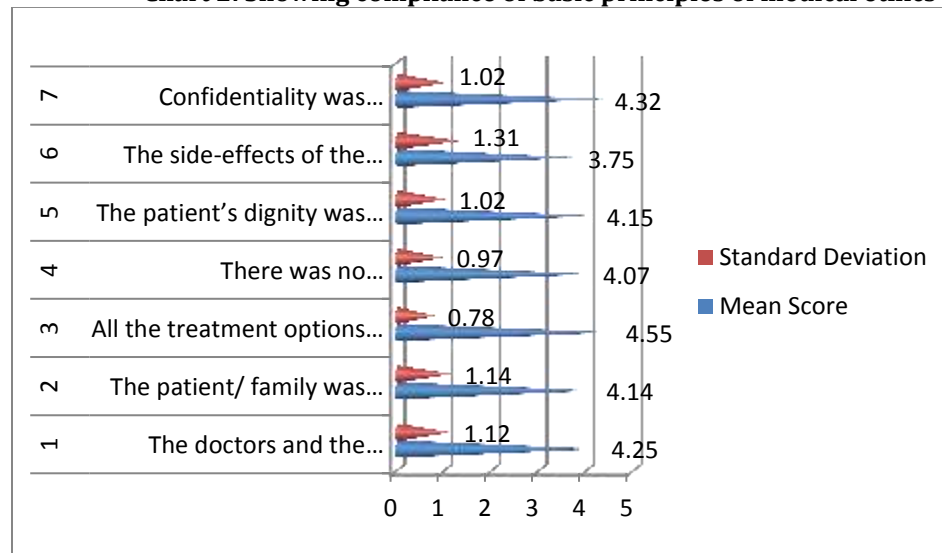
\*SA= Strongly Agree, MA=Mildly Agree, N= Neither Agree nor Disagree, MD= Mildly Disagree, SD= Strongly Disagree

\*\*SD= Standard Deviation

Sl. No.	Statement	SA	MA	N	MD	SD	Mean Score $\frac{\sum fx}{\sum f}$	SD $\sigma = \sqrt{\frac{1}{N} \sum fx^2 - (Ms)^2}$
1	The doctors and the medical staff acted in the best interest of the patient.	66	32	05	07	06	4.25	1.12
2	The patient/family was given the right to choose or refuse treatment.	59	36	04	12	05	4.14	1.14
3	All the treatment options were properly explained to the patient/family.	78	29	05	03	01	4.55	0.78
4	There was no discrimination regarding the treatment given to the patient.	41	57	05	12	01	4.07	0.97
5	The patient's dignity was ensured.	54	42	05	13	02	4.15	1.02
6	The side-effects of the treatment properly explained.	39	46	05	16	10	3.75	1.31
7	Confidentiality was maintained regarding the patient's medical health.	68	31	06	08	03	4.32	1.02

Source: Field Survey, February 2020

**Chart 2: Showing compliance of basic principles of medical ethics**



Source: Table 3

**Interpretation**

In order study the degree of agreeableness, the mean score of all the statements were calculated. Thus, it has been observed that the Mean score of the Statement 3 i.e. ‘All the treatment options were properly explained to the patient/family’ is highest 4.55, followed by Statement 7 ‘Confidentiality was maintained regarding the patient’s medical health’ which accounts for 4.32

Standard deviation has also been calculated in order to examine the variability of the different statements and the result shows that both the statement 5, ‘The patient’s dignity was ensured’ reveals the lowest degree of variability among the respondents and statement 7 ‘Confidentiality was maintained regarding the patient’s medical health’ accounting for 1.02 which is followed by Statement 1, ‘The doctors and the medical staff acted in the best interest of the patient’ where the standard deviation is 1.12

**Table 4: Showing the ethical behaviour of the doctors and other medical staff towards patient/family member**

\*SA= Strongly Agree, MA=Mildly Agree, N= Neither Agree Nor Disagree, MD= Mildly Disagree, SD= Strongly Disagree

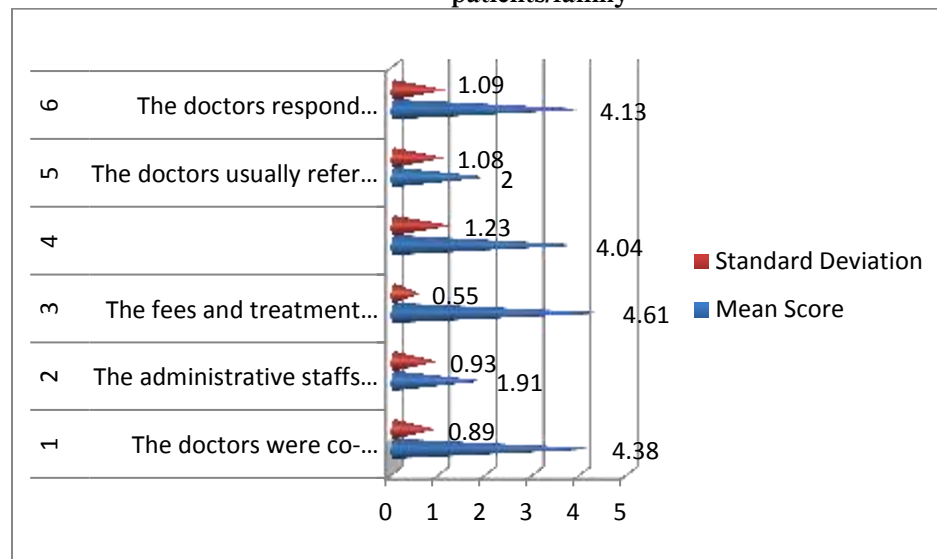
Sl. No.	Statement	SA	MA	N	MD	SD	Mean Score $\frac{\sum fx}{\sum f}$	Standard Deviation $\sigma = \sqrt{\frac{1}{N} \sum fx^2 - (Ms)^2}$
1	The doctors were co-operative and the patients could ask them questions without any hesitation.	67	35	06	07	01	4.38	0.89
2	The administrative staffs were co-operative in settlement of	01	13	05	48	54	1.91	0.93



	claims.							
3	The fees and treatment are expensive.	74	39	03	00	00	4.61	0.55
4	The nurses and other medical staff are helpful and supportive.	57	33	06	14	06	4.04	1.23
5	The doctors usually refer a specific entity for test/ultrasound.	04	12	06	53	41	2	1.08
6	The doctors respond when you call or send text messages at the time of medical emergency.	43	61	04	07	01	4.13	1.09

Source: Field Survey, February 2020

Chart 3: Showing the ethical behaviour of the doctors and other medical staff towards patients/family



Source: Table 4

**Interpretation:** It has been observed that the Mean score of the Statement 3 i.e. ‘The fees and treatment are expensive’ is highest 4.61, followed by Statement 1 ‘The doctors were co-operative and the patients could ask them questions without any hesitation’ which accounts for 4.38.

Standard deviation has also been calculated in order to observe the degree of variability with different

statements and the result shows that the statement 3, ‘The fees and treatment are expensive’ reveals the lowest degree of variability among the respondents accounting for 0.55 which is followed by Statement 1, ‘The doctors were co-operative and the patients could ask them questions without any hesitation’ where the standard deviation is 0.89.

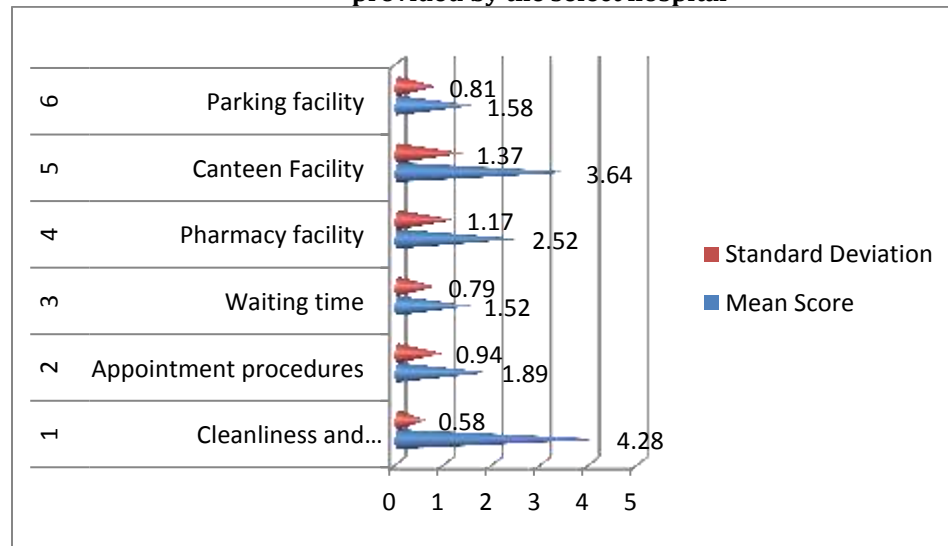
**Table 5: Showing the satisfaction level of the patients/family regarding the facilities provided by the select hospital**

\* HS= Highly Satisfied, S= Satisfied, N= Neutral, D= Dissatisfied, HD= Highly Dissatisfied

Sl. No.	Factors	HS	S	N	D	HD	Mean Score $\frac{\sum fx}{\sum f}$	SD $\sigma = \sqrt{\frac{1}{N} \sum fx^2 - (Ms)^2}$
1	Cleanliness and maintenance of the hospital	38	74	03	01	00	4.28	0.58
2	Appointment procedures	01	11	07	52	45	1.89	0.94
3	Waiting time	00	05	06	34	71	1.52	0.79
4	Pharmacy facility	02	35	08	48	23	2.52	1.17
5	Canteen Facility	27	56	12	18	03	3.64	1.37
6	Parking facility	01	04	06	39	66	1.58	0.81

Source: Field Survey, February 2020

**Chart 4: Showing the satisfaction level of the patients/family regarding the facilities provided by the select hospital**



Source: Table 5

**Interpretation:** It has been observed that the Mean score of the Factor 1 i.e. Cleanliness and maintenance of the hospital is highest 4.28, followed by factor 5 Canteen facility which accounts for 3.64.

Standard deviation has also been calculated in order to observe the level of satisfaction with different factors and the result shows that the factor 1, Cleanliness and maintenance of the hospital reveals the lowest degree of variability among the respondents accounting for 0.58 which is followed by factor 3, Waiting time where the standard deviation is 0.79.

## FINDINGS

### (a) Findings pertaining to objective 1:

- i. The mean score was highest for the statement ‘All the treatment option was properly explained to the patient/family member which was followed by the statement ‘Confidentiality was maintained regarding the patient’s health details.’
- ii. The standard deviation was also calculated to show the degree of agreeableness and it was found that the statement ‘the patient’s dignity was ensured’, followed by ‘Confidentiality





was maintained regarding the patient's health details' revealed the lowest degree of variability.

**(b) Findings pertaining to objective 2:**

- i. The mean score was highest for the statement 'The fees and treatment are expensive' followed by the statement 'The doctors were co-operative and the patient could ask them questions without any hesitation.'
- ii. The standard deviation was also calculated to show the degree of agreeableness and it was found that same statements 'The fees and treatment are expensive' and 'The doctors were co-operative and the patient could ask them questions without any hesitation' showed the least degree of variability.

**(c) Findings pertaining to objective 3:**

- i. The mean score was highest for the factor 'Cleanliness and maintenance of the hospital', followed by the factor 'Canteen facility'.
- ii. The standard deviation was also calculated to show the degree of agreeableness and it was found that the factors 'Cleanliness and maintenance of the hospital' and 'Waiting time' exhibited the lowest variability amongst all the other factors.

**(d) General Findings:**

- i. The behavior of the administrative staff as a whole was unprofessional and rude in comparison to the doctors and other medical staff.
- ii. There was lack of co-ordination among the select departments of the hospital with the front desk executives. The respondents mostly complained about the long time duration they have to wait for the concerned doctors.
- iii. There is lack of resources in comparison to the increasing number of patients. It takes a minimum of 5 hours to get the ultrasound done there which is quite discomforting for the patients who mostly have to opt there because of emergency reasons.
- iv. There should be a distinct cell which must take care of patients' grievances, as most of the patient /family members are not aware regarding the reporting procedure of any unethical activity.

- v. The respondents were satisfied regarding the hygiene of the hospital, good canteen food (so the hassle of bringing home food is minimized), rooms (even general wards) are clean and well managed, well equipped medical facilities, efficient front desk executives, caring nursing staff, availability of the best doctors of India from time to time to cater to the needs of the serious patients.
- vi. The respondents are dissatisfied regarding the unprofessional attitude of the reception staff, parking facility provided by the hospital, the staff in the pharmacy should be more efficient as it takes lot of time in their billing process which is quite annoying as it is mostly crowded, too much time is taken for test specially ultra-sound, non-functional air conditioners specially in the patients sitting area and this is quite discomforting specially for the children and expecting ladies, feeding rooms are dirty and suffocating, the room charges are very high and getting a bed there is also a herculean task, lift service is worst as it is extremely slow and rather non-functional most of the time.

**VII. SUGGESTIONS**

The researchers have given the following suggestions;

- i. The hospital surely needs amicable and friendly staff at the reception.
- ii. Ethical training should be imparted to the non- medical staff too through ongoing education programs and in-service programs, so that they are able to handle the dilemma more empathetically.
- iii. The waiting time of the patients needs to be reduced as it is quite time consuming. The patients should be called as per their appointment time.
- iv. Installation of one more elevator with good capacity and efficiency is the need of the hour as the existing one is insufficient to cater the requirements of so many patients.
- v. Proper display of the reporting procedure regarding patients/ family member grievances should be made.



- vi. Improvement should be made regarding the air conditioning as the waiting area becomes claustrophobic because of increased number of patients and heat.
- vii. The feeding rooms should be made more airy and should be well-maintained.

### VIII. CONCLUSION

Medical ethics is concerned with promoting health, upholding what is best for the patient's interest and maintaining human dignity and the rights of the patients. A proper understanding of the basic principles will enable the doctors to critically analyze their own practice and to defend such practices publicly. The utmost faith of the patients on the healthcare professionals should be reciprocated by them in the form of best of intention. The corrosion of ethics in the recent times has undermined the nobility of the healthcare services. Revival and incorporation of the eroded ethics can go a long way in restoring the faith upon the noble service. Inclusion of feedback machinery can help in addressing the grievances of the patients and their families. Further, establishments of proper organizational standards or codes of ethics, backed by rational consideration of the patients' conditions will serve as yardstick to adhere to the age old Hippocratic Oath.

### REFERENCES

1. Avasthi, Ajit. et al. (2013). "Ethics in medical research: General principles with special reference to psychiatry research", *Indian Journal of Psychiatry*, Vol. 55, Issue 1, pp. 86-91
2. Chakraborty, S. K. (1997). "Business Ethics in India", *Journal of Business Ethics*, October, Vol. 16, Issue 14, pp. 1529-1538
3. Chatterjee, C. and Srinivasan, V. (2013). 'Ethical issues in healthcare sector in India', *IIMB Management Review*, Vol. 25, No. 1, pp. 49-62.
4. Chattopadhyay, Chandrani. (2012). "Indian Philosophy and Business Ethics: A Review", *Advances in Management & Applied Economics*, Vol.2, No.3, pp. 111-123
5. Chattopadhyay, S. (2013). 'Corruption in healthcare and medicine: Why should physicians and bioethicists care and what should they do?', *Indian Journal of Medical Ethics*, Vol. 10, No. 3, pp. 2-27
6. Kothari, C. R. (2004). *Research Methodology, Methods and Techniques*, New Delhi: New Age International Publishers, Second Revised Edition, pp. 55-67
7. Masic, Izet. et al. (2014). "Ethics in medical research and publication", *International Journal of Preventive Medicine*, Vol 5, Issue 9, pp. 1073-1082
8. Mathias, T.A (1994). "Corporate Ethical and Social Responsibility in Action", *Corporate Ethics*, New Delhi: Allied Publishers Limited, pp 30-32
9. Michael, V. P. (2004). *Research Methodology in Management*, Mumbai: Himalaya Publishing House, Fifth Reprinted Edition
10. Murthy, C.S.V. (2004). *Business Ethics*, Mumbai: Himalaya Publishing House, First Edition
11. Peter, E. (2011). 'Fostering social justice: The possibility of a socially connected model of moral agency', *Canadian Journal of Nursing Research*, Vol. 43, No. 2, pp- 11-17
12. Peter, E. (2018). 'Overview and summary: Ethics in healthcare: Nurses respond', *Ojin- A scholarly Journal of American Nurses Association*, Vol. 23, No. 1, pp.21-29
13. Sciortino, J.M. (1994). "Establishing and maintaining an Ethical Business Climate: The Sysco Foods Experience", New Delhi: Allied Publishers Limited, pp 138-140
14. Vilma, Z. et al. (2010). 'Ethical dilemmas concerning decision making within healthcare leadership: a systematic literature review', *Medicina (Kaunas)*, Vol. 46, No. 9, pp. 595-602
15. Walker, M. U. (1998). *Moral Understandings: A feminist study in ethics*. New York: Routledge



# MEASURES TAKEN BY INDIAN POLICYMAKERS TO COMBAT COVID-19 (ATMANIRBHAR BHARAT ABHIYAN)

**Abha Gautam**

MBA from University of Central Lancashire,  
 United Kingdom

**Abhishek Gautam**

M.Tech, Printing Technology  
 Guru Jambheshwar University  
 Hisar, Haryana  
 India

## ABSTRACT

*Covid-19 has spread all over the world within no time and has turned our lives upside down. We can not only say that it has caused and still causing human sufferings but economic sufferings as well. Every country is trying hard to cope with the pandemic in terms of health and economy. The Indian government has also taken up some of the relief measures to support its citizens in this pandemic atmosphere and this paper is critically analysing the policies of the Indian government to revive the Indian Economy during lockdown.*

**KEYWORDS:** Aatma Nirbhar Bharat Abhiyan, Self-Reliant India Mission, Covid-19 Relief Measures

## INTRODUCTION

The novel coronavirus has wreaked havoc across the world, affecting the global economy, reporting around 10,500,639 cases people and infecting millions<sup>1</sup>.

There is an increase in the number of cases<sup>2</sup>, especially in Delhi and Maharashtra and hence the Government of India has taken several preventive steps—from implementing a three months lockdown, opening 52 dedicated COVID-19 test centres in 28 states to announcing a relief package of Rs 1.7 lakh crore<sup>3</sup>.

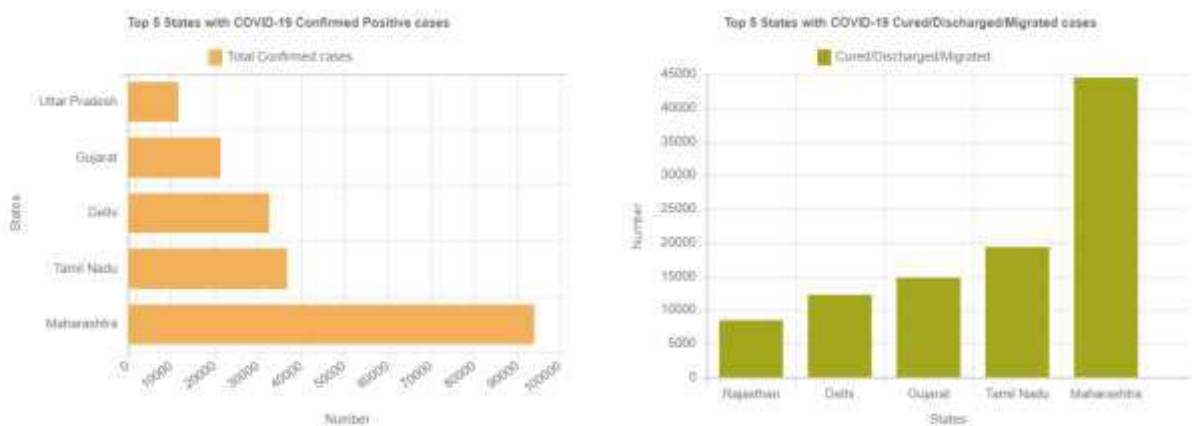


Figure 1: Number of cases in different states

Source: Covid-19 India, data.gov.in, 11 June 2020  
[data.gov.in/major-indicator/covid-19-india-data-source-mohfw](https://data.gov.in/major-indicator/covid-19-india-data-source-mohfw)



**Figure 2: Categories of Covid-19 cases**

Source: Covid-19 India, data.gov.in, 11 June 2020

Samples tested by 11 June 2020 = 52,13,140

SARS-CoV-2 (COVID-19) Testing Status (11/06/2020 9:00 AM IST)

As far as preparation of India is concerned for Covid like pandemic, there is a scarcity of hospital beds, ventilators, doctors and diagnostics in India which makes it unprepared for increasing coronavirus cases. According to WHO reports, India has only 7 beds per 10,000 people<sup>4</sup>, whereas China has 42. Moreover, India has only 8.57 doctors per 10,000 patients<sup>5</sup> as compared to Italy that has 40, China that has 19.798, the US that has 26 and the UK that has 28 doctors, according to WHO.

India has 111 labs for testing Covid-19<sup>6</sup> and India is doing 7.78 tests per 1000 population<sup>7</sup>. Additionally, India spends only 3.53% of its GDP on health; China, 5%, Italy, 9%, the UK and US, 9.7% and 17.2%, respectively. On the other hand, in India the out-of-pocket expenditure on health is an appalling 65%, whereas it's only 11% in the US, 15% in the UK, 23% in Italy and 35% in China<sup>8</sup>.

In December 2019, India ranked 72 on the global food security index<sup>9</sup>, whereas the US stood at the third position and the UK, 17. All these countries

irrespective of being developed countries are scrambling to contain the spread of the virus, with the death toll in thousands.

A couple of months into the fight against COVID-19, India has not only tried hard to combat corona virus but has also extended a helping hand to the lesser privileged in the community.

The lockdown that came into effect on 25<sup>th</sup> March for three weeks has been implemented in phases, the third phase being announced recently to extend over a fortnight, starting 4<sup>th</sup> May to ensure minimal incidence of the pandemic and then it was extended to 30<sup>th</sup> June.

In order to combat Covid-19, India has set up some teams, the description is as follows<sup>10</sup>-

#### **RAPID RESPONSE TEAM**

**Lab network and sample testing**-There has been set up the government and private labs all across India for testing<sup>11</sup>.



**Figure 3: Map shows the number and location of labs across Indian.**

Source: ICMR

### **Diagnostic kits evolution/ other claims**

This team is located at Pune, New Delhi, Kolkata and Hyderabad take cares of the evolution of Diagnostic kits for CBNAAT/ TruNAT and RT-PCR/ Rapid Antibody Test<sup>10</sup>.

### **Procurement, Distribution and regional depots**

This team of technical committees deals with the procurement of VTM, RNA extraction kit and RT-PCR kits<sup>10</sup>.

After procurement, there are regional teams divided into East/North-East, North, West and South regions which distribute the kits in their particular allocated regions.

### **High-level public health committee(National Task Force -NTF)**

There is a high-level public health committee of Public Health experts as well in the rapid response team<sup>10</sup>.

### **NTF Research Groups, other research studies and Policy group on AYUSH**

There are various research groups working on combating Corona Virus which include clinical

research, Diagnostics and Biomarkers, Epidemiology & Surveillance and operations research.

Multi-centric Therapeutic Research Studies are being done to discover more about Plasma Therapy & Convalescent Plasma, BCG, Hydroxychloroquine and WHO Solidarity Trial<sup>10</sup>.

Policy group on Ayurveda, Unani, Homeopathy, Siddha and Other Systems are also trying to find out if there is any cure which can be considered to fight against Covid-19.

### **Admin and Financial Support**

In short, Rapid Response team is actively involved in sample testing, kit validation and virus research along with the other core activities like Purchase, Procurement & Internal audit, Reagent Distribution & Quality check; Central Depot, logistics and training<sup>10</sup>.

### **ATMANIRBHAR BHARAT ABHIYAN**

When the world is struggling to maintain its economy, India has come up with an idea of Self-reliant Bharat Mission which is also known as Atmanirbhar Bharat Abhiyan. According to Indian

Prime Minister Narendra Modi, “when India speaks of becoming self-reliant, it doesn't advocate a self-centred system. In India's self-reliance; there is a concern for the whole world's happiness, cooperation and peace”<sup>12</sup>. In this mission the Prime Minister has announced a Rs. 20 lakh crore economic package in order to combat the coronavirus crisis. This announcement made by Indian Finance Minister in between 13 May 2020 to 17 May 2020, of investing a huge amount in different sections of the economic sectors and certain policy reform initiatives has been supported as well as criticised by many experts. The following section will discuss the distribution of the amount and its benefits in improving the economy.

## DISCUSSION

### PM Vision for Atma Nirbhar Bharat

The intended objective of this plan is two-fold. First includes those measures which can help poor people with liquidity infusion and direct cash transfers who are in acute stress. The second is to strengthen the economy to make it globally competitive and attractive by focussing on critical growth factors.

Together, the measures of Atma Nirbhar Bharat Abhiyan may revive the economic activity, impacted by Covid-19 pandemic and create new opportunities for growth in sectors like agriculture, micro, small and medium enterprises (MSMEs), power, coal and mining, defence and aviation, etc by

reducing the imports and emphasising made in India themes.

According to Trading Economics report 2020<sup>13</sup>, India is one of the largest importers of mineral fuels, oils, waxes and bituminous substances which sum up into 27% of total imports. Moreover, it imports pearls, precious and semi-precious stones and jewellery which is around 14 % of total imports followed up by electrical machinery and equipment (10 %); nuclear reactors, boilers, machinery and mechanical appliances (8 %); and organic chemicals (4 %).

It has been claimed by Mahendra and Rajeswari(2020)<sup>14</sup> that before Covid-19, there existed a reduction in demand in Indian Economy but now supply has also been reduced which is because of many factors like external supply and demand constraints due to global recession and disruption of global supply chains, domestic supply disruptions, and decline in domestic demand which has caused an economic shock to the Indian economy and no sector has to remain untouched of this shock. Therefore, PM has come up with this vision to become vocal about local products and make them global. Having said that, the government has disallowed global tenders in government procurement tenders up to Rs. 200 crores. Additionally, the comprehensive package of Rs 20 Lakh crores which is equivalent to 10% of India's GDP with bold reforms implementation across different sectors under Atmanirbhar Bharat<sup>12</sup> to revive Indian Economy is one of the main agenda of this mission.



Figure 4: Vision of Aatma Nirbhar Bharat

Source: [www.india.gov.in](http://www.india.gov.in)

The total stimulus has been distributed into five tranches as shown in the figure 5 below. However, as per some critics, it is not right to include

the earlier measures taken by the government as an immediate relief for the people and RBI measures to

show it as a huge amount for the publicity of the government.



Figure 5: Phases in which stimulus is provided under Aatma Nirbhar Bharat Abhiyan.

Source: www.india.gov.in

In this mission, there are different amount allocated to different sectors and different people of the society keeping their basic needs and survival in mind.

#### Pradhan Mantri Garib Kalyan Yojana

Government has announced Rs 1.70 crore relief package under Pradhan Mantri Garib Kalyan Yojana/scheme(PMGKY). It includes-

1. Insurance cover of Rs 50 Lakh per health worker.
2. Starting from June 2020, 80 crore poor people have been given benefit of 5 kg wheat/rice per person for the next three months.
3. Moreover, each household would get 1kg pulses for free every month for the next months.
4. Before Corona, the government had taken initiatives of financial inclusion under which it opened the bank accounts for all the poor people to transfer some of the financial aid into their accounts. This step has been taken forward in PMGKY scheme under which Rs 500 per month will be given to 200 crore women Jan Dhan account holders. Furthermore, free gas cylinders would be provided to 8 crore poor families for the next three months.
5. There is an employment programme called MNREGA under which wages of labourers has been increased from Rs 182 to Rs 202

per day in order to provide the benefit to 13.62 crore families.

6. There will be a transfer of Rs 1000 to 3 crore poor senior citizen, poor widows and differently abled people. Additionally, there is a transfer of Rs 2000 to farmers benefitting 8.7 crore farmers.
7. Government has decided to use construction workers welfare fund in order to provide relief to workers.
8. It has been decided to credit 24% of monthly wages into Pension Fund(PF) accounts for the next three months for those wage-earners who earn below Rs 15000 per month.
9. Under PMGKY relief package, 5 crore workers have registered under EPF to get non-refundable advance of 75% of the amount or 3 months of the wages.
10. The government has increased the limit of collateral-free lending from Rs 10 lakhs to Rs 20 lakhs for women Self Help Groups(SHG) supporting 6.85 crore households.

However, critics have claimed that 1,92,800 Crore rupees as shown in figure 6 are invested in earlier measures which should not be included in Aatma Nirbhar Bharat mission as can be seen in the below figure.



Figure 6: Stimulus provided before the announcement of Aatma Nirbhar Bharat Abhiyan.

Source: www.india.gov.in

### RBI RELIEF MEASURES

The proactiveness of the Reserve Bank of India (RBI) is much appreciated as one of the greatest relief measures, but these measures have also been incorporated in Atmanirbhar Bharat Abhiyan. These measures include<sup>15</sup>-

1. Reduction in Cash Reserve Ratio (CRR) which hence resulted in the liquidity of Rs. 1,37,000 crores.
2. RBI has introduced targeted Long-Term Repo Operations (TLTROs) of Rs 1,00,050 crore for fresh deployment in investment-grade corporate bonds. Moreover, TLTRO of Rs 50,000 crore has been decided to invest in bonds, Commercial Paper and non-convertible debentures of Non-banking Financial Companies (NBFCs) and Micro Finance Institutions (MFIs).
3. RBI has also increased the borrowing limits of banks overnight under the Marginal Standing Facility (MSF) to avail an additional of Rs 1,37,000 crore of liquidity at reduced MSF rate of the banking system.
4. It has provided special refinance facilities to the financial institutions like National Bank For Agriculture & Rural Development (NABARD), Small Industries Development Bank of India (SIDBI) and National Housing Bank (NHB) for a total amount of Rs 50,000 crore at the policy repo rate.
5. Mutual Funds are provided with Special Liquidity Facility (SLF) of Rs 50,000 crore to alleviate intensified liquidity pressures.
6. There is also a relief measure for Loan payers in terms of a moratorium of 3 months on payment of instalments and payment of Interest on working Capital Facilities.
7. RBI has reduced margins to facilitate Working Capital Financing.
8. Extension of date for commencement for commercial operations (DCCO) for 1 year to commercial estate sector has been given for loans by NBFCs.

In part 1 of stimulus provided under Aatma Nirbhar Bharat Abhiyan, Rs. 5,94,550 crores, are allocated for different measures as can be seen in the figure 7 below.





Figure 7: Stimulus given in phase 1 of Aatma Nirbhar Bharat Abhiyan

Source: www.india.gov.in

Furthermore, stimulus in part 2 has the allocation of Rs.3,10,000 crores (figure 8) followed by stimulus in part 3 of Rs.1,50,000 crores (figure 9).

In the announcement of part 4 and part 5 of the allocation of Rs 48100 crore (figure 10)

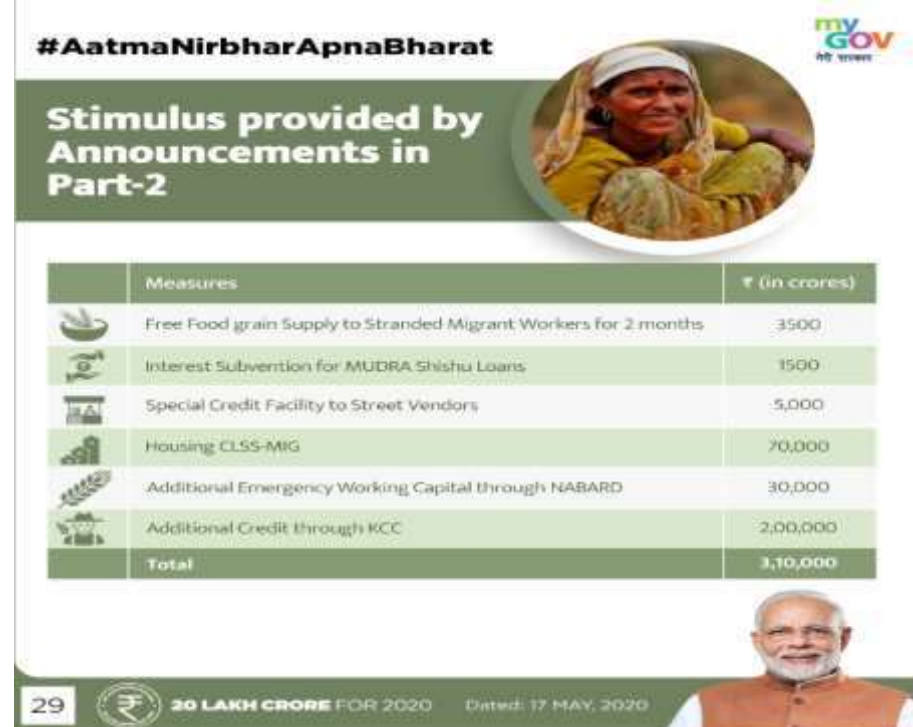


Figure 8: Source: www.india.gov.in



Figure 9:Source:www.india.gov.in



Figure 10: Source:www.india.gov.in

Further section will give an insight on the amount of money received by each section.

**Other measures and relief<sup>12</sup>**

**For Taxpayers-**

1. Special refund and Drawback Disposal Drive has been implemented in which Rs

18000 crore are disbursed under issuance of pending Income Tax refund to taxpayers up to Rs 5 lakh to 14 lakhs.

2. Rs.15000 crores have been announced for Emergency Health Response Package.



3. The relief has been provided to taxpayers by extending last date for Income Tax returns and GST returns to 30 June 2020.
4. Also, the time schedule for custom clearance has been changed to 24/7 till 30 June 2020.

### **Relief Measures for Small Business owners<sup>12</sup>**

1. Loan taken for small businesses is called as Mudra shishu loan under which people can take loan up to Rs.50000. This amount makes the current portfolio of Mudra Shishu loan as Rs. 1.62 lakh crore. The government of India has decided to provide interest subvention of 2% for prompt payees for 12 months which makes total interest subvention of Rs. 1500 crores.

### **Relief Measures for street vendors<sup>12</sup>**

The Aatma Nirbhar Bharat mission has the agenda of making India self-reliant by promoting local goods. In this direction, the government has announced special access to facilitate easy access to credit to street vendors within a month. In order to support street vendors, the government has provided initial working capital up to Rs.10000 which will benefit nearly 50 lakh street vendors.

### **Special liquidity scheme for Non-Banking Finance Institutions(NBFCs), Housing Finance Commission(HFCs) and Micro Financial Institutions(MFIs) worth Rs 30,000 crores<sup>12</sup>.**

In this scheme, investment is to be made in both primary and secondary market transactions in investment grade debt paper of financial institutions like NBFCs, HFCs and MFIs. Moreover, securities will be fully guaranteed by the government of India. This scheme is made under the vision to provide liquidity support for NBFCs/HFC/MFIs and mutual funds to further create confidence in the market.

### **Partial Credit Guarantee Scheme(PCGS) 2.0<sup>16</sup>**

This scheme worth Rs.45000 is to extend the existing PCGS scheme for NBFCs to cover borrowings such as primary issuance of bonds or Commercial papers(CPs). Under this scheme, the first 20% of loss to be borne by the government of India which will result in the liquidity of Rs 45000 crore.

### **Liquidity Injection for DISCOMs<sup>12</sup>**

Currently, the payables of DISCOM(Distribution Companies) to power generation and transmission companies is Rs 94000 crores. PFC(Public Infrastructure Finance Company)/REC(Rural Electrification Corporation Limited) has decided to infuse liquidity of Rs.90,000 crore to DISCOMs against receivables. These loans are to be given against State guarantees which will help to reduce financial and operational losses by introducing digital facility for DISCOMs consumers. Furthermore, central public sector generation

companies are about to give rebate to Discoms to be passed on to the final consumers(industries).

### **TDS(Tax Deducted at Source)/TCS(Tax Collected at Source) Rate Reduction<sup>12</sup>**

In order to help the people to cope with these hard times, the government has reduced TDS and TCS by 25% of the existing rates. The timeline for which this reduction is applicable is from 14 May 2020 to 31 March 2021. This reduction will provide the liquidity of Rs 50,000 crores. Moreover, the government has extended the due date of all income-tax returns for the financial year of 2019-2020 to 30 November 2020.

### **Educational Reforms<sup>12</sup>**

Covid-19 has taught us the importance of technology in development. Education of students has suffered a lot during lockdown and therefore the government has come up with the idea of technology driven education under PMeVIDYA scheme. This scheme is responsible in providing multi-mode access to online education. It includes many steps taken-

1. One Nation -One Digital Platform('Diksha' for school education)- This platform is providing e-content and QR coded energised textbooks for all grades. 200 new textbooks have been added to e-Paathshaala.
2. One Class, One Channel- This initiative brings one earmarked TV channel per class from 1 to 12 into picture. Swayam Prabha DTH channels on Tata Sky and Airtel are designed to support and reach those students who do not have access to the internet. Moreover, live interactive sessions are ongoing on these channels with experts from home through skype.
3. Universities have started to provide online courses from 30 May 2020.
4. Radio, community radio and podcasts are being used as an educational platform.
5. A psychosocial support initiative has been taken under Manodarpan platform for students, teachers and families to ensure their good mental health and emotional well-being.

### **Health reforms, initiatives and investments<sup>12</sup>**

The government has taken some health reforms in order to ensure that India would be prepared for any future Pandemic.

1. Public expenditure has been increased on health to ramp up health and wellness centres in rural and urban areas.
2. To manage pandemics integrated public health labs are set up in all districts with block level labs and public health unit.
3. Research is encouraged by ICMR under National institutional Platform for one health initiative.



4. In order to contain Covid-19, it is important to leverage IT and for that government has rolled out of e-Sanjeevani Tele-Consultation Services.
5. Aarogya Setu App is designed for the self-assessment and contact tracing.
6. India used to import PPE(Personal Protective Equipment) kits but those were not of good quality and hence India started to manufacture PPE kits and now India has 300 domestic suppliers which are not only fulfilling the needs of India but also supplying 51 Lakhs PPE Kits. India has now become the exporter of 87 Lakhs N95 masks and 11.08 crore HCQ(Hydroxychloroquine) tablets.

### Support in favour of Agriculture and Farmers<sup>12</sup>

India is an agricultural country and therefore it is important to include agriculture when it comes to development policies. There have been some relief measures provided to farmers. For instance,

1. Around 3 crore farmers with Rs. 4.22 Lakh crores of agricultural loans have been availed 3 months loan moratorium. Moreover, there is an extension in dates of interest subvention and prompt repayment incentives.
2. The government has sanctioned 25 Lakh new Kisan(Farmer) credit cards with loan limit of Rs. 25000 crores.
3. A loan amount of Rs.86000 crores have been approved for 63 Lakh Agri loans in March and April 2020.
4. NABARD has refinanced Rs.29500 crores to cooperative banks and regional rural banks in March 2020.
5. There has been provided Rs 4200 crores to states in March 2020 for Rural Infrastructure Development Fund.
6. In order to procure agricultural produce, the working capital of Rs 6700 crores has been provided to State Governments since March 2020.
7. The government has announced Rs. 74300 crores worth of procurement at Minimum Support Price(MSP) during lockdown.
8. There is a transfer of Rs 18700 crores to PM KISAN beneficiaries. Moreover, due to loss in agricultural activities during lockdown, claims of Rs 6400 crores paid under PM Fasal Bima Yojana(Insurance).
9. The government has allocated 1 Lakh crore Agri Infrastructure Fund for Farm-Gate Infrastructure in order to benefit primary Agricultural Cooperative Societies, Farmers Producer Organisations, Agriculture entrepreneurs, start-ups etc. This scheme will develop affordable and financially

viable infrastructure for post-harvest management of agricultural produce.

### Pradhan Mantri Matsya Sampada Yojana(PMMSY)<sup>12</sup>

The government has allocated Rs. 20,000 crores to promote blue revolution or fisheries. PMMSY will help in the integrated, sustainable and inclusive development of marine and inland fisheries. The key activities under this scheme involves cage culture, seaweed farming, ornamental fisheries, traceability, making of lab network etc. This scheme will lead to additional fish production of 70 lakh tonnes over 5 years and will double the exports to Rs 100000 crores. Moreover, this scheme will provide employment to over 55 lakh persons as it is designed to focus is on islands, Himalayan states, North-East and aspirational districts. The amount has been divided into two parts-

1. To promote activities in marine, inland fisheries and aquaculture, the amount of Rs. 11000 crores are provided.
2. For infrastructure like fishing harbors, cold chain and markets, the amount of Rs. 9000 crores are allocated.

### Investment in Animal Husbandry<sup>12</sup>

The government has announced Rs. 15000 crores to support private investment in Dairy processing, value addition and cattle feed infrastructure.

### Promotion of Herbal Cultivation<sup>12</sup>

National Medicinal Plants Board(NMPB) has supported 2.25 lakh hectare area under cultivation of medicinal plants in which the government has decided to outlay Rs. 4000 crores for herbal cultivation covering 10 lakh hectares in next 2 years. This investment will lead to the income generation of Rs. 5000 crores for farmers by inducing network of regional mandis for medicinal plants.

### Support for Beekeeping<sup>12</sup>

The government has announced Rs. 500 crores for making integrated beekeeping development centres, collection, marketing and storage centres. This measure is expected to increase the income for 2 lakh beekeepers.

### Operation Green<sup>12</sup>

It has been announced that the government has allocated Rs. 500 crores for Operation Green under which subsidies of 50% on transportation from surplus to deficient markets and 50% on storage is provided to farmers. This scheme will help in providing better price realisation to farmers, reduced wastages and affordability of products for consumers.

### Rural Economy<sup>12</sup>

A scheme of Rs.10000 crores is brought up by government for formalisation of Micro Food Enterprises(MFEs). This scheme is designed as per PM's vision of Vocal for Local with global outreach. It will help 2 Lakh MFEs to attain Food Safety and Standards Authority of India (FSSAI) food standards,

build brands and marketing. Moreover, this scheme is expected to result into improved health and safety standards, integration with retail markets and improved incomes.

**Compensatory Afforestation Management and Planning Authority(CAMPA)<sup>12</sup>**

CAMPA has announced Rs.6000 crore to create job opportunities for tribal community in urban, semi-urban and rural areas. This scheme will facilitate afforestation and plantation work including artificial regeneration, forest management, soil and moisture conservation works along with forest protection and wildlife related infrastructure development.

**Employment Boost under Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)<sup>12</sup>**

The government has announced Rs. 40,000 crores to generate the employment in rural areas under MGNREGA. This amount will help in creating work opportunities for returning migrant workers.

**Micro Small and Medium Enterprises(MSMEs)<sup>17</sup>**

The government has revised the definition of MSMEs. According to the new definition of MSMEs, the enterprises having the investment up to Rs. 1 crore and turnover up to Rs 5 crores are classified as Micro Enterprises whereas small enterprises are said to have investment up to Rs. 10 crores and turnover up to Rs. 50 crores<sup>18</sup>. As far as Medium Enterprises are categorised as the enterprises having investment up to Rs. 20 crores and turnover up to Rs. 100 crores<sup>19</sup>.



Figure 11: Source:www.india.gov.in

Rs 3 Lakh crores collateral free loan is allocated for MSME businesses. The government has decided to make these loans without any guarantee fee and without any fresh collateral. Moreover, interest will be capped, and government will take 100% credit guarantee cover to Banks and NBFCs on the principal and interest. Borrowers with up to Rs. 25 crores outstanding and Rs. 100 crore turnovers are eligible to apply for this loan. As far as tenure of repayment is concerned, these loans will have four year of tenure with moratorium of 12 months on the principal repayment.

**Credit Guarantee Fund Trust for Micro and Small Enterprises(CGTMSE)<sup>19</sup>**

Government is to provide a support of Rs. 4000 crores to CGTMSE which will provide partial

guarantee support to banks up to 65%. It will benefit 2 lakh MSMEs. The promoters of the MSME are to be given debt by banks, which will then be infused by promoter as equity in the unit. This scheme has the investment of Rs. 20000 crores subordinate debt for stressed MSMEs.

**Fund of Funds(FoF)<sup>19</sup>**

The government has come up with Rs. 50000 crores equity infusion for MSMEs through fund of Funds(FoF). It will encourage MSMEs to get listed on main board of stock exchanges.

**Support for Migrant Workers and Urban Poor<sup>12</sup>**

State Governments are allowed to utilise State Disaster Response Fund(SDRF) for providing food and shelter for migrants. Moreover, Rs. 11002 crores



releases to State Government to augment SDRF on 3 April 2020.

The government is providing three meals a day to residents of shelters for Urban Homeless(SUH).

To provide the employment opportunities, 12000 Self-Help Groups(SHGs) are employing urban poor to produce 3 crore masks and 1.2 lakh litres of sanitisers.

Under PM's Technology driven system reforms, One Nation One Ration Card is developed for migrants which will enable migrant beneficiaries to access Public Distribution System(PDS) from any Fair Price Shop. The agenda of this scheme is to cover 67 crore beneficiaries in 23 states covering PDS 83% of PDS population by national portability by August 2020 and 100% National portability is to be achieved by March 2021.

The government will be launching Affordable Rental Housing Complexes(ARHC) for migrant workers under Pradhan Mantri Awaas Yojana(PMAY). It will provide ease of living at affordable rent by converting government funded housing into ARHC under Public-Private Partnership (PPP) mode through concessionaire.

## LABOUR REFORMS<sup>12</sup>

Under Pradhan Mantri Garib Kalyan Package(PMGKP), the payment of 12% each of employer and employee contributions made into EPF(Employment Provident Fund) accounts. It was initially decided for the salary months of March, April and May 2020 but not it has been extended for 3 more months which will cost around Rs. 2500 crores.

## CRITICISM OF ATMANIRBHAR BHARAT ABHIYAN<sup>20</sup>

According to critics, there is no clarity on the percentage of GDP which government is going to spend in 2020-2021 financial year. On the one hand the government is stating that it is going to be 10% of GDP, but, on the other hand, most calculations suggest that the actual government expenditure in the Atmanirbhar package is just 1%.

According to critics, the economic package which is offered by the government is unable to provide adequate immediate relief to the most distressed sections of the economy. Moreover, the idea of policy makers to put lockdown, though it was required, has put the total quantum of economic activity (which is the monetary value of goods and services produced)in the country low. Moreover, this package is not able to resist the contraction in the Indian Economy which means less production in 2020-21 than last year. In other words, the Gross Value Added (GVA is a proxy for the income earned) across sectors — agriculture, industry and services — will fall.

As incomes fall, three things will happen<sup>21-</sup>

1. Individuals will cut down their expenditure.
2. Seeing overall demand fall, businesses, which were already not investing, will likely postpone their investments further.
3. The government revenues will take a massive hit because of the reduction in the earning as revenues and increase in the expenditure, that is the level of fiscal deficit will be reduced.
4. There is a fourth component called net exports (that is, the net of exports and imports), but with the global demand plummeting as well, this too is unlikely to help matters.

It is to note here that the individual, business and government expenditures prominently make up the GDP of India which are apparently reducing because of fall in income.

Of these four engines of growth, only the government has a “superpower” of increasing liquidity, it is the only one which can spend money even when it doesn't have it.

There is another point claimed by the people who are not in favour of Atmanirbhar Bharat is that there is nothing new about it, in fact, it is the part of Made In India only which is making India less efficient as this would make India less competitive without any imports of equipment and industrial inputs.

- **Lack of Backward and Forward Linkages:** Unless the rest of the domestic economy is revived, the MSME sector may face a shortage of demand, and its production may soon sputter to a close.
- **Burgeoning Fiscal Deficit:** Government claims that the stimulus package is around 10% of India's GDP. However, financing it would be difficult as the government is worried about containing the fiscal deficit.
- **Difficulty in Mobilising Finances:** The government seeks a disinvestment to mobilise the finances for the plan.
  - However, the majority of Indian industries are already a bit debt-laden to take up the stake in PSUs.
  - Further, it is difficult to borrow the foreign markets, as rupee with respect to dollar is all time low.

## CONCLUSION

To conclude, every nation is trying to sustain amid the economic crisis triggered by Covid-19 pandemic. The Indian government has also announced recently, an economic stimulus package of Rs 20 lakh crore and some reforms under the self-reliant India Mission.



However, there are several challenges that are needed to be addressed in order to fulfill the vision of this plan.

Impact of this Stimulus Package

- **Primary Sector:** The measures (reforms to amend ECA, APMC, Contract framing, etc) announced for the agricultural and allied sectors are particularly transformative.
  - These reforms are steps towards the **One Nation One Market** objective and help India become the **food factory of the world**.
  - These would finally help in achieving the goal of a self-sustainable rural economy.
  - Also, the MGNREGA infusion of Rs 40,000 crore may help in alleviating the distress of migrants when they return to their villages.
- **Secondary Sector:** Given the importance of MSMEs for Indian economy, the **Rs 3 lakh crore collateral-free loan facility for MSMEs** under the package will help this finance-starved sector and thereby provide a kickstart to the dismal state of the economy.
  - Also, as the MSME sector is the second largest employment generating sector in India, this step will help to sustain the labour intensive industries and thereby help in **leveraging India's comparative advantage**.
  - Additionally, limiting imports of weapons and increasing the limit of foreign direct investment in defence from 49% to 74% will give a much-needed boost to the production in the Ordnance Factory Board, while reducing India's huge defence import bill.
- **Tertiary Sector:** The government has adopted a balanced approach in addressing concerns across sectors. For example:
  - The newly launched **PM e-Vidya programme** for multi-mode access to digital online education provides a uniform learning platform for the whole nation, which shall enable schools and universities to stream courses online without further loss of teaching hours.
  - Public expenditure on health will be increased by investing in grass root health institutions and ramping up health and wellness centres in rural and urban areas.

## SUGGESTIONS

There are so many places in India where there is no Internet connectivity, it is important to have internet connection there as we are moving towards technological reforms like making education digitalised.

Employers are also required to adapt into the technology driven firms so that work can be done from home as well by employees.

There should be an app and farmers should be made aware of it, so that they can be linked with the market and consumers digitally.

- **Enhancing Demand:** The economic package for the country emerging out of the lockdown requires a stimulus enhancing demand across the economy.
  - The best way for this is to spend on greenfield infrastructure.
  - Infrastructure spending uniquely creates structures that raise productivity and extends spending power to the section of the population most affected by the lockdown, namely daily wage labourers.
- **Mobilising Finances:** For financing of the stimulus package, India's foreign reserves stand at an all-time high which could be strategically used to finance its needs.
  - The rest may have to come from privatisation, taxation, loans and more international aid.
- **Holistic Reforms:** Any stimulus package will fail to reflect the trickle-down effect, until and unless it is backed by reforms in various sectors.
  - Thus, Aatma nirbhar plan also encompasses the unfinished agenda of holistic reforms which may include reforms in Civil services, Education, Skill and Labour, etc.

## REFERENCES

1. *Worldometer(2020)*, Available at <https://www.worldometers.info/coronavirus/> (Accessed on 30 June 2020)
2. *Indian Government(2020)*, Available at <https://www.india.gov.in/spotlight/fight-against-covid-19> (Accessed on 10 July 2020)
3. *Indian Government(2020)*, Available at <https://transformingindia.mygov.in/aatmanirbhar-bharat/> (Accessed on 10 July 2020)
4. *World Bank(2020)*, Available at <https://data.worldbank.org/indicator/SH.MED.B.EDS.ZS> (Accessed on 10 July 2020)
5. *WHO(2020)*, Available at [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/medical-doctors-\(per-10-000-population\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/medical-doctors-(per-10-000-population)) (Accessed on 10 July 2020)
6. *Economic Times(2020)*, Available at <https://economictimes.indiatimes.com/news/politics-and-nation/coronavirus-updates-111-labs->



- [across-india-functional-from-today-for-covid-19-testing-informs-govt/videoshows/74750213.cms?from=mdr](#)
7. World Data(2020), Available at <https://ourworldindata.org/coronavirus-testing> (Accessed on 10 July 2020)
  8. World Bank(2020), Available at <https://data.worldbank.org/indicator/SH.XPD.CHEX.GD.ZS> (Accessed on 10 July 2020)
  9. Food Security Index(2020), Available at <https://foodsecurityindex.eiu.com/Index> (Accessed on 10 July 2020)
  10. <https://www.india.gov.in/spotlight/combating-coronavirus> (Accessed on 10 July 2020)
  11. <https://www.icmr.gov.in/crrteam.html> (Accessed on 10 July 2020)
  12. <https://transformingindia.mygov.in/aatmanirbhar-bharat/> (Accessed on 10 July 2020)
  13. [https://tradingeconomics.com/india/imports#:~:text=India's%20major%20import%20partners%20Qare,and%20Switzerland%20\(5%20percent\).](https://tradingeconomics.com/india/imports#:~:text=India's%20major%20import%20partners%20Qare,and%20Switzerland%20(5%20percent).) (Accessed on 10 July 2020)
  14. Mahendra and Rajeswari(2020), 'Covid-19: Impact on the Indian economy, Indira Gandhi Institute of Development Research, New Delhi.
  15. RBI(2020), Available at <https://rbidocs.rbi.org.in/rdocs/PressRelease/PDFs/PR239281035C0C72F5477589233CDB3AFDE29E.PDF> (Accessed on 22 May 2020)
  16. Addressing liquidity/cash flow through Extended partial credit Guarantee scheme, Available at <https://financialservices.gov.in/sites/default/files/Extended%20PCGS.pdf> (Accessed on 20 May 2020)
  17. Boost to domestic suppliers/ MSMEs Amendment to General Financial rules 2017, Available at <https://doe.gov.in/sites/default/files/Amendment%20in%20General%20Financial%20Rules%202017%20-%20Global%20Tender%20Enquiry.pdf> (Accessed on 15 May 2020)
  18. Boost to domestic suppliers/ MSMEs Global Tender Applicability, Available at <https://doe.gov.in/sites/default/files/Global%20Tender%20Equiry-%20GTE-clarification%20regarding%20applicability.pdf> (Accessed on 28 May 2020)
  19. Boost to domestic suppliers/ MSMEs Global Tender Relaxation, Available at <https://doe.gov.in/sites/default/files/Global%20Tender%20Equiry-%20GTE-%20clarification%20regarding%20relaxation.pdf> (Accessed on 28 May 2020)
  20. Indian Express(2020) Available at <https://indianexpress.com/article/explained/explainspeaking-why-the-atmanirbhar-bharat-abhiyan-economic-package-is-being-criticised-6414905/#:~:text=The%20key%20criticism%20is%20that,the%20sharp%20decline%20in%20GDP.>
  21. Economic Times(2020), Available at <https://economictimes.indiatimes.com/news/economy/policy/view-the-problems-with-modis-atmanirbhar-bharat-abhiyan/articleshow/75746607.cms?from=mdr>





# THE GROWING ROLE OF ARTIFICIAL INTELLIGENCE IN HUMAN RESOURCE

**Akanksha Saxena**

Research Scholar,  
Faculty of Commerce and Management,  
Rama University,  
Kanpur

Article DOI: <https://doi.org/10.36713/epra4924>

## ABSTRACT

*The adoption and integration of technology with business is no longer a matter of choice but rather one of survival. Since times, businesses are aligning technology with business goals to ensure business continuity, survival and growth. Technological advancements have entirely reshaped and restructured the organization by making their business operations highly integrated and streamlined than even before. These technological advancements in business are bringing machines and humans more closely along with exploring ways of utilizing it to improve their productivity, ease and efficiency. The inclusion of Artificial Intelligence (AI) in business is an example of such business transformation.*

*The organizations that have already using Artificial Intelligence (AI) in their business operations have witness a progressive transformation of their core processes such as Supply chain and logistics management, marketing, finance, production and operation management, research and development(R & D) and other business operations, The Human Resource (HR) department is also not left behind in the race. Today the Human Resource (HR) professionals are focusing more on the importance of optimizing the combination of human and automated work for an intuitive work environment. As the organizations are adopting artificial intelligence into their Human Resource (HR) process at a varying rate, it is important for the Human Resource (HR) professionals to understand and prepare themselves for these technological changes, which are redefining their organization and workforce characteristics.*

*Artificial Intelligence (AI) based Human Resource (HR) technology help the organization to yield both short term and long term benefits. Artificial intelligence provides Human Resource (HR) departments to transform employee experience empowering managers to take consistent decisions solve critical business challenges, automating repetitive tasks, and building customized training module and assist Human Resource (HR) managers for taking more efficient decisions in talent development.*

*This research paper tries to underline the growing importance of Artificial Intelligence (AI) in human resource management (HRM) and aims to explain how artificial intelligence has been integrated into different functions of human resource. The researcher has used secondary data where the data was collected from research papers, publications, websites, HR blogs, survey reports etc. The research paper is descriptive in nature. The research study has concluded that Artificial Intelligence (AI) plays a significant role in carrying forward the Human Resource (HR) functions right from procurement to performance management and thus there is a growing need of integrating Artificial Intelligence (AI) in Human Resource Management (HRM).*

**KEYWORDS:** - Artificial Intelligence (AI), Human Resource Management (HRM), Human Resource (HR).

## I. INTRODUCTION

The role of technology in the business panorama cannot be looked out. Since the time industrial revolution gained momentum, there has been a radical change in the way companies are doing business. Technology has become an indispensable and integral part of every business plan. Almost all the business owners count on technology to start and scale their companies. However, the paradigm of correlation between technology and business is not new. The traditional areas like process control, quality improvement, customer retention are replaced with modern and improved

terminologies like business process reengineering, continuous improvement and total quality control, customer relationship building etc. Irrespective of the size of the business unit, technology provides tangible and intangible benefits to make the business profitable and meet the growing needs of the customer. The technological touch at every step of the end to end production process adds value for the customers. Businesses use an array of technology to develop competitive advantages in the economic marketplace and enhance their performance. The integration of technology with the business sector is one of the major factor for ensuring



the success of the business (Trkman 2010, p. 130). As the digital world is emerging companies are trying to figure out as how they can shape the world around people with the use of the information technology tools. The digital era technological tools like Artificial Intelligence (AI), data analytics, Machine Learning (ML), Big Data, Internet of Things (IoT), Natural Language Processing, Cloud Computing etc. which began as a differentiating advantage are now becoming the need of the hour for every business unit. The emerging technologies viz. internet of things (IoT), data science, big data, cloud computing, artificial intelligence (AI), and block chain are changing the way we live, work and amuse ourselves. Further advancement of these technologies can contribute in developing hyper automation and hyper connectivity, which would bring us at the dawn of the Fourth Industrial Revolution or Industry 4.0 (Schwab 2017; Bloem 2014; Klosters 2016; Park 2017). The business units that have invested in these tools have witness increased market share, financial figures and overall competitiveness. As the vision of the companies has been shifted to “show me” approach, the focus is also changing from promise to performance. If the business will not run parallel with the advancement in the technology, it will surely be left in the dust by one of the competitor. The broad

spectrum of information technologies, uncovers also various possibilities for companies to use them as they conduct their exchanges. (Archer and Yuan, 2000).

Past researches have shown that Artificial Intelligence (AI) is speeding up exponentially and companies can no longer ignore its underlying potential. The advent of Artificial Intelligence (AI) has been predicted for decades but the catalyst for its emergence is the confluence of technology advances in the field of artificial neural networks, statistical algorithms, computing power and data analysis. In India, the firms across diverse sectors such as healthcare, education, automobiles, banking and retail are increasing integrating Artificial Intelligence (AI) to transform their business. AI has been fostering business model innovation across industries including technology/media, consumer products, financial services, health care, industrial, energy, public sector, and so on (Serafini, 2002). From data sales forecasting to decision making, fraud detection to customer retention, Artificial Intelligence (AI) is spreading its legs across almost every business sphere. According to a survey conducted by Tata Consultancy Service in 2017, Artificial Intelligence (AI) is contributing in business operations, major being in the Information Technology (IT) activities.

### How Companies Around the World Are Using Artificial Intelligence

IT activities are the most popular.



Chart 1: Use of Artificial Intelligence by different companies around the globe

(Source: TATA CONSULTANCY SERVICES SURVEY OF 835 COMPANIES, 2017)

## II. REVIEW OF RELATED LITERATURE

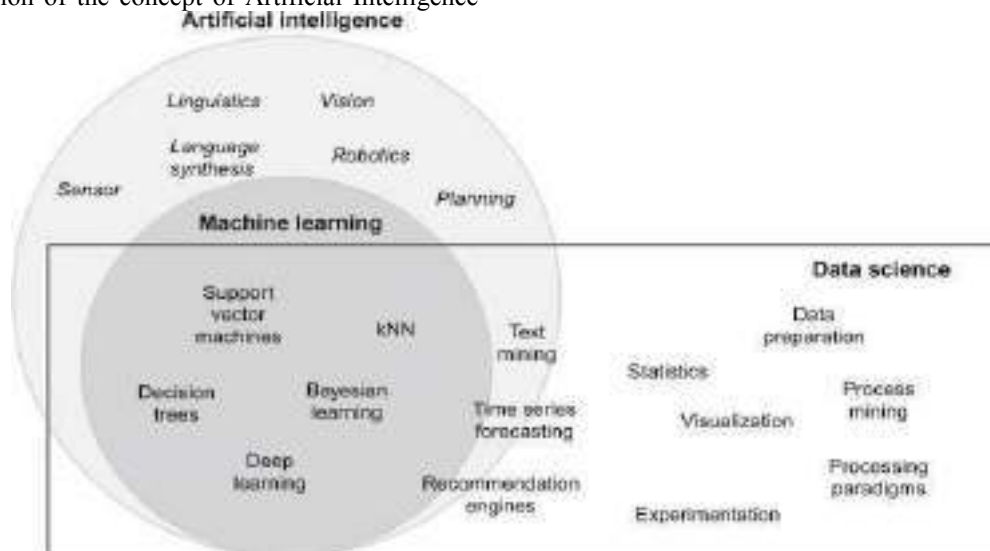
### 2.1 Artificial Intelligence

The term Artificial Intelligence (AI) is composed of two words, "Artificial" meaning "man made" and "Intelligence" meaning "the ability to acquire and apply knowledge and skills".

The concept of Artificial Intelligence (AI) is based on the assumption that the human thought process can be mechanised. Although designing machines to assist humans in their work was not a new concept, the discussion of machine's ability to exhibit intelligence gained momentum when Alan Turing, explored the mathematical possibility of machine learning. In his paper "Computing Machinery and Intelligence", Turing suggested that just the human use available information and logical reasoning to solve a problem and arrive at a decision, machines can replicate the same. However, the introduction of the concept of Artificial Intelligence

(AI) may be dated back to 1956 when John McCarthy and Marvin Minsky presented The Logic Theorist as the first Artificial Intelligence (AI) programme at the Dartmouth Summer Research Project on Artificial Intelligence (DSRPAI). Their definition of AI referred to the ability of machines to understand, think, and learn in a similar way to human beings, indicating the possibility of using computers to simulate human intelligence. John McCarthy defined Artificial Intelligence (AI) as the science and engineering of making intelligent machines, especially intelligent computer programs. AI is a branch of science that helps machines find the right solution for solving complex problems in a human-like way (Kasemsap, 2017).

McCarthy used the term Artificial Intelligence (AI) to distinguish it from machine thinking that included cybernetics, automata theory and complex information processing.



**Figure 1 Relation between Artificial Intelligence (AI) and Machine Learning (ML)**

(Source: Vijay Kotu, Bala Deshpande, in *Data Science (Second Edition)*, 2019)

The massive and growing data today have generated numerous application of Artificial Intelligence (AI) across many diverse industries. Artificial intelligence is a tool which use human intelligence in various fields and improve the performance, and it is an emerging technology which is used in all industries to improve productivity and performance (Brouwer 2015).

### 2.2 Artificial Intelligence (AI) in Finance

Artificial Intelligence (AI) is leading the financial service by super. Mostly now days every financial sector is using Artificial Intelligence (AI) to avail the benefits like saving time, reducing cost and adding value to the business process. Some of the other uses of Artificial Intelligence (AI) in finance include fraud detection, increased security, spending pattern prediction, stock broker system client side user authentication (Patel2018).

### 2.3 Artificial Intelligence (AI) in Marketing

Marketing enables a business to create and maintain long lasting and ever present relationship with the target audience. Artificial intelligence will define how digital marketing will be conducted now and in the future. The ways that has transformed artificial intelligence technology in changing the world of digital marketing are Marketing Increasingly Focused on Consumer Behaviour, Predictive Marketing, Lead Generation, Chatbots, Automated Content Creation, Image recognition, Email Marketing, Augmented Reality (Murgai,2018).

### 2.4 Artificial Intelligence (AI) in Healthcare

According to a 2016 report from CB Insights, around 86% of the various health care organizations



are currently using Artificial Intelligence (AI) technology. The most common ways in which AI is changing health care are by maintaining medical records and other data doing repetitive jobs, Treatment Design, Digital Consultation, Virtual Nurses, Medication Management, Drug Creation, Precision Medicine, Health Monitoring, Health Care System Analysis.(Swetha,2019)

### 2.5 Artificial Intelligence (AI) in Supply Chain and Logistics Management

The application of Artificial Intelligence (AI) in Supply Chain and Logistics Management can assist the managers in two ways:-

1. Automating business operations, processes and actions so that they can operate without the need of human intervention.
2. Assisting the human decision making process in day to day operations by reducing errors.

The Artificial Intelligence (AI) techniques can be used to provide real time information from the raw data, building concrete plans to improve demand forecast and make autonomous decisions regarding the different processes that are performed in the warehouse, offering autonomous vehicles for logistics and shipping. Artificial Intelligence (AI) also helps to improve different areas of supply chain like supply chain transparency and route optimization.

From the above discussions, it can be seen that Artificial Intelligence (AI) finds its applications in almost every fields of business and Artificial Intelligence (AI) is exponentially increasing in Human Resource (HR) also. Recent developments in the field of Artificial Intelligence (AI) and Human Resource (HR) have heightened the need to led to bring out the Human Resource (HR) areas in which Artificial Intelligence (AI) has been implemented especially concerning the Indian context. While many organizations have purchased their BI software and are starting to use in many areas of their businesses and make substantial gains, but they have not taken advantage of this in Human Resource Management area. Executives view Human Resources more of a cost centre, and less of a strategic asset within their organizations (Kapoor, 2010). So far, however, there has been little discussion in this area. This research paper thus tries to present a valuable insight on intersection of Artificial Intelligence (AI) Human Resource Management (HRM).

### III. RESEARCH QUESTIONS

This study was undertaken with a objective of investigating the following research questions:-

1. What are the Human Resource (HR) dimensions in which Artificial Intelligence (AI) finds its applications?
2. Why there is a growing need to embrace Artificial Intelligence (AI) enabled

technologies in Human Resource Management (HRM)?

### IV. RESEARCH METHODOLOGY

The study was primarily depended on secondary data as there was no primary research conducted. The research study is using the descriptive research design. The secondary data has been collected from research papers, publications, websites, HR blogs, and survey reports published by various research organizations.

### V. RESULT ANALYSIS AND FINDINGS

#### 5.1 Application of Artificial Intelligence (AI) in Human Resource (HR)

In early days primary duties of human resource were recording, maintenance and payroll. Over time other functions such as employee training, uniformity and well being were added to their task Later on recruitment and skilled workforce selection were added to their duties. Today, Human Resource Management (HRM) is presuming a more critical role than ever before. These days, not just that they are responsible for all task mentioned, but they are also responsible for motivating the employees' wellbeing and workforce development as well. The Human Resource (HR) groups have more date at their fingertips than ever before. In recent times, organisations not only have the traditional roles but they also expertise in areas such as data science, data visualization and learning. Advancements in information technology (IT), predictive analytics, artificial intelligence and machine learning in HR processes is enabling professionals to perform traditional practices with much more ease and reduced time span. The HR executives are planning to invest in areas such as predictive analytics, enhanced process automation and Artificial Intelligence (AI) (Rao 2019).The future of Human Resource (HR) is both digital and human. As the influence of Artificial Intelligence (AI) is expanding to a greater extent in Human Resource Management (HRM), HR leaders are focusing to balance this advancement with technology.

#### 5.1.1 Recruitment and Talent acquisition

One of the most critical decisions facing the workplace is recruitment and talent acquisition. The recruitment manager dedicates most of the working time to the development of recruitment process, which calls for technology skills, highly specific experience and leadership roles. While traditional Applicant Tracking System (ATS) were regarded as the backbone of agile recruiting, the changing workforce demographics and heightened candidate expectations have compelled the organizations to



reimagine their recruiting process. The application of Artificial Intelligence (AI) for recruiting is empowering the organizations to streamline and modernize their recruiting efforts by reducing or eliminating human intervention in time consuming activities like manually screening resumes. Talent acquisition software has eliminated almost 75% of the work related to the recruitment process (Wislow, 2017). Using a preliminary assessment to screen out the potential candidate is critical task and a long process especially when the volume of data is high. The success of talent acquisition lies in building the relationship that converts potential candidates to employees. The power of Artificial Intelligence (AI) lies in its ability to process and manage high volume of data at fast speed, thus improving efficiency and productivity of organization. These same features and benefits can be applied to the hiring process. Artificial Intelligence (AI) algorithms can analyse the job description, tokenize the keywords and then analyse each candidate's profile to match the required job title, skill, experience, qualification etc.

### 5.1.2 Training and development

The need for training, orientation and support throughout the initial time with the company for a new employee is the cornerstone of success of any company. Training is equally important for the existing and as well as new employees. It enables to integrate new employees into the company and helps them settle into the rhythm of the company and adapt to new roles and routines. According to a research study by Oracle, nearly 27% of HR leaders think that AI-powered solutions for employee training will have a positive impact on employee Learning and Development (Gautam, 2019). Artificial Intelligence based training module ensures that the training programs are tailored to cater specific need of the employees. Artificial Intelligence (AI) infused with employee training program platform provides greater automation, personalization and better career and professional development. Artificial Intelligence (AI) enabled training modules are designed to provide broadest possible spectrum of procedure, protocols, policies and resources to address their problems and provide real time solution for the same. The new employees may refer to the Artificial Intelligence (AI) driven automated database system to clarify their doubts thus relieving the senior employees. With the constant digital disruption, Artificial Intelligence (AI) may also assist the employee in reskilling and upskilling. This will serve a two way benefit. For organizations, benefits include enduring workforce. For employees the benefits include career and professional development.

### 5.1.3 Performance Management

Performance feedback and appraisal are an integral and indispensable part of a workplace environment. The traditional methods of performance appraisal are not so reliable in the

present era a technology as they may suffer from personal biasness. Thus, it is important to deploy a data driven culture where tools such as Artificial Intelligence (AI) may be collaborated with business leaders' opinion to assess the employee performance. Artificial Intelligence (AI) may make use of descriptive and predictive data analysis techniques to evaluate and analyse employee data such as employee engagement, performance data, rate of absenteeism etc. to make a clear distinction between high performer and high potential employees.

### 5.1.4 Decision Making

Human Resource Management (HRM) is all about making decisions. Like the other functional areas of an organization, Human Resource management (HRM) have to deal with making decisions oriented at the growth and profitability of the firm.

Some of the decisions may be complex in nature which requires deep understanding of the problem, detail information of the subject, critical thinking and a structured approach. With the combination of knowledge base and Artificial Intelligence (AI), it is possible to create sophisticated database models and stimulation as basis for decision making.

## 5.2 Growing importance of Artificial Intelligence (AI) in Human Resource (HR)

Artificial Intelligence (AI) at the forefront is transforming the business and commerce across the globe with larger organization embracing the change. With the continuous rejuvenation of Artificial Intelligence (AI) into Human Resource (HR), the traditional practices of the past are considered to be obsolete. As the next wave of cognitive, automated and immersive technologies changes the way we do business, experts state AI has the potential to transform HR (Ghaswalla, 2020). Thus, there was a growing need to evaluate the Human Resource (HR) practices in the light of technology which have the potential to drive Human Resource (HR) function from providing strategic advantage to supporting the work force. The researcher has identified and cited the following primary reasons for implementing Artificial Intelligence (AI) in Human Resource (HR):-

### 5.2.1 Accelerate competitive advantage

To stay ahead of the competition, businesses need to continuously monitor their competitors' move and adjust accordingly. The realm of Artificial Intelligence (AI) in Human Resource (HR) provides new insights, transform decision making, identifies competitor's strength and weakness and results in improved business outcome. Far sighted companies' sees investment in Artificial Intelligence (AI) as creating a significant business values, thus providing a competitive edge on the business front.



### 5.2.2 Acquisition and Development of new skills

As the modern landscape of the business is defined by technology, the companies are looking forward to invest in new tools and practices for educating and training their employees. Artificial Intelligence (AI) enables Human Resource (HR) professionals to use predictive analysis using natural language for addressing skills related gaps of employees and connects them with learning to build those skills that are increasingly in demand.

### 5.2.3 Improve employee experience

As the world has been watching the unfolding of digital transformation in every sphere of life, employees expect a personalized experience at work. With the talent pipelines becoming complex, it is important to know the pulse of the employees. Employees expect for relevant, contextual and convenient things that may be customized according to their preference and circumstances. Artificial Intelligence (AI) assists business leaders to fix this issue by meeting four criteria- clarification, compliance, connection and culture. The wide spectrums of overlapping of data with Artificial Intelligence (AI) enable technology are effective for improving employee experience at the individual level.

### 5.2.4 Efficient use of Human Resource Budgeting

The Human Resource (HR) budgeting decisions are extremely complex as it determines the long term economic and financial profitability of the business. As contrast to the one-size-fits-all approach that worked in the past, the Human Resource (HR) manager now rely on Artificial Intelligence (AI) driven algorithms to take accurate decisions regarding budgeting and resource allocation. The primitive advantage of Artificial Intelligence (AI) driven decisions is that the information is based on facts and statistical figures subjected to a simple set of calculations.

### 5.2.5 Mental Health

The human based task makes the Human Resource (HR) department a crucial element within any organization. As the relationship between employer and employee are thriving both at professional and personal sphere, the role of Human Resource (HR) have shifted from product oriented to people centric approach. The domain of Human Resource (HR) professional now range from counselling, mentoring, providing moral support securing the mental health of the well being at the workplace. Prolong working hours; changing business dynamics, changing business roles, pressure to meet the project deadlines are some of reasons which have raised the concern to track the mental health of the workforce. Artificial Intelligence (AI) based techniques such as sentiment analysis may be used to correlate to employee morale and can help

organizations in identifying employees suffering from disruptive mental state of mind. AI-enabled wearable tools, for instance, built with deep learning models, voice and image recognition and natural language processing can analyze and monitor employee behaviour and emotions. This helps to identify workers who are struggling with job tasks or battling with mental illnesses such as anxiety and depression (Okhifun, 2020). incorporating information in Artificial Intelligence (AI) enabled frameworks about the warning signs of poor mental state of an employee would allow Human Resource (HR) department to extend additional support.

## VI. CONCLUSION

Artificial Intelligence (AI) provides an impressive way of application in a wide range of area. The inclusion of Artificial Intelligence (AI) in business has opened doors to limitless opportunities. The future holds infinite possibilities for Artificial Intelligence (AI) especially when it comes to play in the field of Human Resource (HR). It cannot be denied that Artificial Intelligence (AI) aid and abet a Human Resource (HR) manager in carrying out different functions effectively and efficiently thus enabling them to focus on higher value task. But this not the stage where Artificial Intelligence (AI) can replace human beings. Right from recruitment to performance management there are administrative and repetitive in nature. The complexity of Human Resource (HR) and its multitude of variables add butter oil to burning flame. Digitalization and automation of work in Human Resource (HR) provides integrated orientation, experience and real time solution. The integration and adoption of Artificial Intelligence (AI) has transfigured the role of a Human Resource (HR) manager from manual administrative task to a more strategic approach.

Although Artificial Intelligence (AI) is foreseen as an opportunity and is regarded as a game changer for business to gain competitive advantage, it also offers certain challenges (Bersin, 2017) which a company need to overcome to avail the full advantage of it. At the outset, the initial challenges to deal with the redundancy of the data. As the Human Resource data is stored at multiple locations which is required by different departments, any changes in one set of data may not be reflected in other set thus acknowledging the problem of data inconsistency. The second concern is to deal with the policy of data security and confidentiality. The companies employing AI enabled technologies should take the employees in confidence that their data would not be misguided and measures should be taken to safeguard their data and prevent it from unauthorized access. Lastly, as Artificial Intelligence (AI) embedded programs and algorithm works on data collected and



captured by human one cannot rely on its accuracy. These algorithm help to reduce human intrusion, but their results may not be 100 percent valid and acceptable in every decision. Despite of the challenge discussed above most of the researchers believes that the futures of business is both Human Resource (HR) and digital and are viewing Artificial Intelligence (AI) as a driver for change towards the light at the end of the tunnel.

## REFERENCES

1. Archer, N. & Yuan, Y. F. (2000) *Managing business-to-business relationships throughout the e-commerce procurement life cycle*. *Internet Research-Electronic Networking Applications and Policy*, 10, 385- 395.
2. Bersin, J. (2018). *How will AI in HR be a game-changer?* Retrieved from <https://searchhrsoftware.techtarget.com/opinion/How-will-AI-in-HR-be-a-game-changer>
3. Biswas, S. (2018). *Employee Experience, Jobs and Skills: How AI will Impact HR*. Retrieved from <https://www.hrtechnologist.com/articles/digital-transformation/employee-experience-jobs-and-skills-how-ai-will-impact-hr/>
4. Bloem J, Van Doorn M, Duivestijn S, Excoffier D, Maas R, Van Ommeren E (2014) *The Fourth Industrial Revolution. Things Tighten*.
5. Gautam, A. (2019). *How Artificial Intelligence Can Transform Employee Training In 2020 And Beyond*. Retrieved from <https://elearningindustry.com/how-artificial-intelligence-transforms-employee-training>
6. Ghaswalla, N.A. (2020). *How Artificial Intelligence transforming employee experience*. Retrieved from <https://www.thehindubusinessline.com/info-tech/how-artificial-intelligence-transforming-employee-experience/article30607509.ece#>
7. Meade, J. (2017). *Is Your Business Ready for Artificial Intelligence (AI)?* Retrieved from <https://towardsdatascience.com/is-your-business-ready-for-artificial-intelligence-ai-51efefb11d97>
8. Kapoor, B. (2010). *Business Intelligence and Its Use for Human Resource Management*. *The Journal of Human Resource and Adult Learning*, 6(2), 21-30.
9. Kasemsap, K. (2017). *Artificial intelligence: Current issues and applications*. In *Handbook of research on manufacturing process modelling and optimization strategies* (pp. 454-474). IGI Global.
10. Klosters, D. (2016). *World Economic Forum Annual Meeting 2016 Mastering the Fourth Industrial Revolution*. *World Economic Forum*. Retrieved from <http://www3.weforum.org/docs/Media/>
11. Manager, W. (2018). *7 Ways to Use Artificial Intelligence in HR*. Retrieved from <https://www.newgenapps.com/blog/growing-role-of-artificial-intelligence-in-hr>
12. Manyika, J., Chui, M., Miremadi, M., Bughin, J.; George, K., Willmott, P., & Dewhurst, M. (2017, January). *"A Future that Works: Automation, Employment, and Productivity."* McKinsey&Co. Retrieved from <https://www.gita.org.in/Attachments/Reports/MG I-A-future-that-works-Full-report.pdf>
13. Murgai, A. (2018). *Transforming Digital Marketing with Artificial Intelligence*. Retrieved from <https://www.ijltemas.in/DigitalLibrary/Vol.7Issue4/259-262.pdf>
14. Okhifun, G. (2020). *How Artificial Intelligence Can Tackle Workplace Stress*. Retrieved from <https://www.corporatewellnessmagazine.com/article/how-artificial-intelligence-can-fight-against-workplace-stress>
15. Park SC (2017) *The Fourth Industrial Revolution and implications for innovative cluster policies*. *AI & Society* 33(3). pp 433-45.
16. Patel, K. (2018). *Artificial Intelligence In Finance*. Retrieved from [https://www.researchgate.net/publication/335109921\\_Artificial\\_Intelligence\\_In\\_Finance](https://www.researchgate.net/publication/335109921_Artificial_Intelligence_In_Finance)
17. Rao, P. (2019). *The future is now: The changing role of HR*. Retrieved from <https://economictimes.indiatimes.com/small-biz/hr-leadership/leadership/the-future-is-now-the-changing-role-of-hr/articleshow/68229542.cms>
18. Serafini, L.; Garcez, A.A. (2016). *Logic Tensor Networks: Deep Learning and Logical Reasoning from Data and Knowledge*. Retrieved from [http://ceur-ws.org/Vol-1768/NESY16\\_paper3.pdf](http://ceur-ws.org/Vol-1768/NESY16_paper3.pdf)
19. Trkman, P. (2010). *The critical success factors of business process management*. *International journal of information management*, 30(2), pp.125-134.
20. Wislow, E. (2017). *Beworkhappy.com*. Retrieved from <https://www.facebook.com/beworkhappy>



# A STUDY OF EFFECT OF EXERCISE AND YOGA ON PHYSICAL & MENTAL FITNESS ON HANDBALL PLAYERS

<sup>1</sup>Mahendra Singh Rajawat

<sup>1</sup>Department of physical education,  
OPJS university, Churu,  
Sadulpur,  
Rajasthan, 331303

## ABSTRACT

*The purpose of the study to show the effects of exercise and yoga on physical and mental fitness on handball players. In this study, 70 handball players were selected randomly from different collages of Rajasthan. Ages of the subject's players should be around 18 to 21 years. These are then divided into three groups: Group I (yogic practices) and Group II (physical exercise) and Group III is control group. These experiments were done for 12 weeks. Control group only do their regular works. Pilot study was done for capacity of the players for fix their load. Physiological, physical and psychological variables are also used. Standardized tests and questionnaire methods were used to collect data on all the selected variables. 't' test is used for statistical analysis and also to find out significant improvement. 0.05 level of confidence is fixed. Heart rate increases due to yogic exercises. Yoga and exercises can increase flexibility, power, cardio-respiratory endurance, blood pressures, resting heart rate and breathing holding time of handball players.*

**KEYWORDS:** - yoga and exercise, flexibility, cardio-respiratory endurance, resting heart rate and breathing holding time

## INTRODUCTIONS

Yoga is been originated from the Sanskrit word. It means the suppression of all activity of body, minds and make them in order for distinction and liberations.<sup>1</sup> Yoga is science and a theory. It can use in therapeutics purpose. It is a *moksha shastra*, *moksha* means freedom and *shastra* means teaching. It can be also mean to yoke, unite or bring together.<sup>2,3</sup> It is also help to restore the harmony in the body-mind complex. Yoga did not represent any religion, creed or race. It teaches sprung from the spiritual soil of ancient India and called as *sanatana dharm*.<sup>4,5</sup>

In Yoga sutras, yoga is been practiced approximately from 2<sup>nd</sup> century. Patanjali has also some existing practices and writings text. It also contains some essential idea of yoga theory and practices. These systems are external because it has a relationship with body, breath and senses. Also, essence of yoga in eight division or ashtanga yoga it can comprise the stage of concentration by increases three of eight limbs.<sup>6,7,8</sup>

Patanjali messages that every human being is been fit and naturally balanced. Yoga is one the most important aligning of inner balance. In yoga practices, many levels of human experience like body, breath and mind are given full attention and freed for more concentration and reflections.<sup>9,10,11</sup>

In modern time, yoga is used to remain healthy. Patanjali has given two way to remain healthy is-

1. To remain healthy, removes that obstacles which block your path

2. To promoting the healing forces<sup>12,13</sup>

For self-management these two points are most important. Illustrations of Patanjali shows that in earlier times yoga practices are embodied for integrated approach. It helps to improve the health and spiritual self-understanding.<sup>14,15</sup> Training and practices of yoga is been exists around five thousand years or more. Yoga is derived from a word *yuj*, means unite and join together. Yoga can be used for the transformation of person from their natural form to healthy form. Yogic vision development by sound and clear methodology which helps to brings a luminous, perceptive and a truth thing.<sup>16,17</sup>

## PHYSICAL ASPECTS OF YOGA

In modern era, yoga and exercises can be a game changer. Physical molding and cantered fixation both are the striking component of yoga. Daily yogic practise makes the person healthy and physical wellness.<sup>18,19</sup> Yoga asanas gives the development of spine, for control breath, focus on daily schedules. Due to muscular and physical stress, body imbalance is occurring which may lead to different aches and pains. Asana is done by smooth, control movement to provide the maximum stretch to body.<sup>20,21</sup>





## PHYSIOLOGICAL ASPECTS OF YOGA

Yoga helps to improve the legitimate working of the body. Yoga nourishes the endocrine gland which is useful for development and advancement.<sup>22</sup> It has been proved that yoga can increase the capacity of processing and breathing. It helps to blood flow to the mind and improve the mental health. Yoga can improve muscle strands and nerves for physiological work. Legitimate can be improve the joints, breath and blood pressure.<sup>23,24,25</sup>

## BENEFITS OF YOGA EXERCISE

In 21<sup>st</sup> century, everyone needs to be fit. Everyone need to be fit and well-being. Yoga and exercise make human beings stronger and healthier. Some benefits of yoga and exercises are-<sup>26,27,28</sup>

### 1. Decreases stress

Yoga is most important to decreases the stress level. It can reduce the level of cortisol hormones which are responsible for stress.

### 2. Anxiety

Yoga practices reduces the anxiety level.

### 3. Reduces inflammations

Some studies show that daily practise of yoga may help to reduces the body inflammation. Inflammation is a chronic disorder it can develop pro-inflammatory diseases like heart disease, cancer, diabetes.

### 4. Improve heart health

Heart supply the blood to whole body. it can also supply nutrition to the heart and it make the body healthy. Some studies show that yoga may help to reduces the several risk of heart diseases.

### 5. Depression

Daily practices of yoga have anti-depressant activity and help to decreases the symptoms of depressant. Yoga helps to lower the cortisol level, serotonin level and the neurotransmitter associated to depression.<sup>29,30</sup>

### 6. Chronic pain reduction

Chronic pain affects millions of peoples. Research demonstration that yoga may reduce many types of chronic pain.

### 7. Sleep quality

Poor sleep may increase the risk of depression, high blood pressure etc. yoga practises may help to improve sleep.

### 8. Improve flexibility, balance and breathing problem

Daily practises of yoga may help to reduces the breathing problems and maintain the body balance. It may help to improve cardiovascular diseases. Some yoga practises may help to improve flexible body.<sup>31,32</sup>

## YOGA IMPROVES HEALTH

### 1. Improves your flexibility

Flexibility is the first and most beneficial of yoga. Normal person cannot touch his feet's but continuous practices of yoga can help them. Continuous using of yoga can remove or decreases the pain and aches.

### 2. Muscle strength

Strong muscle help to protect us from arthritis, back pain etc. strength is made up by yoga.

### 3. Protect your spine

Crave movement help the spine to take their nutrition. Some asana practices may keep this disk supple.

### 4. Blood flow

Yoga helps to increases the blood flow in the body. it helps to circulate the blood specially hands and feet. Yoga boots the haemoglobin and red blood cells level; it carries oxygen to cells and helps to increases the blood flow in heart and may reduce the swelling in kidney or heart problems. Blood clot is responsible for heart attack and strokes, yoga may help to remove or dilute theses clots and make person healthy.<sup>33,34</sup>

### 5. Focusing

Now a day, focus is much more important then everything. For any kind of work focus is important. Yoga helps to improve your focus, reaction time, memory and IQ.<sup>35</sup>

### 6. Improve system and balance

Yoga can encourages relax, slow your breath, focus and sift the balance the sympathetic nervous system. This improve the blood flow to intestine and reproductive organs, decreases the blood pressures. Regular practices of yoga exercise improve body balance. It removes or decreases the back pain, knee pains and other body problem.<sup>36,37</sup>

### 7. Immune system

Yoga (asana and pranayama) can improve or boost the immune system. Meditation is the important way of boosting immune system.

### 8. IBS and other digestive problems

Now a day, everyone suffers with many kinds of diseases or problems. Some are ulcer, irritable bowl syndromes and constipations. Some yoga practices may help to improve the constipation problems and also lower the risk of colon cancers. In physical practises body can move which help in digestion and removes the waste product from the body.<sup>38,39,40</sup>

## METHODOLOGY

Research needs a systematic method and procedure like research design, source of data, sampling method, selection of subjects, collection of data, criterion Measures etc. some reliable and authentic data makes research successful. The statistical analysis of data provides a complete and successful hypothesis as pre-selected by the researcher.



## SOURCES OF DATA

Data has pertaining the study of appropriate test on inter-collages of Rajasthan state. Players are participating in inter-collages tournaments which held in Rajasthan collages.

## SELECTION OF THE SUBJECT

In this study, 70 handball players were selected randomly from different collages of Rajasthan. Ages of the subject's players should be around 18 to 21 years.

## DESIGN OF THE STUDY AND VARIABLES

There are two types of variables-

- I. Independent Variables- yogic practices and physical exercise.
- II. Dependent Variables-
  - A. Physical variables-
    - Flexibility
    - Explosive power
    - Cardio-respiratory
  - B. Physiological variables
    - Blood pressure
    - Resting heart rate
    - Breath holding time
  - C. Psychological variables
    - Anxiety
    - Stress
    - Aggression

## SELECTION OF TESTS

Present study was done to assess the effect of yogic practice and physical exercise of handball players. It may include the physiological, physical and psychological variables. Standardized tests and questionnaire methods were used to collect data on all the selected variables.

## 1. FLEXIBILITY

### Purpose:

Flexibility test helps to measure the flexibility of the lower back muscles and the hip.

**Equipment used:** Sit and Reach Box

### Procedure:

In sitting position, legs together, knees flat on the floor, and feet flat against the box, shoulder width apart. Bend forward at the waist and reach as far forward as possible with the fingers. Measuring the number of centimetres one can reach either in front of or beyond the vertical surface. Four trials were done on subjects and best one will be used for test score.

### Results: -

#### 1. Mean and dependent 't' test value were used.

	Yogic practices group	Physical exercise group	Control group
Pre test	17.35	16.25	17.6
Post test	17.75	18.95	17.6
't' test	9.35	11.17	0.38

Significant at 0.05 level.

## Physical variable

S.no	Variables	Test item
1	Flexibility	Sit and reach box
2	Explosive power	Standing board jumping
3	Cardio-respiratory endurance	15-minute copper test

## Physiological variable

S.no	Variables	Test item
1	Blood pressure	Sphygmomanometer
2	Resting heart rate	Stop watch
3	Breathing holding time	Stop watch

## Psychological variable

S.no	Variable	Test item
1	Anxiety	SCAT inventory
2	Stress	Inventory
3	Aggression	Inventory

## EXPERIMENTAL DESIGN AND STATISTICAL PROCEDURE

In this study, seventy handball players are been selected randomly. Players which are selected is known as subjects and then divided into two experimental group. Group 1 is for yogic practices and group 2 is for physical exercise. It can be done for twelve weeks of five day per week. Variables are divided into physical, physiological and psychological. These variables are assessed by standardized test. Pre and post test data were collected immediately after twelve weeks of training. These data were analysed by dependent 't' test and by ANCOVA co-variances. For post-test F-ratio were found to be significant and the sheffee's post hoc test was used. In all the cases 0.05 levels was fixed as level of confidence to test the hypotheses.



Table shows that the dependent 't' ratio value of pre and post-test of flexibility on yogic practices, physical exercise and controlled group are 9.35, 11.17 and 0.38. significant value required with df 19 at 0.05 level. Table value is less than the obtained 't' ratio value. It is been prove that the performance of flexibility is improved by training. Control group is not improved as the 't' value is less than the table value. These are not part of any training.

### 2. Co-variance of flexibility analysed

Yogic practices group	Physical exercise group	Control group
19.45	19.79	17.18

Source of variance	Sum of square	Df	Mean square	'F' ration
Within	72.40	57	1.30	30.12
Between	77.86	2	38.94	30.12

Significant at 0.05 level.

This show the post-test value of yogic practices, physical exercises and control groups are 19.45 19.79 and 17.18, F ratio is greater than table value with df 57 and 2. This result shows that there is some significance difference in post-test means of yogic practices, physical exercises and control group on Flexibility. Scheffe's post hoc test were applied to find out the significant differences.

### 3. Scheffe's test for the pre and post paired means of flexibility

Yogic practice group	Physical exercise group	Control group	Mean difference	Confidence interval
19.45	19.75	17.18	0.36	0.10
19.47	19.77	17.18	2.25	0.10
19.50	19.76	17.18	2.60	0.10

Significant at 0.05 level.

It shows the post-test differences on Flexibility between the yogic practices group and physical exercises group were 0.36 are lesser than the confidence interval value 0.10, which shows no significant difference at 0.05 level of confidence. Yogic practices group and control group; physical exercises group and control group were 2.25 and 2.60. These values are greater than the confidence interval value 0.10. Results show that there is no difference in flexibility between the post-test of yogic exercise, physical exercise. This study shows that physical exercise is better than yogic practices and control group for improvement of flexibility.

## 2. EXPLOSIVE POWER

### Purpose:

To measure the explosive power in horizontal distance.

### Equipment:

Measuring tape and Chunam.

### Procedure:

A line is drawn on the ground. Players takes a position with toes just behind the line and feet slightly apart. Taking off from both feet simultaneously then jumps as far as possible and landing on both feet. In jumping, players crouch slightly and swings the arms to aid the jump. distance to the nearest centimetre from take-off line to the closest heel position. 3 trails are recorded.

### Results-

#### 1. Mean and dependent 't' test values were analysed

	Yogic practices group	Physical exercise group	Control group
Pre test	1.94	1.99	1.9
Post test	2.05	2.17	1.91
't' test	7.80	8.3	0.44

Significant at 0.05 level

For pre and post-test, the dependent 't' ratio of yogic practices, physical exercise and control group are 7.74, 8.3 and 0.44. table value required for significant difference with df 19 at 0.05 level. 't' ratio value is greater than table value. Training improved the performance of Explosive power.

**2. Analysis of Co-variance on explosive power**

Yogic practices group	Physical exercise group	Control group
2.06	2.15	1.95

Source of variance	Sum of squares	Df	Mean square	'F' ratio
Within	0.4	56	0.03	36.53
Between	0.40	2	0.20	36.52

Significant at 0.05 level of confidence

Table show that the post-test values of yogic practices, physical exercises and control groups are 2.06, 2.15 and 1.95. F-ratio is 36.53. it is greater than the table value of 3.16 with df 2 and 56 required for significance at 0.05. This study shows there was a significant difference in post-test means of yogic practices, physical exercises and control groups on Explosive power. Scheffe's post hoc test is used to find out the mean significant differences.

**3. Scheffes test for post-test paired means of explosive power**

Yogic practice group	Physical exercise group	Control group	Mean differences	Confidence interval
2.05	2.15	1.94	0.09	0.26
2.05	2.15	1.94	0.14	0.26
2.05	2.15	1.94	0.21	0.26

Significant at 0.05 level.

Post-test differences on Explosive power between the yogic practices, physical exercises and control group were 0.09, 0.14 and 0.21. values are greater than the confidence interval value 0.26, which shows significant difference at 0.05 level. Results were shown that there is a significant difference in post-test. It shows that physical exercise is better than yogic practices and control group were improved in explosive power

**3. RESTING PULSE RATE**

**Aim-** To record the resting pulse rate of each subject per minute.

**Equipment used-** stop watch and bio monitor was used to measure the resting pulse rate

**Procedure-**

Pulse rate was monitored by pulse monitor. This were recorded in a sitting position, in the morning session. Players to sit down on the bench and relax for 15 minutes for the test. The number of pulse beats per minute were recorded.

**Results-**

**1. Mean and 't' test for resting pulse rate**

	Yogic practices group	Physical exercise group	Control group
Pre test	76.35	75.26	76.3
Post test	73.5	71.36	76.66
't' value	5.90	7.88	0.10

Significant at 0.05 level

Resting heart rate are expressed in pulse beat / minute

Pre and post-test on Resting heart rate of yogic practices, physical exercises and control groups are 5.90, 7.88 and 0.10. 't' ratio value of Experimental groups are greater than the table value. training programmed had significantly improved the performance of Resting heart rate. the control group has not improved significantly. 't' value is less than the table value.

**2. Analysis of co-variance on resting pulse rate**

Yogic practices group	Physical exercise group	Control group
74.3	72.3	76.2

Source of variance	Sum of squares	Df	Mean square	'F' ratio
Within	123.40	56	2.3	34.23
Between	151.2	2	75.15	34.23

Significant at 0.05 level of confidence



Post-test values of yogic practices, physical exercises and control groups are 74.3, 72.3 and 76.2. F-ratio is 34.23. it is greater than the table value study shows that there was significant difference among the adjusted post-test. Scheffe's post-hoc test was applied to find out the paired significant difference.

### 3. scheffe's test for resting pulse rate

Yogic practice group	Physical exercise group	Control group	Mean differences	Confidence interval
74.13	72.40	75.30	1.80	1.20
74.13	72.40	75.30	2.10	1.20
74.13	72.40	75.30	3.89	1.20

Significant at 0.05 level.

Post-test differences on Resting heart rate between the yogic practice group, physical exercises group control group were 1.80, 2.10 and 3.89. The values are greater than the confidence interval value 1.20. it shows significant difference at 0.05 level of confidence. from the results of the study that there is a significant difference in resting heart rate between the post-test means of yogic practice group and physical exercises group and control group results show that physical exercises group is better than yogic practice group and control group in improving Resting heart rate.

## 4. BREATHE HOLDING TIME

AIM- measure the ability of the players for hold the breath to a longer time

### EQUIPMENT USED-

Stop watch and score sheets

### PROCEDURE

Players inhaled deeply after which he held his breath for length of time possible to him. The index finger serves an indicator to the investigator to know the start and end of the recording time. The thumb and middle finger were used to hold the nose. For recording the breath holding time, Player were requested not to let the air out by opening the mouth. The time of holding the breath till one subject let the air out was clocked by using the stopwatch to the nearest one tenth of a second as breath- holding time.

### Results-

#### 1. Mean and 't' test for breathing holding time

	Yogic practices group	Physical exercise group	Control group
Pre test	33.61	33.32	33.30
Post test	37.44	39.50	33.26
't' value	9.50	15.27	0.08

Significant at 0.05 level.

Breath holding time are expressed in seconds.

t-ratio between the pre and post-test on Breath holding time of yogic practices, physical exercises and control groups are 9.50, 15.27 and 0.08. 't' ratio value of Experimental groups are greater than the table value. Training programmed had significantly improved the performance of Breath holding time. the control group has not improved significantly. 't' value is less than the table value, as they were not subjected to any specific training.

#### 2. Analysis of co-variance on breath holding time

Yogic practices group	Physical exercise group	Control group
37.8	39.20	33.10

Source of variance	Sum of squares	Df	Mean square	'F' ratio
Within	133.46	56	2.50	79.88
Between	381.8	2	190.88	79.88

Significant at 0.05 level of confidence.

Post-test values of yogic practices, physical exercises and control groups are 37.8, 39.20 and 33.10. the obtained F-ratio is 79.88. it is greater than the table value. results indicate that there was significant difference among the post-test of yogic practices, physical exercises and control groups on Breath holding time. Scheffe's post-hoc test was applied to find out the paired significant difference.

**3. scheffe's test for breath holding time**

Yogic practice group	Physical exercise group	Control group	Mean differences	Confidence interval
36.9	39.20	34.07	2.44	1.50
36.9	39.20	34.07	3.80	1.50
36.9	39.20	34.07	6.20	1.50

Significant at 0.05 level.

Post-test differ in Breath holding time between the yogic practice group, physical exercises group and control group were 2.44, 3.80 and 6.20. The values are greater than the confidence value 1.50. shows significant difference at 0.05 level of confidence. the results of the study show the significant difference in Breath holding time between the post-test means of yogic practice group, physical exercises group and control group.

physical exercises group is better than yogic practice group and control group in improving Breath holding time.

**5. STRESS**

AIM- To study the stress level of handball player.

**Equipment Used**

Everly and Girdano's Stress questionnaire

**Procedure**

For measuring the stress level everly and girdano's questionnaires were used. There were four levels of responses almost, always, seldom true and never true. Players were made to mark a tick in the column which every true his nature. Scorings helps the inventory. Scores were treated as individual scores. Its range of 14 to 56. For lower the psychological stress, score should also less.

**Result-****1. Mean and dependent't' test on stress**

	Yogic practices group	Physical exercise group	Control group
Pre test	15.1	15.25	15.30
Post test	14	12.1	15.2
't' value	7.10	11.6	0.29

Significant at 0.05 level

Stress scores are expressed in points.

t-ratio values between the pre and post-test means on Stress of yogic practices, physical exercises and control groups are 7.10, 11.6 and 0.29. 't' ratio value of Experimental groups are greater than the table value. Training programmed had improved the performance of Stress. control group has not improved significantly. 't' value is less than the table value.

**2. Analysis of co-variance stress**

Yogic practices group	Physical exercise group	Control group
13.16	11.78	14.56

Source of variance	Sum of squares	Df	Mean square	'F' ratio
Within	36.89	56	0.77	57.9
Between	75.20	2	37.89	57.9

Significant at 0.05 level of confidence

post-test values of yogic practices, physical exercises and control groups are 13.16, 11.78 and 14.56. F-ratio is 57.9. it is greater than the table value with df 2 and 56 required for significance at 0.05 level of confidence. study indicates that there were significant difference among the post-test of yogic practices, physical exercises and control groups on Stress. Scheffe's post-hoc test was applied to find out the paired significant difference.

**3. Scheffe's test for stress**

Yogic practice group	Physical exercise group	Control group	Mean differences	Confidence interval
14.11	12.01	15	1.80	0.66
14.11	12.01	15	1.50	0.66
14.11	12.01	15	2.89	0.66

Significant at 0.05 level.

Post-test differ in Stress between the yogic practice group, physical exercises group and control group were 1.90, 1.50 and 2.89. These values are greater than the confidence value 0.66. it shows significant difference at 0.05 level of confidence. from the results



shows that there is a significant difference in Stress between the post-test means of yogic practice group, physical exercises group control group. physical exercises group is better than yogic practice group and control group in improving Stress.

## DISCUSSION ON PHYSICAL, PHYSIOLOGICAL AND PSYCHOLOGICAL VARIABLES

### Physical Variables

Study shows that group I (yogic practices) and group II (physical exercise) has improve the physical variables like Flexibility, Explosive Power and Cardio-Respiratory Endurance when it was compared with control group. By comparing with yogic practices and control groups, physical exercise has a greater improvement effect. Some study shows the effects of yogic training on endurance and flexibility.

### Physiological Variables

Study shows that Yogic practices and Physical exercises improves the blood pressure, resting heart rate and breath holding time. Physical exercise training gives better effects as compare to yogic practises and control group.

### Psychological Variables

Study shows that group 1 yogic practises and group 2 physical exercise improved the psychological variables like anxiety, aggression and stress but control group did not have any significant effect. Physical exercise training has greater effect. Study show that there is a significant difference in between yogic practices and physical exercises in developing variables like anxiety, aggression and stress.

## SUMMARY AND CONCLUSION

This study was done to known about the effect of yogic practices and physical exercises on Physical, Physiological and Psychological variables of handball player of Rajasthan state. In this study, seventy handball players were selected for the different types of test. The age of players was 18 to 21years. These players further divided into two groups along with a control group. First group is yogic practices and second group is physical group. These groups done their practices and exercises for twelve with five days per weeks. Control groups remain constant in every situation. It did not engage for any types of exercise and practices. The groups are then divided into physical, physiological and psychological variables. These variables are then goes to the standardized tests. Pre and post testing data were collected after twelve week of training period. These data were then analysed by 't' test and ANCOVA analysis. F ratio and scheffee's post-hoc test has a greater effect on post-test. 0.05 level was fixed for level of confidence for testing the hypotheses.

Results were shown that there is a greater improvement in all variables (physical, physiological and Psychological variables) due to yogic practices and physical exercises in handball players of Rajasthan state.

In yogic practice and physical exercises and control group there is an significant difference.

## REFERENCES

1. Matthews M, Comfort P. Crebin Complex training in ice hockey the effects of a heavy resisted sprint on subsequent ice-hockey sprint performance. *Research*, 2010; 24(11):2883-2887.
2. Srinivasan, Ramakrishna. Effect of weight training and interval training on selected motor fitness and psychological variables of men handball players. *Pesy Quarterly International Journal of Physical Education Sports Management and Yogic Sciences*. 2013; 3(1):10-14.
3. Jayaraman. Effects of Different Depth of Aqua Training on Selected Physical Fitness Variables among College Men. *Horizon Palaestra International Journal of Health, Sports and Physical Education*. 2012; 1(2):67-71.
4. Croucher Paul E. Effects of an assisted jump training stimulus on explosive performance. *Master's thesis, Wintec* 2010.
5. Fan JT, Chen KM. Using silver yoga exercises to promote physical and mental health of elders with dementia in long-term care facilities. *International Psychogeriatrics* 2011; 23:1222-1230.
6. Fazelifar S. A comparative study of physical fitness in 11-13-year old male students of Amol City. *Iranian Journal of Motion* 28 107-126.
7. Gaurav V (2011). Effects of Hatha Yoga training on the health-related physical fitness. *Journal of Sports Science and Engineering* 2007; 5:169-173.
8. Hittleman R. *Yoga for Health (Ballantine Books)*. Mirghafouri H, Touranloo H and Mirfakhrudini H. An analysis of the barriers to women's participation in sport activities: A case study of female students of Yazd University. *Iranian Journal of Sports Management*. 2009; 183-100, 2013.
9. Olufemi AJ, Adaeze N. Effectiveness of an eight-week low impact aerobic dance programme on the management of osteoarthritis. *International Journal of Humanities and Social Science* 2013; 2:286-291.
10. Roma MF, Busse AL, Betoni RA, Melo AC, Kong J, Santarem JM, Jacob Filho W Effects of resistance training and aerobic exercise in elderly people concerning physical fitness and ability: a prospective clinical trial.
11. Einstein (Sao Paulo) 2013; 11:153-7.
6. Sadeghi H. *An Introduction to Sports Biomechanics (Tehran: SAMT)*. Shahana A, Nair US, Hasrani SS. Effect of aerobic exercise programme on health-related physical fitness components of middle-aged women.
12. *British Journal of Sports Medicine*. 2010; 44:19-23.2006.
13. Singh. Effect of Speed, Agility and Quickness (SAQ) Based Soccer Drill on Fitness and Skill Abilities of Football Players. *Horizon Palaestra International Journal of Health, Sports and Physical Education*. 2012; 1(2):43-48.
14. Allen Phillips D, James E, Horuak. *Measurement and evaluation in physical education*, New York: Hon Wiley and Sons, Inc, 1979.
15. Barrow Harold M, Rosemary Gree Mc. *A practical approach to measurement in physical education (3rd ed.) Philadelphia, Complex Training Lea and Febiger*, 1979.
16. Frank W, Dick. *Sports Training Principles*, London: The A & C Black Publishers Ltd, 1980, 189.
17. Grosset Dunlop. *Enjoying Track and Field Sports*, London: Paddington Press Ltd, 1979, 82.



18. Haerricecil F. Wyed Eric, Patride H. *Wenstar UIniversal Dictionary Bombay, the Tulsisash Enterprise*, 1970, 712.
19. Hardayal Singh. *Science of Sports Training*, New Delhi: D.V.S. Publications, 1991, 2.
20. Radhakrishnan S, Moore CA, *A Sourcebook in Indian Philosophy*, 1967.
21. Dasgupta, Surendranath *A History of Indian Philosophy. 1. Delhi, India: 1975; 226.*
22. Dass, Baba Hari *the Yoga Sytras of Patanjali, A Study Guide for Book 1, Samadhi Pada; Translation and Commentary. Santa Cruz, California: Sri Rama Publishing. 1999; 5.*
23. Aranya, Swami Hariharananda, *Yoga Philosophy of Patanjali with Bhasvati. Calcutta, India: University of Calcutta. 2000, 1.*
24. Stephen Phillips *Yoga, Karma, and Rebirth: A Brief History and Philosophy. Columbia University Press. 2009, 28-29.*
25. Patrick Olivelle *the Early Upanishads: Annotated Text and Translation. Oxford University Press. 1998.*
26. Satish Chandra *Historiography, Religion, and State in Medieval India, Archived from the original on 4 February 2013. Retrieved 29 August 2012, 135–136.*
27. Satish Chandra *Historiography, Religion, and State in Medieval India. 2007; 135-136.*
28. Matilal BK, "Perception. An Essay on Classical Indian Theories of Knowledge", *Oxford University Press, 1986.*
29. Blumenthal JA et al (1991) *Effects of exercise training on cardiorespiratory function in men and women older than 60 years of age, Am J Cardiol, 15;67:7, pp.633-9.*
30. Blumenthal JA et al (1991) *Effects of exercise training on cardiorespiratory function in men and women older than 60 years of age, Am J Cardiol, 15;67:7, pp.633-9.*
31. Bowman AJ et al (1997) *Effects of aerobic exercise training and yoga on the baroreflex in healthy elderly persons, Eur J Clin Invest, 27:5, pp.443-9.*
32. Boyle CA, Sayers SP, Jensen BE, Headley SA and Manos TM (2004) *The effects of yoga training and a single bout of yoga on delayed onset muscle soreness in the lower extremity, J Strength Cond Res, 18:4, pp.723-9.*
33. Brenes GA et al (2018) *The Effects of Yoga on Patients with Mild Cognitive Impairment and Dementia: A Scoping Review, Am J Geriatr Psychiatry, 25. pii: S1064-7481(18)30534-7.*
34. Bryan S, Pinto Zipp G and Parasher R (2012) *The effects of yoga on psychosocial variables and exercise adherence: a randomized, controlled pilot study, Altern Ther Health Med, 18:5, pp.50-9.*
35. Chan W, Immink MA and Hillier S (2012) *Yoga and exercise for symptoms of depression and anxiety in people with poststroke disability: a randomized, controlled pilot trial, Altern Ther Health Med, 18:3, pp.34-43.*
36. Chen TL et al (2009) *The effect of yoga exercise intervention on health related physical fitness in school-age asthmatic children, Hu Li Za Zhi, 56:2, pp- 42-52.*
37. Cheung C et al (2018) *Effects of yoga on oxidative stress, motor function, and nonmotor symptoms in Parkinson's disease: a pilot randomized controlled trial, Pilot Feasibility Stud, 23:4, p-162.*
38. Damodaran A et al (2002) "Therapeutic potential of Yoga practices in modifying cardiovascular risk profile in middle aged men and women", *J. Assoc. Physicians India, 50:5, May 2002.*
39. Donohue B et al (2006) *Effects of brief yoga exercises and motivational preparatory interventions in distance runners: results of a controlled trial, Br J Sports Med, 40:1, pp.60-3.*
40. Durstine J et al (2002) "Lipids, Lipoproteins and Exercise", *Journal cardio pulmonary Rehabilitation, 22, pp.385-398.*





## TEACHING SLOW LEARNERS IN RUSSIAN AND ENGLISH CLASSES

**Khodjayeva Dilnoza Shavkatovna**

Doctor of Philosophy in Philological Sciences,  
Associate Professor of Kokand State  
Pedagogical Institute  
Ferghana, Uzbekistan

**Khusanov Eldar Davlatjonovich**

EFL Teacher of Kokand State Pedagogical  
Institute  
Ferghana, Uzbekistan

### ANNOTATION

*This article deals with some problems teaching students or pupils who are slow learners or have some problems to make out the topics in non-native language lesson, especially in Russian and English classes. Moreover, there are given some very necessary ways and methodological techniques for teachers who have to work with slow learners in classes.*

**KEY WORDS:** learners, types, different, education, groups, develop, effective, success,  
Yu. Babansky and V. Tsetlin

The growth in the number of underperforming and poorly performing students is one of the main problems of the modern school. Recently, psychologists and educators, along with doctors, have noted a steady increase in the number of children with problems of general behavior and education. The urgent problem of our school is “not to lose,” “not to miss” students with low educational capabilities. Its solution involves the improvement of methods and forms of educational organization, the search for new, more effective ways of generating knowledge among students that would take into account their real capabilities.

The ongoing socio-economic changes in the life of our society, the constant increase in the requirements for the level of general education exacerbated the problem of school failure. The number of students who, for various reasons, are unable to master the curriculum in the allotted time and in the required volume, is constantly increasing. Underachievement that arises at the initial stage of education creates difficulties for the normal development of the child, because, having not mastered the basic mental operations, students can't cope with the increasing volume of knowledge in the middle grades and “drop out” of the learning process in subsequent stages.

*Yu. Babansky and V. Tsetlin distinguish two groups of causes of failure: external and internal, among the external causes, they primarily include the causes of the social plan, namely the decline in the value of*

education in society, as well as the imperfection of the organization of the educational process (uninteresting lessons, lack of individual approaches, overload, lack of cognitive methods, knowledge gaps, negative influence of the family, etc.) [3; 56].

But one of the main internal causes of failure is defects: the health of students, caused by a sharp deterioration in the level of material well-being of families. It is clear that a person suffering from various ailments is not able to endure colossal training loads. Internal causes include such factors as low development of intelligence, lack of sustainable positive motivation for learning, and poor development of the volitional sphere. It's somehow not customary to pay special attention to the latter, but meanwhile, it is will and perseverance that play an important role in educational activity.

***The following types of student failure can be distinguished:***

1. The low quality of mental activity is combined with a positive attitude towards learning (***“wants, but cannot”***).
2. The high quality of mental activity is combined with a negative attitude to learning (***“maybe, but does not want to”***).
3. The low quality of mental activity is combined with a negative attitude towards learning (***“does not want and cannot”***).

So, features of unsuccessful students:

- low level of knowledge, as a result of this,
- low level of intellectual development,
- lack of cognitive interest,



- elementary organizational skills are not formed,
- students require an individual approach from a psychological and pedagogical (in terms of training) point of view,
- there is no reliance on parents as allies of the teacher - subject, children, mainly from asocial families,
- lack of adequate self-esteem on the part of students,
- frequent skipping lessons for no good reason, which leads to the lack of a system of knowledge and, as a consequence, a low level of intelligence.

A foreign language is an object that primarily requires a well-developed memory and a well-developed volitional sphere [1; 53].

Experience has shown that at the initial stage of learning a foreign language, there are no students who do not succeed, because all the material is based on oral advancement, that is, all expressions and structures are worked out when repeated in oral speech in the form of conversation, memorization of vocabulary and structures in poems and songs. Difficulties arise when students must make an effort to partially consolidate teaching material at home. Short-term memory or reluctance of individual students to memorize vocabulary leads to the fact that, due to ignorance in the first place, words, students cannot perceive the text by ear, understand the text read, answer questions, etc.[2; 45-53].

***The following signs of failure in a foreign language can be distinguished: ignorance of basic vocabulary; misunderstanding of questions; inability to write a phrase; pondering the simplest phrases as a sign of the absence of speech automatisms; inability to use familiar material in a new situation; instability of results, as a result of lack of awareness of actions; performing exercises at random, not guided by the rule; passivity in the lesson; distractibility, the desire to translate the conversation to extraneous topics, the constant transition to the native language[1; 2].***

To activate poorly performing students in the lesson, increase motivation to learn a foreign language, teachers use a variety of forms and methods of work:

1. First of all, at the primary and secondary levels of education, teachers use games, situational conversations. This is an effective method for neutralize the negative attitude of students to the subject. The forms of role-playing in the lessons are different: at the initial stage of training, this is a story-based role-playing game of fairy-tale content, for middle school age - a story-based role-playing game of everyday content.

2. Competition games are held in which all students enjoy playing (who will say more sentences, thematic words, etc.).

3. An effective ball game is played at an optimal pace and helps students to consolidate words. With repeated repetition, students quickly remember them.

4. To consolidate the grammatical and lexical material, speech exercises are used, which are carried out by a teacher or a strong student. The pace of speech is gradually increasing. With good oral training of educational material in speech, children cope well with it when reading text, listening, retelling, and other types of work.

5. Used support cards, wildcard exercises.

6. Teachers to work with grammatical material widely use grammatical schemes that help children build competently sentences. Before performing oral or written work, grammar schemes are written on the board. Experience shows that even the weakest students do well with grammar material, if from the initial stage of learning a foreign language, children are accustomed to working with schemes. With the help of schemes, work is done on errors.

7. Drawings are used to work with poorly performing children, since children have difficulties in compiling the text of the retelling in Uzbek. Kroki drawings help students to make, for example, a minimum of sentences on a topic, to draw on paper what they heard when listening. This helps the teacher to control the understanding of foreign language speech.

8. For work, test material or collections of exercises are used, with the help of which training exercises (training) are carried out from simple to complex. Work most often occurs independently, after each exercise control or mutual control. The students themselves evaluate and comment on the mistakes, the teacher only directs them. Bad marks are not put in the journal. This helps poor students to overcome the fear of independent work. The teacher, while working, helps poorly performing students[3; 89].

9. Difficulties in working with poorly performing students arise when students do not have a lexical minimum. This usually occurs at 3 or 4 year of study. The reasons for this are underdeveloped or short-term memory. You should conduct exercises that allow you to repeatedly use the word in a particular situation. After such exercises, the vocabulary "goes into a long memory." [4; 30]

10. For the development of the memory of memorizing vocabulary, the formation of the ability to build monologic speech, it is good to use the game "Snowball" [3; 24]. The first student calls the word the second repeats the word and calls his own. The last student repeats the words of everything said. Primary school students successfully complete this task. Such tasks can be carried out in the preparation of the story.

11. For a good assimilation of the material, a good result is provided by a step-by-step control of



knowledge (thematic, lexical, grammatical) with subsequent correction.

12. To work with poorly successful students, a differentiated approach to learning is required, which involves the use of appropriate didactic materials:

- special training tables, posters and diagrams for self-control;
- cards - tasks that determine the condition of the proposed task,
- cards with the texts of the information received, accompanied by the necessary explanations, grammar schemes;
- cards showing samples of how to complete the task;
- cards for individual work;
- tasks with a choice of answer;
- punch cards;
- instruction cards, which give instructions for completing tasks.

In order to prevent work with poorly performing students, you must:

- reinforce a strong student when working together with a weak student (the leading role is given to a strong student),
- conduct additional consultations,
- slow down the survey
- in elementary grades to check the record of homework,
- organize a special homework system: preparation of memos; creative assignments, breaking homework into blocks,
- a link to a similar task completed earlier,
- remind you of the method and method of completing a task
- make a reference to the rule
- check all homework, monitor their completion after class (in case of absence),
- regularly inform parents about the performance of a poorly performing child.

Especially important for students with a low level of activity is the success factor. It is always necessary to praise the student for even the smallest successes, more often to draw the attention of the student body to the successes of such a student so that he can feel his forward movement. Practice has shown that the implementation of the above allows students to achieve more active work in the classroom, high interest in the material, self-confidence, increased knowledge and academic performance.

## REFERENCES

1. McMillan, J., Myran, S., Workman, D. (2002). *Elementary teachers' classroom assessment and grading practices*.
2. *Journal of Educational Research*, 95(4), 203. Retrieved from Professional Development Collection.
3. McTighe, J., O'Connor, K. (2005). *Seven practices for effective learning*. *Educational Leadership*, Vol. 63, No.3.

4. O'Connor, K. (1999). *How to grade for learning*. Arlington Heights: Skylight Training and Publishing.



## EVALUATIVE NATURE OF ANTHROPOCENTRIC PROVERBS WITH HUMAN NAMES

**Ra'no Urishevna Madzhidova**

Doctor of Philological Sciences,  
Professor,  
Uzbekistan State University of World Languages,  
Tashkent,  
Uzbekistan

### ABSTRACT

*The anthropocentric paradigm allows to investigate the role of human factor in language studies according to the goals of the study. In its turn, this places a human being in the center of linguistic studies. The current article is written within the principles of anthropocentric paradigm in which the linguocultural aspect, that's to say, evaluative and figurative nature of anthropocentric proverbs with human names is analyzed and revealed with the help of examples. The aim of the article is to study the evaluative character of anthropocentric proverbs in Russian and Uzbek. The purpose of the article is achieved by addressing the following tasks such as study of related literature, description of the relationships between language and culture, analysis of evaluative and figurative nature of anthropocentric proverbs in the compared languages, analysis of functions of anthropocentric proverbs with human nominations and analysis of such proverbs' potential to possess both negative and positive qualities and volume of such qualities such as quantity and collectivity principles. In the article, such methods of investigation as linguistic description and classification, linguocultural analysis were used. The results of the study showed that: a) the anthropocentric proverbs can reveal the image of a person, particularly his worldview is disclosed through such proverbs, as a result, values of people can be revealed and at this point, the importance of recognition of cultural codes is emphasized; b) the anthropocentric proverbs have evaluative and figurative nature: they can provide information on the gender, age, social status, mental abilities, character traits, activity, kinship, number of people; c) the anthropocentric proverbs can possess mythological-religious values and these values are reflected when they express common things, prominent personalities, names and surnames; d) the anthropocentric proverbs can function in a certain context, for example, they may have the following functions: displaying psychological state, behavior, actions, heroism, betrayal and others; e) the anthropocentric proverbs reflect some qualities in terms of positive and negative evaluations and they can be studied in terms of quantity and collectivity that they possess in their anthropocentric character.*

**KEY WORDS:** anthropocentric paradigm, anthropocentric proverbs, evaluation, worldview, image of the person, cultural codes, cultural values, linguocultural character, human names.

### INTRODUCTION

It should be noted that in world linguistics, nowadays a new paradigm has been emerged as a result of continuous changes in the history of language studies and development of a society. In particular, this scientific paradigm is regarded as an anthropocentric paradigm in which language is studied in connection with other disciplines and in which a human factor plays an important role in language studies. More precisely, the main focus is on the human factor that plays a role in linguistic investigations. Within the framework of this scientific universally recognized model, the following linguistic branches are being investigated: cognitive linguistics (language and cognition), linguoculturology (language and culture),

sociolinguistics (language and society), psycholinguistics (language and psychology), theolinguistics (language and religion) and etc. At this point, it is essential to note that although the relationships between language and culture have been studied in many linguistic researches, they still need constant researches so that new correlations, linguoculturemes, or peculiarities could be revealed. Particularly, proverbs, particularly, anthropocentric proverbs despite a number of monographic studies devoted to the issue in question, are the essential language units which carry cultural-national properties of a nation they belong to. Therefore, in this article the problem is addressed from the anthropocentric viewpoint in order to reveal their linguocultural aspects to a higher extent.



## LITERATURE REVIEW

It is essential to deal with cultural codes in revealing the cultural specificity of a language unit, particularly proverbs. Cultural codes are a cultural category, the implementation of which is carried out using a combination of verbal and non-verbal signs and their combinations in cultural texts, determined by the historical and cultural period. The combination of signs and their combinations is characterized by stability of interpretation in the space-time continuum and communicative potential both at the level of personal perception and at the level of socio-cultural practices [7: 161].

It is known that "historical experience selects and preserves in the cultural practice of different generational cohorts only that which allows a given people to adapt to the surrounding world, to survive, to develop. Therefore, at the operational level of sociocultural practice, there are many phenomena coming, acquiring a random or insufficiently stable form. Long-term collective experience, historical memory, creative opportunities allow such stable units to appear in every culture as mental standards, assessment criteria, meaningful schemes that accumulate peculiar clumps of understanding and evaluation of the world, activity standards embodied in technologies and labor standards" [1: 36]. Based on this position, we define the cultural code as a cultural-historical experience of the people folded in symbolic units, designed to facilitate the spiritual and practical development of reality.

The world around is a complex object of knowledge for a person. The individual cannot be understood in the flow, and one of his human life the diversity of reality and work out the best ways to adapt and survive in it. A unique means of transmitting all the achievements in the field of the relationship between man and nature, man and society, as well as self-knowledge is a language that encodes all the necessary information for human life: "Linguistic coding of cultural and historical experience in the meaning of a linguistic sign streamlines value-semantic relationships, existing within the boundaries of a particular linguocultural community, and the coordinating mechanisms of the language serve as a kind of "matrix" of the semantization of the knowable space. The process of semantization covers a variety of worlds of human being. As a result of comprehension, they turn out to be included in the broad context of the practical and spiritual development of reality" [3: 67]. This is the essence of cultural codes.

Cultural codes reflect the system of cultural values of the people. They are universal in nature, but have national-cultural features of implementation [3: 68].

Cultural codes are considered as "secondary sign systems that use different material and formal means to encode content that is generally reduced to a picture of the world, to the worldview of a given society" [5: 32]. Cultural and historical experience is encoded using various linguistic signs, which reflect it as a cultural code, containing "information about the values of the linguistic and cultural community, the basic conceptual systems within the general culture code that correspond to mental categories, as well as the structure of these categories and their position in relation to each other and to the surrounding reality as a whole" [5: 32]. It should be emphasized that the cultural code can be expressed not only using verbal means, but also non-verbal signs.

Naturally, the cultural and historical experience of the linguistic and cultural community is diverse, respectively diverse and the varieties of cultural codes represented by linguistic signs of various levels.

So, according to G.A. Bagautdinova, anthropocentric phraseology may contain the following cultural codes:

**Anthropomorphic cultural code.** This cultural code recreates the image of man as a biological being.

**Biomorphic cultural code.** This type of cultural code represents images of animals, birds, insects, plants.

**Object cultural code.** This type of cultural code is used to represent images of household items, buildings, dwellings, its details; clothes; food; substances, metals, minerals, etc.

**Animated cultural code.** This cultural code displays images of natural phenomena.

**Mythological cultural code.** The mythological cultural code reflects the images of religiously conditioned representations of man.

**Temporal cultural code.** This cultural code represents images using temporal vocabulary.

**Spatial (geographical) cultural code.** This kind of cultural code represents images of space.

**Color cultural code.** This cultural code reflects the connection of images with the symbolism of color.

**A quantitative cultural code.** A characteristic feature of this type of cultural code is the representation of images using quantitative units of measurement.

**Terminological cultural code.** This kind of cultural code represents images using the terms of various branches of knowledge [2: 25].

We believe that distinguished G.A. Bagautdinova, using anthropocentric phraseology as an example, cultural codes of images



can be similarly identified in anthropocentric proverbs, since the cultural code is a concept related to the field of culture, universal, nadlinguistic, but at the same time represented by linguistic, primarily lexical units, and phraseological units, along with words, tokens, proverbs and sayings, riddles, jokes, etc., refer to the lexical units of the language.

The cultural codes of images of anthropocentric proverbs in the Uzbek and Russian languages are presented in all varieties identified by G.A. Bagautdinova. In the course of our thesis, we, based on a study of an axiological study of anthropocentric phraseology G.A. Bagautdinova [2: 46], we study the representation of the anthropomorphic cultural code in anthropocentric proverbs, as this cultural code finds its expression through the names of various parts and organs of the human body.

The anthropomorphic cultural code is also called the somatic, or bodily, code, and it is noted that in the somatic code the symbolic functions of various parts of the body are significant, for example, a person as such can be symbolized by his head: *считать по головам; ну, ты голова!*, плечи: *на ее плечах лежала большая ответственность*, рука: *не хватает рабочих рук; мастер – золотые руки; правая рука; он остался с маленьким ребенком на руках; отдам в хорошие руки; через мои руки проходит вся почта* etc [5: 7].

And *antropomorphic* means a humanoid, similar to a person, commensurate with it. The anthropomorphic cultural code consists in assessing objects and phenomena of the surrounding reality through the prism of human nature, human properties and qualities. For example, in the tourist discourse, the anthropomorphic cultural code is manifested in the personification of objects of the surrounding world and natural phenomena, which are personified, they are endowed with the qualities of a person, the ability to speak: the natural world becomes close to a person similar to him [6]. Calling a man in the German language by the name Max, which has the outdated meaning of “strong man, hero”, the cultural attitudes laid down in the etymology of the name are actualized by such physiological parameters of men as the largest, strongest, strongest [4].

So, the basic image of an anthropomorphic cultural code is man [9]. It is also basic in anthropocentric proverbs. This is the commonality of anthropocentric proverbs and anthropocentric cultural code. Nevertheless, the anthropomorphic cultural code can be represented not only in anthropocentric proverbs, but also in other texts.

In general, in the Uzbek and Russian languages there are many anthropocentric proverbs that enclose an anthropomorphic cultural code as a key to understanding the worldview of the people and their way of life. Such proverbs contain markers -

names of the image of a person and various parts and organs of his body. For example: *Бир кўзликлар элига борсанг, бир кўзингни қисиб юр. Бир калла – калла, икки калла – тилла. Соғлом танда – соғлом ақл. Кўнгли қоранинг юзи қора. Яхши ошини ер, ёмон – бошини. Яхшининг кўли сингунча, ёмоннинг бели синсин; Ножки с подходом, ручки с подносом, сердце с покором, голова с поклоном, язык с приговором. Маленькие дети тяжелы на коленях, а большие – на сердце. Заушиный языком не слизнешь. Пока сердце не заболит, глаза не плачут. Глаза с поволокой, роток с позевотой. Жену выбирай не глазами, а ушами.* As you can see, the proverbs of the Uzbek and Russian languages, encoding in themselves an anthropomorphic cultural code, reflect the vision of the world by man through the prism of himself as a biological being.

The anthropomorphic cultural code is represented in the studied proverbs of the Uzbek and Russian languages through such anthropomorphic metaphors symbolizing a person as *голова, мозе, волос, лицо, лоб, глаз, нос, ухо, рот, губа, язык, зубы, борода, ус, шея, тело, кость, плечо, рука, локоть, кулак, палец, ноготь, грудь, сердце, спина, живот, нога, колено, пятка*.

Some of the names of parts of the human body in the analyzed proverbs of the Uzbek and Russian languages are represented by synonyms. For example, in the Uzbek language:

- **юз – бет:** *Юзи оқнинг, иши тўғри. Юзинг қора бўлса, ойнадан ўпкалама. – Бетга чопар кимга ёқар. Бетинг қийшиқ бўлса, ойнадан ўпкалама;*

- **пешона – манглай:** *Пешонаси шўр – тақдирингдан кўр. Камбағалнинг пули – пешона тери. – Манглай теринг билан топилган нон танинга ҳалол. Дехқон хирмони тўлгунча, манглай тери дарё бўлур;*

- **кўз – гавҳар:** *Кўз – тарози, кўнгли қози. Ёмон кўз – тош ёради. Ўғрининг ўзи битта, кўзи – юзта. Қулоқдан кўз ҳақ. – Гавҳаринг юзинг кўрки. Кўз гавҳари – ҳаёт нури;*

- **бош – калла:** *Бош омон бўлса, дўппи топилади. Бошинга қилич келса ҳам, тўғри гапир. – Саллани ол деса, каллани олади. Аҳмоқ калла оёқ оғритар; и т.п.*

In russian language:

- **лицо – рыло:** *Не тот хорош, кто лицом пригож, а тот хорош, кто на дело гож. Не спрашивай здоровья, гляди в лицо. Скромность всякому к лицу. – Куда нам – с посконным рылом да в суконный ряд!*



- **лоб – чело:** *Живот толстой, да лоб пустой. Заставь дурака богу молиться, он и лоб разобьет. Лоб что лопата, да ума небогато. – Бей челом ниже: до неба высоко, до лица земля ближе;*

- **глаза – очи:** *У глупого умный – как бельмо на глазу. Не тот друг, кто медом мажет, а тот, кто правду в глаза скажет. Не тот тебе друг, кто в глаза льстит, но тот тебе друг, кто заочно добро творит. – Не годится в неправде язык шевелить, чтобы в очи хвалить, а за очи хулить. Не хвали в очи, не хули за глаза. Пока солнышко взойдет, роса очи выест;*

- **живот – брюхо:** *Живот – не нитки: надорвешь – не подвяжешь. Живот да головка – всегда у ленивых отговорка. Горох да репа – животу не укрепа. – Сытое брюхо к ученью глухо. Блин не клин, брюха не расколет. Брюхо болит: на краюху глядит;* etc.

Anthropocentric proverbs of the Uzbek and Russian languages reflect in themselves through images the worldview of the people, for example, as G.A. Bagautdinova notes, “Images are a reflection of the way of seeing and can be defined in the framework of cultural codes” [2: 25].

The image of a person who, according to V.N. Solovar and E.S. Moldanova is the “core of every national culture, its value system”, which is the “result of the accumulation of all knowledge and experience” of the people in the entire history of the development of its culture: “Each person has a certain set of moral qualities that are most valued; opposite features are condemned in numerous units of nomination” [8: 33]. The image of a person in anthropocentric proverbs, therefore, undergoes evaluative comprehension.

The estimated value in anthropocentric proverbs can already be incorporated in the very nomination of a person. It should be noted that the system of naming a person in the studied proverbs of the Uzbek and Russian languages is very colorful and multifaceted, just as colorful and multifaceted man himself.

In the anthropocentric proverbs, the invariant form of the name of a person is the Uzbek language (singular or plural) words *odes*, *kishi*, and in Russian - a *person* (s).

## RESULTS AND DISCUSSION

The existing variety of human names in the anthropocentric proverbs of the languages studied is determined by the fact that they present the characteristics of a person from different angles, for example, in terms of gender, age, social status, mental abilities, character traits, etc.

One of the ways to nominate a person in anthropocentric proverbs of the Uzbek and Russian languages is the use of personal names. It should be noted that the use of personal names as a way of nominating a person is most characteristic of the proverbs of the Russian language, in which full / incomplete, derivative / abbreviated, diminutive and abundant forms are abundant.

Most of the personal names represented in the anthropocentric proverbs of the Uzbek and Russian languages are mythological and religious nominations of a person. For example, in the Uzbek language: *Алихўжа, Хўжаали, Абдукарим, Исо, Мусо, Сулаймон, Хизир, Азроил, Ҳасан, Ҳотам, Фозил, Шониёз*; в русском языке: *Абрам, Абросим, Аввкун/Аввакум, Авдей, Авель, Аверкий, Аверьян, Авессалом, Авирон, Ависана, Авксентей, Авраам/Аврам, Агабит, Агара, Агафон/Агафонник, Агей, Аграфена, Агрппина, Адам, Аер, Азарий, Акиндин, Аксен, Аксинья, Акундин, Александр, Алексей, Андел, Андозера, Андрей/Андреян, Анкудин, Антон, Арсений, Артемида, Артемий, Афанасий, Ваалам, Вавила, Варвара, Василий, Галина, Георгий, Герасим, Григорий, Денис, Дмитрий, Евдокия, Елена, Емелий, Игнатий, Ипатий, Ирод, Исак, Каин, Карп, Екатерина, Кипрей, Кирилл, Ксения, Леонтий, Макар, Макарья, Мария, Мирон, Митрофан, Моисей, Назар, Никита, Панкратий, Пантелей, Пахомий, Петр, София, Тимофей, Труфангора, Фалалей, Федор, Федос, Федот, Филат, Филипп, Харитон* and many others.

It is easy to determine that a person's names, which are mythological and religious nominations of a person, are borrowed in the Uzbek language mainly from Arabic and Persian, and in Russian mainly from Greek or Latin. This is due to the dominant spread of Muslim religion in Central Asia, and Christianity in Russia.

In the process of phonetic-grammatical mastery of many names in the Russian language, variants have formed that are recorded in the proverbs we are studying: *Абакум – Аввакум; Абрам – Аврам, Авраам, Авраамий; Абросим – Амвросий, Абрасим; Аверьян – Аверкий; Авксентий – Аксентий, Аксен; Агапий – Агап; Афанасий – Афанас, Афонас, Апанас; Давид – Давыд; Егорий – Егор, Егорь; Иоанн – Иван; Кирила – Кирило; Макешь – Мокошь; Михаил – Михайло; Панкратий – Панкрат; Сара – Сарра; Семион – Семен; Симеон – Симон – Симап; Фаддей – Фадей; Филипп – Филип.*

However, along with mythological and religious names, there are also common names used



by commoners, for example, in the Uzbek language: *Аёз, Қўчқор, Али, Вали, Тешабой, Болтабой, Тошпўлат, Эшпўлат, Дехқонбобо, Ҳатамтой, Ражаб, Хулкар* и др.; в русском языке: *Аника, Антип, Глеб, Елисей, Кузьма, Леонтий, Архип, Василий, Агафья, Аксинья* etc.

In the anthropocentric proverbs of the Russian language, the names of prominent personalities are also reflected: thinkers, politicians, generals, writers, poets, etc.: *Платон, Бонапарт, Сусанин, Суворов, Пушкин, Ленин, Гитлер, Чкалов*.

It should be noted that the Russian language proverbs represent anthropocentric peculiar use of truncated, spoken and diminutive forms of the names: *Ағния – Ағаша, Ағашка, Аника; Акулина – Акуля, Акулька; Алена – Аленка, Аленушка; Александр – Сашка; Алексей – Алеха, Алеша; Андрей – Андрюха; Арина – Аринушка; Афанасий – Афонька, Афонюшка, Афоня; Богдан – Богданушка, Богдашка; Варвара – Варюха, Варюшка; Иван – Ваня, Ванька; Василий – Василек, Васька, Васючка; Владимир – Володя; Гаврила – Гаврилко; Галина – Галя; Герасим – Гаранька; Григорий – Гришка; Дарья – Даша; Демьян – Дема; Евдокия – Евдошка; Егорий – Егорка; Елина – Елинка; Еремей – Ерёма, Еремка, Ерёмушка, Ероха, Ерошка; Иван – Иванушка, Ивашка; Игнатий – Игнашка; Игорь – Игошка; Илья – Ильюшка, Иляточка; Исая – Исайка; Кирил – Кирюшка; Козьма – Козанька; Константи́н – Костя; Левон – Левка; Лукерья – Луканька; Маланья – Малашка; Марина – Маринушка, Маруша, Манюшка; Марфа – Марфуша; Мария – Машка; Микола – Микушка; Мирон – Мирока; Михаил – Миша, Мишка; Анастасия – Настя; Наталья – Наташа, Натаха; Нестор – Нестерка; Никита – Никитка, Никеша; Окулина – Окуля, Окся; Олена – Оленка; Павел – Пава, Пашка, Пашенька; Прасковья – Парашка; Савелий – Савка, Саврасуха; Семен – Сенька, Сенушка; Степан – Степка; Тимофей – Тимошка; Трофим – Трошка; Улита – Улька; Фаддей – Фадя; Фалалей – Фаля; Федор – Федорка, Федорно, Федорушка; Федос – Федоска; Федот – Федотка, Федудь, Федька, Федюшка, Федя; Фекла – Феня; Филат – Филатка; Филипп – Филиппушка, Филька, Филя; Фома – Фомушка, Фонушка; Яков – Яшка; etc.*

In addition, in the proverbs of the Russian language the analyzed group can observe the use of names and surnames: *Андронов, Дзюндя, Доброходов, Ефремихин, Ефремов, Зырянин,*

*Иванов, Манухов, Минин, Харитин, Никонец, Петров, Суеслов, Шуйский, Яковец, Иванович, Иваныч, Кудрявич, Лазаревич, Фомич, Андреевна, Ивановна, Кузьминична, Мосевна, Карилловна, Федосьева* etc.

In anthropocentric proverbs of the Russian language, the use of personal names as common nouns is also observed, in a collective sense: *адамы (Адам), андроны (Андрон), артамоны (Артамон)*.

It must be emphasized that each personal name functioning in the anthropocentric proverbs of the Uzbek and Russian languages performs certain functions, the main of which is to display the standard characteristics of the name bearer (physiological data, behavior, actions, heroism / betrayal, etc.), for whom this name was fixed and glorified.

Along with personal names in anthropocentric proverbs of the Uzbek and Russian languages, common names of a person are widely used, which convey various figurative and evaluative meanings and give an assessment to a person in different forms.

Outside view of man and his physiological state is estimated at anthropocentric proverbs such names as in Uzbek: *япалоқ, кал, кар, кўр, чўлоқ, нуноқ, семиз, нор, ўлик, пес, яроқли, кўса, букри, оқсоқ, соқов, сўқир, пасмонда, оғиз, соғ, бемор, касал, дардсиз, оҳангсиз, мохов, тирик, кучли, билаги алп, полвон, тўқ, оч, оч киши, ташна, қўтир, тишли, кўзсиз, алп, чопқир, дароз, ўлармон, йўгон, холли, пардозли, сулув, гўзал, чиройли, ишкамба; в русском языке; плоский, сплюснутый, сплющенный, лысый, лысина, плешь, плешивый, глухой, слепой, слепец, хромой, калека, инвалид, неумелый, неспособный, неумелость, неспособность, толстый, полный, тучный, жирный, упитанный, родинка, родимое пятно, мертвец, труп, мертвый, неживой, отвратительный, мерзкий, годный, пригодный, трудоспособный, безбородый, горбатый, сутулый, горбун, согнутый, изогнутый, хромой, немой, косноязычный, заика, немота, слепой, неряшливый, неряха, грязнуля, нечистоплотный, грязный, запачканный, рот, уста, зев, пасть, здоровый, больной, хворый, болезненный, нездоровый, беспечный, беззаботный, беззвучный, прокаженный, живой, сильный, мощный, могучий, неотразимый, борец, силач, богатырь, состоятельный, сытый, зажиточный, голодный, жаждущий, чесотка, чесоточный, имеющий зуб, зубчатый, слепой, безглазый, богатырь, витязь,*





*быстрый, быстроногий, резвый, высокий, рослый, долговязый, длинный, жадный, ненасытный, толстый, полный, имеющий родинку, с родинкой, красивый, милovidный, прекрасный, прелестный, толстый.*

As can be seen from the list, when assessing the appearance and physiological state of a person, attention is drawn to his external (*сулув, гузал, чиройли; красивый, милovidный, прекрасный, прелестный*); physiological data (*семиз, дароз, кучли, билаги алп, полвон; толстый, полный, тучный, жирный, упитанный, высокий, рослый, длинный, долговязый, сильный, мощный, могучий, борец, силач, богатырь*); state of health (*соғ, бемор, касал; здоровый, больной, хворый, нездоровый, болезненный*); body defects (*кал, кар, кўр, чўлок; плешиивый, лысый, плешь, лысина, глухой, слепой, слепец, хромой, калека*), as well as for fullness / hunger (*тўқ, оч, оч киши, ташна; сытый, состоятельный, зажиточный, голодный, жаждущий*).

In addition, when a person is nominated in anthropocentric proverbs of the Uzbek and Russian languages, attention is paid to age-related features, in connection with which such names of a person as: *кампир, чол, бола, бачча, жувон, қари, пари, қария, ёш, катта, кичик, қари қиз; баба, бабенка, бабка, бабняк, бабуся, дед, дедко, дедушка, стар, старик, старец, детенок, дети, детки, детина, детинец, детишки, детище, детка, деточка, дитё, дитя, детеныш, детвора, ребенок, мальчик, женщина, стар, старик, старец, пожилой, старый, старина, старичок, пери, фея, муза, молодой, молодец, молодёжь, старший, старшой, младший, малый, малолетний, маленький, млад, младой, младый, меньшей, меньший, дева.*

The characteristics of a person by gender are reflected in anthropocentric proverbs of the Uzbek and Russian languages in the following names of a person: in the Uzbek language: *йигит, қиз, хотин-қиз, аёл, эркак, санам, ножинс, жонона, ўғлон*; in Russian: *юноша, юнец, юный, девица, девка, девочка, девушка, девчина, женщина, жена, баба, мужчина, муж, муженёк, мужик, мужик-горюн, мужилка, мужичишко, мужичок, красавица, бесполоый, возлюбленная, милая, любимая, мальчик, мальчуган, сын, сынище, сынок, сыночек, молодец.*

The nationality of a person is taken into account in the proverbs of the analyzed group by means of names like *ўзбек, араб, лўли, ҳинди, саҳройи* в узбекском языке и *узбек, араб, цыган, чуваш, индиец, кочевник, степняк, степной, деревенщина* in Russian. The use of

the names of the indicated nationalities as a person's name is explained by the historical past of the peoples, their political, economic and cultural ties.

Among the human names in the analyzed proverbs, the groups in which the person is nominated on the basis of the type of activity, character traits, behavior and behavior are especially distinguished.

In anthropocentric proverbs of the Uzbek and Russian languages, a number of names stand out that describe a person by the nature of his activity. For example, in the Uzbek language: *амир, ароқхўр, баковул, бахши, баққол, бек, беҳунар, бойхўжа, бождор, болтачи, босқончи, бошлиқ, боғбон, бўёқчи, бўзчи, гўрков, даллол, дарвеш, деҳқон, довчи, дорбоз, дуторчи, жодугар, заргар, игначи, имом, ишчи, карнайчи, кинначи, кинчи, кир ювгич, кончи, косиб, кулол, куф-суфчи, кўмирчи, лапарчи, лашкар, маддох, мерган, минебоши, мироб, мисгар, морбоз, мулла, мурдашўй, мўйнадўз, навкар, нонвой, нотик, овчи, олим, ол-олчи, оломончи, орачи, ошпаз, пазанда, пир, подачи, подшо, пошишо, подшоҳ, пойгаачи, раҳбар, ромчи, савдогар, сайроқчи, салмоқчи, сарбон, синчи, сипоҳи, сипоҳ, сотувчи, султон, соҳибкор, сурнайчи, сўзловчи, сўзчи, табиб, тақлидчи, тегирмончи, тезакчи, темирчи, тешмачи, тикувчи, тингловчи, тиланчи, тождор, тўғрамчи, ултон, уста, устоз, хожа, хон, хоқон, хўжа, филбон, фолбин, шайх, ширафуруш, шогирд, чақимчи, чевар, чилангар, чорвадор, чўпон, чўри, эгачи, элчи, эмчи, этикдўз, эшикчи, эшмачи, эшон, юзбоши, яламачи, ясовул, кўшиқчи, ҳоким, хунарли, хунарманд, хунарсиз, қароқчи, қассоб, қиморбоз, қози, қотил, томчи, кул, кўшчи, қоровул, ўйинчи, ўланчи, ўмарончи, ўровул, ўроқчи, ўтинчи, ўғри.*

In Russian: *эмир, повелитель, правитель, военачальник, главнокомандующий, алкаш, пьяница, повар, кухмистер, бахши, сказитель, народный певец, бакалейщик, торговец, бек, правитель, неумелый, не имеющий ремесла, ходжа, собирающий пошлину и налоги, молотобоец, начальник, глава, предводитель, руководитель, садовник, садовод, красильщик, маляр, ткач, могильщик, маклер, посредник, дервиш, отшельник, дехканин, крестьянин, земледелец, канатоходец, эквилибрист, дутарист, колдун, волшебник, чародей, колдунья, ювелир, имам, духовный наставник, рабочий, работник, трубач, горнист, карнаист, играющий на карнае,*



музыкант, знахарка, заклинательница, прачка, шахтёр, горняк, рудокоп, ремесленник, гончар, угольщик, участник лапара, войско, армия, маддах, стрелок, полководец, мираб, мулла, мусульманский священник, меховщик, телохранитель, ополченец, дружинник, пекарь, оратор, охотник, учёный, повар, кулинар, старец, пастух, падишах, царь, гонщик, наездник, участник скачек, руководитель, предводитель, руководящий, купец, торговец, караванщик, коновал, умеющий выхаживать лошадей, служилый, чиновник, должностное лицо, солдат, воин, продавец, султан, повелитель, умелец, специалист, сурнаист, играющий на сурнае, рассказчик, сплетник, болтун, говорун, лекарь, врач, подражатель, мельник, кузнец, портной, портниха, швей, швея, швейник, слушатель, нищий, попрошайка, венценосец, бедный, мастер, умелец, умелый, искусный, учитель, наставник, ходжа, хан, каган, император, владыка, хозяин, погонщик слонов, ворожея, гадалка, шейх, духовный наставник, ученик, подмастерье, клеветник, ябедник, доносчик, швея, портниха, вышивательница, слесарь, скотовод, пастух, чабан, служанка, прислуга, рабыня, невольница, сестра, посланник, посол, сапожник, ишан, должность сотника, есаул, всадник, песенник, певец, мэр, правитель области, искусный, умелый, ремесленник, неумелый, не имеющий ремесла, разбойник, мясник, игрок, играющий в азартные игры, судья, убийца, капля, невольник, раб, пахарь, охранник, сторож, караульщик, танцор, танцовщица, игрок, певец, исполнитель улана, жнец, косарь, дровосек, вор.

It is noteworthy that this group contains indications of the names of modern and obsolete crafts and professions, as well as the rank, status, as well as presence / absence of work, employment / idleness, and human addictions.

The names of a person denoting his character, qualities and properties make up a large group in anthropocentric proverbs of the Uzbek and Russian languages. The Uzbek proverbs and include token type *яхши, зўр, сахий, бахил, тўғри, бир сўзли, чечан, дили пок, дили тўғри, ҳайрихоҳ, тили ширин, мард, жўмард, кўрқмас, асл, ишсевар, меҳнаткаш, тиришқоқ, абжир, ғайратли, меҳрли, содда, ростгўй, вафоли, камтар, вафодор, сахий, зўр, жасур, ҳаёли, орли, номусли, пардали, тамизли, ботир, ҳур, умидли, уятли, жаҳлсиз, танти, бетаъма, эпли, эпчил, чийирли, ақли теран, ақлли, ақлдор, доно, нодон, фозил, илмли,*

*билимли, ориф, оқил, зийрак, донишманд, билимтой, соғ, бардошли, сабрли, тоқатли, пухта, чечан, ғолиб, таваккалчи, ўйловчи.* Such names of a person contain a positive assessment of his character, qualities and abilities.

Along with the positive characteristics of human qualities, character and abilities in the anthropocentric proverbs of the Uzbek language, a number of names are used according to the studied parameter, which serve to express a negative assessment of a person. For example: *мақтанчоқ, манман, бесабр, маҳмадана, писмиқ, пишиқ, ўр, телба, анқов, девона, гўл, вайсақи, жоҳил, кўрқоқ, бибурд, сатанг, бесалом, жаҳлли, сўзамол, илмсиз, билимсиз, номард, кўпол, чаласавод, шаллақи, шарманда, кезма, эзма, ақлсиз, беақл, худобезори, ғайратсиз, ишқмас, ялқов, эринчоқ, аҳмоқ, тентак, ношукур, дангаса, текинхўр, ювош, анқов, ошхўр, нонхўр, лақай, ношуд, эпсиз, сабрсиз, бесабр, жинни, чаққон, бепарво, муғомбир, қолоқ, текин томоқ, беодоб, беобрў, беномус, бешарм, беҳаё, безбет, орсиз, беобрў, танбал, уялмас, уятсиз, шалтоқ, шилқим, гапчил, мумсик, зикна, сурбет, мечкай, очкўз, тамагир, бойтеват, сувсоқ, пасманда, гумондор, писмиқ, писмиқи, югурик, бетамиз, бефаҳм, қулоқсиз, фаросатсиз, эсар, эси паст, беўйлов, ғалча, аламзада, эринчоқ, кўнгилчак, эринчак, кўнмас, маҳмадана, ҳаёсиз, вафосиз, нодон, ёлғончи, ноумид, олифта, танноз, зиёндон, аразчи, дўнон, беқаноат, танимас, қилиқсиз, азадор, қизғанчиқ, шошма, тузсиз, бандахос, ҳоримтой, муғамбир, ноқобил, эгри, ёмон, иғвогар, ғийбатчи, ноинсоф, фирибгар, манман, қаллоб, ўзи совуқ, сўзи совуқ, зиёнкўр, виждонсиз, имонсиз, порахўр, ақли калта, ҳаромхўр, аблаҳ, ифлос, ғаламис, нокас, ҳасадчи, ғар, тулпак, кўнгли ёмон, юриши ёмон, айби бор, йўли бузуқ, дили қинғир, нокас, бахил, золим, хоин, юлғич, нопок, тили нопок, ўйи бузуқ, аллоп, ялмоғиз, золим, қонхўр, мараз, ўлармон, хасис, қаллоб, пасткаш, димоғдор, лаганбардор, хушодагўй, жаллоб, чақмачоқ, қурумсоқ, очофат, сўзи нодуруст, таёғи йўғон, сўзи йўғон, сир олувчи, бўлувчи, номард, банги, муттаҳам.*

In Russian proverbs, the qualities of a person's character are described by the following names: *безграмотный, бестолковый, бешенный, бойкий, брезгливый, верный, веселый, глупый, грешный, добродетельный, докучливый, достойный, жалкий, жесткий, завистливый, задорливый, запасливый, злой, лживый, лицемер, лукавый,*



льстивый, любопытный, малодушный, милостив, мудрый, мучитель, неблагодарный, небрезгливый, неверный, невинный, неграмотный, недобрый, недовольный, недостойный, нездоровый, некорыстен, немилостливый, немилый, немощный, немудрый, ненавидящий, ненасытный, непоседа, непотребный, несчастный, неумелый, обманщик, плут, плутоватый, правдивый, правдолюб, правдолюбивый, премудр, премудрый, проворливый, прожорливый, противный, работающий, разумный, распутный, самолюб, самолюбец, сбойливый, сильный, сирота, скупец, скупой, слезливый, слепец, слепой, смелый, смиренный, смирный, смышлёный, совестливый, сребролюбец, стыдливый, суетливый, суровый, торгош, тороватый, торопливый, убогий, угличанин, угодливый, угодник, удалой, удаляющийся, указчик, умница, умный, упорный, упрямый, уралец, уродец, уродливый, утопающий, хам, хвалящий, хвастливый, хвастун, хитрец, хитрый, храбрец, храбруша, храбрый, чистоплюйка, шельма, шут, юридивый, ябедник. When characterizing the qualities and properties of a person, his kindness, mental abilities, attitude to work, shame, devotion, greed, lust, etc. are described.

Relevant in the anthropocentric proverbs of the studied languages are the names of people, indicating kinship. For example, in the Uzbek language: қариндош, қардош, уруғ, уруғ-аймоқ, хеш, туғишган, туғишмаган, бобо, ота, ўгай ота, она, эна, фарзанд, отадош, отали, онали, отасиз, ўғил, қиз, отаси бошқа, кундошбачча, оғали, оғасиз, оға, ака, ука, сингил, опа-сингил, неварра, амаки, тоға, амма, хола, жиян, уни, келин, келинчак, ичкуёв, куёв, почча, янга, божа, овсин, овсин-ажин, овсин, эгачи-сингил, эр боласи, ийа, эгиз, етим, есир, етим қиз, етим бола, етим йигит, етимча, ҳароми, ҳаромзода, ҳарамзада, қуда, қайни, қайнота, қайнона, қайнсингил, қайнэгачи; русском языке: родственник, родич, родня, родной, брат, приятель, дружище, род, племя, сородичи, дед, бабушка, прадед, дедуля, отец, родитель, мать, мама, мамаша, мамашка, маменька, мамка, мамонька, бабушка, бабушка, дитя, дитё, ребёнок, сын, имеющий отца, мальчик, сын, дочь, дочка, девочка, девушка, девица, девка, отчим, дитя соперницы, брат, братец, братишка, сестра, сёстры, внук, дядя, дяденька, тётя, тётка, тётенька, тётушка, племянник, племянница, братец, невеста, невестка,

сноха, невестушка, зять, живущий в доме у тещи, жених, женишок, деверь, зять, сваха, свояк, невестка, сестрица, ребёнок мужа, двойня, близнец, двойняшки, сирота, сиротка, ублюдок, незаконнорождённый, плут, подлец, сват, сватья, младший брат жены или мужа, тещь, свёкор, тётца, свекровь, золовка, свояченица.

Marital relations are especially noted in anthropocentric proverbs, while marriage / love relationships, the presence / absence of children, married / unmarried, are noted if one of the spouses is not alive. For example, in the Uzbek language: эр, ёр, хотин, бека, ошиқ, маъшук, ўйнаш, кундош, тўйли, тўйсиз, болалилар, боласизлар, бўйдоқ, бева; в русском языке: муж, супруг, мужчина, любимый, возлюбленный, жена, супруга, женщина, баба, хозяйка, влюблённый, любимый, возлюбленный, любовник, любовница, справляющий свадьбу, имеющие детей, многодетные, бездетные, не имеющие детей, холостой, холостяк, неженатый, вдова, вдовец.

A person's nomination in the anthropocentric proverbs of the studied languages can express a characteristic of a person's social status and relationships with other members of society. For example, in the Uzbek language: эга, дўст, душман, ёв, биродар, қўшни, ошина, қўноқ, даъвогар, жавобгар, гумондор, мусулмон, пайғамбар, олувчи, ёт, ўзга, бегона, элдош, улфат, қурдош, сирдош, қўлдош, ўртоқ, кофир, мезбон, меҳмон, қўноқ, ҳамсоя, бегона, шерик, кайвони, оғайни, таниш, кадрдон, харидор, касбдош, совчи, эга, бекенгаш, мусофир, ҳаммол, тутинган, овулдош, фуқаро, мижоз, ҳамроҳ, етакчи, кафил, йўлдош, йўл ўғриси, йўлчи, йўловчи, бузғунчи, таги паст, авлиё, тавбачи, бош, ишбоши, азиз, отин, ҳангамачи, дангамачи, ҳашарчи, мурид, таниш, чувринди, ўзга, ҳазилкаш, бекорчи, безори, бер-берчи, иши йўқ, иши бор, ишлик, ишсиз, хўп-хўпчи, туҳматчи; в русском языке: хозяин, владелец, обладатель, друг, товарищ, приятель, враг, неприятель, противник, недруг, брат, приятель, товарищ, сосед, соседка, друг, знакомый, гость, истец, претендент, ответчик, ответственный, подозревающий, мусульманин, пророк, получатель, отчуждённый, чужой, посторонний, иной, другой, друг, приятель, собеседник, ровесник, сверстник, единомышленник, закадычный друг, верный помощник, сотоварищ, товарищ, подружка, подруга, приятельница, неверный,



нечестивый, богоотступник, хозяин, гость, гостья, сосед, чужой, посторонний, партнёр, сообщник, соучастник, коллега, друг, приятель, знакомый, близкий, дорогой, покупатель, закупщик, коллега, сват, сваха, хозяин, владелец, обладатель, приезжий, чужестранец, путник, странник, носильщик, грузчик, земляк, гражданин, житель, клиент, покупатель, спутник, попутчик, ведущий, руководящий, руководитель, поручитель, гарант, заверитель, путник, прохожий, пассажир, смутьян, склочник, подстрекатель, святой, чудотворец, глава, главный, первый, руководитель, дорогой, милый, любимый, уважаемый, драгоценный, ценный, редкостный, почитаемый, учительница, женщина, участник хашара, мюрид, последователь, знакомый, приятель, оборванец, чужой, посторонний, шутник, бездельник, хулиган, безработный, имеющий работу, без работы, не имеющий работы, клеветник.

When a person is socially characterized, the basis for the nomination is such indicators as friendship, neighborhood, work, especially business, religion, etc.

Place of residence, tribal names can also be the basis for the name of a person. This phenomenon is more evident in Russian proverbs, for example: *агаряне*.

Another parameter of the person's nomination in the analyzed proverbs is the person's financial condition. For example, in the Uzbek language: *йўқ, бор, камбағал, бой, беқўним, гадо, гадой, арбали, пиёда, йўрғали, бойвачча, камонсиз, эшакли, сепли, сепсиз, яланғоч, ғариб, отлиқ, туяли, ворис, боқим, ялангоёқ, кемали, қайиқли, молсиз киши, қарздор, пули бор, пули йўқ, отли, туяли, ғариб, молсиз, юксиз, нонсиз, зарул, нозарул, иштонсиз, кулчали, оқчали, оқчасиз, тўнли, фақир, фақир киши, тўкин, бедавлат, молли, ичи қалтироқ, бечора, сирти ялтироқ*; в русском языке: *нет, не имеется, не существует, есть, имеется, существует, бедняк, бедный, неимущий, малоимущий, необеспеченный, богач, бай, богатый, зажиточный, нищий, попрошайка, пеший, пешка, пешком, байский сын, без лука, обладающая приданым, бесприданница, обнаженный, голый, нагой, оголённый, раздетый, одинокий, бесприютный, безродный, бесприютный, всадник, конный, наследник, присмотр, уход, иждивение, босиком, босой, босоногий, босаяк, оборванец, корабельщик, подочник, должник, с деньгами, без денег, всадник, конный, бестоварный,*

*належке, бесхлебный, необходимый, нужный, ненужный, бедный, неимущий, нищий, бедняк, обильный, изобильный, богатый, без имущества, бедный, неимущий, нуждающийся, бедняк, блестящий.*

In general, the names of a person by his financial condition, on the one hand, reflect the presence / absence of money capital, i.e. Poverty or wealth, on the other hand, indicates what is a measure of wealth, and how it is valued.

In anthropocentric proverbs of the Uzbek and Russian languages, the name of a person can indicate the number of people. Their quantitative characteristic can be expressed by numerals (quantitative serial, a collective) as well as the pronouns, and adverbs in some cases - nouns and adjectives denoting quantitative object parameters. Compare in Uzbek: *бир, икки, етти, биров, икков, учов, бешов, олтов, тўртовлон, еттовлон, олтовлон, бари, бариси, кўп, кўпчилик*; в русском языке: *один, два, семь, семеро, оба, двое, вдвоём, трое, втроём, пятеро, впятером, шестеро, вшестером, четверо, вчетвером, семеро, всемером, весь, все, всё, вся, много, обильно, значительно, многочисленный, обильный, значительный, большинство, много, масса, толпа.*

In addition, names of a generalizing and collective nature such as *халқ, yurt, el, vatan, hamma* in the Uzbek language and *народ, публика, народность, страна, край, родина, племя, род, отечество, отчизна, все, всё, весь* in Russian.

In addition to the indicated methods of nominating a person in the anthropocentric proverbs of the analyzed languages, a descriptive method is widely used, which occurs when characterizing a person according to all the parameters discussed above. Compare: *тили узун, тили калта, қўли калта, ясанган, кезанган, ўқиган, ўқимаган, уққан, севган, севмаган, суйган, эринмаган, ўлмаган, қочган, қувган, дўсти оз, дўсти кўп, дўсти нодон, замони бошқа, фикри равшан, сўзи равшан, отаси бошқа, ҳунари бор, илми бор, илми йўқ, иймони йўқ, билиги йўқ, пилиги йўқ, турқи бузуқ, хулқи бузуқ, берарман, оларман, уқуви бор, уқуви йўқ, меҳри бор, бахти бор, аҳди бор, лаънат ёғдирувчи, раҳмат эшиттирувчи, аҳди бор, аҳд қилган, излаган, из қувган, интилган, ўйлаган, ишлаган, ишламаган, билган, гап урган, довни енгган, ёвни енгган, билган, билмаган, уялган, буюрган, кийган, минган*; in Russian: *с длинным языком, с коротким языком, грамотный, образованный, учёный, необразованный, любимый, нелюбимый,*



немертвый, сбежавший, преследуемый, другое время, ясный ум, имеющий ремесло, имеющий знания, необразованный, неверующий, незнающий, без фитиля (без запала), с неприятной физиономией, с плохим поведением, отдам, возьму, опытный, неопытный, сострадающий, счастливый, соглашенный, проклинающий, благодарный, условленный, заключенный, ищущий, преследующий, преследуемый, обдуманый, работавший, не работавший, знавший, говоривший, преодолевший, победивший, не знавший, пристыженный, приказавший, одетый.

In general, it should be noted that the names of people used in anthropocentric proverbs of the Uzbek and Russian languages have a rich figurative basis and contain huge information of linguocultural character that allows us to judge the value priorities of the Uzbek and Russian peoples, which is due to the reflection of various cultural codes in the units we analyzed.

## CONCLUSION

As a result of our investigation, the following inferences can be drawn:

1. The estimated understanding of a person in anthropocentric proverbs of the Uzbek and Russian languages is expressed by various names of a person.

2. The person's names in the anthropocentric proverbs of the studied languages model his characterization by such parameters as external (physical) and internal (moral and spiritual) qualities, occupation, social and marital status, gender, age, family ties, etc.

3. Nomination of a person with the help of personal names is more characteristic for proverbs of the Russian language, which is predetermined by the use of both full and derivative, abbreviated, diminutive and affectionate names. Personal names in anthropocentric proverbs are mainly mythological and religious nominations of a person, borrowed in the Uzbek language mainly from Arabic and Persian, and in Russian from Greek or Latin.

4. Each personal name functioning in the anthropocentric proverbs of the Uzbek and Russian languages performs certain functions, the main of which is the characterization of a person by the properties of the famous name of the owner.

5. Names of a common noun in the anthropocentric proverbs of the languages studied express various figurative and evaluative meanings.

6. The names of people in the anthropocentric proverbs of the Uzbek and Russian languages have a rich figurative basis and contain huge information of linguocultural character that allows us to judge the value priorities of the Uzbek

and Russian peoples, which is determined by the reflection in the proverbs of various cultural codes.

7. Cultural codes in the anthropocentric proverbs of the studied languages represent a cultural category, the implementation of which is carried out using a combination of means of nominating a person determined by the historical and cultural period.

8. The cultural and historical experience of the linguistic and cultural community, designed to facilitate the spiritual and practical development by an individual of reality, diverse, respectively diverse and varied cultural codes represented by human names in anthropocentric proverbs.

9. The commonality of the anthropocentric proverbs of the Uzbek and Russian languages and the anthropocentric cultural code is that the basic image in both cases is a person. Nevertheless, the anthropomorphic cultural code can be represented not only in anthropocentric proverbs, but also in other texts.

10. In general, in the Uzbek and Russian languages there are many anthropocentric proverbs that contain an anthropomorphic cultural code as a key to understanding the worldview of the people and their way of life. Such proverbs contain markers - names of the image of a person and various parts and organs of his body, which predetermine the vision of the world by a person through the prism of himself as a biological being.

## REFERENCES

1. Avanesova G.A., Kuptsova I.A. *Codes of culture: understanding of the essence, a functional role in cultural practice. // In the world of science and art: issues of philology, art history and cultural studies: Mater. XLVII Internat. scientific. - Scient. Conf., No. 4 (47). - Novosibirsk: Sibak, 2015. - S. 36.*
2. Bagautdinova G.A. *Man in phraseology: anthropocentric and axiological aspects: Abstract. d ISS ... Doctor. filol. sciences. - Kazan, 2007. - 46 p.*
3. Gerasimenko I.E. *Cultural codes of gender representations (according to a survey of students of Tula universities). // Scientific reports of Belgorod State University. Series: "Philosophy. Sociology. Right". - Belgorod, 2016. - Issue. 36, No. 10 (231). - S. 67.*
4. Gerasimenko I.E. *Cultural codes of gender representations (according to a survey of students of Tula universities). // Scientific reports of Belgorod State University. Series: "Philosophy. Sociology. Right". - Belgorod, 2016. - Issue. 36, No. 10 (231). - S. 68.*
5. Gudkova O.A. *Quasi-reference nominations in the gender vocabulary of German speakers: Diss. ... cand. filol. sciences. - Tula, 2008. - 260 s.*
6. Ivanova S.V. *Political Discourse and Cultural Coding: Detonation of Cultural Codes (based on US Political Discourse). // Political linguistics. - Yekaterinburg, 2011. - No. 2. - S. 32.*



7. *Krasnykh V.V. Codes and cultural standards (invitation to talk). // Language, consciousness, communication: Sat. articles. - M.: MAKS Press, 2001. - Issue. 19. - S. 7.*
8. *Pimenova Z.P. Cultural codes in tourist tourism discourse. - [http://www.rusnauka.com/11\\_NPE\\_2013/Philologia/7\\_134053.doc.htm](http://www.rusnauka.com/11_NPE_2013/Philologia/7_134053.doc.htm).*
9. *Simbirtseva N.A. "Code of culture" as a cultural category. // Knowledge. Understanding. Skill. - M., 2016. - No. 1. - S. 161.*
10. *Solovar V.N., Moldanova E.S. Nominations of a person by internal parameters (based on the Kazym dialect of the Khanty language). // Bulletin of Ugric studies. - Khanty-Mansiysk, 2011. - No. 3 (6). - S. 33.*
11. *Tokarev V.G. Quasi-standard as a unit of linguistic-cultural level. // Slavistična revija. - Ljubljana, 2015. - No. 63. - S. 289.*



## THE ROLE OF PRAGMATICS IN LINGUISTICS

**Qurbonova Sayoraxon Makhamadaliyevna**

Doctor of Philosophy in Philological Sciences,  
Senior Teacher of Ferghana State University,  
Ferghana, Uzbekistan

### ANNOTATION

*The article analyzes the role and essence of a pragmatic approach to the problems of language and speech. Also the differences between the semantic, syntactic and pragmatic attitude in the process of speech acts are shown. The difference between a pragmatic approach and style is given. The role of pragmatics in the disclosure of the personality in literary text is also emphasized.*

**KEYWORDS:** *semiotics, syntactic, semantics, the process of speech, social character, mental character, locution.*

### DISCUSSION

Linguistics is the study of language materials and their use in speech. It is well-known that linguistic units have a form and a semantic aspect, and the founder of system-structural linguistics, F. de Saussure, states that a linguistic sign consists of the relations of a speaker and speech [5, 99]. However, this content represents only the final product of the linguistic sign.

In fact, in the expression of a meaning and content through a linguistic sign, or in the understanding of a meaning and content through a certain form, "understanders" - that is, those who perceive the same meaning in the same form, in other words, speak the same language, share thoughts in the same language, also have a significant role. The reason is that that any language is powered by the consciousness of those who speak it, because it is they who assimilate and remember the forms that exist in this language, increase its viability by using it in different meanings and contexts, and pass it on to future generations.

In its turn, the language, as the most important means of communication, expresses various relationships between people, and eventually develops itself, in which case it cannot be free from the influence of social and mental characteristics of people, do not rely on them. That is, the author of the speech, that is, the speaker and his personality, play an important role in this process. However, in the linguistic analysis of speech processes, this aspect of the issue is almost ignored. In this perspective, the role of the speaker in this process of the speech becomes even clearer, given the conditionality and variability of the speaker in relation to the speech. If the speaker did not obey to conditions and the speech

did not vary, the languages of the world would not be so diverse and the pragmatics of speech were not so diverse. The speech, on the other hand, is relatively stable, with only varying degrees and approaches to its perception.

In solving the problem of semantic comprehension through language units, it is important to divide semiotics into the following interrelated sections and distinguish them: 1) syntax, which studies the signs and ways of their interaction; 2) semantics, which studies the relationship of symbols to the object they represent; 3) pragmatics, which studies the subject's attitude to the applied sign and the effect of the signs on the subject using this sign [4, 51]. Hence, while semantics refers to the relation of a sign to an object, syntax regulates the relation of a sign to a sign. All of these processes are governed by the activities of the subject who reacts to the sign or is influenced by the sign (perceiving meaning and content). In this sense, the most important aspect of language communication is pragmatics. As long as it does not imply a pragmatic goal and serves to ensure its realization, neither semantics nor syntax can be anything but utter nonsense, and there is no need for a person to keep these conditional signs in mind. This means that pragmatics is the source of life, the generator of language.

E.S.Aznaurova, a researcher in the field of pragmatics, quotes the linguist V.G.Gak in her research on the differentiation of the object of research in the field of syntax, semantics, pragmatics: "... if syntax studies how a person speaks and the structure of expression, semantics (person) explains what he is saying, what this text means. Pragmatics, on the other hand, seeks to reveal the context in



which a person speaks and for what purpose, and what the pragmatic effect of expression is”[1, 29]. Yu.S.Stepanov's definition of semantics, syntax and pragmatics is more concise and systematic: "semantics" refers to the relation of signs (language units) to what is expressed in them, "syntax" is the relation of a sign (language unit) to the sign (language unit) and "pragmatics" refers to the relation of a sign (language unit) to a language user [3, 25].

Noting that there are three aspects mentioned in most views on semiotics, the linguist M. Hakimov, who conducts the effective research in the field of pragmalinguistics, explains the essence of these aspects in his monograph "Fundamentals of Uzbek pragmalinguistics" as follows: "... syntax is the field that studies the relationship of one linguistic sign to another linguistic sign in the syntactic clauses. The relationship of linguistic symbols in syntactic clauses to the subject and concept is studied in semantics. Pragmatism has been shown to study the direct relation of a speech act to context. It seems that the relationship between the speech act and the context is the main object of study of pragmatics”[8, 5].

The results of pragmalinguistic research are relevant not only in linguistics, but also to cultural studies, speech culture, ethnolinguistics, and sociolinguistics.

"All human social behavior in the objective world is reflected in his speech activity" [8, 5]. Since we aim to have a complete understanding of human speech and the basis of its formation, we have to analyze it to the point where it reaches its roots in order to adequately cover the essence of the issues. In this case, the interconnection of some related disciplines, if necessary, can provide answers to the problems of one discipline by analysis of another. In this case, it is not a problem of limitation of this or that science, but the achievement of a specific goal, that is, the ability to analyze everything from the factors of human speech to the occurrence of units of expression in speech.

Language and Man is a very old and ever-new subject of the language science. This subject is so ancient that people have already realized that language and man are inseparable, but at the same time this subject is so new and young that every form of expression of thought, as a product of a thought, offers new insights into the relationship between language and man. [2, 3].

As it is known, language units differ from one level to another. Lexical and grammatical levels are the most active units of information in the interpretation of the speaker's personality traits, and in text analysis, features related to language levels (phonetic, morphological, lexical, grammatical) are often at the center of research.

We are of the opinion that the grammatical features of these forms are not important in the process of expressing one's opinion in a language,

they form the basis of the structure of the text. But the writer's main focus is not on the grammatical rules of the language, but on the pragmatic purpose of the speech structure, that is, the speaker's own goal through speech - the desire to express their thoughts to others, to express attitudes, to express themselves in the cognitive world. In the field of linguistics, in most cases, the product of the speech of people (creators) is analyzed in the context of linguistics. Language tools are evaluated as a criterion that reflects the stylistic features of the text, and it is approached as a level of assessment that determines the ability of the language owner (creator) to describe the event figuratively with the help of these tools. But the object we want to study is very different from the methodological issues.

It can be concluded that speech "can be the object of a number of new directions as a product of the speaker's perceptual and expressive activity" [8, 31]. Speech and its pragmatic analysis reveal the national-cultural features of linguistic activity. In addition, the process of communication can take such a wide range of expressions that it is not enough to require the speaker to use language materials or to learn only the tools of his or her field as a linguist in analysis. For this reason, a cognitive approach to language and speech issues is gaining popularity today. That is, it is a field of study of human cognition and forms of expression, in which language tools play a key role. At the same time, the essence of the study of language is important in this regard.

At the same time, experts distinguish three elementary functions of language as a means of communication: 1) naming (nomination) of objects understood in the real world; 2) interrelation (prediction) of the named on the basis of certain laws; 3) the speaker's attitude to the names and their connections (location). If we apply these three functions to the three aspects of semiotics distinguished by Ch. Morris, we understand that "nomination" means semantics, "predication" means syntax, and "location" means pragmatics. Thus, location refers to nomination and prediction, which in turn refers to the "response of a person to the sign he or she is using" [6, 249].

Pragmatics is relatively little studied in linguistics in the fields of syntax and semantics. To present, its perfect content has not been formed either. In fact, pragmatics regulates certain rules of use of language units in speech relations, develops its conditions taking into account the participants of communication and the state of speech. Each language and the people who speak it have their own forms of communication, personality features, and the degree to which the goal of communication is achieved depends on the degree to which pragmatic requirements are met in the communication process.

The grammatical forms that have a single form of expression in the realization of a pragmatic goal do not have any pragmatic character. When





there are more than one form that serves to express the same grammatical content, and when one form is used interchangeably with another, the pragmatic features of the text become apparent. For example, in the Uzbek language, the presence of the singular and plural forms of personal pronouns in relation to the second person, or the use of the plural form instead of the first person singular, expresses an active pragmatic content.

The morphemic units serve primarily for grammatical connections in texts, and their main function is to grammatically model the forms that enter into syntactic communication in mutually compatible forms. But sometimes even the use of syntactic morphemes in one form or another creates a certain amount of information. For example, in Russian, addressing to someone by using the "thee" means being close to them and not being a stranger. For example:

*Menga erga tegasanmi? – Komissar bu gap og‘zidan qanday chiqib ketganini o‘zi bilmay qoldi. Yumdalab tashlasa, nima qilaman, deb yuragi po‘killab turgan edi, Natasha unday qilmadi.*

*Otasi (ehtimol bobosi) tengi bu odam nima deyotganini daʼʼatan tushunolmagandek, bir zum kipriklarini pipiratik turdi-da, moviy ko‘zlarida tabassum paydo bo‘ldi.*

*Propiskadan o‘tkazsang, tegaman!*

*Sensiradimi, demak yaqin olgani shu! Mana buni ochiqcha savdo desa bo‘ladi!*

(“Tushda kechgan umrlar”, 146-bet)

*("Will you marry me?" "The commissioner didn't know how it came out." His heart was pounding, wondering what to do next, if she would reject, but Natasha didn't.*

*Pretending not to understand what the man of her father's age (it might even be grandfather's age) saying, blinked her lashes for a moment, and a smile appeared in her blue eyes.*

*"If you register me, I'll marry you!"*

*If she addressee me with familiarity, then she wants to be close to me! That's the good bargain.)* (Life in a Dream, p. 146)

In this case, the speaker's address as "sen" means that the listener is "close to him" and, according to the context of the speech, agrees to the proposal - to marry him. The dysphemical form of lexical units also helped to understand the content of the speech process. *Will you marry me? Will you register me?* helps to understand their personality traits.

Uzbeks, on the other hand, do not treat strangers and older people in the same way, which is a sign of obscenity and disrespect.

But addressing the speaker as "sen" is not always the same. Sometimes, when an older person says "sen", there is a sense of sincerity.

*Shaxt o‘rnimdan turdim-da, xayrlashmasdan eshikka yo‘naldim.*

*-SHoshmang! – dedi u baqirib.*

*To‘xtadim.*

*-Qayting! – “Opal” qutisidan sigaret olib labiga emas, sarg‘ayib ketgan tishlari orasiga qistirdi. Go‘yo g‘ajib tashlamoqchi bo‘lgandek.*

*-Aytaver dardingni! – dedi to‘satdan sensirab.*

*Gap boshlashim bilan chehrasi yorishdi.*

*-Shomansur akaning o‘g‘limisan? Tashla qo‘lni! Otang ajoyib odamlar! U kishi to‘g‘risida ocherk yozganman. Ishning ko‘zini biladigan rais edilar... O‘zing qayerda ishlaysan?*

(“Tushda kechgan umrlar”, 175-bet)

*(I got up and went to the door without saying goodbye.*

*-Don't hurry! He shouted.*

*I stopped.*

*-Come back! "He took a cigarette from the Opal box and stuck it between his yellowed teeth, not his lips." It's almost like a surprise.*

*-Tell your pain! He said suddenly, feeling it.*

*His face lit up as I began to speak.*

*- Are you the son of Shomansur aka? Drop your hand! Your father is a wonderful person! I wrote an essay about him. They were the boss who knew the job ... Where do you work?)(Life in a Dream, p. 175)*

In this case, the use of "you" means that the formalities in interpersonal relationships are over, a close relationship is established, the speaker knows the interlocutor well and shows a sign of affection. If we pay attention to the content of the text, the speaker first addresses the listener in the form of "you", and then recognizes him and changes the form of attitude at the end of the conversation, which is due to friendship and support. Drop your hand!" and is filled with warm thoughts about the father of the interlocutor. The written information is a moving image in the mind of the reader. It is often devoted to the formation of cognitive information based on the appearance of the participants, the imagery of their facial expressions, and mainly their kinetic movements. "Drop your hand!" the command-type form of speech is associated with kinetic movements, which are mainly masculine forms of action, usually expressing sympathetic, benevolent meanings with sincere squeezing of the right palms. In this case, the transition of people to the form of "you" during the conversation is a sign of a positive attitude, in other places it can take on a completely different meaning. When a relatively young person addresses an older person as "you", it creates a feeling of disrespect and contempt.

*... Kalandarov stood up and tried to suppress his trembling, not shouting and not smiling:*

*– Qani, gapir bo‘lmasa! Nega o‘tirding? Maslahatingni eshitaylik! Bugun kesakdan o‘t chiqib qoldi... – dedi. ("Oh, speak then!" Why are you sitting. Let's listen to your advice! There's a fire in the woods today ...')*

*He stood up slowly, smiled and looked at the people, then at Kalandarov. Kesak desangiz ham mayliga, – dedi, – lekin sensiramang, Arslonbek. Men sizdan*



*ikki yosh kattaman. Shu yerda bo'yi etgan qizim, bola-chaqalik o'g'lim o'tiribdi... Kozimbekning orzusini ko'ring, sensiramang...*

*("I won't be in trouble when you call me the "wood", he said, – Arslonbek. "I am two years older than you. My grown-up daughter and my son, who has children are sitting here ... See Kozimbek's dream, don't humiliate me).*

*The news brought Kalandarov to his senses, and the silence of the hall, the deep sigh of someone in that silence, crushed him... he thought, "That's not going to happen. Why is it that a person who has been silent until now behaved himself like this? He told me not to address him by "thee" looking at my face! There is something wrong... " (Sinchalak, p. 125)*

This passage indicates that the listener was previously addressed as "you" and that there were no objections. In the present speech, however, this is perceived on the level of disrespect, disregard, and even insult to the listener. Since this form did not cause such a reaction in the listener in the previous relationship, the speaker continued to use this form in the appeal, but from today's point of view and the speech situation (they are talking in a large meeting and the listener's daughter and son are also present in this meeting ) is embarrassed by the form of expression used by the speaker in his speech and the attitude understood through that form.

Thus, in our small scientific research, we can conclude that pragmatics studies the understanding of language signs in the mind of its user - the human mind. In this sense, pragmatism plays an important role in creating communication between people without denying the importance of semantics and syntax in language learning.

## USED LITERATURE

1. Азнаурова Э.С. Прагматика художественного языка –Ташкент, 1988. - С.120. стр. 29.
2. Будагов Р.А. Человек и его язык – М.: Изд. Московского университета, 1976. С. 428. Стр. 3.
3. Маҳмудов Н. Ўзбек тили синтаксисининг долзарб масалалари // ЎТВА. 1990. № 2, 25-бет.
4. Новиков А.А. Семантика русского языка – Москва: Высшая школа, 1982. –С. 51.
5. Соссюр Ф.де. Труды по общему языкознанию. – Москва: Прогресс, 1977. –С. 99.
6. Степанов Ю.С. Основы общего языкознания. – М., 1975. –С. 249.
7. Ҳақимов М. Ўзбек илмий матнининг синтагматик ва прагматик хусусиятлари. – Тошкент. 1990. Филол. фанл. номзод... дисс. 116-бет.
8. Ҳақимов М. Ўзбек прагматингвистикаси асослари. – Т.: Академнашр, 2013. Б-174. 5-бет.



## ANALYSIS OF AVAILABLE CLOTHING USED IN DAILY USE OF COLLEGE GOING GIRLS

**Iti Dubey \***

Ph.D. Research Scholar

Department of Textile and Apparel Designing  
College Of Community and Applied Sciences  
M.P.U.A.T. Udaipur,  
Rajasthan

**Sudha Babel**

Professor

Department of Textile and Apparel Designing  
College Of Community and Applied Sciences  
M.P.U.A.T. Udaipur,  
Rajasthan

Article DOI: <https://doi.org/10.36713/epra4912>

### ABSTRACT

*The present research was undertaken to find out the analysis of available clothing in wardrobe of daily wear clothing of college going girls. It examines clothing preferences, apparel buying habits, and shopping behaviors. A self developed questionnaire was used to collect data. The purpose of this study is to identify major factors that influence clothing preference and selection. 30 sample size (College going girls) was selected from Home Science girls hostel, MPUAT, Udaipur. Results were systematically illustrated with the help of tables. Results confirmed that the respondents cared about their appearance. They indicated that they love to purchase quality fashionable clothing but were neutral about spending a large percentage of their monthly budget on clothing.*

### INTRODUCTION

The ultimate guide to what every college girl should have in her wardrobe. Includes wardrobe basics for every college student's closet. Women have the luxury of a lot of options when it comes to their wardrobe, which men usually don't, and thank god for that! But having more options usually means that your wardrobe is going to be flooded with clothes. And most of us ladies do end up hoarding clothes like nobody's business. But sadly, we end up pushing those never touched outfits into the dark abyss of all things rejected.

### OBJECTIVE

To analysis of available clothing in wardrobe of college going girls.

### METHODOLOGY

A self structured interview schedule was formulated to collect information from college going girls related to apparels. 30 sample size (College going girls) was selected from Home Science girls hostel, MPUAT, Udaipur. Results of the survey have been systematically illustrated with the help of tables.

### RESULTS AND DISCUSSION

This section of the study shows very clearly the finding and interpretation in the context of objective of the study, thus providing a bird's eye view of the complete study which make this section the most significant crucial part of this study. The results of the study have been systematically illustrated with the help of tables tracing the objective of the present study.



**Table-1 Frequency and Percentage Distribution of Respondents by age**

Age of responded	Frequency (f)	Percentage (%)
20-25	19	63.33
25-30	11	36.66

Age of the respondents was recorded and it was observed that maximum respondents (63.33%) belonged to the age group of 20-24 years and minimum respondents (36.66%) belonged to the age group of 25-30 years.

**Table-2 Frequency and Percentage Distribution of Respondents by education**

Education of responded	Frequency (f)	Percentage (%)
UG	2	6.66
PG	13	43.33
Ph.D.	15	50

The data pertaining to education revealed that all had qualification post graduate and only 6.66 per cent respondents were educated. Maximum number of respondents were undergraduate respondents (50%) was Ph.D., 43.33 per cent respondents

**Table-3 Frequency and Percentage Distribution of Respondents by marital status**

Marital status of responded	Frequency (f)	Percentage (%)
Married	6	20
unmarried	24	80

The data also revealed that 80 per cent respondents were unmarried and only 20 per cent were married.

**Table-4 Frequency and Percentage Distribution of Respondents by family type**

Family type of responded	Frequency (f)	Percentage (%)
Nuclear	8	26.66
Joint	22	73.33

Majority of the respondent 73.33 per cent belonged to joint family and only 26.66 per cent respondents belonged to nuclear family.

**Table-5 Frequency and Percentage Distribution of Respondents by fabric**

S.No.	Fabric	Frequency	Percentage
1.	Cotton	18	60
2.	Silk	6	20
3.	wool	7	23.33
4.	Synthetic	20	50
5.	Blended	5	16.67

**\*Multiple responses**

It is clear from Table 5 that 60 per cent respondents had cotton apparel. 50 per cent used synthetic apparel, 23.33 per cent respondents had wool apparel and only 20 per cent respondents preferred silk and only 16.67 percent blended apparels in their wardrobe.

**Table-6 Frequency and Percentage Distribution of Respondents by Preference Criteria**

S.No.	Preference Criteria	Frequency	Percentage
1.	Appearance	30	100
2.	Comfort	30	100
3.	Ease of care	25	83.33

**\*Multiple responses**



It can be envisaged from the data presented in Table 6 that 100 per cent respondent's preference criteria for selecting the garments are appearance and comfort,

83.33 per cent said they were also giving attention on ease of care .

**Table-8 Frequency and Percentage Distribution of Respondents by washing**

S. No.	Fabric	Dry cleaning		Hand wash	
		Frequency	Percentage	Frequency	Percentage
1.	Cotton	2	6.66	30	100
2.	Silk	18	60	5	16.66
3.	wool	4	13.33	28	93.33
4.	Synthetic	3	10	17	56.66
5.	Blended	2	6.66	21	70

**\*Multiple responses**

It is clear from table 8 that 100 per cent respondents used hand washing method for cotton garments, and only 6.66 per cent preferred dry cleaning. In case of silk garments 60 per cent respondents used dry cleaning, 16.66 per cent washed through hand .

It was explained by the 93.33 per cent respondents that the washed woolen garments through hand wash method, 13.33 per cent used dry cleaning Synthetic garments washed through hands by 70 per cent respondents, and only 6.66 per cent was using dry cleaning method.

**Table-9 Frequency and Percentage Distribution of Respondents by storage method**

S. No.	Fabric	Storage methods			
		Homemade method		Commercial method	
		Frequency	Percentage	Frequency	Percentage
1.	Cotton	24	80	4	13.33
2.	Silk	15	50	8	26.66
3.	wool	21	70	11	36.66
4.	Synthetic	15	50	3	10
5.	Blended	24	80	3	10

**\*Multiple responses**

The result revealed that 80 per cent respondents used homemade method for storage of cotton apparels and 13.33 per cent preferred commercial method. 50 per cent respondents used homemade storage method for silk apparels only 26.66 per cent used commercial method. 70 per cent respondents replied they were using homemade method for wool apparels and 36.66 per cent used commercial method. In case of synthetic

apparels 50 per cent respondents responded they were also using homemade method and 10 per cent favored commercial method. It was noted that 80 percent respondents were using homemade and 10 per cent commercial method. Most of the respondents said that in homemade method they were using newspaper, neem leaves and in commercial method naphthalene bolls were used.

**Table-10 Frequency and Percentage Distribution of Respondents by apparels according to season**

S.No.	Responses	Frequency	Percentage
1.	Yes	25	83.33
2.	No	10	16.67

It can be seen from table 10 that 83.33 per cent respondents said that different season require different types of clothing witch further require different storage

method depending on type of fabric. 16.67 per cent respondents replied they were not changing the storage method of apparels according to season.



**Table-12 Frequency and Percentage Distribution of Respondents by Money expenditure range monthly**

S.No.	Money expenditure range monthly	Frequency	Percentage
1.	Below 500	08	26.66
2.	500-1000	<b>10</b>	<b>33.33</b>
3.	1000-1500	07	23.33
4.	Above 1500	07	23.33

**\*Multiple responses**

Most of the respondents (33.33%) said that they spend 500-1000 Rs/- per month on the purchasing of clothing. 26.22 per cent spend below 500 Rs/-, 23.33 per cent spend 1000-1500 Rs/-, and above 1500 Rs/- monthly on clothing.

**Arrangement of casual wears and party wears in wardrobe:** All the respondents reported that they were keeping their casual wears and party wears separately casual wear folded in separate columns and party wears were hanged in different column.

**Table-13 Frequency and Percentage Distribution of Respondents by rearrangement of wardrobe time to time**

S.No.	Time period	Frequency	Percentage
1.	Twice a week	2	6.66
2.	Weekly	<b>10</b>	<b>33.33</b>
3.	After 15 days	9	30
4.	Monthly	16	53.33

**\*Multiple responses**

It can be seen from Table 13 that 33.33 per cent respondents responded that they were rearrange their wardrobe weekly, 30 per cent rearranged after 15 days,

53.33 per cent rearranged monthly and only 6.66 per cent rearranged twice a week.

**Table-14 Frequency and Percentage Distribution of Respondents by Place**

S.No.	Source of information	Frequency	Percentage
1.	Retailer	10	33.33
2.	Family and friends	21	70
3.	Neighbour	5	16.66
4.	Newspaper	12	40
5.	Television	15	50
6.	Radio	2	6.66
7.	Internet	22	73.33
8.	Magazine	20	66.66

**\*Multiple responses**

It can be observed from data that 73.33 per cent respondents said they got information regarding storage methods for garments from the internet. 70 percent respondents get information from their family , 66.66 per cent got knowledge from magazine, 50 per cent

from television, 40 per cent from newspaper, 33.33 per cent from retailer, 16.66 per cent from neighbour only 6.66 per cent got information from radio.

**Table-17 Frequency and Percentage Distribution of Respondents by place of purchasing**

S.No.	Place	Frequency	Percentage
1.	Retail shops	20	66.66
2.	Malls	22	73.33
3.	Street shops	<b>27</b>	<b>90</b>
4.	online	9	30

**\*Multiple responses**

The data described that 90 per cent respondents shopping their garments from street shops, 73.33 per cent purchased from malls, 66.66 per cent purchased

from, retail shops and only 30 per cent were doing online shopping.



**CONCLUSION**

All respondent were participate during interview process will be done and every one giving very interesting answers as per their need and problem faced .Respondents suggested that used Naphthol balls,

dried neem leaves, newspapers these are keep insects, mildew and moth away. Clothes must be kept away from damp places, frequently exposure to sunlight and wind. Don't put dirty/ damp clothes without proper cleaning in wardrobe.

**INTERVIEW SCHEDULE**

- 1) Name:
- 2) Age:
- 3) Educational Status:
  - a. UG
  - b. PG
  - c. Ph.D.
- 4) Marital status:
  - a. Married
  - b. unmarried
- 5) Mobile No.
- 6) E-mail id:
- 7) Family type:
  - a. Nuclear
  - b. Joint

7) How much apparel do you have in your wardrobe:

S. No.	Fabric	No. of apparel
1.	Cotton	
2.	Silk	
3.	Wool	
4.	Synthetic	
5.	Blended fabric	

8) What is yours preference criteria for selecting the garments:

- a. Appearance
- b. Comfort
- c. Ease of care

9) Do you know how to care the different type of garments:

- a. Yes
- b. No

If yes, how?

10) Which methods do you use for washing the garments:

S. No.	Fabric	Washing methods	
		Hand wash	Dry cleaning
1.	Cotton		
2.	Silk		
3.	Wool		
4.	Synthetic		
5.	Blended fabric		



11) Which storage method you used for apparels:

S. No.	Fabric	Storage methods	
		Homemade method	Commercial method
1.	Cotton		
2.	Silk		
3.	Wool		
4.	Synthetic		
5.	Blended fabric		

12) Do you change the storage method of apparels according to season:

- a. Yes
- b. No

14) How much money do you spend on clothing in a monthly:

- a. Below 500
- b. 500-1000
- c. 1000-1500
- d. Above 1500

15) How you arrange your casual wears and party wears in your wardrobe:

16) Are you rearrange your wardrobe time to time:

- a. Yes
- b. No

17) In how much time

- a. Twice a week
- b. Weekly
- c. After 15 days
- d. Monthly

19) From where you get information regarding storage methods for garments:

- a. Retailer
- b. Family and friends
- c. Neighbour
- d. News paper
- e. Television
- f. Radio
- g. Internet
- h. Magazine

22) From where you purchase your garments:

- a. Online
- b. Retail shops
- c. Malls
- d. Street shops





# FRAGMENTATION OF RELATIONAL SCHEMA BASED ON CLASSIFYING TUPLES OF RELATION AND CONTROLLING OVER REDUNDANCY OF DATA IN A RELATIONAL DATABASE LEADS TO VEXING IN DATABASE INTERFACES

**Praveen Kumar Murigeppa Jigajinni**

Sainik School Amaravathinagar

Post: Amaravathinagar,

Udumalpet Taluka,

Tiruppur Dt,

Tamilnadu State

## ABSTRACT

*Database system architecture is evolving for the past five to six decades; this gave magnanimous dimension to the field of Database system, not only in terms of architecture, but also in terms of usage of the system across the world, further this has led to revenue growth.*

*The research on controlling data redundancy in a relation introduced normalization process. There are 6 normal forms which enhance representation of the data, The Normal Forms such as 1NF, 2NF, 3NF, BCNF, 4NF, 5NF and 6NF are domain specific meaning the decomposition of relation focuses on the attribute of relations.*

*This manuscript is specifically examines the vexing in database programming when database is normalized. The decomposition of tables causes an effect on code and increases the complexity in the programming.*

**KEYWORDS:** Database Management Systems (DBMS), Structured Query Language (SQL), Relational Database Management system (RDBMS). Normal Forms (NF)

## INTRODUCTION

The concept of a Relational Database Management system (RDBMS) came to the fore in the 1970s. This concept was first advanced by Edgar F. Codd in his paper on database construction theory, "A Relational Model of Data for Large Shared Data Banks". The concept of a database table was formed where records of a fixed length would be stored and relations between the tables maintained [2]. The mathematics at the heart of the concept is now known as tuple calculus [3]. The variation on relational algebra served as the basis for a declarative database query language, which in turn formed the basis for the Structured Query Language (SQL). SQL remains as the standard database query language some 30 years later.

Database technology, specifically Relational Database Technology (RDBMS), has seen incremental advancements over recent decades but the competition has narrowed to a few remaining larger entities. The pursuit for improvement has largely left technology practitioners, especially the database administrators, focused on the benefits of performance tuning of the database technology. The infrastructure teams have relied on benefits of the potential compression factors from various RDBMS

offerings to help quell the ever expanding footprint of structured and unstructured data that fills the capacity of the typical data center. As a result, infrastructure teams continually seek hardware refreshes with promises of faster disk performance and improved memory caching to gain new database performance tools. Ultimately, a database administrator is left with only a few tools to improve database performance such as adding and tuning database indexes, which only add to the amount of space required for the database. In the end, the data of concern becomes secondary too and can even become smaller than the indexes themselves, leaving the technology practitioners faced with a diminishing rate of return from their efforts. Technology can only go so far and the physics of spinning disks is reached eventually with the associated costs of competing methods to store, retrieve and query data Today, IT professionals are challenged with the task of on going improvements to achieve goals of businesses. Unfortunately, IT budgets do not dynamically grow as fast as business needs. That sequence of events creates majors obstacles for DB infrastructure, deployment,[1]



## HISTORICAL VIEW

Normalization theory of relational databases dates back to the E.F. Codd's first seminal papers about the relational data model (Codd, 1970). Since then it has been extended a lot (see, for instance, Date (2007, Chap. 8)) and the work is ongoing. There are proposals how to apply similar principles in case of other data models like object-oriented data model (Merunka et al., 2009), (hierarchical) XML data model (Lv et al., 2004), or (hierarchical) document data model (Kanade et al., 2014). Database normalization process helps database developers to *reduce* (not to eliminate) data redundancy and thus avoid certain update anomalies that appear because there are combinatorial effects (CEs) between propositions that are recorded in a database. For instance, in case of SQL databases each row in a base table (table in short) represents a true proposition about some portion of the world. CEs mean in this context that inserting, updating, or deleting one proposition requires insertion, update, or deletion of additional propositions in the same table or other tables. The more there are recorded propositions, the more a data manager (human and/or software system) has to make this kind of operations in order to keep the data consistent. Thus, the amount of work needed depends on the data size and increases over time as the data size increases. Failing to make all the needed updates leads to inconsistencies. The update anomalies within a table appear because of certain dependencies between columns of the same table. Vincent (1998) shows how these dependencies lead to data redundancy. Informally speaking, these anomalies appear if different sets of columns of the same table contain data about different types of real-world entities and their relationships. By rewording a part of third normal form definition of Merunka et al. (2009), we can say that these sets of columns have independent interpretation in the modeled system. According to the terminology in (Panchenko, 2012) these sets of columns have different themes. Thus, the table does not completely follow the *separation of concerns principle* because database designers have not separated sets of columns with independent interpretations into different software elements (tables in this case). The update anomalies across different tables within a database may occur because of careless structuring of the database so that one may have to record the same propositions in multiple tables. The update anomalies across different databases (that may or may not constitute a distributed database) may occur if one has designed the system architecture in a manner that forces duplication of data to different databases.

Conceptually similar update (change) anomalies could appear in the functionality of any system or its specification and these make it more difficult and costly to make changes in the system or its specification. Pizka and Deissenböck (2007) comment that redundancy is a main cost driver in software maintenance. The need to deal with the update anomalies in the systems that are not designed to prevent them is inevitable because the systems have to evolve due to changing requirements just like the value of a database variable changes over time. For instance, some of

the changes are caused by the changes in the business, legal, or technical environment where the system has to operate, some by changing goals of the organization, and some by the improved understanding of the system domain and requirements by its stakeholders. The theory of normalized systems (NS) (Mannaert et al., 2012b) reflects understanding of the dangers of the update anomalies and offers four formalized design theorems that complete application helps developers to achieve systems that are free of CEs and are thus modular, highly evolvable, and extensible.

The NS theory speaks about modules and submodular tasks. The work with the NS theory started after the invention of the database normalization theory. Its proponents see it as a general theory that applies to all kinds of systems like software, hardware, information system, or organization or specifications of these systems. Like the database normalization theory, its goal is to improve the design of systems and facilitate their evolution. In our view, it would be useful to bring these two theories together to be able to understand their similarities and differences. Possibly, we can use the ideas that have been worked out for one theory in case of the other theory as well. Nowadays there is a lot of talk about object-relational impedance mismatch between highly normalized relational or SQL databases and object-oriented applications that use these. Thus, researchers and developers look these as quite distinct domains that require different skills and knowledge as well as have different associated problems, theories, methods, languages, and tools. Hence, in addition to technical impedance mismatch there is a mental one as well. We support the view that database design *is* programming and has the same challenges as the programming in the "traditional" sense like ensuring quality and high evolvability, separating concerns, managing redundancy and making redundancy controlled, testing the results, versioning, and creating tools that simplify all this.

Database and application developers sometimes have antagonistic views to the normalization topic. Merunka et al. (2009) mention a common myth in object-oriented development community that any normalization is not needed. Komlodi (2000) compares object-oriented and relational view of data based on the example of storing a virtual car in a garage. He compares a design that offers a large set of highly normalized tables with an object-oriented design where there is class *Car* that describes complex internal structure and behavior of car objects. Readers may easily get an impression that normalization is something that one uses in case of databases but not in case of object-oriented software.

On the other hand, there are ideas of using the relational model, relational database normalization theory, and dependency theory, which is the basis of the normalization theory, to facilitate understanding of evolving systems. De Vos (2014) uses the relational model as a metalanguage and the relational database normalization theory as a theoretical tool to explain and predict language evolution in terms of gradual lexicon development as well as explain the levels of language ability of animals. We



have found the work of Raymond and Tompa (1992), Lodhi and Mehdi (2003), and Pizka (2005) that apply the dependency theory to the software engineering. Raymond and Tompa (1992) analyze text editor and spreadsheet software. They describe functionality in terms of tables, investigate dependencies between the columns, and discuss implications of the dependencies to the design of data structures and software as well as end-user experience. They show how decomposing the tables along the dependencies, based on the rules of database normalization, reduces redundancy in software design and thus makes it easier to update the software. They suggest that it would be possible to teach object-oriented design in terms of multivalued dependencies. The authors note that users could tolerate certain amount of data redundancy but the goal to ensure data consistency leads to software that is more complex. Having different approaches for dealing with redundancy within the same software may reduce its usability. Lodhi and Mehdi (2003) describe and illustrate the process of applying normalization rules to the classes of object-oriented design. Pizka (2005) considers maintainability of software and discusses difficulties of maintaining code due to change anomalies, which are conceptually similar to the update anomalies in not fully normalized relational databases. He transfers the idea of normalization from data to code and defines two code normal forms in terms of semantic units and semantic dependencies. In principle, there is such dependency between program units (for instance, functions), if these units are equivalent or semantically equivalent. The latter could mean that the operations fulfill the same task but perform their task based on differently represented input data. He uses the defined normal forms for reasoning about, finding, and removing change anomalies in code to improve its maintainability. However, none of these ideas has achieved widespread attention. In October 2015, the paper (Raymond and Tompa, 1992) had six, the paper (Lodhi and Mehdi, 2003) had one, and the paper (Pizka, 2005) had two papers that referred to it according to the Google Scholar™. None of these references has the topic of the referenced papers as its main topic.

Software systems contain a layer that implements business logic, which is guided by the business rules. It is possible to represent these rules in decision tables. The works of Vanthienen and Snoeck (1993) as well as Halle and Goldberg (2010) are examples of research about normalizing decision tables to improve their understandability and maintainability. They derive the normalization process from the database normalization process and define different normal forms of business rules. Halle and Goldberg (2010) comment that the normalization leads to a decision model structure that causes the removal of duplicate atomic statements and delivers semantically correct, consistent, and complete rules.[4]

## THE PROCESS OF NORMALIZATION

Databases are only one, albeit often very important, component of information systems. Intuitively, it is understandable that some design problems that appear in

databases can appear in some form in any type of systems. These systems could be technical, sociotechnical, social, or natural. For instance, there could be multiple software modules in a software system that implement the same task, multiple forms in the user interface of the same actor providing access to the same task, multiple process steps, organizational units or organizations that fulfill the same task, or identical or semantically similar models that describe the same tasks. These examples potentially mean unnecessary wasting of resources and more complicated and time-consuming modification of tasks and their models. Being duplicates of each other, the parts have undeclared dependencies, meaning that changing one requires cascading modifications of its duplicates to keep consistency. The more there are such duplicates, the more changes we need to keep consistency.

If there are multiple unrelated or weakly related tasks put together to a module, then it is more difficult to understand, explain, and manage the module. Such modules have more dependencies with each other, meaning that changes in one require examination and possible modifications in a big amount of dependent modules. The less the general information hiding design principle is followed, the more cascading changes are needed. For instance, intuitively, one can understand how difficult it would be to understand places of waste and duplication in a big organization and after that reorganize it. In organizations, the more fine-grained are its tasks, the easier it is to distribute these between different parties and in this way achieve separation of duties and reduce the possibility of fraud.[4]

## NORMAL FORMS

Database Normalization is a method of organizing the data in the database. Normalization is a systematic approach of fragmenting tables to eliminate data redundancy (repetition) It is a multi-step process that creates data into tabular form, removing duplicated data from the relation tables.

Normalization process is divided into the following normal forms:

1. First Normal Form
2. Second Normal Form
3. Third Normal Form
4. BCNF
5. Fourth Normal Form
6. Fifth Normal Form
7. Sixth Normal Form

## DATABASE PROGRAMMING TECHNIQUES AND ISSUES

Programming is the process of designing and developing a executable code to meet computing results.

When software development is under process the coder has to have clear cut idea of database design process. We now turn our attention to the techniques that have been developed for accessing databases from programs and, in particular, to the issue of how to access SQL data-bases



from application programs. Our presentation of SQL in Chapters 4 and 5 focused on the language constructs for various database operations—from schema definition and constraint specification to querying, updating, and specifying views. Most database systems have an interactive interface where these SQL commands can be typed directly into a monitor for execution by the database system. For example, in a computer system where the Oracle RDBMS is installed, the command SQLPLUS starts the interactive interface. The user can type SQL commands or queries directly over several lines, ended by a semicolon and the Enter key (that is, “; <cr>”). Alternatively, a file of commands can be created and executed through the interactive interface by typing @<filename>. The system will execute the commands written in the file and display the results, if any.

The interactive interface is quite convenient for schema and constraint creation or for occasional ad hoc queries. However, in practice, the majority of database inter-actions are executed through programs that have been carefully designed and tested. These programs are generally known as application programs or database applications, and are used as canned transactions by the end users, as discussed in Section 1.4.3. Another common use of database programming is to access a database through an application program that implements a Web interface, for example, when making airline reservations or online purchases. In fact, the vast majority of Web electronic commerce applications include some database access commands. Chapter 14 gives an overview of Web database programming using PHP, a scripting language that has recently become widely used.

In this section, first we give an overview of the main approaches to database programming. Then we discuss some of the problems that occur when trying to access a database from a general-purpose programming language, and the typical sequence of commands for interacting with a database from a software program.

### 1. Approaches to Database Programming

Several techniques exist for including database interactions in application programs. The main approaches for database programming are the following:

Embedding database commands in a general-purpose programming language. In this approach, database statements are embedded into the host programming language, but they are identified by a special prefix. For example, the prefix for embedded SQL is the string EXEC SQL, which precedes all SQL commands in a host language program. A precompiler or preprocessor scans the source program code to identify database statements and extract them for processing by the DBMS. They are replaced in the program by function calls to the DBMS-generated code. This technique is generally referred to as embedded SQL.

Using a library of database functions. A library of functions is made available to the host programming language for database calls. For example, there could be functions to connect to a database, execute a query, execute an update, and so on. The actual database query and update commands and any other necessary information are

included as parameters in the function calls. This approach provides what is known as an application programming interface (API) for accessing a database from application programs.

Designing a brand-new language. A database programming language is designed from scratch to be compatible with the database model and query language. Additional programming structures such as loops and conditional statements are added to the database language to convert it into a full-fledged programming language. An example of this approach is Oracle's PL/SQL.

In practice, the first two approaches are more common, since many applications are already written in general-purpose programming languages but require some data-base access. The third approach is more appropriate for applications that have intensive database interaction. One of the main problems with the first two approaches is impedance mismatch, which does not occur in the third approach.

### 2. Impedance Mismatch

Impedance mismatch is the term used to refer to the problems that occur because of differences between the database model and the programming language model. For example, the practical relational model has three main constructs: columns (attributes) and their data types, rows (also referred to as tuples or records), and tables (sets or multisets of records). The first problem that may occur is that the data types of the programming language differ from the attribute data types that are available in the data model. Hence, it is necessary to have a binding for each host programming language that specifies for each attribute type the compatible programming language types. A different binding is needed for each programming language because different languages have different data types. For example, the data types available in C/C++ and Java are different, and both differ from the SQL data types, which are the standard data types for relational databases.

Another problem occurs because the results of most queries are sets or multisets of tuples (rows), and each tuple is formed of a sequence of attribute values. In the program, it is often necessary to access the individual data values within individual tuples for printing or processing. Hence, a binding is needed to map the query result data structure, which is a table, to an appropriate data structure in the programming language. A mechanism is needed to loop over the tuples in a query result in order to access a single tuple at a time and to extract individual values from the tuple. The extracted attribute values are typically copied to appropriate program variables for further processing by the program. A cursor or iterator variable is typically used to loop over the tuples in a query result. Individual values within each tuple are then extracted into distinct program variables of the appropriate type.

Impedance mismatch is less of a problem when a special database programming language is designed that uses the same data model and data types as the database model. One example of such a language is Oracle's PL/SQL. The SQL standard also has a proposal for such a database programming language, known as SQL/PSM. For



object databases, the object data model (see Chapter 11) is quite similar to the data model of the Java programming language, so the impedance mismatch is greatly reduced when Java is used as the host language for accessing a Java-compatible object database. Several database programming languages have been implemented as research prototypes (see the Selected Bibliography).

### 3. Typical Sequence of Interaction in Database Programming

When a programmer or software engineer writes a program that requires access to a database, it is quite common for the program to be running on one computer system while the database is installed on another. Recall from Section 2.5 that a common architecture for database access is the client/server model, where a client program handles the logic of a software application, but includes some calls to one or more database servers to access or update the data. When writing such a program, a common sequence of interaction is the following:

When the client program requires access to a particular database, the program must first establish or open a connection to the database server. Typically, this involves specifying the Internet address (URL) of the machine where the database server is located, plus providing a login account name and password for database access.

Once the connection is established, the program can interact with the database by submitting queries, updates, and other database commands. In general, most types of SQL statements can be included in an application program.

When the program no longer needs access to a particular database, it should terminate or close the connection to the database.

A program can access multiple databases if needed. In some database programming approaches, only one connection can be active at a time, whereas in other approaches multiple connections can be established simultaneously.[5]

### MODUS OPERANDI

The technology is changing fast, the new paradigms in the database system as well as in the programming languages makes programmers to shift their focus completely, this leads to time consuming to develop new applications further the old applications will be sidelined due to mismatch of supporting files.

There are several GUI interfaces available with database systems which can generate the applications through wizard.

Selecting right Interface for the database system is the critical step, the right methodology is to have an interdependent easy to use interface with a built in wizards for developing database driven applications.

### CONCLUSION

The programming languages are developed for two reasons one is funded by the government of a particular country to take up the new researches and second is due to lack of unavailability of tools makes frustration.

Most of the languages really on third party softwares for database driven application. The users should feel easy to develop applications. In this regard there is a scope to develop an GUI Interface where a normal user can develop an application with ease

### REFERENCES

1. *i-manager's Journal on Information Technology, Vol. 2* | No. 1 | December 2012 – February 2013
2. Codd, E. F. (1970). *A Relational Model of Data for Large Shared Data Banks Retrieved on June 12, 2012, from* <http://www.seas.upenn.edu/~zives/03f/cis550/codd.pdf>
3. Sumathi, S., Esakkirajan, S., (2007). *Fundamentals of Relational Database Management Systems.* (pp. 96-97). Springer-Verlag Berlin Heidelberg.
4. *The Database Normalization Theory and the Theory of Normalized Systems: Finding a Common Ground - Baltic J. Modern Computing, Vol. 4 (2016), No. 1, 5-33*
5. [http://www.brainkart.com/article/Database-Programming--Techniques-and-Issues\\_11480/](http://www.brainkart.com/article/Database-Programming--Techniques-and-Issues_11480/)



## A CASE STUDY ON COMMUNITIES IN KARNATAKA

**Praveen Kumar Murigeppa Jigajinni**

Sainik School Amaravathinagar

Post: Amaravathinagar,

Udumalpet Taluka,

Tiruppur Dt,

Tamilnadu

---

### ABSTRACT

*India Is the one of the fastest developing nation in terms of population and economic. The Government of India and the Government of Karnataka's introduced many Policies for the growth and welfare of people, Acts and Programmes are introduced to develop the backward castes status. Under these, many economic, social, educational, and so on Policies, very purpose of this paper is to understand the various castes in Karnataka further to identify the work culture of the people of Karnataka.*

---

### 1. BRAHMIN

Sannati Chandralamba belongs to cultured family, they strictly follow the tradition in every walk of life and they ask Kula Guru to perform sacredity of birth and death. The naming ceremony will be held for Girl child at the age of 12 and within 3 months of the date of birth for the male child. If alone male child then sacrifice (Homa – Hindu mythological ceremony) function will be organised and before the male child marriage 5 imprints (Mudre) and for female child 3 imprints (Mudre) will be stamped. A ceremony called Upananaya will be held for the male child. This community will not enter in to the lower community temples. Even then if they wish to go they will go by carrying substances like coconut and sweets particularly sugar. Usually this community mix up with upper caste of Lingayat community and they will not mingle with other communities. During Goudas era this community is called as Kulkarni Gouda used to fix the date to celebrate festivals and that will be followed by the Kulkarni. During this era they used to bow down (Namaskar) as and when they used to come across of Goudas but in these days nobody cares. The Kulkarni's were very strict in their culture and they never allowed a person to enter their home. Now these days one(upper cast) can enter their home. If any women give birth, mother and baby are kept outside the home, and are untouchable for the first 10 days. After conducting function by the upper cast people such as kumbaar, kambaar, soolagitti the baby child and mother are accessible to others. This community will not allow any one inside the kitchen room and the God worship room in the house.

If there is any demise in the family, they follow untouchability methodology, meaning no one touches any one. Close relatives will bring the food and they serve by doing so, the untouchability period gets over. When dead body is burnt, they preserve three stones, bones and rice water through which they carry out Pind Daana in the last rite ceremony. They perform rite ceremony by march pasting around the dead body by carrying pot filled with water and having three holes inside the pot, once the march past gets over, at last they throw the pot behind them and they never look back what happens after throwing the pot, this kind of activity is carried out by their relatives. During marriage ceremony both male and female should agree to tie up. Once they agree the related traditional functions will be carried out by the family by exchanging betel leaf and memorandum of agreement. Before the marriage day. Son in law Parade will be conducted and son in law will be welcomed to bride home by washing his leg. Bride family will follow the words of an astrologer.

The holy places for this community are Kaashi, Badri, Rameshwar. Non vegetarian communities are not allowed to worship God Hanuman. This Brahmin community worship all kinds of God and they go to temple along with substances like coconut and sweets particularly sugar, for lower cast community temples like Holey, Maadiga community, they send upper cast person along with sugar, coconut to worship. Usually they visit Raghvendra Monastery which is situated at Yadagir. Females are not allowed in male temple where as females are allowed in female temples. Females are liberal except during worship of



God. Females are unaware of Government Laws, Rules and regulations due to their tradition

## 2. AINAAR

This community has a tradition to go door to door and collect flour powder in the wallet (Jolige). These days, the tradition has become liberal and they are not going daily (door to door) to collect flour powder in their wallet. They are the disciples of Vishwaaaradhya Swamy follow their teachings. They go to every community people house as and when they are invited. Even today also they tell ephemeris(Panchaang). Swamy tie up linga (Aayachaar) to the new born baby within three days and the naming of new born baby will be done by Brother in Law or the Swamy. In todays world some people will follow Ankali or Neerpaadi Monastery. When it comes to marriage, In front of Kula Guru Groom will tie knot to Bride. They worship Basavanna. Since is no burial land or grave yard, they do last rituals in their field and the one who don't have their fields they perform it in government land, near pond called Maddi Kere.

## 3. BANAJIGAA

This is the sub community of Lingayat and this community is strictly following the Hindu myths. The birth, death and marriages are performed by following tradition called AINAAR saanidhya. This community keep track of changes occurs in the village and their community, time and again they remember the changes took place. This is the upper caste community and having well to do, and this community folks will lead normal life.

## 4. REDDY

Reddy community folks will perform naming ceremony according to the instructions given by AINAAR MUTTYA (an elderly person or old aged person belonging to AINAAR caste). If they want to search bride they listen to the percept (shaashtra) given by AINAAR MUTTYA (an elderly person or old aged person belonging to AINAAR caste). This community people celebrate all the festivals such as Holi, Udagi.etc with full josh and energy. While constructing the house they strictly follow the panchang. Like other castes and communities they follow the last rituals by giving baath to the dead body and they keep dead body in sitting position and they worship, once all relatives and friends visit then dead body parade takes place finally they swamp the body in their respective land. Their Family deity or community deity (Kuladevathe) is Hemareddy Mallamma.

## 5. KUMBAARA

This is the normal community/ caste in the society and these days they follow panchaanga to name the newly baby in the family, they keep naming ceremony very early comparing to other caste and communities for girl child within 11 or 15 or 16 days and for boy 2 or 22 days, they follow AINAAR and special about this cast is, all community people will taste the food prepared by them. Previously they used to collect mud and prepare the pot and they used to sell

but these days they stopped making pots and they simply collect from local or outside and they sell. This change took place because of no value and demand in the market but they never gave up their traditional pot making work. They lead normal life and they have high regards for their community.

## 6. KAMBAARA

This class of people are also called as Vishwakarmas and they perform different works to lead their life, they are also called as Panchaal, Panchaal meaning they may be Carpenter, Goldsmith, good at brass or steel related works, they are also extremely good at sculptures (Shilpi). This is vegetarian caste and they have Family deity or community deity. They follow the tradition in ceremonial functions and rituals. This community has full faith in their jobs and these communities are not interested in higher education. Kalika devi is the family deity. They remember Thinthini mouneshwar. The birth of this community is given by goddess Sirsingi Kalika devi, even though they have the lands they are not interested in farming and during Ugadi fest they worship all weapons or objects used for their earnings.

## 7. VISHWAKARMA

The community claims descent from the god Vishwakarma, who is considered by Hindus to be the divine architect or engineer of the universe. He had five children — Manu, Maya, Tvastar, Shilpi and Visvajna — and these are believed by the Vishwakarma community to have been the forebears of their five sub-groups, being respectively the gotras (clans) of blacksmiths, carpenters, bell metalworkers (metal casters), stonemasons and goldsmiths. It is not known whether these five subgroups historically practised endogamy, which is a frequently-found feature of the Indian caste system.

The origin myths of the Vishwakarma community were first consolidated in the early 18th century, during the British colonial rule. These myths were compiled in the Vishwakarma Puranam, whose original manuscript is undated but was most probably created in the mid-17th or 18th century. According to a popular myth recorded in the Vishwakarma Puranam, the five children of the god Vishwakarma served the gods as artisans, and possessed the ability to create things by simply imagining them. They had conserved their veerya by being celibates, and lived in a fort on the coast of Ilangapuri (Sri Lanka). The fort was made of lodestone, and the enemy weapons thrown at it were stuck to its walls, rendering it invincible. Their chief enemy was Karunakaran, a vassal of the Chola emperor. In order to defeat the Vishwakarmas, Karunakaran planted many beautiful women (Brahmin women according to some versions of the legend) in the fort. These women married the Vishwakarmas, thus destroying their spiritual power, and learned the secret that a certain type of poisonous grass could be used to burn up the fort. Using this secret, the enemy blew up the fort, and the Vishwakarmas were scattered in various areas, where they were forced to work as artisans and craftsmen for mortal humans.



## 8. ELIGERA

Birth, House warming, marriage, death are performed through AINAAR (JANGAMA), traditions are being followed similar to backward people. Early days this caste used to sell liquor as part of their leading life, gradually it has been disappeared and struggling to lead their life. They have become labour class people and facing difficulty in their life. Goddess Neeramaanivi Yellamma is the family or community deity.

## 9. UPPARA

Traditionally selling the salt, but these days its disappeared, in this community all the percepts, functions are performed by AINAAR (JANGAMA). This caste prepares cart(MANTAPAA) for the dead body to carry, in todays date also the Holeyaa caste people come to plough the field and Maadiga community will play the drum. They worship god before the marriage. Mudrike and Veena Mudrike are the two special religious/sacred system it has very strict rules and regulations due to which it is no body is following and the one who is following the dead body of them is burnt and the one who is not following their dead body is swamped in the buried land. Tirupathi Timmappa is the family or community deity.

## 10. KABBALIGA

Selling fish and boating is the job of this caste but due to low income and no scope they are leading their life by working as labour or doing farming or hunting on special occasions and they are working in other fields. This is backward class caste and their education is not up to the mark, the religious/sacred functions are being performed by AINAAR(JANGAMAA) and they are the follower of Vachanakaara Ambeeger Choudayaih.

## 11. KURUBA

This community or caste who tends sheep, goats, and they are called as shepherds, by tending sheep they used to lead a life, but these days they have shifted to other fields like farming ..etc the religious/sacred functions are being performed by AINAAR(JANGAMAA) and they are the follower of Vachanakaara Ambeeger Choudayaih. This caste will not strictly follow religious activities. They are the devotee of Beerappaa. Blanket is the brand of this community. They strongly believe in not doing mischief to others and they will follow this to the extent. If a kid dies, whose age is less than 15 they will not do any religious function. This community appreciate the change took place to their society in the various fields like education, work and other walks of life. Early days this community people work under goudas and now they are independent and the growth of this community is remarkable and are happy about it.

## 12. AGASA

This community people are also known as Parit, Agasa, Madiwaala and Dhobhi is the basic work( Cleaning the cloths and pressing it). These days they stopped because of there is

no scope for it. This community is known for its humble attitude.

## 13. WADDAR (BHOWI)

Traditionally this caste used to break the stones for the construction, this is the mode of income for them and they are paid very low due to which gradually people changing their work and becoming labour and are working in different sectors, economically backward caste struggling to lead the life. They are very strictly follow the religious activities and the religious/sacred functions are being performed by AINAAR(JANGAMAA) or Kulaguru (Gurikaara). These are the devotee of YELLAMMA and are follower of god Shreeshaila Mallikarjunaa. If marriage takes place in the temple AINAAR will tie the knot (MANGALASUTRA) to bride, in case of home the groom will tie the knot (MANGALASUTRA). The dead body will be swamped near the pond. Their economic conditions are pathetic and are facing lot of difficulties to lead the life. The TELAGU language is the mother tongue of this community/caste.

## 14. HELAWA

Traditionally this caste prepares Mat.

## 15. HADAPAD

Hair cutting is the traditional job of this community and are called as KSHOURIKA, these are also called as Hadapad. Till date they are following the same tradition and are working in this field. This is backward caste, these are not treated properly in the society and are unhappy about it. The religious/sacred functions are being performed by AINAAR(JANGAMAA). They have great respect and regards for HADAPAD ANNAPPA who is the vachanasahityakaaraa.

## 16. MARATHA (CHOUDHARI)

They are proud for their belongingness to the Chathrapathy Shivaaji Maharaja community and showering abundance of respect and regards to Shivaaji Mahaaraja. They worship pandharaapur god. They are from Maharashtra State Traditionally they are butchers and still they follow their traditional work, MOHARRAM and DYAAWAMMA TEERINA Festival. . The religious/sacred functions are being performed by BRAHMAN's and their population is very less. This community appreciate the change took place to their society in the various fields like education, work and other walks of life.

## 17. HOLEYAA

HOLEYAA is the community has the tag of untouchability in the society meaning they do not have respect in the society and they have got their own way of leading their life when it comes to religious functions. Basically this community used to dig the land and other labour kind of work they do to lead their life. They are not fully dependent on farming since there is a scarcity of land





further their deity or sacred guru is HOLEYAA – DAASARU all religious functions will be carried out by them, if not then by the AINAAR(JANGAMAA). They give due respect to CHETTIGEMMAA and they worship MAREMMMAA. Unlike all communities they also follow their own religious activities. Early days they are ill-treated in the society and the other caste/ community people have belief that if some one touches them bad omen will happen. This community/caste is not good at education field and only they can read and write. On special occasions they perform religious activity called OODI TUMBWADU to MAREMMMAA and YALLAMMA HEDLI . we find remarkable drop outs in the field of education due to their economic conditions and these days it is very difficult to lead their life. If any one dies, to operate band MAADIGA will come if and only if he has been called by HOLEYA. Unlike others they also conduct TITHI OOTAA. When BEDAGU MANYEDEVARAU become one that time marriage function takes place. They do not have any holy place. Early days if any one dies they are going to act like messengers and used to circulate death message to relatives, friends and their locality but now it is stopped. They have an impression as BRAHMIN and LINGAAYAT communities are upper caste communities and HOLEYA-MAADIGA community is lower and backward caste, like other caste are having facilities like water tank in their colony, this community also has, due to PALSTIC AGE they are allowed to enter in HOTELS. Lot of changes took place due to the constitution of India. This community is know for its works like digging, acting like death messenger, performing works during marriage function and so and so forth are performed for all caste and community of people in the society, and as and when they demand equality in the society, there will be difference, injustice, inequality, suppression and exploitation this community experiences.

### 18. MAADIGA

Like HOLEYA samaja or community this community also suffers from untouchability in the society, most of social and domestic problems are same. Traditionally they stitch sandals, shoes and band performance are the works they perform for their bread and butter. But these days hardly doing such works. They have choosen different fields such as a labour and farming, its very difficult to run their family by farming also due to less land and they are unable to send their children to the school. The religious/sacred functions are being performed by AINAAR(JANGAMAA) some time these functions are also done by the MAADIGA-DAASA, infront SHARANA oriented people naming ceremony will be done. In this culture we can see women are the followers of goddess YELLAMMAA and gents are the followers of MALLAYYAA. They have MAATHANGI culture and its strongly rooted in them. if and only if religious functions are performed by AINAAR(JANGAMAA) then only groom will tie knot to bride. This community celebrates GOWARI HUNNIME fest in a grand manner. They worship god in temple from far distance, they never go near to the god. Their religious functions will be performed by upper

class caste and HOLEYAA-MAADIGAA-BHOVI community people are not taking active role in other religious activities. If any demise happen, some occasions they leave their house, if a demise happens and if the family has no land or field one of family member has to carry the dead body to GAIRAANI like their community people explain. MAADIGAA ownness was deeply rooted in the old days now it is almost disappeared now. Few people are in to the business of making sleepers and shoes. The Mulla caste people butcher the cow and they distribute the meat among this community people and the skin is being collected by MAADIGA community people, further with that skin they prepare sleeper and shoes and they give it back and collect one bread (Roti) from them. In addition to this they also prepare MAATI a type of rope which is used to lift the container from the well and preparing OOGUNTU( a kind of item used for cow), BAARKOOLU ( A kind of rope which is used to hit a cow). And other domestic items are being prepared by the cow skin. Similar to other community they have also there religious laws, rules and regulations which they are following. They deeply saddened about the education of their kids due to drop outs. They are economically not sound, this community people explain as the society has drastically changed but as we belongs to this community we see minuscule change which has no impact on us. They have their community Sangha and the members of this sangha are of the same community. They blame god (PARAMATHAMA) for his impartiality to their community. In old days they used to wait for a year to collect JAWAAR grain from the KANAA ( a kind of container - Digging land and making space to keep the grains). This community never blame others and leading their life peacefully.

### 19. SAIYYAD

In the muslim community this is the upper caste and traditionally they are MOULVEES. When birth takes in the family they give five names after five days by the MULLA in a specific manner. In this community they perform special religious function to the male child called MUNJI, which is similar to the UPANAYANA of BRAHMIN community.

In this community both groom and bride family sign on agreement form and after that marriage takes place. The dead body will be carried in a cart called DHOLI and take it to MASJID and perform NAMAAS (Prayer), after this they carry to home to perform last rituals after that they swamp the dead body in the land. They have got their own burial land. They have procured the burial land by collecting the money from their community this kind of holy job has not been done by Hindu community people. They never invite Hindu community people if they are invited for final rituals they are not allowed to pour mud on dead body, later they can. Kids give hairs to God (Muslim Monk) this is called JAWALA. They celebrate Hindu festivals also. But Hindus will celebrate only MOHARAAM festival. Further This SAIYAAD community people will celebrate BAKRID and RAMDAAN festival with a great zeal and josh. If pregnant woman dies she also swamped in burial land. This community has fear of their kids if they kids will not go to



school then they open PANSHOP due to this reason they are sending their kids to school likewise their community people describe.

If anybody calls for the work, they will go and perform otherwise they will not go by their own this is kind of job fluctuation they have in the society. These days are good days as compare to old days likewise they demonstrate. They have a ray of hope that the education can change their kids lives.

Normally they do not marry to other caste (SHEAK, PINJAAR, JYAATHAGAAR) people. HAZ is the holy place for them and visiting HAZ brings prosperity, faithfulness and regard attitude brings in them.

In this religion they follow Hindu culture (like they ask to SWAMI before performing any function, while naming ceremony). This indicates there is great impact of Hindu religion on them.

## 20. SHEEKHA

In a Muslim community, this caste does business, Like all muslim community people they also does religious function through MULLA'S. If a birth takes place in their family they will not give the milk till naming a newly born baby a GOD'S NAME ( a religious naming ceremony). They will not give the food to the carrying women. If a demise happens, UPPAAR caste (Hindu Religion) people will dig the buried land to swamp the dead body. They never use band and they chant KHURAN while carrying the dead body further ladies are not allowed to GHORI burial land. The THITHI culture is same as Hindu religion and They give CHAAZ, The one who has lost his eye(s), or Husband or Wife died or any finger broken will not fall under this category. They celebrate festivals every month in their own normal style. RMADAAN, BAKRID, MOHARRAM festivals are celebrated in a grand manner. During RAMDAAN they keep fasting for one month and they have special kind of culture called SHAWWAAL which will be celebrated after the 6 days of RAMDAAN. Once RAMDAAN gets over they distribute sweets named KURMA to all community people, further they donate 5% of their earned money to all. This community people are hard working people and they will not fast on all the RAMDAAN days. They swamp female dead body in the same burial ground. Olden days MUNJI is performed by barber but these days doctors will come and perform. Generally MUNJI function will be organised for a kid within 5 yrs of date of birth. They have strong belief that if child gets proper education he/she can survive anywhere in the world. Further they explain as the JAANAPADA songs are disappeared due to the birth of mixer grinder. During the construction of house, at the initial stage meaning, plinth will be initiated by MOULVIES. They express as the society has changed lot. They express drastic change took place in the field of education, earnings, jobs and even caste system. This caste people are not much aware of the government plans, rules

and regulations and they demand reservation for their community.

## 21. PINJAAR

This is the predominantly backward class caste of Muslim community, traditionally their job is to make beddings and pillows, and they do not strictly following neither the Muslim religion nor Hindu religion. Generally this caste follows Muslim religion but they did not gave up both the religion. On older days we used to eat Pundipallya by mixing water but these days we are getting Rotti Palyya, Anna Saaru and is it not the golden era? They ask counter question. Due to no scope and demand in Beddings and Pillows they are forcibly changing their field, and living their life by farming, labouring and are astonished about the change took in their society, further they never imagined that their traditional work dies like this.

## 22. JYATHGAARA

The most backward class of Muslim community is the JYATHGAAR community and traditionally they travel one place(village) to another place(village) and sell the products. But these days they gave-up their traditional job and completely shifted to farming. They celebrate both Muslim and Hindu festivals, they used to celebrate Hindu festivals because the kids of this community used to like sweets prepared during Hindu festivals. If you look and compare with SAIYYAD caste the PINJAAR and JYATHGAAR caste families will not strictly follow their religion or traditions.

## CONCLUSION

In the above said communities no one has cast feeling, for some people they have their own caste god even then other community people are worshipping. MASJID is not only holy place for the Muslim community, even other caste people worship. But HALAAY (god giving temple) both Hindu and Muslim community people worship. For all caste the home god is different in Hindu culture. Except BRHAMIN, BANAJIGA, AINAAR, REDDY cast all other castes are belongs to Hindu community. Generally Kurukundi Mallyaya and Mailapur Mallyaya are the home god for most of the castes. HOLYEYA-MAADIGA caste families have no Holy place, these two caste people are not allowed to enter inside the temple and till date is being followed one can identify her caste by looking at nose wearings said by untouchable community women. While constructing home they follow religion as per their community rules and regulations (by calling BRAHMIN, AINAAR, MOULWI), we never see much difference in the outer design of houses for these communities. One can see only Muslim community people will have their own buried land and other caste people are not. Only one house for Brahmins so they burn the dead body in their land. Here no caste has either own land or the building (Bhavana). For HOLYEYA and MAADIGA other castes are upper castes. For backward class category, the



BRAHAMIN, AINAAR, BANAJIGA, REDDY and SAIYYAD castes are upper castes or forward castes. In this research it is noticed that upper caste or forward caste is one who are vegetarians, due to which BRAHAMIN, AINAAR, BANAJIGA, REDDY, KUMBAAR falls under this category. Some caste they have their own wells and are used on unavoidable circumstances. During summer season other village people used to take bath in the well. In almost all communities there is a change, in their living style due to education, jobs and income. For some caste like BRAHAMIN, AINAAR, BANAJIGA, REDDY, KUMBAAR are not having enough property but they are well to do for themselves. People are not aware of inception of their caste and their traditional job. If problem persists people approach TANDAA's political leader otherwise generally people are approaching police station to resolve their problems. One can explain by looking at their living style, walking style and speaking style one can identify their caste. Boycotting publically, open punishments, killing activities are not found during this research activity. Further people explain that, at times exploitation, suppression, and differentiation found among the communities. Similarly Openness, equality and brotherhood are found among the communities and have actually happened and experienced by people. There is no specific direction and clear cut way or idea about Laws, Rules and regulations

One can see due to health problem family economic condition has fall down and are in critical conditions. There is no timely rain due to which farmer condition has become pathetic. Every caste people build their relation within their caste. Most of the caste dependent on farming, some people are working in different sectors. One can view every caste is dependent on socioeconomic, religious system. The religious functions, traditions, rules and regulations are different or vary from caste to caste. Only few caste carry forwarding their ancestors job but most of the communities have switched. Basically they belongs to village and generally communities have changed their caste due to change in their job, education and income. The inequality we find in untouchability community and their growth also not encouraging. The untouchability is the biggest hiccup in their life. Except Brahmin caste all caste will swamp the dead body and except uncertainty death (during pregnancy./ Accident or decease) dead body will be swamped. If the different caste people maintain good relationship in the society, HOLIYA will dig the burial land and BAND (HALIGE) performed by MAADIGA. Still there is inequality in the society for HADAPADA community. We see the Brahmin community culture has changed, BRAHAMIN, AINAAR, BANAJIGA, REDDY, KUMBAAR are belongs to upper caste now these days its disappearing. KUMBHAR, KAMBHAR communities living together peacefully. ELIGER, UPPAR caste people leading their normal life. KURUBA and KABBALIGA community are more in number but very few children get educated and due to low income they are facing hardships in their life. WADDARU, HELAWARU, HADAPADA, PINJAAR, JATHYAGAAR fall under low income and poor

class people. Its very difficult to resolve the issues of MARATHA CHOUDHARI caste. HOLEYA and MAADIGA community people have taken advantage of government facilities and are improving their living standards. In Muslim community SAIYYED, SHEKH, PINJAAR, JATHYAGAAR are identified as different castes but they have common culture among them. SAIYYED and SHEKH caste families are more religious as compared to PINJAAR and JYAATHGAAR. Generally people aware of Job Guarantee, Govt Houses, Washrooms, Ration Card, PAHANI, CROP BIMA, Loans but they are unaware of laws, Government rules and regulations. People want to gain advantage of government schemes such as Job Guarantee, Govt Houses, Washrooms but they don't know how to get it. Further all community people express that they belongs to backward class when it comes to take advantage of govt schemes.

## REFERENCES

1. Rathore, D. M. (2019, February 16). *Mandal Commission or Backward Class Commission of 1979, What was its mandate & recommendations?* New Delhi, New Delhi, India.
2. Today, G. (2019, April 26). *Provisions Regarding Scheduled Castes and Tribes in Indian Constitution.* Retrieved April 26, 2019, from GK Today: <https://www.gktoday.in/gk/provisions-regarding-scheduled-castes-and-tribes-in-indian-constitution/>
3. NCM, N. C. (2019, April 26). *Constitutional Provisions.* Retrieved April 26, 2019, from National Commission for Minorities NCM: [http://ncm.nic.in/Constitutional\\_provisions.html](http://ncm.nic.in/Constitutional_provisions.html)
4. NCM, N. C. (2019, May 2). *Profile of NCM.* Retrieved May 2, 2019, from National Commission for Minorities NCM: [http://ncm.nic.in/Profile\\_of\\_NCM.html](http://ncm.nic.in/Profile_of_NCM.html)
5. Wikipedia.org



# THE IMPACT OF SYBLINGS IN THE FAMILY ON THE PSYCHOLOGICAL CHARACTERISTICS OF THE CHILD

**Tursunova Dilnavoz Tolkin qizi**

A Teacher of the Department of Psychology  
Ferghana State University,  
Ferghana,  
Uzbekistan

---

## ANNOTATION

*This article discusses the direct impact of sibling relationships in the family on the psychological characteristics of the child.*

**KEY WORDS:** *family, child, monogam, society, ideals, siblings, Adler*

---

## DISCUSSION

The family is a small homeland, a sacred fortress, a great school for the future owners. It is a sacred place where the eternity of life is a symbol of the continuity of generations and preserves our traditions. The human child sees his family in the light of the world. He grows up drinking water from the springs of love of his grandparents, parents, neighbors and aunts. He recognizes his relatives by looking at the customs, kinship, and customs. Following in the footsteps of adults, they enter the wings and learn science and craft. Family, patriotism, love, and consequence are the golden cradle of labor education. *Scholars point out that since the institution of the family itself is by nature a more conservative, that is, unchanging, stable system, the changes that take place in society within the family only take place after the 1930s begins to reflect.*

*In our country, 97% of the total population lives in families, the remaining three percent - the elderly, orphans and foster children, and those temporarily residing in Uzbekistan from other countries are also family members., relatives, compatriots, humanitarian people in various governmental and non-governmental organizations. In this sense, the family is a sacred place where a person shares his happiness and bliss, dreams, goals, perceives himself as a human being and enjoys life.*

The family is the oldest of the social institutions. From the first year of life, the main task of the family is to form the child's personality, that is,

to take care of his upbringing. The family is part of society, and a new person is born into it. This small social group is the first school of life for a child. Parents are the child's first caregivers. Well-known psychologist Adler was the first in the family to put forward the idea that the formation and development of a child's personality depends on the presence of brothers and sisters in his family.

In the psychological literature, the status of sibling actually (English sibling, sibs - brothers and sisters in the same family) - a concept that represents the official difference between the birth, sex and birth of a particular person in a particular family. The question of the child's sibling status and its relationship to personal indicators has not yet been clarified, meaning that there is insufficient scientific evidence. Nevertheless, many researchers have studied how an individual's sibling status affects his or her personality, matrimonial and parental status, relationships with friends, and the nature of the interactions he or she establishes with management and colleagues at work. *Empirical data suggest that there are four types of such relationships.*

- *The eldest child.* The eldest child in the family, is usually the expectation of the parents, and parents expect a lot from him, and he usually justifies these expectations. Her aspirations for success, her academic and career achievements, and her chances of achieving it are also usually high. His success depends not only on the expectations of the parents, but also on the fact that the child, who was pampered for a while, then "falls from the throne",



suddenly changes position and the system of expectations becomes different accordingly. *In Adler's words, this could be called "detronezation."* Because after the appearance of a brother or sister, the child's attention is suddenly focused on the other child, and the child feels with a kind of grief that the attitude towards him has changed. But she begins to work to regain the attention and affection of her parents. If the first child has a strong deprivation that occurs after seeing a sibling, but does not have enough internal capacity to show itself, sometimes the firstborn the child becomes more vulnerable), in which the child's behavior begins to change dramatically, for example, he hates his brother and tries to hurt him, offends his parents with his whims, does not eat, is independent becomes stubborn, not sleeping, not even going to the toilet, not doing what is said.

*For example, half of American presidents, more than 20 astronauts, were the first children in a family. Typically, boys growing up in a family have a male community (e.g., military, international, political organizations), older siblings have a female community (school, hospital), and so on. both become leaders who successfully manage teams logically.* And when it comes to marriage, the average child tends to live happily ever after. It should be noted that in some cases, the eldest children sometimes fall into the category of problematic, difficult to raise in society. This can be due to either the excessive weight of the parents' expectations of the older child or „ the detronezation „

- *The second child* usually grows up to be dependent on adults, in need of help from others, intolerant of injustice, injustice and harshness, and whimsical in the attitudes of others. He looks more cunning in his shadow when he looks at his brother or sister, because he is accustomed to having older people with him from birth. On average, children can grow up to be good artists, athletes, diplomats, and people who are good at working with people.
- *A small child* tends to feel small for the rest of his or her life, and no one can hurt him or her. A child who is always in the throes of care will continue to feel protected and secure everywhere in the future, and will demand the same of others. They are often in a good mood and can get along well with others. Usually, a young child has a strong motivation to succeed, and is more resilient in a competitive environment. Unfortunately, it has been observed that they are less successful in marriage, and those who have small children in

the family consider divorce because they do not produce a good faithful, resilient husband or wife. Therefore, he is not in a hurry to get married because he does not like to take responsibility.

- *The sibling status of an only child* is close to that of a firstborn. A child who grows up knowing the hopes and aspirations of his parents can achieve great things in many areas, especially in the intellectual field, but usually becomes very self-loving and selfish. They are not afraid to make mistakes in society, they are successful, but they do not always succeed because they are not involved with people. That is why Uzbeks say, "The only child is not a child," and they do not appreciate the fact that the parents are passionate, give him all the opportunities and love him. This is reflected in the way he treats other people in the future, as much as the eldest child is kind to an elderly parent, the only child is the opposite, and even after the death of his father and mother, he is saddened by them. *"Why did they leave me?"* Therefore, having at least two children for a good family and establishing a good relationship between them is beneficial for both the individual and the family and society. Experiments were conducted in four phases according to variable quantities. In the experiment, the method of increasing the variables was used.

Phase 1 was organized according to variables. Sibling is conducted within a range of variables according to the psychological characteristics of the status. At this stage, 2 experimental and 2 control classes are selected for comparison. *A total of 105 students participated in the experiment and control classes.*

An introductory discussion was organized on understanding the differences between the topics studied experimentally and now, creating a lesson situation relevant to the topic, and the theoretical and practical significance of the topic being studied. The control work is based on the scientific hypothesis that it leads students to fully master the psychological features of sibling status.

Phase 2 of the experimental work, in contrast to Phase 1, is carried out in the framework of variables. In Phase 2 of the experimental work, in addition to the above variables, the following quantities are given:

- 1) Drawings, sketches, tables;
- 2) Assignments;
- 3) Method of repetition;
- 4) Warning students of mastery level;
- 5) Debate;
- 6) Find the answer to the question;
- 7) Selection of additional tasks;
- 8) Repetition.



In addition to all the variables used in Phase 2 of Experimental Phase 2, two properties of the variables were taken into account Phase 3

During the final phase of the experiment, interviews, questions and questionnaires were

conducted among the students (105 people), who completed the test assignments. As a result of the study, the following indicators were obtained (Table 2.3.1):

2.3.1-table

**On the psychological characteristics of the sibling status of students  
 level of knowledge**

Groups:	Number of students	Level of knowledge, skills and		
		Excellent	Normal	Poor
<i>Experimental group</i>	52	15	17	20
<i>Control group</i>	53	18	15	20

*In order to determine the effectiveness of the experimental work, a comparative comparison of the results of the initial and final experiments resulted in the following tables (Table 2.3.2):*

**Dynamic growth of students' knowledge of the psychological features of sibling status**

Groups Stages	Level of knowledge, skills and abilities					
	<i>Experimental groups<sub>2</sub> = 52 people</i>			<i>Control groups<sub>1</sub> = 53 people</i>		
	<i>Good</i>	<i>Normal</i>	<i>Poor</i>	<i>Good</i>	<i>Normal</i>	<i>Poor</i>
<b>Initial experience</b>	15	17	20	18	15	20
<b>Final experience</b>	40	8	4	26	16	11

**REFERENCE**

1. *Oila, jamiyat, qonun – T.: “O‘zbekiston” - O‘qituvchi, 2007 – 112 b.*
2. *Adler A. Pomosh roditelyam v vospitanii detey. – M.: 1992.*
3. *„Oilaga nechta farzand kerak?” – T.: Medisina, 1989. – 18 b.*
4. *www. wikipedia.ru*
5. *www. ziyonet.uz*



# FACTORS AFFECTING WILLINGNESS TO PAY FOR GOOD QUALITY URBAN WATER IN KOLLAM DISTRICT, KERALA

**Dr.Suprabha L**

Assistant Professor & Head

Dept.of Economics

Kunnamangalam Govt.Arts & Science College,Calicut

Kerala

## ABSTRACT

*Urbanization widens the gap between demand for and supply of civic amenities in urban centers. Among these amenities water is to be singled out as the very existence of humans depends on it. Urban population in the country has been increasing at rates that are twice the rural population growth rates, on the other hand, urban water accounts for 5-6 percent of the total water consumption in the country which is grossly inadequate in relation to water demand. The water availability in urban settlements is much below the minimum level required for a congenial living. Despite having extensive piped network, the water supply is spasmodic, of low pressure and frequently not potable. They cannot use the well water as it is brackish. The contingent valuation survey conducted in the urban areas of Kollam revealed that people are willing to pay a higher rate if they are provided with high quality water on a 24x7 basis. The present study examines the relationship between willingness to pay and factors identified as affecting willingness to pay for urban water.*

**KEY WORDS:** *Urbanisation, water quality, willingness to pay, contingent valuation.*

## INTRODUCTION

Urbanization is as old as civilization itself. Major problems associated with rapid urbanization are lack of universal accessibility of drinking water, ineffective distribution of water supply, deprivation among the people, high level of pollution, water shortage, wastage due to old leaking pipeline etc. The urbanization process in the developed countries has been closely linked to industrialization and the level of economic development. In India, however the growth in urban population has been much higher than industrial and economic growth in urban areas. Consequently, there has been a sharp rise in urban-rural and core periphery dichotomy, increasing the number of urban poor and spatially imbalanced urban systems. The sharp rise in urban population has, also, imposed a strain on the urban infrastructure and services, leading to a deterioration in quality of urban life (Umareddy Venkateswarlu, 1998). Urbanization widens the gap between demand for and supply of civic amenities in urban centers. Among these amenities water is to be singled out as the very existence of humans depends on it (Bidyut Mohanty, 1988). Issues of urban water have in recent years acquired increasing

complexity, partly on account of the continuing pressures of urbanization and urban growth, and partly due to the limited water that is available for urban use. Urban population in the country has been increasing at rates that are twice the rural population growth rates, on the other hand, urban water accounts for 5-6 percent of the total water consumption in the country which is grossly inadequate in relation to water demand. A direct consequence of inadequate provision is manifested in sharp deterioration of service levels. Drinking water supply and sanitation in India continue to be inadequate, despite longstanding efforts by the various levels of government and communities at improving coverage. The level of investment in water and sanitation, albeit low by international standards, has increased during the 2000s. At the same time, local government institutions in charge of operating and maintaining the infrastructure are seen as weak and lack the financial resources to carry out their functions. In addition, no major city in India is known to have a continuous water supply and an estimated 72 percent of Indians still lack access to improved sanitation facilities. The households have to spend long hours to source water since the water supply is intermittent and



the water from shallow tube wells and hand pumps is generally not potable. In addition the distribution of water varies considerably between settlements within the cities and between different income groups. The better off sections living in the planned parts of the city are better served by the water supply and sanitation services than those living in slums and squatter settlements. The water availability in urban settlements is much below the minimum level required for a congenial living.

Kerala one of the smallest of the states of India, occupies the south western portion of the Indian Union. With high mountain ranges not far removed from the sea coast, and a high intensity of rainfall Kerala is fortunate in having a number of rivers, all having their origin in the ghats and either flowing westward into the sea or eastward into other states. This special topography has enabled the state to have a plentiful supply of water flowing down her rivers. Even though the state can be said to be very rich in her water resources, storage arrangements and other special works are necessary in each of the rivers, so that the waters flowing through them during the monsoon months can be conserved and utilized for the various requirements in the basin at other times of the year. The lie of the land is most undulating with a general slope from east to west. In between the undulating valleys, several streams drain down and most of these rivers formed by the confluence of these streams have westward flow. On account of the shortness of the distance between the mountains on the east and sea on the west, almost all rivers are short in length. There are a few rivers in the state which have their sources in the western ghats within the state boundary, but which flow in an easterly direction. The demand for water is primarily for protected water supply, irrigation and hydel power generation. Industries and recreational sectors also demand their due share. Due to rapid urbanization, increased economic activity, population explosion, changes in land use pattern and higher standards of living, the gap between the demand and supply of water has been widening.

In the state of Kerala different slab systems are followed by the Kerala Water Authority for charging water. But when raising water charges the government does not consider whether the people are able and willing to pay such an increased amount. The income levels of consumers are different and their consumption pattern of water is also different. The people belonging to different income levels will have different willingness to pay for a commodity. The contingent valuation method is adopted in this study for identifying the factors affecting the willingness to pay for an improved water supply system. The survey

technique that attempts to obtain stated preferences is known as the Contingent Valuation Method (CVM). The word contingent is used to reflect the preferences that are stated for a described hypothetical situation. In this study the hypothetical situation presented is that of one in which there is a supply of high quality water in a 24x7 basis. Kollam, an old sea port town on the Ashtamudi Lake was founded on 1st July 1949. Despite having extensive piped network, the water supply is spasmodic, of low pressure and frequently not potable. They cannot use the well water as it is brackish. As far as the slum areas are concerned there is no daily supply of water. During the draught seasons they get water only for 2 to 3 days a week. The contingent valuation survey conducted in the urban areas of Kollam revealed that people are willing to pay a higher rate if they are provided with high quality water on a 24x7 basis. The present study identifies the factors affecting the willingness to pay (WTP) and checks the relationship between various factors and willingness to pay for water.

#### OBJECTIVES OF THE STUDY

1. To examine the association of willingness to pay and severity of the water availability problem
2. To examine the association of willingness to pay and family size
3. To examine the association of willingness to pay and income status
4. To examine the association of willingness to pay and slab level

#### METHODOLOGY

The present study is conducted among the urban water consumers in Kollam District. Out of the total population of 41937 domestic connections a sample of 600 beneficiaries were selected for analyzing willingness to pay for water and check the relationship between willingness to pay for water and various factors affecting it. Almost 1.5% connections rounding nearest 100 were selected randomly from total connections. Thus the total sample size becomes 600. Then number of samples from each corporation/municipality was fixed with probability proportional to sample size. That is proportional to the total connections in each corporation/municipality. It was also decided to select households from a minimum of two wards from each corporation/municipality. As the sample size to be selected from Kollam Corporation is high sample households were selected from eight wards of Kollam Corporation. The stated preference approach such as contingent valuation is used to measure the beneficiaries' willingness to pay and Chi-





Square Test is used to test the association between Willingness to pay (WTP) and factors affecting it.

**HYPOTHESES**

1. Willingness to pay is not dependent on the severity of the availability problem

2. Willingness to pay is not dependent on the family size

3. Willingness to pay is not dependent on the income of the respondents

4. Willingness to pay is not dependent on the consumption slab

**WILLINGNESS TO PAY FOR WATER**

**Willingness to pay of beneficiaries belonging to different slabs**

Response	Willing to pay		Not willing to pay		Total
	Count	Percent	Count	Percent	
BPL	52	78.8	14	21.2	66
0-5	21	91.3	2	8.7	23
5-10	200	78.7	54	21.3	254
10-20	179	85.2	31	14.8	210
20-30	29	93.5	2	6.5	31
30-40	9	81.8	2	18.2	11
40-50	2	100.0	0	0.0	2
Above 50	3	100.0	0	0.0	3
Total	495	82.5	105	17.5	600

Among those people belonging to the BPL category 78.8 percent are willing to pay up to 10 percent more for improved supply and 21.2 percent are willing to pay nothing or 10 percent more but they are ready to render their services to Kerala Water Authority(KWA) twice in a month. Among those people belonging to the 0-5 slab 91.3 percent are willing to pay up to 10 percent more for improved supply and 8.7percent are willing to pay nothing or 10 percent more for improved services. Among those people belonging to the 5-10 slab 78.7 percent are willing to pay up to 10 percent more for improved supply and 21.3 percent are willing to pay nothing or 10 percent more for improved services. Among those people belonging to the 10-20 slab 85.2 percent are willing to pay up to 10 percent more for improved supply and 14.8 percent are willing to pay nothing or 10 percent more for improved services. Among those people belonging to the 20-30 slab 93.5 percent are willing to pay up to 10 percent more for improved supply and 6.5 percent are willing to pay nothing or 10 percent more. Among those people belonging to the 40-50 slab all respondents are willing to pay and 10 percent more for improved services. Among those

people belonging to the slab of above 50 all respondents are willing to pay and 10 percent more for improved services. Out of the total respondents in all slabs 82.5 percent are willing to pay and 17.5 percent are not willing to pay or 10 percent more for improved services.

**FACTORS AFFECTING WILLINGNESS TO PAY (WTP)**

The factors affecting willingness to pay were identified as severity of the water availability problem, family size, income status and slab levels to which the consumer belongs. The association between WTP for water and factors affecting WTP were tested using Chi-Square Test and percentage analysis is also done to understand the relation between WTP and factors affecting it.



**Table 1**

**Association of willingness to pay and severity of the water availability problem**

Water availability problem	Not willing to pay		willing to pay		Total
	Count	Percent	Count	Percent	Count
Not a problem	11	28.9	27	71.1	38
Severe	67	18.6	293	81.4	360
Very severe	27	13.4	175	86.6	202
All	105	17.5	495	82.5	600
Chi square = 6.148* df = 2 P=0.046					

*\* significant at 0.05 level*

H<sub>0</sub> : Willingness to pay is not dependent on the severity of the availability problem.

To check whether willingness to pay is influenced by availability problem Chi square test is done. The calculated value of the chi-square is greater than the table value the null hypothesis is rejected. The

relationship is significant at 0.05 percent level. There is increase in willingness to pay of the people as the severity of the availability problem increases. The percentage analysis also shows that as the availability problem increases the willingness to pay of the people also increase.

**Table 2**

**Association of willingness to pay and family size**

Family size	Not willing to pay		willing to pay		Total
	Count	Percent	Count	Percent	Count
≤ 4	58	16.9	286	83.1	344
Above 4	47	18.4	209	81.6	256
All	105	17.5	495	82.5	600
Chi square = 0.228 <sup>ns</sup> df = 1 P = 0.633					

*ns non significant at 0.05 level*

H<sub>0</sub>: Willingness to pay is not dependent on the family size

To check whether willingness to pay is influenced by increase in family size of the individual Chi square test is done. The calculated value of the chi-square is less than the table value the null hypothesis is accepted. The relationship is not significant. There is no increase in willingness to pay of the people as the

family size of the respondent increases. The percentage analysis also shows that there are no considerable changes in willingness to pay as the family size of the respondents increase.



**Table 3**

**Association of willingness to pay and income status**

Income Status	Not willing to pay		willing to pay		Total
	Count	Percent	Count	Percent	Count
< 5000	53	16.4	271	83.6	324
5000-10000	30	19.5	124	80.5	154
10000-15000	8	19.0	34	81.0	42
Above 15000	14	17.5	66	82.5	80
All	105	17.5	495	82.5	600
Chi square = 0.781 <sup>ns</sup> df = 3 P = 0.854					

*ns non significant at 0.05 level*

H<sub>0</sub> : Willingness to pay is not dependent on the income of the respondents

To check whether willingness to pay is influenced by the income of the respondents Chi square test is done. The calculated value of the chi-square is less than the table value the null hypothesis is accepted. The relationship is not significant .There is no increase

in willingness to pay of the people as the income of the respondent increases. The results of the percentage analysis also convey that the willingness to pay does not change considerably as the income of the respondents increase.

**Table 4**

**Association of willingness to pay and Slab level**

Consumptions lab (based on quantity in KL)	Not willing to pay		Willing to pay		Total
	Count	Percent	Count	Percent	Count
BPL	14	21.2	52	78.8	66
0-5	2	8.7	21	91.3	23
5-10	54	21.3	200	78.7	254
10-20	31	14.8	179	85.2	210
More than 20	4	8.5	43	91.5	47
All	105	17.5	495	82.5	600
Chi square = 8.0731 <sup>ns</sup> df = 4 P = 0.089					

*ns non significant at 0.05 level*

H<sub>0</sub> : Willingness to pay is not dependent on the consumption slab

To check whether willingness to pay is influenced by the consumption slab to which the respondents belong, Chi square test is done. The calculated value of the chi-square is less than the table

value the null hypothesis is accepted. The relationship is not significant .There is no increase in willingness to pay of the people with changes in the consumption slab to which they belong. The percentage analysis also shows that there are no considerable changes in willingness to pay as the consumption slab of the respondents change.



## CONCLUSION

The present study aims at examining the relationship between willingness to pay and factors identified as affecting willingness to pay for urban water. The study conducted using contingent valuation method identified severity of the water availability problem, family size, income status and slab levels to which the consumer belongs as the factors affecting willingness to pay for water. The analysis of the relationship using Chi-Square test reveals that out of the factors identified the WTP of the people increases with the availability problem and it is the most important factor affecting the WTP of the people. There is increase in willingness to pay of the people as the severity of the availability problem increases. All the other factors identified have no influence on the WTP of the people. The water availability problem is very severe in urban settlements in Kollam District in Kerala. The urban water consumers are willing to pay a higher rate for water if they are provided with high quality water on 24x 7 basis. The government can work in this direction by providing high quality water as the people are ready to pay higher rates.

11-period/article20306437.ece

## REFERENCES

1. Venkateswarlu Umareddy. (1998), "Urbanization in India: Problems and Prospects", New Age International (p) Ltd Publishers, New Delhi, p. p Nil
2. Bidyut Mohanty . (1993), "Urbanization in Developing Countries: Basic Services and Community Participation", Concept Publishing House, New Delhi, p. p Nil
3. Arunachalam .M. (1993) , "Tasks Ahead :A Government perspective" in Bidyut Mohanty : Urbanization in developing countries ,Basic services and Community Participation, Concept Publishing House, New Delhi, p. p Nil
4. Sharmila Banerjee. ( 2001), "Economic Valuation of Environmental Benefits and Costs" , in Rabindra N.Bhattacharya(ed): Environmental Economics An Indian Perspective ,Oxford University Press p. p Nil
5. Herath M Gunatilake. (2003), "Environmental Valuation: Theory and Applications", Post Graduate Institute of Agriculture, University of Peradeniya
6. Ahmed Hussen. (2004), "Principles of Environmental Economics", Routledge, Taylor and Francis Group, London and New York
7. Report of the Working group on Drinking Water.( 2002-2007), State Planning Board, Thiruvananthapuram,.
8. Urban Statistics Handbook (2008)
9. <https://kwa.kerala.gov.in>
10. <https://www.thehindubusinessline.com/economy/Urban-population-grows-faster-than-rural-in-2001->



## TO STUDY THE IMPACT OF SOCIAL MEDIA ON SOCIETY USING STATISTICAL TECHNIQUES

**Prakash S. Chougule**

Associate Professor  
Department of Statistics  
Rajarshi Chhatrapati Shahu College  
Kolhapur (MS), India

**Tejaswi S. Kurane**

Assistant Professor  
Department of Statistics  
Rajarshi Chhatrapati Shahu College  
Kolhapur (MS), India

**Sarika P. Magdum**

Research Student  
Department of Statistics  
Rajarshi Chhatrapati Shahu College  
Kolhapur (MS), India

**Pruthviraj D. Nikam**

Research Student  
Department of Statistics  
Rajarshi Chhatrapati Shahu College  
Kolhapur (MS), India

**Bhakti R. Dhongade**

Research Student  
Department of Statistics  
Rajarshi Chhatrapati Shahu College  
Kolhapur (MS), India

**Ajinkya C. More**

Research Student  
Department of Statistics  
Rajarshi Chhatrapati Shahu College  
Kolhapur (MS), India

Article DOI: <https://doi.org/10.36713/epra4959>

### ABSTRACT

*Social media is a platform for people to discuss their issues and opinions. Before knowing the aspects of social media people must have to know what is social media? Social media are computer tools that allow people to share or exchange information's, ideas, images, videos and even more with each other through a particular network. In this paper we cover all aspects of social media with its positive and negative effect. It gives people a way to stay in touch with people who live far away. It lets people share fun, interesting and informative content. It gives businesses a way to engage with customers.*

**KEYWORDS:** *Social media, Society, Chi-square test, hypothesis testing.*

### INTRODUCTION

Social Networking Sites have become prominent part of life for many people today, be it youth, the working lot & even the elder people. There are more than 2.3 Billion worldwide active social networking sites users. Most people engage with social networking sites without thinking, what are its effects on their lives, whether it is positive or negative. According to various research studies in the field of online social networks, it has been revealed that these

sites are impacting the lives of the youth as well as the society greatly. Social networking sites play a huge role in modern day politics & are one of the most valuable assets that political parties use to gain votes. We can take a look at the recent election campaigns in our country & see how all the parties have spent millions on social networking sites to help tarnish each other's name & policies.

Social networking has changed the way people interact with each other forever. Also there are



some negative effects which include identity theft, cyber bullying, decreased social interaction in real life, and social isolation. Increase in mobile social networking could possible cause future health problems. The most common positive impact of social media was that it allowed kids to stay in touch with past and present friends throughout the changes in their lives: school, job, and team changes, hospital stays, studying abroad, etc.

In this article we study the positive as well as negative effect of social media on society. We collected the primary data through questionnaire from various areas. We used the graphical representation and testing of hypothesis for statistical analysis purpose.

**OBJECTIVES**

- 1) To study gender –wise distribution of use of different social networking sites
- 2) To study proportion of male and female users of SNS in rural and urban area
- 3) To study various effects of social networking sites on lifestyle of users

- 4) To study impact of social networking sites on personal & social life
- 5) To study the frequency at which users share their personal, social & economic aspects through SNS.

**METHODOLOGY**

For this study we have collected 300 samples by simple random sampling. By using proportion method we took 150 are from rural area and remaining 150 are from urban area.

For rural area, 1] Chavare 2] Talsande 3] Ghunaki.

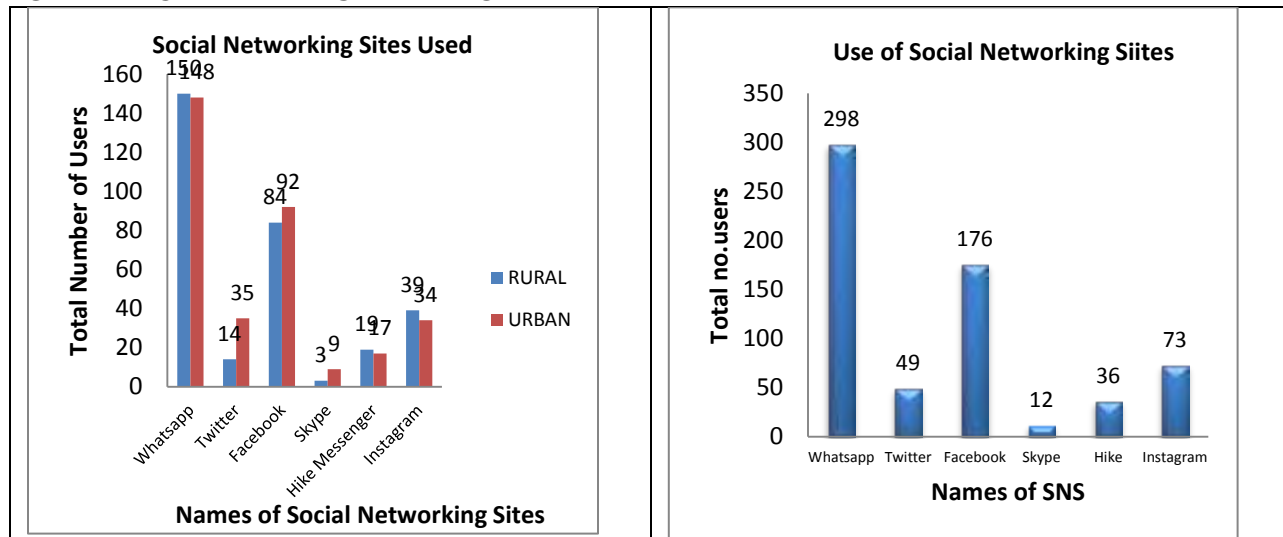
For urban area, 1] Rajarampuri 2] Shahupuri 3] Ruikar colony

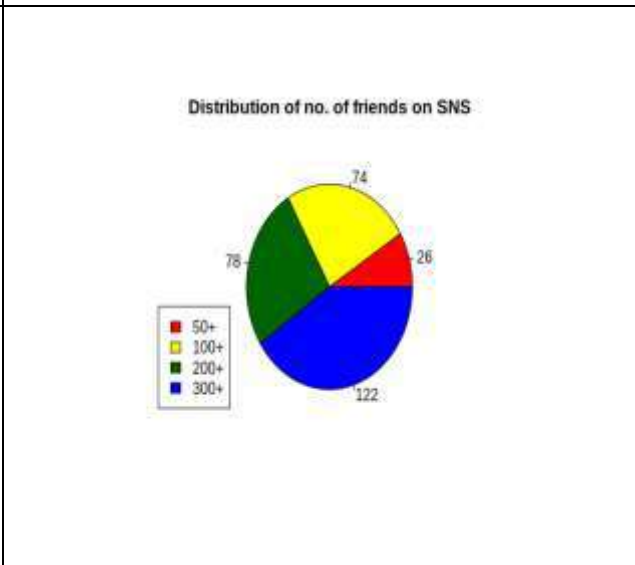
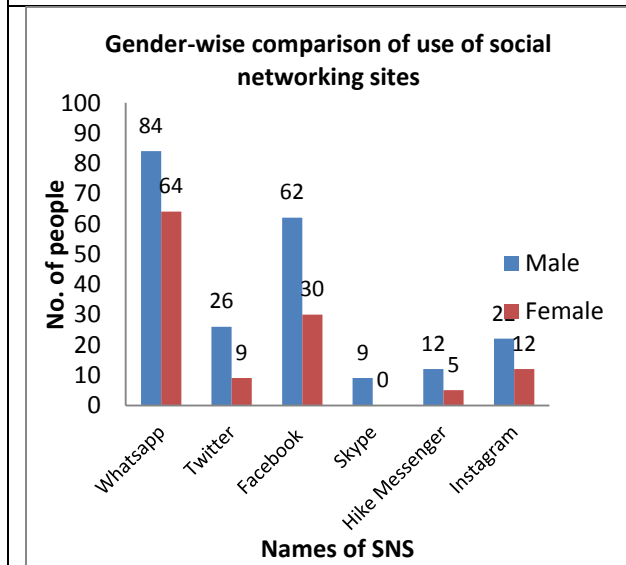
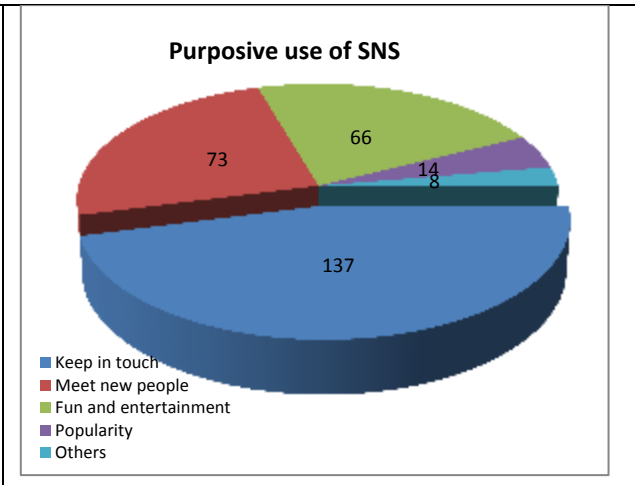
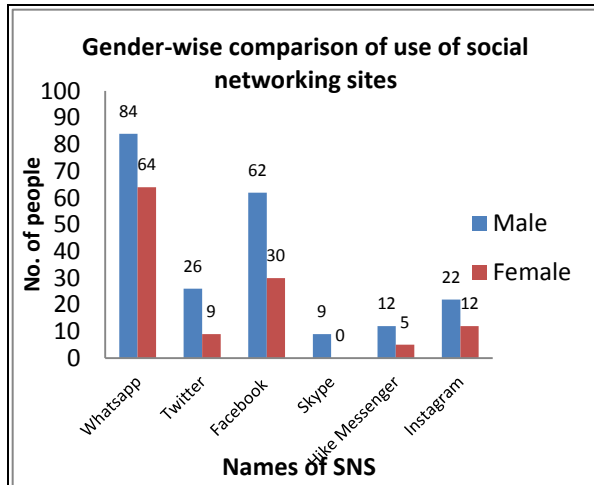
**STATISTICAL TOOLS USED**

- 1. Graphical Representation
- 2. Testing of hypothesis
- 3. Theory of Attribute

**Software’s used:** 1. MS-Excel 2. MS-Word 3. R-Software

**GRAPHICAL REPRESENTATION**





**TESTING OF HYPOTHESIS**

**A) Test for Equality of Proportion of Social Networking Sites Male Users in Rural and Urban Area:-**

$H_0$ : There is no significant difference between proportions of SNS users in rural and urban area for male

$H_1$ : There is significant difference between proportions of SNS users in rural and urban area for male

$Z_{cal} = 0.4695$       $Z_{tab} = 1.96$  at 5% level of significance

**B) Test for Equality of Proportion of Social Networking Sites Female Users in Rural and Urban**

$H_0$ : There is no significant difference between proportions of SNS users in rural and urban area for female

$H_1$ : There is significant difference between proportions of SNS users in rural and urban area for female

$Z_{cal} = 0.4678$       $Z_{tab} = 1.96$  at 5% level of significance

**C) Test for Independence between Area and SNS Users**

$H_0$ : SNS users and area are independent. Vs.  $H_1$ : SNS users and area are not independent.

$\lambda^2_{cal} = 0.2199$       $\lambda^2_{tab} = 3.841$  at 5% level of significance



**D) Test for Independence between Area and Effects of Social Networking Sites on Lifestyle**

$H_0$ : Area and effects of SNS on lifestyle are independent

$H_1$ : Area and effects of SNS on lifestyle are not independent.

$\lambda_{cal}^2 = 2.2597$       $\lambda_{tab}^2 = 3.841$  at 5% level of significance

**Test of Attribute: Association and Colligation between SNS Users and Area.**

Coefficient of Association (Q) = 0.0549

Coefficient of Colligation (Y) = .0274

**Fitting of distribution**

**A) To Check Whether Discrete Uniform Distribution is good fit for Given Data or not:-**

$H_0$ : Sharing of personal social and economic information on SNS is uniformly distributed over the rural area

$H_1$ : Sharing of personal social and economic information on SNS is not uniformly distributed over the rural area.

$\lambda_{cal}^2 = 83.52$       $\lambda_{tab}^2 = 15.507$  at 5% level of significance

**B) To Check Whether Discrete Uniform Distribution is good fit for Given Data or not:-**

$H_0$ : Sharing of personal social and economic information on SNS is uniformly distributed over the urban area

$H_1$ : Sharing of personal social and economic information on SNS is not uniformly distributed over the urban area.

$\lambda_{cal}^2 = 146.56$       $\lambda_{tab}^2 = 15.507$  at 5% level of significance

**CONCLUSION**

In the world with over 70% of internet users' active on social networks, who spend at least one hour a day on average on those social networks, we have to conclude that social networks have become a sort of reality in which people communicate, interact, and obviously trust. We also have to be aware that over 60% of those users access social networks via mobile devices, with strong indicators that this percent will only increase in the future years. In our study we conclude that, Whatsapp, Hike Messenger and Instagram are used more in rural area than in urban area.

99% people in Kolhapur district used Whatsapp while nearly 59% people used Facebook.

To keep in touch with family and friends nearly 46% people use social networking sites.

In rural area male users of social networking sites are greater in number than female users. In urban area male users of social networking sites are greater in number than female users. Impact of social networking sites on social life in urban area and rural area is positive. Health and academic performance in rural area is more positively impacted.

A male as well as female user of social networking sites in rural is less than urban area. The area and users of social networking sites are independent. Effect of use of different social networking sites on lifestyle and area are independent. Users of social networking sites and area are positively associated. Sharing of personal, social and economic aspects on social networking sites is not uniformly distributed over the rural area and urban area.

**REFERENCE**

1. Becker, Mark W., Reem Alzahabi, and Christopher J. Hopwood. *Media Multitasking is Associated with Symptoms of Depression and Social Anxiety. Cyberpsychology, Behavior, and Social Networking* 16, no. 2 (2013): 132-35.
2. Bryfonski, Dedria. *The Global Impact of Social Media. 2011 ed. Detroit, MI: Greenhaven Press. 224.*
3. Campbell, Marilyn (2005) *Cyber bullying: An old problem in a new guise? Australian Journal of Guidance and Counseling, Australian Academic Press, 2005, 76.*
4. Mark W. Becker, Reem Alzahabi, and Christopher J. Hopwood. *Cyberpsychology, Behavior, and Social Networking. February 2013*





## HOW TO INTERGRATE THE AFFECTIVE DIMENSION IN THE TEACHING OF FRENCH AS A FOREIGN LANGUAGE IN KENYA

**Dr. Auma Rose**

Lecturer- French,  
Department of Language and Literature  
Education,  
Masinde Muliro University of Science and  
Technology,  
Kakamega,  
Kenya.

**Dr. Joyce Kasili**

Lecturer- French,  
Department of Language and Literature  
Education,  
Masinde Muliro University of Science and  
Technology,  
Kakamega,  
Kenya.

**Ms. Clara Bulili**

Lecturer- French,  
Department of French and  
other Foreign Languages,  
Maseno University,  
Maseno, Kenya

---

### ABSTRACT

*Learning a language can be a complicated affair, particularly when the language is foreign and learning takes place in an exolingual context. The teacher of a foreign language in a multilingual context such as Kenya has to choose his teaching/learning strategies and activities properly in order to motivate the learner. He/she must also ensure a conducive environment that encourages learning through his attitude and behavior. Another necessary ingredient for achieving this is affectivity, an important component of the teaching/learning process. Following our practice as teachers of languages in general and of that of French in particular, in the mentioned environment, we have observed that our colleague teachers encounter difficulties in the pursuit of interest in the subject area on the part of the learners. How does the teacher integrate affectivity into the learning/teaching of French as a foreign language as to get them eager to learn? This article attempts to answer this question by first, defining the term “affectivity,” and then exploring the different ways in which the teacher can integrate affectivity into the teaching of French as a foreign language.*

**KEYWORDS:** *Didactics, French Foreign Language, Affectivity, Motivation*

---

### INTRODUCTION

Learning of a foreign language calls for creativity and innovation on the part of the teacher to make his/her activity a success. Creativity here means adopting strategies that are likely to encourage the learners to participate in their own learning by actively interacting with their teacher and the pedagogical content. In this

paper, we try to propose ways in which a teacher can have positive impact on learning in order for him/her to attain his/her objectives besides causing the learner to communicate effectively in the target language.

#### 1. The term “affectivity”

The Dictionary of Didactics of French as a Foreign and Second Language (2003) defines



affectivity as the set of feelings (hatred, respect, pleasure, etc.) that have an impact on learning. The affective dimension is present in all human relationships: teacher and learners, between learners, learners and language, learner and didactic material, etc. Affectivity, which is a powerful source of energy and motivation, enables access to knowledge. According to Larousse (2008), affectivity is a set of affective phenomena (emotions, feelings, passions, etc.).

In a teaching / learning situation, two agents, the learners on the one hand and the teacher on the other, interact for the success of the process. In other words, learning does not take place effectively without the involvement of both class groups. The student makes the decision to learn and the teacher, for his part, manages this learning. Learners should contribute to this project by cooperating and being actively involved in their own learning. This special relationship between teacher and learner is important for the quality of learning achieved by the learner.

The learner has his own emotions and the physiological manifestations that arise from them; manifestations which influence his activities and those of the teachers. Le petit Robert (Rey, 2002) defines emotion as a "pleasant or unpleasant sensation". This means that the emotional state can be positive or negative. In school, emotion can make learning easier or worse. According to Piccardo and Puozzo, (2003), the teacher should create an atmosphere in the classroom that promotes a positive emotional state in learners to facilitate learning. The teacher must find ways to integrate the affective dimension into the teaching of the foreign language.

## **2. How can the teacher promote a positive emotional state in learners, in order to improve the quality of performance in the classroom?**

To answer this question, we refer to the work of psychologists who have been interested in the interaction of class factors during learning. These appeal to individual factors in the learner but also to those in his environment. This is the affective domain in learning. The psychologists found that a successful education is concerned with developing not only the cognitive abilities of the learner, but also their personality. There is therefore need to take into account affectivity as an equally important component of the teaching /learning process, also decisively influencing as the cognitive component on this process. (Rogers, 1975).

Apart from the development of the cognitive capacities of the learner that we are teaching, other factors in the learner's environment must also be taken into account to make the learning process effective. This vision introduces a new look at the practices of the teacher, those which must stimulate the emotional conditions of the learner for the learning to be successful.

Stevick (1980) states that, "Success (in learning foreign languages) depends less on materials, techniques and linguistic analysis than on what happens in and between people during the class." It therefore follows that success depends less on "things" than on "people". Some of the factors that determine this success are the teacher himself and the role he plays in the learning process, learner values, learner /teacher attitude, varying learner needs, accepting learner errors as learning tools of learning and creating a sense of belonging in the learner.

### **2.1 The role of the teacher**

Before the introduction of the competency based curriculum (CBC) in Kenya in 2017, learners of French as a foreign language in Kenya generally encountered this language when they entered the first year of secondary school. Currently, foreign language learning starts in grade four, a level in the second cycle of primary education (Kenya Institute of Primary Development, 2017). How does one integrate the affective dimension into teaching French as a foreign language in a multilingual context as is the case in Kenya?

Foreign or second language learners often suffer from anxiety: fear of the unknown, frustration, tension and insecurity. Anxiety can be reduced through the teacher's attitude and the climate that the teacher creates in the classroom. He must do everything to promote the self-esteem and self-confidence of the learners. The Kenyan learner of French as a foreign language, who learns the language in an exo-lingual environment, also suffers from this anxiety. The teacher is therefore called upon to do everything possible to ensure the integration of an emotional dimension in teaching. This requires structured and planned strategies. The teacher must put in place pedagogy characterized by calm, create a friendly and pleasant atmosphere to reduce tension in the language class. He must lead the learner to bring out positive emotions, which facilitate language learning.

Meirieu (2014) suggests that creating the pleasure of learning tends to lift the negative emotions of incapacity (anxiety, fear, etc.) on the part of the learners. According to this author, the two agents in the classroom - the teacher and the learner, bring about the



pleasure of learning. He cites the attempts that the learner can make in his environment, the feeling that the learner has after having accessed something that comes from him and which escapes him at the same time and the encounter between the learner's intelligence, his most intimate questions, the intelligibility of the world as well as the universal answers. He asserts that in order for learners to be able to question themselves and to make attempts, the intervention of the mediator, here, the teacher is necessary.

## 2.2 Learner values and teacher expectations

The value students place on a given subject as well as the expectations teachers have of their students have a significant impact on the learning of a given subject. Giordan and Saltet (2011) indicate that the pleasure of knowing comes from the environmental and personal parameters. They support their argument by letting the learners express themselves as follows:

J'ai le plaisir d'apprendre quand: « je sens que mon enseignant est motivé, je me sens appréciée, j'ai confiance en la situation et en mes enseignants, j'ai confiance dans les compétences de mes enseignants, je bénéficie d'un environnement favorable, on m'offre un environnement pour apprendre qui me stimule, je me sens soutenu, je me sens respecté, écouté et quand je me sens accompagner pour choisir

I have the pleasure of learning when: I feel that my teacher is motivated, I feel appreciated, I have confidence in the situation and in my teachers, I have confidence in the skills of my teachers, I benefit from a favorable environment, I am offered a learning environment that stimulates me, I feel supported, I feel respected, listened to and when I feel supported to choose (Our translation)

Je suis bien motivé quand: j'ai un besoin, un ressenti, une attente, une bonne estime de moi, j'ai confiance en moi, j'ai confiance en mes capacités, j'y trouve un plus, un sens, un plaisir, je me sens interpellé, questionné, je me sens autonome, je sais appréhender mes peurs, mes angoisses et quand j'ai un objectif, un projet.

I'm well motivated when: I have a need, a feeling, an expectation, I have self-esteem, I

have confidence in myself, I have confidence in my abilities, I find a plus in it, a meaning, a pleasure, I feel challenged, questioned, I feel independent, I know how to apprehend my fears, my anxieties and when I have an objective, a project (Our translation)

From these citations above, it is evident that the learner experiences many emotions during the learning process. Learning is easier when the teacher is motivated in his task. His motivation will show during his practice in the classroom and spread to the learners who will in turn also feel motivated. The learner who feels appreciated will be motivated during his learning. The appreciative teacher will encourage learners' effort and make them desire to learn. The learners will feel supported and accompanied in their learning. The motivated teacher will create a favorable environment for learning and learners will consequently gain confidence in the skills of their teachers. Therefore, it is the teacher who conditions the thoughts of the learner.

## 2.3 Learner/teacher attitude towards the foreign language

What attitude does the learner/teacher have towards the language and the native speakers of this language? The response to this question lies on how the class-group view the language being learnt/taught. The attitude of the learner towards the foreign language is plays an important role in the success of the learning. Secord and Backman (1964) distinguish three components of attitude towards things: the affective component, relating to feelings towards an object or a valuation of these feelings; the conductive component, which has to do with behavior towards the object; and the cognitive component, which relates to beliefs about the object. Attitudes are therefore favorable or unfavorable and present themselves in varying degrees, generally presenting themselves in form of likes and dislikes.

We often hear of comments such as "*French is difficult*", "*it is a beautiful language*", "*it's a language of people of class*", "*I'm learning it for the sake of it*", "*where will it take me?*" "*It's a language of foreigners*", "*I'm learning it for the first time while my colleagues learnt it earlier*", "*I really love it*"...

These generally constitute the feelings and perceptions that learners can have of a language and its native speakers. These can influence either positively or negatively thus fostering or hindering the learning of a given language. The teacher should therefore create situations likely to render the learners attitude positive.



#### 2.4 Learners' varying needs.

In the French as a foreign language classroom in Kenya and elsewhere in a teaching /learning situation, learners all have different needs, different abilities, and different learning profiles. A visual learner needs to visualize, the auditory type needs to hear, the kinesthetic one needs to move and engage their body and the verbal learner needs to express themselves (CECR 2001). To meet the needs of the whole group, the teacher should choose activities likely to motivate all learners to learn, according to their needs and their profiles. He cannot deal with all learning styles at the same time, but he must vary his ways of teaching to be able to implement, at one time or another, activities which correspond to preferences and capacities of each, to integrate the visual, the auditory, the kinesthetic and the verbal. This gives each learner the opportunity to open up to others and to practice other ways of learning. Varying the modes of delivering content reduces monotony and increases motivation in learners.

The teacher should also take into account the experiences and interests of the learners. Future journalists would not be offered the same activities as future diplomats taking French for Specific Objectives (FOS), courses offered at some Kenyan universities, as the situations of communication they are likely to find themselves in in the future are not the same. For the same reasons, we would not propose the same activities to children as to adults, or activities at level CI to learners at level A2. An audience that learns French for fun will not have the same needs as an audience of doctors. It therefore holds that a random choice of activities can lead to undesirable reactions in learners.

#### 2.5 Error as a support tool for learning

Errors are an integral part of learning. By making errors, the learner gets to know what to say and how to say it as opposed to one who keeps quiet fearing to make mistakes. The teacher should therefore try to make the learners active, encouraging them to participate in class. He/she should let the learners know that pronouncing/spelling a word incorrectly does not call for punishment. Following the "think-pair-share" technique proposed by (Kagan, 1994), learners' should not be penalized for errors, but rather, participation should be encouraged despite the errors because they are a support to learning. Thus, the learner will feel accepted even if his productions are wrong.

In the light of this, the teacher should try to involve all the learners by proposing group work because in small groups, they participate easily. To ensure effectiveness of the groups, the teacher could

constitute them instead of asking the learners to form them at their convenience. While doing this, the psychological profile of the learners should be taken into account in order to foster cohesion. The teacher is called upon to always treat the students with the utmost respect that they deserve at all times as to protect their ego and create an atmosphere of cooperation instead of that of competition because competition discourages learning (Casal, 2001; Crandall, 1999). The teacher should further allow the learner to express himself/herself freely following the "Total Physical Response" method where the learners exchange with each other spontaneously. This reduces anxiety and feelings of insecurity (Asher, et al, 1967).

#### 2.6 Show learners they are valued

The teacher can also show learners that they are valued by calling them by their first names and by getting into the habit of talking to them even outside the classroom. This motivates the learners, giving them a sense of belonging besides proving to them that the teacher is interested in what they are doing.

He/she should engage them in building the learning space by soliciting their opinions on classroom activities and showing confidence in their ability to learn the language. He/she should recognize their successes; introduce activities, which have, not only linguistic purposes, but also personal goals, such as getting to know each other and getting to know their classmates better. The teacher can further help the learners to identify their strengths and come up with strategies that will enable him/her to overcome their weaknesses and consequently build spaces so that they can share, at will, their interests, feelings and concerns. He can then evaluate the learners with the purpose of knowing what the learner can do instead of what he/she cannot do.

#### 2.7 CONCLUSION

Affectivity leads to motivation, tools without which learning would not be realized effectively. A positive mind and a friendly environment created by the teacher enable learning. The learner's interaction with the subject content is largely influenced by the teacher. The teacher is therefore a major agent in promoting learning. He/she is the mediator between the learner and the content to be learnt. He/she is the role model influencing every step of the learner in class. He is the pace setter, regulating the learning process. He/she is the moderator, intervening regularly in the process of learning. He/she is thus the master planner of the activity that takes place in the world of a learner.



## 2.8 Recommendations

From this present work, it is evident that teachers need to be sufficiently informed on this subject. The aspects pointed out in this article need not only to be mentioned in the course of training as is the case in some universities in Kenya where only one unit in the Psychology course attempts to mention the affective domain in class. In this regard, we propose that the Ministry of Education organizes training in the form of workshops or seminars and involve all teachers of French. The university programs that aim at training teachers of language could be reworked as to include this subject. Teachers are equally called upon to be innovators in their own classrooms, observing creativity in their lessons in order to interest their learners who only meet in class once a week. We also suggest that teachers study this topic and disseminate their findings so that the information can be shared among teachers of French as a foreign language in Kenya in order to improve the teaching/learning of this language in the country.

## REFERENCES

1. Asher, J. J. et al. (1967). *The Learning Strategy of the Total Physical Response: Some Age Differences*. *Child Development*, (4), 1219. doi:10.2307/1127119
2. Bandura, A. (2007). *Auto-efficacité. Le sentiment d'efficacité personnelle* (P. Lecomte, trad.) (2<sup>e</sup> éd.), Bruxelles, De Boeck.
3. Casal, S. (2002). « El desarrollo de la inteligencia interpersonal mediante las técnicas del aprendizaje cooperativo », dans Fonseca, M. C. (ed.). *Inteligencias múltiples, múltiples formas de enseñar inglés*. Sevilla : Mergablum.
4. Crandall, J. (1999). « Cooperative language learning and affective factors », dans Arnold, J. (ed.) *Affect in Language Learning*. Cambridge: Cambridge University Press.
5. Conseil de l'Europe. (2000). *Cadre européen commun de référence pour les langues. Apprendre. Enseigner. Evaluer*. Strasbourg/Paris : Conseil de l'Europe/Didier.
6. Cuq, J- P. (2003). *Dictionnaire de didactique du français langue étrangère*, Paris, Clé international.
7. Giordan, A. et Saltet, J. (2011). *Apprendre à apprendre*, Paris, Libro.
8. Kagan, S. (1994). *Cooperative Learning*. San Clemente, CA: Kagan Cooperative Learning.
9. Kenya Institute of Curriculum Development (2017)
10. Larousse. (2008). *Le Petit Larousse illustré*, Paris, Larousse.
11. Ledoux, J. (1996). *The Emotional Brain*. New York: Simon Schuster.
12. Mathon, O. (2015) *Apprendre à apprendre*, Consulté le 12/8/2016 <http://www.apprendreaapprendre.com/réussite-scolaires/profil-pedagogiques/>
13. Meirieu, P. (2014) [http://www.meirieu.com/li\\_plaisir\\_dapprendre.htm](http://www.meirieu.com/li_plaisir_dapprendre.htm)
14. Piccardo, E. et Puozzo I. (2013). « Émotion et apprentissage des langues », *Linguistique et Didactique des Langues (LIDIL)*.
15. Puozzo, C. I. (2009). « Le sentiment d'efficacité personnelle. Pour un nouvel enseignement/apprentissage des langues », *Revue sciences croisées*, 6, p. 1-29. [en ligne : <http://sciences-croisees.com/N6/PuozzoCapron.pdf>]
16. Puozzo, C. I. et Piccardo E. (2013). "L'émotion dans l'apprentissage des langues." *Revue de linguistique et de didactique des langues* 48.
17. Rey, (2002). *Le Petit Robert*. Paris, Le Robert.
18. Rogers, C. (1975). « Bringing together ideas and feelings in learning », dans D. A. Read y S. B. Simon. *Humanistic Education Sourcebook*. Englewood Cliffs, NJ: Prentice Hall.
19. Secord, P.F & Backman, C.W (1964) *Social Psychology*. New York: McGraw Hill
20. Stevick, E. (1980). *Teaching Languages: A Way and Ways*. Rowley, MA: Newbury House.



# BIO-MEDICAL WASTE MANAGEMENT IN INDIA: CONTEMPORARY APPROACHES AND WAY FORWARD

**Sunil K. Yadav<sup>1</sup>**

<sup>1</sup>Student,  
Faculty of Architecture & Planning,  
Dr. A.P.J. Abdul Kalam Technical University  
Lucknow,  
India

**Dr. Indrani Chakraborty<sup>2</sup>**

<sup>2</sup>Professor and Dean,  
Faculty of Architecture & Planning,  
Integral University Lucknow,  
India

**Dr. Subhrajit Banerjee<sup>3</sup>**

<sup>3</sup>Associate Professor,  
Faculty of Architecture & Planning,  
Dr. A.P.J. Abdul Kalam Technical University Lucknow,  
India

---

## ABSTRACT

*The rights of citizens to clean and healthy environment provides the foundation for management of BMW in India. With increasing population and economic development leading to large amount of waste generated it becomes imperative to have an adequate, safe and sustainable management of bio-medical waste (BMW). India was one of the first countries to implement BMW Management rules in 1998 under Environmental Protection Act 1986. But National Green Tribunal states that only 1.1 lakh of the 2.7 lakh healthcare facilities identified across the country are authorized under the BMW management rules, reflecting the service level gap creating risks of inadequate disposal posing serious health hazard. It has become more evident after SARS COVID-19 breakout which highlighted the policy level framework of BMW management System an existing practices. Lessons learnt from this can help as driving force to achieve benchmark in this field. This study briefly reviews the evolution of policy level framework, nature of existing practices and situation of BMW Management in India. Collective analysis of these factors and equating it with best practices available globally, contemporary advancements and innovation can help pave a way forward.*

**KEYWORDS:** Hospital Waste, Bio-medical waste (BMW) Management, India, SARS-CoV2, COVID-19

---

## 1. INTRODUCTION

Hospital waste refers to all discarded biological or non-biological waste which is not fit for further usage. Medical waste is a subset of hospital waste which means- any waste, which is generated during the diagnosis, treatment or immunization of human beings or animals or in research activities pertaining thereto or in the production or testing of biological, and including categories mentioned in Schedule I of bio-medical waste (Management and Handling) (second Amendment) Rules, 2000 by Ministry of Environment and Forests Notification.

All BMW are hazardous. According to WHO, Nearly 85% of all waste generated by hospital is general waste. About 15% waste is BMW, which includes Infectious waste - 10%. Non-infectious waste such as radioactive and chemical wastes -5%. The remaining waste though mixed with non-hazardous waste, can be injurious to humans or animals as also being detrimental to the environment and needs special handling and treatment due to its highly toxic contents and infectious properties. [1]

### 1.1. Sources of generation of BMW

Primary sources		Secondary sources
Hospital	Medical College	Clinic
Nursing Home	Immunization centers	Ambulance Service
Dispensaries	Nursing Homes	Home treatment
Maternity home	Animal research centers	Slaughter houses
Dialysis center	Blood bank	Funeral Service
Research lab	Industries	Educational institutes

**Table1: Sources of Biomedical waste generation**

Source: International Journal of Current Engineering and Technology, (2013)<sup>[2]</sup>

At source, it is categorized into five major categories- Sharps, Pathological waste, Chemical waste, Pharmaceutical waste and Radioactive wastes.

### 1.2. Material wise composition of Bio-medical waste

By weight		
	Plastic	14%
Combustible		
	Dry cellublastic solid	45%
	Wet cellublastic solid	18%
Non-combustible		20%

**Figure 1: Biomedical waste composition**

Source: [http://isebindia/95\\_99/99-07-02.html](http://isebindia/95_99/99-07-02.html)

Health Hazards may include-Infection, Genotoxicity and Cytotoxicity, Chemical toxicity, Radioactivity hazards, or Physical injuries, along with adverse olfactory and visual aesthetics.

Ill managed waste causes pollution, growth of carriers like insects, rodents and worms and can cause ailments like typhoid, cholera, hepatitis and AIDS by usage of syringes and needles. In addition to health risks associated with poor management of medical waste, its impact on environment, especially to the risks of pollution of water, air and soil must also be considered.

## 2. BIO-MEDICAL WASTE MANAGEMENT RELATED LEGISLATIONS

Until fairly recently, BMW management was not generally considered an issue. In the 1980s and 1990s, concerns about exposure to human immunodeficiency virus (HIV) and hepatitis B virus

(HBV) led to questions about potential risks inherent in medical waste. Thus hospital waste generation and its appropriate management and disposal is a major concern due to its risk threat to the health of patients, immediate hospital staff and to the overall general population. Thus it becomes important for the health care establishments to segregate, disinfect and dispose this waste using appropriate and available eco-friendly methods.

### 2.1. BMW (Management & Handling) Rules, 1998

These rules were restricted to healthcare facilities with more than 1000 beds and they are required to obtain authorization. These rules provide for the Healthcare Facilities (HCF) to segregate the biomedical waste as per the 10 categories like Human Anatomical Waste, Animal Waste, Waste Sharps, Liquid and Solid waste etc. into colored bags—yellow, red, blue/white and black according to



the category of the biomedical waste in the containers clearly marked with the bio-hazard and cytotoxic hazard symbol.<sup>[3]</sup> The HCFs could store this waste for up to 48 hours after which they either treat it in-situ or is sent to a Common Biomedical Waste Treatment Facility (CBMWTF). The CBMWTF then treated the waste according to the color of the bag. Different colors called for different types of treatments such as incineration, deep burial, autoclaving, shredding, chemical treatment, disposal in a landfill, etc. If BMW was to be transported outside the premise where the waste is generated it carried with itself information like senders as well as receivers name and address.<sup>[4]</sup>

In the World Health Organization (WHO) meeting in Geneva, in June 2007, core principles for achieving safe and sustainable management of health-care waste were developed.

## 2.2. BMW Management Rules-2016, salient features:

1. The ambit of the rules was expanded to include vaccination camps, blood donation camps, surgical camps or any other healthcare activity;
2. Phase-out the use of chlorinated plastic bags, gloves and blood bags within two years;
3. Pre-treatment of the laboratory waste, microbiological waste, blood samples and blood bags through disinfection or sterilization on-site as prescribed by WHO or NACO;
4. Provision of training to all its health care workers and immunize all health workers regularly;
5. Establishment of a Bar-Code System for bags or containers containing BMW for disposal;
6. Availability of Annual Report on its website within period of two years, report major accidents;
7. More stringent standards for incinerator to reduce the emission of pollutants in environment;
8. Existing incinerators to achieve the standards for retention time in secondary chamber and Dioxin and Furans within two years;
9. BMW was classified in to 4 categories instead of 10 to improve the segregation of waste at source;
10. Procedure to get authorization simplified. Automatic authorization for bedded hospitals. The validity of authorization

synchronized with validity of consent orders for Bedded HCFs. One time Authorization for Non-bedded HCFs;

11. Operator of a common BMW treatment and disposal facility to ensure its timely collection from the HCFs and assist the HCFs in conduct of training.
12. No occupier to establish on-site treatment and disposal facility, if a service of common BMW treatment facility is available at distance of 75 kilometers.

This has several advantages as installation and functioning of individual BMW treatment facility as well as recruiting separate, dedicate, and skilled workforce require high capital investment. CBMWTF is a popular concept in developed countries because by operating it at its full potential, the cost of treatment/kg BMW gets significantly reduced. Further, this makes control and checking of various waste disposal plants less tedious.<sup>[5]</sup>



### 3. BIO-MEDICAL WASTE MANAGEMENT ECOSYSTEM IN INDIA

PROCESS	STAKEHOLDERS	METHODS USED	INFRASTRUCTURE
COLLECTION	WASTE GENERATORS WASTE COLLECTOR	In non chlorinated bags	Bar coded bags to be provided to HCF
SEGREGATION		Four different color coded bags	Color coded bags/ bins to be used for each type of waste (4 types)
STORAGE		<ul style="list-style-type: none"> <li>Yellow bags to be collected within 48 hours</li> <li>To be stored in trolley systems</li> </ul>	To be stored in secure area accessible to transport team
TRANSPORTATION	BMW TREATMENT PLANT	Bio medical waste transport vehicles with proper signage	
PROCESSING		<ul style="list-style-type: none"> <li>On site</li> <li>Nearest Waste treatment plant</li> </ul>	
DISPOSAL		Carbon to landfill, effluent treated and recycled, rest recycled	


Table 2: BMW management in India

Source: Author

**3.1. Waste survey:** Smart cities, Command and Control Centers collect healthcare system data, use of GIS based systems

**3.2. Waste Generation:** Major focus on minimization of BMW

**3.3. Waste segregation, accumulation and storage:** The latest guidelines for segregation of BMW recommend the following color coding:

Category	Type of bag / container used	Type of waste	Treatment/ disposal options
<p><b>YELLOW</b></p> 	<p>Non-chlorinated plastic bags</p> <p>Separate collection system leading to effluent treatment system</p>	<p>a) Human Anatomical Waste                      b) Animal Anatomical Waste                      c) Soiled Waste                      d) Expired or Discarded Medicines &amp; Cytotoxic drugs along with glass or plastic ampoules, vials etc.                      e) Chemical Waste                      f) Micro, Bio- and other clinical lab waste                      g) Chemical Liquid Waste                      h) Discarded linen, mattresses, beddings contaminated with blood or body fluids. Also routine mask &amp; gown as per BMW rules, 2018.</p>	<p>Incineration or Plasma pyrolysis or deep burial*</p>

 <p>RED</p>	<p>Non-chlorinated plastic bags or containers</p>	<p>Contaminated Waste (Recyclable) Vacutainers, tubing, bottles, intravenous tubes and sets, catheters, urine bags, syringes without needles and gloves</p>	<p>autoclaving/ microwaving, hydroclaving and then sent for recycling, not sent to landfill</p>
 <p>WHITE (Translucent)</p>	<p>(Translucent) Puncture, Leak, tamper proof containers</p>	<p>Waste sharps including Metal sharps-Needles, Syringes with fixed needles, Needles from needle tip cutter/burner, Scalpels, Blades</p>	<p>Auto or Dry Heat Sterilization followed by shredding or mutilation or encapsulation</p>
 <p>BLUE</p>	<p>Cardboard boxes with blue colored Marking, Puncture proof and leak proof boxes or containers with blue colored marking, as per BMW rules, 2018</p>	<p>Broken/ discarded glass- Medicine vials &amp; ampoules except those contaminated with cytotoxic wastes. Metallic Body Implants</p>	<p>Disinfection or autoclaving, microwaving, hydroclaving and then sent for recycling</p>

Figure 2: Waste segregation and storage in India [6]

**3.4. Waste transportation:** Separate closed biomedical hazard vans marked with bio hazard symbol are utilized. GPS enabled separate vans

**3.5. Waste treatment:** Summary of the most used methods for traditional medical waste treatment:

- **Autoclave:** the disinfection of medical waste by an autoclave consists of exposing the materials to saturated steam under pressure in an enclosed environment. It is a popular method of disinfection in hospitals. Commonly, autoclaves are used in conjunction with physical treatment processes such as shredding or grinding.
- **Chemical treatment:** the disinfection by application of chemicals to contaminated materials. Chemical treatment can be considered most suited for treating liquids like blood, urine, stool and hospital sewage.
- **Microwave irradiation:** a volumetric heating process to reduce and disinfect

medical waste volumes using High energy electromagnetic field.

- **Incineration:** A common treatment process used to eliminate all forms of combustible materials, while sterilizing inorganic portions. It is not desirable due to human health related concerns, environmental issues and financial impact. [7]

**3.6. Waste disposal:** As stated by Health Care without Harm, an international coalition of 470 organizations in 52 countries, non-incineration treatment technologies are a growing and developing field. Most medical waste is incinerated. Some technologies are still essentially prototypes, while others, such as autoclave technology, have been used for decades. The role of incinerator in increasing environmental air pollution has been checked by issuing new standards for incinerators and improving its operations.

#### 4. SCENARIO OF BIO-MEDICAL WASTE MANAGEMENT IN INDIA

Healthcare is becoming one of India's largest sectors



both in terms of revenue and employment and with growing healthcare, there is a requirement of management of BMW. India's public healthcare spending was 3.6% of India's GDP in 2016 as against notably higher number for developed countries and 5%- 9% for key developing countries.

According to the CPCB annual report of 2016, total quantity of BMW generation in the country is approximately 517 tons per day (TPD). Besides, as per a joint report by Associated Chambers of Commerce and Industry of India (ASSOCHAM) and Velocity in 2018, the total quantity of medical waste generated in India is 550 TPD, and these figures are likely to increase close to 775.5 TPD by 2022. [8] In a large tertiary care hospital in India, the waste generated is about 1-2 kg/bed/day as against 2.8 kg/bed/day from a similar sized hospital in USA. [9] According to a Parliament report tabled in February 2019 To grapple with these manifold increase in generation of BMW, 199 common Bio-Medical Waste

Treatment Facilities (CBWTFs) are in operation and 23 are under construction (CPCB, 2017), which is inadequate for health facilities in 750 districts of the country. The number of HCFs using CBWTFs are 131837, and approximately 21870 HCFs have their own treatment facilities on-site.

There are various gaps which need to be focused upon. One such is that in most of the hospitals strict enforcement/ monitoring of BMW Rules 2016 are not being followed properly. The training of Health Care Facility staff and the awareness of the Hazards of BMW is still a challenge in most of the country. The compliance is being enforced through penalties and via awareness. The CTF are operational in most Tier 1 cities and Tier 2 cities of India and compliance is high today because of NGT. But lack of awareness lead to issues of improper segregation. In Tier 2 and 3 cities the general waste is also mixed with BMW. In 2009, about 240 individuals in Gujarat, India had become infected with Hepatitis-B a consequence to the reuse of unsterilized syringes. According to All India Syringes and Needles and Syringes Manufacturing Association nearly 20% syringes come from recycled sources. [10]

Other challenges in BMW management include speed of data availability, under-reporting of waste generated and handling capacity, operation of healthcare facility without authorization under Biomedical Waste Management Rules.

The MoEF (Ministry of Environment, Forest, and Climate change) reviews HCFs once a

year through state health secretaries and the SPCB (State Pollution Control Board).The advisory committee on BMWM is now mandated to meet every 6 months.

NGT suggests a need to review effectiveness of the monitoring mechanism, including securing information by way of electronic manifest system from the handlers of such waste and its online reporting by the state pollution control boards on daily basis by developing necessary software and, creating awareness.

## 5. COVID-19 PANDEMIC AND WAY FORWARD

The SARS-CoV-2 virus, responsible for COVID-19, has spread across at least 190 countries and more than 217,000 confirmed cases of COVID-19 and at least 6075 casualties in India have been reported (as of June 4, 2020 according to the World Health Organization), since it was first reported in China in 2019.

India's pollution watchdog, the Central Pollution Control Board (CPCB), has released guidelines for handling, treatment and safe disposal of BMW generated during treatment, diagnosis and quarantine of patients confirmed or suspected to have the novel coronavirus disease (COVID-19).

Waste treatment facilities to immediately dispose the COVID-19 waste. The Common Bio-Medical Waste Treatment Facilities (CBWTF) operators ensure regular sanitization of workers involved in handling and collection of biomedical waste and provided with adequate personal protective equipment. Facilities use dedicated vehicles to collect COVID-19 ward waste and to sanitize such vehicles after every trip.

At the quarantine facilities and during home care need to follow strict steps to ensure safe handling and disposal of waste, biomedical waste generated is collected separately in yellow colored bags and bins.

Post COVID-19 pandemic, public expenditure on health will be increased by investing in grass root level health institutions and ramping up health and wellness centers in rural and urban areas as suggested by the Government of India. Setting up of Infectious Diseases Hospital Blocks and strengthening of lab network and surveillance by Integrated Public Health Labs in all districts. Block level labs coupled with Public Health Units for management of pandemics.

## 6. CONCLUSION

Despite India being among the first country to initiate measures for safe disposal of BMW, there is an



urgent need to take action for strengthening the existing system capacity, increase the funding and commitment towards its safe disposal.

There is a large gap in reach of Biomedical Waste Management in India. Tier-3, 4 and 5 cities along with rural regions lag behind in availability of Biomedical Waste Management practice and inclusion of these regions in near future is imperative to bridge this gap.<sup>[11]</sup> Furthermore existing available infrastructure and governance needs to be improved to achieve better efficiency by means of introduction of new technology and smart systems. Healthcare management and monitoring system integrated into Smart City mission is a step in right direction. Availability of finances is a major issue for its upgradation can be improved by tools like Foreign Direct Investment and encouragement of private sector. Policy level steps regarding affordability and profitability to make the sector lucrative economically. Adoption of Global practices and innovations use can be taken from countries like Japan South Korea which have one of the highest rated Healthcare systems in the world.<sup>[12]</sup> Awareness among Healthcare workers and allied services and common citizens about threats of ill management and proper methods of Management according to clinical protocols and appropriate education, awareness and training of Healthcare workers is necessary in this regard. Waste minimization at source level with strict monitoring and audits of waste generated sources. BMW treatment can be decentralized and treated at the source by methods which create less environmental impact. Each and every healthcare facilities which generates biomedical waste, needs to set up requisite treatment facilities to ensure proper treatment of wastes and its disposal so as to minimize the risk of exposure to staff, patients, doctors and the community from biomedical hazards. BMW Management Board must be established in each district.

Outbreak of COVID-19 pandemic has tested the system, forced it to perform more efficiently and helped evolution of the policy level guidelines. This has also brought awareness among common citizens.

The lessons learnt from this pandemic coupled with existing policies and management systems can help in rapid transformation of the sector to achieve the established benchmarks.

## 7. REFERENCES

1. Datta Priya, Mohi Gursimran, Chander Jagdish, (2017), *Biomedical waste management in India: Critical appraisal*, Department of Microbiology, Government Medical College Hospital, Chandigarh, India
2. Anurag V, Tiwari A and Prashant A. Kadu (2013), *Biomedical Waste Management Practices in India- A Review*, Department of Civil Engineering, G H R P, Amravati, India
3. Ministry of Environment, Forest and Climate Change (2016) *Biomedical Waste Management Rules*.
4. Singh Anju, Unnikrishnan Seema and Dongre Samridhi (2019). *Biomedical Waste Management in India: Awareness and Novel Approaches*, Environmental Engineering and Management area National Institute of Industrial Engineering (NITIE), India
5. Ministry of Environment, Forest and Climate Change (2016) *Biomedical Waste Management Rules*.
6. *Manual for Biomedical Waste Management (2018)*, Government medical college & hospital-32, Chandigarh.
7. Mishra Kirti, Sharma Anurag, Sarita, Ayub Shahnaj, (2011), *A Study: Biomedical Waste Management in India*, IOSR Journal of Environmental Science, Toxicology and Food Technology (IOSR-JESTFT)
8. ASSOCHAM India (2018) *Unearthing the growth curve and necessities of bio medical waste management in India*.
9. Babu Ramesh , Parande A., Rajalakshmi R, Suriyakala P., Volga M. (2009), *Management of Biomedical Waste in India and Other Countries: A Review*, Central Electrochemical Research Institute, Karaikudi, Tamilnadu, India
10. Gupta Saurabh, Boojh Ram (2006), *Biomedical waste management practices at Balrampur Hospital, Lucknow, India, Centre for Energy, Environment & Technology, Hyderabad*
11. Muduli K, Barve A (2012), *Challenges to waste management practices in Indian health care sector. In International Conference on Environment Science and Engineering*.
12. P Datta, Mohi GK, Chander J (2018), *Biomedical Waste Management in India: Critical appraisal. Journal of Laboratory Physicians*



## A STUDY ON EFFECT OF HORMONES SECRETION & NUTRITION LEVEL ON BODY BUILDERS AND FOOTBALLERS

<sup>1</sup>Mohammad Afroz Abbas

<sup>1</sup>Department of physical education,  
OPJS University,  
Churu, Sadulpur,  
Rajasthan, 331303

Dr. Vijay Singh<sup>2</sup>

<sup>2</sup>Department of physical education,  
University of Kota,  
Rajasthan, 324005

### ABSTRACT

*The purpose of the study to show an effects of hormones secretion & nutrition level on body builders and football players. In this study, fifty players were selected form universities of Rajasthan state. Players age between 19 to 26 years. Players were divided into three groups. First group for interval training, second group for complex training and third one is for combination of interval & complex training. the pre-test been done one each football players and this test is been conducted to know some parameters like speed, endurance and performance. 12-week duration is selected for this study. Post-test is the final score. For the statistical analysis of pre and post-test, ANCOVA is used. It is used to find out the mean difference, 'F' ratio and scheff's post hoc test. 0.05 level is fixed. Pilot study helps initiate the capacity of the players to fix the load.*

**KEYWORDS-** hormone secretion, nutrition level, speed, endurance and performance

### INTRODUCTION

In 21<sup>st</sup> century everyone needs to be fit and fine. Yoga, body building and meditation are some examples of healthy tips to make human body fit and perfect.<sup>1,2</sup> Body building is a progressive resistance exercise. It can help to control and develop musculature. A person which are engaged in this is known as body builder. Body builder performed different types of poses in body building competitions<sup>3,4,5</sup>. Judges in this competition may judge their posing, muscularity, sizes and stage of presentation. Throughout competitions body builders eliminated the nonessential body fat, enhanced the combination of extracellular dehydration and carbohydrate loading for maximum muscle vascularity. For competitions body builder may tan and shave their skin.<sup>6,7,8</sup> There are some body-builders who use artificial anabolic steroids and use of other drugs to build and recover the muscles injuries. This drug may cause health risks that's why some competitions these drugs are banned. The winner of Mr. Olympia is the top male professional body-builder<sup>9,10,11</sup>.

Now a day, body builders uses AAS (anabolic-androgenic steroids) it helps to increases the body muscular hypertrophy but it has various health risk. Excess of AAS may lead death also. Before and after training body builders takes supplementing with protein, branched chain amino

acids, creatine<sup>12,13,14</sup>. Before 8-12 weeks of competitions, body builder may focus on reducing the body fat to very low levels for retaining muscle mass. For this body builder uses AAS and combinations of drugs to ensure minimal muscle mass loss. At this time if body builders are engaged in aerobic exercises it may lose their body mass. Aerobic exercises may resist muscular hypertrophy, which may elevate circulating cortisol with endurance exercises and also promote catabolic environment. If aerobic exercise is done in large volumes it may leads to counterproductive<sup>15,16,17,18</sup>.

Body building is an art and culture. Peoples takes it more than sport. Three phase of body building- muscle gain phase, dieting phase and competition. In dietary phase, body builders are focus on increasing muscles mass while minimizing excess increase in fat mass. Selection of food in body building is most important things<sup>19,20,21</sup>. Body builders may have very rigid attitudes towards food selections, their meal frequency and nutrition timing with supplementation. In earlier time magazines and successful competitors may inform about the nutrition and supplementations. In recent time, internet and forums gives the information. Most of the body builder may spend their time on off-seasons



and may require clear and safe nutrition and dietary  
**FOODS FOR BODY BUILDING**

Foods are the main fuel to the body. it gives body strength, improvements, growth etc. some foods which are used for body building are<sup>24,25</sup>

**1. oysters-** these foods have played a big role in hormones productions; it also contains zinc. Some study shows that if any body builder takes zinc supplements this will exhaust the higher post workout testosterone then placebo. There are some other foods which are high in zinc like chicken liver and pumpkin seeds.

**2. Greek yogurt-** yogurts contains higher concentrations of proteins. It is produced by staining excess amount of liquid and carbohydrates from regular yogurt. These may result in higher concentration of casein, a slow digesting proteins and releases slowly amino acids to the blood stream. Before sleeping if body builders consumed casein it provides an increase amino acid in blood. It was sustained throughout the night and increases in synthesis of protein. Greek yogurt may useful for muscle-building.<sup>26,27</sup>

**3. steak-** many body builders can take benefits from saturated fats. Some study shows that high fat/ low fiber and low fat /high fiber can yield more amount of testosterone level. If nay body builder train with a heavy weight he or she may require higher amount of fats and fibers.

**4. Oatmeal** – oat meals contain high amount of fibers. Fibers contained water. It can help to dilute harmful chemical by binding with them and dilute that. It can hasten the unwanted food residues in digestive track. One serving of oatmeal contain 13 percent of fibers. It digests very slowly. It should not eat before exercise. It is the best food for the body. whole grain, fruits, vegetables, seeds, beans and legumes are included.<sup>28,29</sup>

**5. Grapefruit-** resveratrol are presents in grapes. It helps to protect form bacteria and fungi. It has aromatase inhibitors. This converts testosterone and androgens into estrogens. It is also used for lean mass and promotes testosterone level. it contains vitamin C. its helps in me metabolic system and it also has fat burning capabilities. Chemicals which are present in grapes may helps to reduces the level of insulin, fat metabolism and body processes energy more efficiently<sup>30,31</sup>.

**6. beetroots-** beetroot juices may increase the production of nitric oxide gases in the body. it helps blood vessels to dilate and blood flow increases. It helps to improve the oxygen and nutrient delivery to muscles and other tissues. it improves the athletic performance and recovery. It helps to reduce the level of exertion and decreases the amount of oxygen to complete a workout.

**7. Butter-** butter contains high level of nutrients. It was depend on cow breads like grass-fed beef

supplements.<sup>22,23</sup>

contains more amount of omega-3s than normal cows bread. It also contains a higher amount of stearic acid and it doesn't raise the blood cholesterol levels.

**8. Bananas-** enzyme bromelain, was present in bananas. It can boost a man's libido. It also contains B vitamins such as riboflavin. Bromelain is also found in pineapples. It helps to treat indigestion and reduce inflammation<sup>32,33</sup>.

## HORMONES

Chemical messengers of the body are known as hormones. These are travelling through bloodstream and help the tissues and organs to do their proper works.<sup>1,2</sup> Body releases several types of hormones it acts on different aspects of bodily functions.<sup>1</sup> In human body, hormones are released from several glands. It may be required for growth, development, reproduction etc.<sup>34,35</sup> These hormones coordinate the activity of human body and living organism for their growth and development. Endocrine glands help them to release from special tissues in human body.<sup>36,37</sup> Hormone can produce many effects on human body. Different types of hormones produce different types of actions. Some hormones are do their jobs very quickly and stopped but some hormones are for long period of time and had their effects for long periods.<sup>38,39,40</sup>

## METHODOLOGY

Research Methodology of any research is most important things. Here in this study, some methodology are selection of subjects, selection of variables, experimental design, pilot study, criterion measures and selection of tests, reliability of data, reliability of instruments, subject reliability, orientation of the subjects, administration of test items, administration of training programs, collection of data, statistical techniques and its justification adopted for the analysis of data have been done.

## SELECTION OF SUBJECTS

Study has done to find out the isolation and combined effect of football players training on selected endurance, speed and performance parameters. For this study, fifty men and female players were selected form universities of Rajasthan state. Players age between 19 to 26 years. Players were divided into three groups. First group for interval training, second group for complex training and third one is for combination of interval & complex training. Everything will be explained in neat and clean procedure so that player should understand that thing and might give their best.

## SELECTION OF VARIABLES

By searching whole literatures from books, websites or any other sources to find the importance of interval and complex training. Dependent and independent variables are used this study:



**1. DEPENDENT VARIABLES**

➤ **Endurance Parameters**

- 1. Speed Endurance
- 2. Muscular Endurance
- 3. Cardio Respiratory Endurance

➤ **Speed Parameters**

- 1. Speed
- 2. Stride Length
- 3. Stride Frequency

➤ **Performance Parameters**

- 1. Kicking
- 2. Dribbling

**2. INDEPENDENT VARIABLES**

- Group I – Interval Training
- Group II – Complex Training
- Group III – Combined Interval and Complex Training

**EXPERIMENTAL DESIGN**

Pre and post-test were done the selected groups. Fifty players were selected from the OPJS university, Rajasthan, India. Age of selected players ed in this study.

in between 19 to 26 years. Players were grouped into three. Each and every player should be divided into their respected groups. Group 1 players are for interval training, Group 2 player is for complex training and Group 3 players are for both interval and complex training. At first, the pre-test been done one each football players and this test is been conducted to know some parameters like speed, endurance and performance. 12-week duration is selected for this study. Post-test is the final score. For the statistical analysis of pre and post-test, ANCOVA is used. It is used to find out the mean difference, 'F' ratio and scheff's post hoc test. 0.05 level is fixed significance to hypotheses. Pilot study helps initiate the capacity of the players to fix the load.

**SELECTION OF TESTS**

Isolation and combined effects of interval and complex training parameters were measures in this present study. Players speed, endurance and performances before and after the training were check

S. No	Variables	Tests
1	Speed Endurance	100 Metres Run
2	Muscular Endurance	Push ups, Sit Ups
3	Cardio Respiratory Endurance	15 Min Run/Walk
4	Speed	60 Metres
5	Stride Length	Metres
6	Stride Frequency	Numbers
7	Kicking	Soccer Test
8	Dribbling	Soccer Test

**1. ENDURANCE PARAMETERS**

**Speed Endurance (100 meters run)**

**Aim:** - To calculate the speed endurance of players.

**Equipment's used:**

Measuring tape, clapper and Stopwatch.

**Procedure:**

For maximum efforts, player may stand and crouch for 100meters run. Test score may be calculated by the time for clap to crosses the finish line. The fractions were rounded to the next largest one tenth of a second. Digital

electronic watch is used. average velocity is calculated by using the following formula:

$$\text{Speed endurance} = \frac{\text{Distance}}{\text{time}} / \text{mts/seconds}$$



## Results and discussion

ANCOVA analysis of mean of interval, complex and combined training on speed endurance

	Interval training	Complex training	Combined interval and complex training	Df	F ratio
Pre-test means	19.25	19.89	19.27	2	0.16
Post-test means	19.33	19.87	19.89	2	20.46
Adjusted post-test means	18.83	18.89	18.50	2	19.70

The table shows the Pre-test means of interval training, complex training and combined interval and complex training were 19.25, 19.89 and 19.27. The obtained F-ratio for the pre-test was 0.16. the pre-test mean F-ratio was insignificant at 0.05 level of confidence.

It prove that there were no significant differences between the experimental groups. It indicates that the groups process was perfect while assigning the subjects to groups.

Post-test means of the interval training, complex training and combined interval and complex training were 19.33, 19.87 and 19.89. F-ratio for the post-test was 20.46. post-test mean F-ratio was significant at 0.05 level of confidence. it proves that the post-test means of the players were significant.

Adjusted post-test means of the interval training, complex training and combined interval and complex training were 18.83, 18.89 and 18.50. F-ratio for the adjusted post-test means was 19.70. F-ratio was significant at 0.05 level of confidence. It proves that a significant difference among the means due to the experimental trainings on speed endurance. significant differences were recorded, the results were subjected to post hoc analysis using Scheffe's post hoc test.

From the table, the means of speed endurance among combined interval and complex training group was 19.27, interval training group with mean value of 19.25, and complex training group with mean value of 19.89. ANCOVA is used to analysis of pre and

post test scores and adjusted mean scores of the players. F values were 0.16, 20.46 and 19.70. F value on pre-test scores are not significant and F values on post-test and adjusted means were significant at 0.05 level of confidence. these are greater than table value. Scheff's post hoc test proves that twelve weeks training combined and complex groups are improved speed endurance of football players.

### Muscular Endurance (push up and Sit-ups)

**Aim:** Measure the muscular endurance of the players.

**Equipment's used:** Mats, stop watch and whistle.

### Procedure:

Participants player were lie on the back with knees band. With the heels the feet is on the floor. The angle must be around 90 degrees. Fingers were place behind the neck with elbow touching the mat. Players are then curled up to a sitting position and touches the knees. These were done by many times. Push ups may be done by raising and lower the body portions using arms. One point was scored for each correct push ups and sit-up. Winner whose score was the maximum push ups and sit-ups completed in one minute.

### Results and discussion-

ANCOVA analysis of mean of interval, complex and combined interval and complex training on muscle endurance

	Interval training	Complex training	Combined interval and complex training	Df	F ratio
Pre-test means	34.15	35.70	34.95	2	0.80
Post-test means	40.66	39.65	42.97	2	12.99
Adjusted post-test means	40.16	39.79	42.98	2	12.50

The table shows the Pre-test means of interval training, complex training and combined interval and

complex training were 34.15, 35.70 and 34.95. The obtained F-ratio for the pre-test was 0.80. the pre-test





mean F-ratio was insignificant at 0.05 level of confidence. It prove that there were no significant differences between the experimental groups. It indicates that the groups process was perfect while assigning the subjects to groups.

Post-test means of the interval training, complex training and combined interval and complex training were 40.66, 39.65, 42.97. F-ratio for the post-test was 12.99. post-test mean F-ratio was significant at 0.05 level of confidence. it proves that the post-test means of the players were significant.

Adjusted post-test means of the interval training, complex training and combined interval and complex training were 40.16, 39.79 and 42.98. F-ratio for the adjusted post-test means was 12.99. F-ratio was significant at 0.05 level of confidence. It proves that a significant difference among the means due to the experimental trainings on speed endurance. significant differences were recorded, the results were subjected to post hoc analysis using Scheffe's post hoc test. On muscular endurance, due to experimental training a significant difference on means.

From the table, the means of muscular endurance among combined interval and complex training group was 42.98, interval training group with mean value of 34.95, and complex training group with mean value of 42.97. ANCOVA is used to analysis of pre and post test scores and adjusted mean scores of the players. F values were 0.80, 12.99 and 12.50. F value on pre-test scores are not significant

and F values on post-test and adjusted means were significant at 0.05 level of confidence. these are greater than table value. Scheff's post hoc test proves that twelve weeks training combined and complex groups are improved muscular endurance of football players.

### **Cardio-Respiratory Endurance (15 Minutes Run/Walk)**

**Aim:** to assess the cardio-respiratory endurance of the players.

#### **Equipment's used:**

100-meter track, stop watch, whistle, score sheets and pencils

#### **Procedure:**

This test were administrated with the help of qualified testers. In this 100-meter track were taken and after every ten meters. These are the lap scorers. Players were instructed by instructor to cover as much distance as possible by running and walking until the final whistle. Left minutes are announced to the player after completion of every minutes. A long whistle is been blown after twelve minutes players are stopped instantly and stood on the spot. Lap scorer go to spot and take the reading in tenth meter. The distance covered by the players was used as a measure of cardio-respiratory endurance.

#### **Result and discussion-**

ANCOVA analysis of mean of interval, complex and combined interval and complex training on cardio-respiratory endurance

	<b>Interval training</b>	<b>Complex training</b>	<b>Combined interval and complex training</b>	<b>Df</b>	<b>F ratio</b>
<b>Pre-test means</b>	2256.40	2156.40	2166.40	2	1.34
<b>Post-test means</b>	2756.10	2656.10	2676.10	2	13.56
<b>Adjusted post-test means</b>	28.20	29.20	29.50	2	13.89

The table shows the Pre-test means of interval training, complex training and combined interval and complex training were 2256.40, 2156.40 and 2166.40. The obtained F-ratio for the pre-test was 1.34. the pre-test mean F-ratio was insignificant at 0.05 level of confidence. It prove that there were no significant differences between the experimental groups. It indicates that the groups process was perfect while assigning the subjects to groups.

Post-test means of the interval training, complex training and combined interval and complex training were 2756.10, 2656.10 and 2676.10. F-ratio for the post-test was 13.56. post-test mean F-ratio was significant at 0.05 level of confidence. it proves

that the post-test means of the players were significant.

Adjusted post-test means of the interval training, complex training and combined interval and complex training were 28.20, 29.20 and 29.50. F-ratio for the adjusted post-test means was 13.89. F-ratio was significant at 0.05 level of confidence. It proves that a significant difference among the means due to the experimental trainings on speed endurance. significant differences were recorded, the results were subjected to post hoc analysis using Scheffe's post hoc test. On cardio respiratory endurance, due to experimental training a significant difference on means.



From the table, the means of cardio-respiratory endurance among combined interval and complex training group was 2166.40, interval training group with mean value of 2256.40, and complex training group with mean value of 2156.40. ANCOVA is used to analysis of pre and post test scores and adjusted mean scores of the players. F values were 1.34, 13.56 and 13.89. F value on pre-test scores are not significant and F values on post-test and adjusted means were significant at 0.05 level of confidence. these are greater than table value. Scheff's post hoc test proves that twelve weeks training combined and complex groups are improved cardio respiratory endurance of football players.

## 2. SPEED PARAMETERS

### Speed (60 Metres Run)

**Aim:** Measure the speed of the player.

	Interval training	Complex training	Combined interval and complex training	Df	F ratio
Pre-test means	8.21	8.01	9.01	2	0.09
Post-test means	7.50	6.50	6.55	2	3.87
Adjusted post-test means	7.39	7.50	7.70	2	3.94

Table shows the Pre-test means of interval training, complex training and combined interval and complex training were 8.21,8.01 and 9.01. The obtained F-ratio for the pre-test was 0.09. the pre-test mean F-ratio was insignificant at 0.05 level of confidence.

It prove that there were no significant differences between the experimental groups. It indicates that the groups process was perfect while assigning the subjects to groups.

Post-test means of the interval training, complex training and combined interval and complex training were 7.50,6.50 and 6.55. F-ratio for the post-test was 3.87. post-test mean F-ratio was significant at 0.05 level of confidence. it proves that the post-test means of the players were significant.

Adjusted post-test means of the interval training, complex training and combined interval and complex training were 7.39, 7.50 and 7.70. F-ratio for the adjusted post-test means was 3.94. F-ratio was significant at 0.05 level of confidence. It proves that a significant difference among the means due to the experimental trainings on speed endurance. significant differences were recorded, the results were subjected to post hoc analysis using Scheffe's post hoc test. On speed, due to experimental training a significant difference on means.

From the table, the means of speed among combined interval and complex training group was 9.01, interval training group with mean value of 8.21,

**Equipment's used:** Track for running, a finish line, stopwatch and a clapper.

### Procedure:

Players were stand at starting position. For better results, two players were run in same direction with same time. The time of clap to crossing the finishing line was taken as test score. The fractions were rounded to the next largest one tenth of a second. stopwatches were used. Two trials were recorded sufficient rest in between. The time taken between the starters and crossed the finishing line was measured as the score in 1/10th of the second.

### Results And Discussion-

ANCOVA of co variance of mean on interval, complex and combined interval and complex training on speed

and complex training group with mean value of 8.01. ANCOVA is used to analysis of pre and post test scores and adjusted mean scores of the players. F values were 0.09, 3.87 and 3.94. F value on pre-test scores are not significant and F values on post-test and adjusted means were significant at 0.05 level of confidence. these are greater than table value. Scheff's post hoc test proves that twelve weeks training combined and complex groups are improved speed of football players.

### Stride Length (60 Metres Run)

**Purpose:** The purpose of this test was to measure the stride length of the subjects.

**Equipment:** track for running, measuring tape, saw dust and clapper.

### Procedure:

Players were allowed to run fast about 60 metres to measure speed, length of stride, which consists of acceleration zone of 30 metres and the test zone of 30 metres. Players uses the acceleration zone to gain maximum speed through the 30 metres test course. sawdust was spread over the test zone. the bilateral discrepancies two successive strides are measured to the nearest centimetre. The results were recorded into centimetres

### Results and discussion-

ANCOVA of co variance of mean on interval, complex and combined interval and complex training on speed



	Interval training	Complex training	Combined interval and complex training	Df	F ratio
Pre-test means	1.65	1.88	1.68	2	1.10
Post-test means	1.60	1.78	1.88	2	19.70
Adjusted post-test means	1.68	1.69	1.71	2	18.20

The table shows the Pre-test means of interval training, complex training and combined interval and complex training were 1.65, 1.88 and 1.68. The obtained F-ratio for the pre-test was 1.10. The pre-test mean F-ratio was insignificant at 0.05 level of confidence. It proves that there were no significant differences between the experimental groups. It indicates that the groups process was perfect while assigning the subjects to groups.

Post-test means of the interval training, complex training and combined interval and complex training were 1.60, 1.78 and 1.88. F-ratio for the post-test was 19.70. post-test mean F-ratio was significant at 0.05 level of confidence. It proves that the post-test means of the players were significant.

Adjusted post-test means of the interval training, complex training and combined interval and complex training were 1.68, 1.69 and 1.71. F-ratio for the adjusted post-test means was 18.20. F-ratio was significant at 0.05 level of confidence. It proves that a significant difference among the means due to the experimental trainings on speed endurance. significant differences were recorded, the results were subjected to post hoc analysis using Scheffe's post hoc test. On stride length, due to experimental training a significant difference on means.

From the table, the means of stride length among combined interval and complex training group was 1.68, interval training group with mean value of

1.65, and complex training group with mean value of 1.88. ANCOVA is used to analysis of pre and post test scores and adjusted mean scores of the players. F values were 1.10, 19.70 and 18.20. F value on pre-test scores are not significant and F values on post-test and adjusted means were significant at 0.05 level of confidence. these are greater than table value. Scheff's post hoc test proves that twelve weeks training combined and complex groups are improved stride length of football players.

**Stride Frequency (60 Metres Run)**

**Aim:** to measure the stride frequency of the player.

**Equipment's used:**

stopwatch, test course and clapper.

**Procedure:**

players were run fast about 60 metres to measure speed; the measurement of frequency was taken in the test zone of 30 metres. The time elapsed for the players to contacts of the players after the initial supporting phase in the test zone. recording the time taken for ten strides. Dividing the number of strides taken by the time recorded given the number of strides ran in one-second.

**Result and discussion-**

ANCOVA of co variance of mean on interval, complex and combined interval and complex training on stride frequency

	Interval training	Complex training	Combined interval and complex training	Df	F ratio
Pre-test means	3.89	3.92	3.82	2	0.48
Post-test means	4.01	4.88	4.78	2	4.59
Adjusted post-test means	3.69	3.72	3.81	2	4.70

The table shows the Pre-test means of interval training, complex training and combined interval and complex training were 3.89, 3.92 and 3.82. The obtained F-ratio for the pre-test was 0.48. The pre-test mean F-ratio was insignificant at 0.05 level of confidence. It prove that there were no significant differences between the experimental groups. It indicates that the groups process was perfect while assigning the subjects to groups.

Post-test means of the interval training, complex training and combined interval and complex training were 4.01, 4.88 and 4.78. F-ratio for the post-test was 4.59. post-test mean F-ratio was significant at 0.05 level of confidence. it proves that the post-test means of the players were significant.

Adjusted post-test means of the interval training, complex training and combined interval and complex training were 3.69, 3.72 and 3.81. F-ratio



for the adjusted post-test means was 4.70. F-ratio was significant at 0.05 level of confidence. It proves that a significant difference among the means due to the experimental trainings on speed endurance. significant differences were recorded, the results were subjected to post hoc analysis using Scheffe's post hoc test. On stride frequency, due to experimental training a significant difference on means.

From the table, the means of stride frequency among combined interval and complex training group was 3.82, interval training group with mean value of 3.89, and complex training group with mean value of 3.92. ANCOVA is used to analysis of pre and post test scores and adjusted mean scores of the players. F values were 0.48, 4.59 and 4.70. F value on pre-test scores are not significant and F values on post-test and adjusted means were significant at 0.05 level of confidence. these are greater than table value. Scheff's post hoc test proves that twelve weeks

training combined and complex groups are improved stride frequency of football players.

### 3. PERFORMANCE PARAMETERS

#### Kicking (Soccer Test)

**Purpose:** Football kicking ability of the player.

**Equipment's used:** 3 soccer balls and stopwatch. a restraining line.

#### Procedure:

At restraining line a soccer ball is placed. after signal, the test performer kicks the ball against the wall. Two soccer balls are placed 9 feet behind the restraining line in the centre of the test area. In the event of a kick, the test performer may retrieve the ball or use one of the two additional balls. Every kick must be kicked behind the restraining line. The number of legal kicks each 30 second period was recorded. score was the highest total of any four trials.

#### Result and discussion-

ANCOVA of co variance of mean on interval, complex and combined interval and complex training on kicking

	Interval training	Complex training	Combined interval and complex training	Df	F ratio
Pre-test means	25.60	25.88	25.78	2	0.48
Post-test means	32.06	32.66	33.66	2	5.95
Adjusted post-test means	31.10	30.72	33.81	2	5.88

The table shows the Pre-test means of interval training, complex training and combined interval and complex training were 25.60, 25.88 and 25.78. The obtained F-ratio for the pre-test was 0.48. the pre-test mean F-ratio was insignificant at 0.05 level of confidence. It prove that there were no significant differences between the experimental groups. It indicates that the groups process was perfect while assigning the subjects to groups.

Post-test means of the interval training, complex training and combined interval and complex training were 32.06, 32.66 and 33.66. F-ratio for the post-test was 5.95. post-test mean F-ratio was significant at 0.05 level of confidence. it proves that the post-test means of the players were significant.

Adjusted post-test means of the interval training, complex training and combined interval and complex training were 31.10, 30.72 and 33.81. F-ratio for the adjusted post-test means was 5.88. F-ratio was significant at 0.05 level of confidence. It proves that a significant difference among the means due to the experimental trainings on speed endurance. significant differences were recorded, the results were subjected to post hoc analysis using Scheffe's

post hoc test. On kicking, due to experimental training a significant difference on means.

From the table, the means of kicking among combined interval and complex training group was 25.78, interval training group with mean value of 26.60, and complex training group with mean value of 25.88. ANCOVA is used to analysis of pre and post test scores and adjusted mean scores of the players. F values were 0.48, 5.95 and 5.88. F value on pre-test scores are not significant and F values on post-test and adjusted means were significant at 0.05 level of confidence. these are greater than table value. Scheff's post hoc test proves that twelve weeks training combined and complex groups are improved kicking of football players.

#### Dribbling (Football Test)

**Aim:** measures Football dribbling ability.

**Markings:** 20-yard diameter was measured and marked. Around the circles a Twelve-inch cones were located at 5-yard intervals. A 3 feet perpendicular line were draw.

#### Procedure:

Players start dribbling the ball around the starting line. Players dribbles between the cones as quick as possible and back to starting line. Three trails have



been done, first one is clockwise, second one counter clockwise and third one direction of choice. The final test score are the combination of the two best trials.

### Results and Discussion of Dribbling

ANCOVA analysis of interval, complex and combined interval and complex training on dribbling

	Interval training	Complex training	Combined interval and complex training	Df	F ratio
Pre-test means	22.43	22.56	23.56	2	0.48
Post-test means	18.66	18.99	19.99	2	5.23
Adjusted post-test means	18.00	17.99	17.22	2	5.33

The table shows the Pre-test means of interval training, complex training and combined interval and complex training were 22.43, 22.56 and 23.56. The obtained F-ratio for the pre-test was 0.48. the pre-test mean F-ratio was insignificant at 0.05 level of confidence. It prove that there were no significant differences between the experimental groups. It indicates that the groups process was perfect while assigning the subjects to groups.

Post-test means of the interval training, complex training and combined interval and complex training were 18.66, 18.99 and 19.99. F-ratio for the post-test was 5.23. post-test mean F-ratio was significant at 0.05 level of confidence. it proves that the post-test means of the players were significant.

Adjusted post-test means of the interval training, complex training and combined interval and complex training were 18, 17.99 and 17.22. F-ratio for the adjusted post-test means was 5.33. F-ratio was significant at 0.05 level of confidence. It proves

that a significant difference among the means due to the experimental trainings on speed endurance. significant differences were recorded, the results were subjected to post hoc analysis using Scheffe's post hoc test. On dribbling, due to experimental training a significant difference on means.

From the table, the means of dribbling among combined interval and complex training group was 23.56, interval training group with mean value of 22.43, and complex training group with mean value of 22.56. ANCOVA is used to analysis of pre and post test scores and adjusted mean scores of the players. F values were 0.48, 5.23 and 5.33. F value on pre-test scores are not significant and F values on post-test and adjusted means were significant at 0.05 level of confidence. these are greater than table value. Scheff's post hoc test proves that twelve weeks training combined and complex groups are improved dribbling of football players.

### SUMMARY AND CONCLUSIONS

The study was to find out the isolated and combined effect of interval training and complex training on selected endurance, speed and performance parameters among football players. To achieve this study, fifty football players from OPJS university, Rajasthan, India were selected and their ages ranged from 19 to 26 years. Players were divided into three equal groups. Group I is for Interval Training, Group II acted as Complex training and Group III acted as Combined Interval & Complex Training.

The duration of experimental period was 12 weeks. all the fifty players were tested on their selected endurance, speed and performance parameters.

This final test scores formed as post test scores. The pre-test and post test scores were analysis using Analysis of Covariance (ANCOVA) to find out the significance among the mean differences. 'F' ratio for adjusted test was found to be significant. Scheffe's post hoc test was used. In all cases 0.05 level of significance was fixed to test hypotheses.



## REFERENCES

1. Alkahtani S. (2014). Comparing fat oxidation in an exercise test with moderate intensity interval training. *J Sports Sci Med.* 13(1):51-8.
2. Alkahtani, S.A., Byrne, N.M., Hills, A.P. & King, N.A. (2014). Interval Training Intensity Affects Energy Intake Compensation in Obese Men. *Int J Sport Nutr Exerc Metab.* 2014 Mar 25.
3. Alves, J.M.V.M., Rebelo, A.N., Abrantes, C., and Sampaio, J. (2010). Short term effects of complex and contrast training in soccer players' vertical jump, sprint, and agility abilities. *J Strength Cond Res;*24(4): 936–941.
4. Comyns TM, Harrison AJ, Hennessy LK, Jensen RJ. (2006). The Optimal Complex Training Rest Interval for Athletes From Anaerobic Sports. *J Strength Cond.* 20(3):471-476.
5. Conroy, T.R. (1991). Plyometric Training and its Effects on Speed, Strength and Power of Inter-Collegiate Athletes, Abstract, *Microform Publication Bulletin*,72.
6. Daniel, J., Jose, M., Gonzalez, R., & Fernando, N. (2009). Effects of complex vs noncomplex training programs on lower body maximum strength and power. *Isokinetics and Exercise Science.* 17-4. 233-241.
7. Dhayanithi, R. (1991). Comparative Analysis of Continuous Running, Interval Running and the Combined Effects on Cardio respiratory Endurance”, Unpublished M.Phil., Dissertation, Pondicherry University, Pondicherry.
8. Eduardo, J.A. M. S., & Manuel, A. A. S.J., (2008). Effects of complex training on explosive strength in adolescent male basketball players. *The Journal of Strength and Conditioning Research.* 22(3):903-9.
9. Engel, F.A, & Sperlich, B. (2014). High Intensity Interval Training for Young Athletes. *Wien Med Wochenschr.* 2014 Apr 15.
10. Esformes, JI, Keenan, M, Moody, J, and Bampouras, TM. Effect of different types of conditioning contraction on upper body postactivation potentiation. *J Strength Cond Res* 25(X): 000-000, 2011.
11. Fagan, C.D. & P.K. Doyle Baker. (2000). The Effects of Maximum Strength and Power Training Combined with Plyometrics on Athletic Performance. *Medicine and Science in Sports and Exercise,* 32(5).
12. Faude, O., Schmittker, R., Schulte, Z. R, Muller, F. & Meyer, T. (2013). High intensity interval training vs. high-volume running training during preseason conditioning in high-level youth football: a cross-over trial. *J Sports Sci.* 2013;31(13):1441-50.
13. Faude, O., Steffen, A., Kellmann, M. & Meyer, T. (2014). The Effect of ShortTerm Interval Training During the Competitive Season on Physical Fitness and Signs of Fatigue: A Cross-Over Trial in High Level Youth Football Players. *Int J Sports Physiol Perform.* 2014 Mar 11.
14. Ferrari, B.D., Impellizzeri, F.M., Rampinini, E., Castagna, C., Bishop, D. & Wisloff, U. (2008). Sprint vs. Interval Training in Football. *Int J Sports Med.* 29(8):668-74.
15. French, D.H., Kraemer, W.J., Cooke, C.B. (2003). Changes in dynamic exercise performance following a sequence of preconditioning isometric muscle actions. *Journal of Strength and Conditioning Research,* 17(4), 678-685.
16. Gabbett, T.J., Whyte, D.G., Hartwig, T.B., Wescombe, H. Naughton, G.A. (2014). The Relationship Between Workloads, Physical Performance, Injury and Illness in Adolescent Male Football Players. *Sports Med.*2014 Apr 9.
17. Gillen, J.B. & Gibala, M.J. (2014). Is high-intensity interval training a timeefficient exercise strategy to improve health and fitness? *Appl Physiol Nutr Metab.* 39(3):409-12.
18. Goran, S., Zoran, M., Nebojsa, T. & Aleksandar, J. (2011). Correlation between Speed, Agility and Quickness (saq) in Elite Young Soccer Players. *Acta Kinesiologica,* 2: 36-41.
19. Ingebrigtsen, J., Dillern, T. & Shalfawi. (2011). Aerobic capacities and anthropometric characteristics of elite female soccer players. *J Strength Cond Res* 25(12): 3352–3357.
20. Jovanovic, M., Sporis, G., Omrcen, D. & Fiorentini, F. (2011). Effects of speed, agility, quickness training method on power performance in elite soccer players. *J Strength Cond Res.* 25(5):1285-92.
21. Keating, S.E., Machan, E.A., O'Connor, H.T., Gerofi, J.A., Sainsbury, A., Catterson, I.D. & Johnson, N.A. (2014). Continuous exercise but not high intensity interval training improves fat distribution in overweight adults. *J Obes.* 2014:834865.
22. Lesinski, M., Muehlbauer, T., Busch, D. & Granacher, U. (2014). Effects of Complex Training on Strength and Speed Performance in Athletes: A Systematic Review. *Sportverletz Sportschaden.* 2014 Mar 5.
23. Lloyd, R. & Deutsch, M. (2008). Effect of order of exercise on performance during a complex training session in rugby players. *J Sports Sci.* 26(10):1122.
24. Logan, G.R., Harris, N., Duncan, S. & Schofield, G. (2014). A Review of Adolescent High-Intensity Interval Training. *Sports Med.* 2014 Apr 18.
25. Loudovikos, D. L., Jacky, F., Ceorge, L. & Charilaos, T. (2013). The Acute Effect of Upper-Body Complex Training on Power Output of Martial Art Athletes as Measured by the Bench Press Throw Exercise. *Journal of Human Kinetics.* Volume 39, Issue 1, Pages 167–175.
26. Mahdiabadi, J., Gaeini, A.A., Kazemi, T. & Mahdiabadi, M.A. (2013). The effect of aerobic continuous and interval training on left ventricular



- structure and function in male non athletes. *Biol Sport*. 30(3):207-11.
27. Markus, D. & Rhodri L. (2008). Effect of order of exercise on performance during a complex training session in rugby players. *Journal of Sports Sciences* 26(8): 803 – 809.
28. McBride., N.M. (2002). The Effect of Heavy-Vs. Light-load Jump Squats on the Development of Strength, Power, and Speed. *Journal of Strength Conditioning Research*, 16(1), 75-82.
29. McMillan, K., Helgerud, J., Macdonald, R. & Hoff, J. (2005). Physiological adaptations to soccer specific endurance training in professional youth soccer players. *Br J Sports Med*. 39(5):273-7.
30. Orendurff, M.S., Walker, J.D., Jovanovic, M., Tulchin, K.L., Levy, M. & Hoffmann, D.K. (2010). Intensity and duration of intermittent exercise and recovery during a soccer match. *J Strength Cond Res* 24(10): 2683-2692.
31. Perez-Gomez, J. (2008). Effects of Weight Lifting Training Combined With Plyometric Exercises on Physical Fitness, Body Composition, and Knee Extension Velocity During Kicking in Football. *Applied Physiology and Nutrition Metabolism*, 33:3.
32. Raja, Chidambara. S. (1992). Comparative Analysis of the Effects of Continuous and Interval Running on Cardio-respiratory Endurance, Unpublished M.Phil., Dissertation, Annamalai University. Robbins, D.W. (2005). Postactivation potentiation and its practical applicability: a brief review. *J Strength Cond Res*. 19(2):453-8.
33. Rubley, M.D., Haase, A.C., Holcomb, W.R., Girouard, T.J. & Tandy, R.D. (2011). The effect of plyometric training on power and kicking distance in female adolescent soccer players. *J Strength Cond Res*. 25(1):129-34.
34. Sale, D. (2004). Postactivation potentiation: role in performance. *Br J Sports Med*. 38:386-387. Sathianarayana, Reddy. (1993). Relative Effects of Plyometric and Weight Training Followed by Plyometric Training on Power, Speed, Stride Length and Stride Frequency. Unpublished Doctoral Thesis, Annamalai University.
35. Slettalokken, G. & Ronnestad, B.R. (2014). High intensity interval training every second week maintains VO<sub>2</sub>max in soccer players during off-season. *J Strength Cond Res*. 2014 Feb 20.
36. Sundramoorthy, V. (1999). Effect of Isolated and Combined Weight and Plyometric Trainings on Selected Strength Parameters, Speed and Power”, Unpublished Doctoral Thesis, Alagappa University.
37. Thomas, K., French, D. & Hayes, P.R. (2009). The effect of two plyometric training techniques on muscular power and agility in youth soccer players. *J Strength Cond Res*. 23(1):332-5.
38. Zoran, M., Goran, S., Nebojsa, T., Nic, J. & Kresimir, S. (2013). Effects of a 12 Week SAQ Training Programme on Agility with and without the Ball among Young Soccer Players. *Journal of Sports Science and Medicine*. 12, 97-103.
39. Barrow, M. H. & McGhee, R. (1979). A practical approach to measurement in biochemical education. Philadelphia: Lea and Febiger, Edition-3rd.
40. Baumeister, R. F. (Ed.) (1999). *The self in social psychology*. Philadelphia, PA: Psychology Press (Taylor & Francis).



## EFFECT OF HORMONES SECRETION & NUTRITION LEVEL ON HEALTH: A REVIEW

<sup>1</sup>Mohammad Afroz Abbas

<sup>1</sup>Department of Physical Education,  
OPJS University,  
Churu, Sadulpur,  
Rajasthan, 331303

Dr. Vijay Singh<sup>2</sup>

<sup>2</sup>Department of Physical Education,  
University of Kota,  
Rajasthan, 324005

### ABSTRACT

*Now a day, everyone needs to fit and health. Secretions of hormones and nutrition level should be maintained for health. Chemical messengers of the body are known as hormones. These are travelling through bloodstream and help the tissues and organs to do their proper works. Body releases several types of hormones it acts on different aspects of bodily functions. Body building is a progressive resistance exercise. It can help to control and develop musculature. A person which are engaged in this is known as body builder. Body builder performed different types of poses in body building competitions. Throughout competitions body builders eliminated the nonessential body fat, enhanced the combination of extracellular dehydration and carbo-loading for maximum muscle vascularity. supplements are most important in body building. It will used by both the sex male and female. whey protein, chromium picolinate, omega 3 fatty acids, BCAA, poly-vitamins, glutamine and caffeine are some supplements used by body builders during workout.*

**KEYWORDS-** hormones, body-building, supplements

### INTRODUCTION

Chemical messengers of the body are known as hormones. These are travelling through bloodstream and help the tissues and organs to do their proper works.<sup>1,2</sup> Body releases several types of hormones it acts on different aspects of bodily functions.<sup>1</sup> In human body, hormones are released from several glands. It may be required for growth, development, reproduction etc.<sup>3,4</sup> These hormones coordinate the activity of human body and living organism for their growth and development. Endocrine glands help them to release from special tissues in human body.<sup>5,6</sup>

Hormone can produce many effects on human body. Different types of hormones produce different types of actions. Some hormones are do their jobs very quickly and stopped but some hormones are for long period of time and had their effects for long periods.<sup>7,8,9</sup>

### FUNCTION OF HORMONES

#### 1. Thyroid hormones

Thyroid hormones release from thyroid gland. It released basically two hormones T3 (triiodothyronine) and T4 thyroxine. These hormones control the metabolism system and also helps in regulate the weight, energy level determination, body temperature. It also has some effects on hairs and skins.

#### 2. Insulin

Insulin is secreted by pancreas. Pancreases located behind the stomach. It has a leaf like structure. Carbohydrates which are presents in foods, pancreases help body to use glucose or sugar from them. It gives energy and store the glucose for future work. These hormones help to regulate or keeping the blood sugar level to getting high. In higher cases it is known as hyperglycaemia and in lower cases it is hypoglycaemia.

#### 3. Estrogen

Estrogen is released by ovaries know as female sex hormones. This hormone is responsible for starting of menstruation cycle and for menopause. It is also help in reproduction. If excess amount of estrogen is released by ovaries it can causes breast cancers, uterine cancers, moodiness etc. if sufficient amount of estrogen are not released into the body it may causes acne, skin lesions, hair losses etc.<sup>10,11,12</sup>

#### 4. Progesterone

Progesterone hormone is also released by ovaries. It helps regulate various function of female body. mainly it is responsible for maintaining pregnancy and also helps to regulates monthly cycle. If the progesterone level dropped, pregnancy does not occur. plays a role in sexual desire.





## 5. Prolactin

Pituitary gland released prolactin hormone. It will be released after childbirth for lactation. It enables breastfeeding. During Pregnancy, prolactin hormones are released. It also helps in fertility by inhibiting follicle-stimulating hormone and gonadotropin-releasing hormone.<sup>13,14,15</sup>

## 6. Testosterone

Testosterone is a male sex hormone. Testosterone is also help in body building muscles and also an anabolic steroid by nature. It helps to develop the male reproductive tissues and also help to increase in body mass, body hairs etc. frailty and bone loss may occur if sufficient amount of hormones are not released.

## 7. Serotonin

This hormone is responsible for boosting the mood and also known as chemical of feel good. Serotonin helps in regulating the sleep, increase the memory and learning power, some muscles functions etc. if the sufficient amount of hormones are not released in the body it may affect the brain and also affect the mood and increase the stress level. It may lead to depression, migraine, insomnia and craving of carbohydrate etc. if very much amount of serotonin is produced by body it may lead to causes agitation, stage of confusion and sedations etc.<sup>16,17</sup>

## 8. Cortisol

For remain healthy and energetic cortisol hormones are very much important for body. it helps to control the physical and psychological stress. It may affect very badly to body if dangerous conditions are occurred it may increase the heart, blood pressures and can decreases the respiration etc. it may also occur the ulcers, high blood pressures, anxiety etc. chronic fatigue syndrome was occurred if it releases in less amount.<sup>18,19,20</sup>

## 9. Adrenaline

Adrenal gland secret adrenaline hormone. It is an emergency hormone; it gives the quick reactions for thinking and quick reactions to stress. Adrenaline hormones increase the metabolic rate, dilation of blood vessels and brain. It releases quick into the blood and send impulse to organ for a specific reaction during the stressful conditions.

## 10. Growth Hormone

Growth hormones are also known as somatotropin hormones. Somatotropin hormones contain a protein hormone which helps to synthesised and regulate the growth, cell reproduction, cell regeneration and boosting metabolism.<sup>21,22,23</sup>

### 1.3 Hormonal signalling

Hormones are releases for growth and maintenance of human body. it goes through the blood and the signals were carryout to the target. There are some important hormones signals.<sup>24,25,26</sup>

- Intracrine- it acts on cells by intracellularly and help them to synthesized it.
- Autocrine- it effects on cell and causes a biological effect.
- Paracrine – it does not enter into general circulations but acts on nearby cells.
- Endocrine- before released into bloodstream, it acts on target cells.

## BODY BUILDERS

Now a days, everyone needs to be healthy and fit. Natural bodybuilding has taken the popularity, rapidly. There are some contests of body building may occur in different countries. In this contest many body builders can take part. body building preparations involves reduction of fats for maintain of muscle mass. It can be achieved by intake of sufficient amount of calories, intense strength training and increased cardiovascular exercise.<sup>27,28,29</sup> During pre-contest period body builders has to reduces the body fats to very low levels. In this number of sets and repetitions were increases and other resistance. This may also help to burn the fats which may results in loss of muscle mass. Aerobic exercise may also help to reduces the fats. Muscles mass acceleration is the main goal in off-session body builder makes positive energy balance. Heavy weight exercise may give muscles accretion.<sup>30,31,32</sup> Some proteins are also required for that. Time of protein intake are most important for muscles mass. For high intense resistance tanning carbohydrate are most important. Carbohydrates helps to synthesis of muscles glycogen. Many body builders use anabolic steroids and also different types of drugs which help them to maintain and growth of body, may also help to recover from injuries. Now a days, in many competitions use of this drug are banned.<sup>33,34,35</sup>

## BODY BUILDING DIETS

### 1. FOODS TO EAT

- **Meats, poultry and fish:** Sirloin steak, ground beef, pork tenderloin, venison.
- **Dairy:** Yogurt, cottage cheese, low-fat milk and cheese.
- **Grains:** Bread, cereal, crackers, oatmeal, quinoa, popcorn and rice.
- **Fruits:** Oranges, apples, bananas, grapes, pears, peaches.
- **Starchy vegetables:** Potatoes, green peas, green lima beans.
- **Vegetables:** Broccoli, spinach, leafy salad greens, tomatoes, green beans,
- **Seeds and nuts:** Almonds, walnuts, sunflower seeds, chia seeds and flax seeds.
- **Beans and legumes:** Chickpeas, lentils, kidney beans, black beans.
- **Oils:** Olive oil, flaxseed oil and avocado oil.<sup>36,37,38</sup>

### 2. FOODS TO AVOIDED

- **Alcohol:** excess amount of alcohol consumption may affect muscle and lose fat.
- **Added sugars:** Foods high in added sugars include candy, cookies, doughnuts, ice cream, cake and sugar-sweetened beverages, such as soda and sports drinks.
- **Deep-fried foods:** These may promote inflammation and disease. it includes fried fish, French fries, onion rings, chicken strips and cheese curds.<sup>39,40,41</sup>



## NUTRITIONS COMPOSITION FOR BODY BUILDING

### 1. Calories and macronutrients

For competition body builders may increase their diet which are low in calories but energy expenditures are more. During this muscle maintenance and fat loss are important. At this time optimal caloric intake, deficits and macronutrients combinations are used. In this weight loss and more energy can be expended than consumed. By reducing caloric intake, these can be increasing caloric expenditures. Weight lost is depend on size of caloric deficit and length of time. Normal body can metabolize yield of 3500 kcals, for daily deficit is 500 kcals. A dynamic model does not represent the physiological adaptations. 50% of the caloric was consumed in first 24 week of competitions and 40% reduction in their baseline energy expenditure.<sup>42,43,44</sup>

### 2. Protein

Proteins are most important for body building. It can support the muscles for maintenance. Body builders require high amount of proteins. It also helps to increase the strength and increase the activity. 1.2 to 2.2 g/kg is sufficient for a normal body but body builders require more proteins. Thus, it is proved that protein intake is more during competition.

### 3. Carbohydrate

For better performance body builder need more amount of carbohydrates. It can give strength for training and also reduces the glycogen depletions it may enhance the performances. Glycogen is the main fuel source. Fat loss are done by lower carbohydrate diets and also not for performance and health.<sup>45,46</sup>

### 4. Fat

Carbohydrate and protein are most important in sports nutrition over dietary fat. Maintenance of fats are most important. It emphasizes carbohydrates to performance and protein for build and repair of low body mass. dietary fat influences anabolic hormone concentrations. It can help bodybuilders to maintain LBM. isocaloric diets may reduce 40% to 20% of testosterone levels. For competitions body builders take obligatory caloric reduction.

#### 2.4.5 Ketogenic diets

These diets contain high fat, adequate amount of proteins, low amount of carbohydrate diet. It is also used as a medicine in epilepsy. In this condition, diet force the body for fat burning rather than carbohydrate. Carbohydrates converted into glucose. It is very important for brain functions. For lower the epileptic seizures, ketone must be elevated from the blood.<sup>47,48,49</sup>

## HISTORY OF BODY BUILDING

At first the weight lifting comes into play. It was starting from stone lifting traditions which were practiced into Egypt, Greece and Tamilakam. Eugen Sandow is the father of bodybuilders. It was started from late 19<sup>th</sup> century. At first body building is used to show their strength, demonstrations or wrestling matches.<sup>50,51,52</sup>

### 1. 1950s–1960s

In 1950 and 1960 body building becomes more popular. These are for emergence of strength and

gymnastics champions.<sup>53,54</sup> There are many body building organisations. IFBB (international federations of bodybuilding) were stabilized in 1946. In 1965, the most prestigious titles were Mr. America, Mr. World, Mr. Universe, Mr. Galaxy, and ultimately Mr. Olympia was given. Advertisement of gold gym is been started in mid 1960.<sup>55,56</sup>

### 2. 1970s–1990s

In early 1970s body building becomes the most popular and most important publicity. In 1981 national physique committee was formed. It becomes the most popular bodybuilding organisation in America and the amateur division of IFBB. In this period anabolic steroids are also used for body building and it may continue through 1980 and 1990.<sup>57,58</sup> These anabolic steroids help to develop and growth of body. In late 1970, the use of anabolic steroids are openly discussed. In 1970, Vince McMahon found a new organization of body building name WBF (world body building federation). In this sport bigger prizes money and showmanship were given.<sup>59,60</sup>

### 3. 2000s

In 21<sup>st</sup> century consumptions and recreation become the more popular. IFBB makes body building an Olympic sport but many of them argue that it is not a sport.<sup>61,62</sup>

## PRE AND POST WORKOUT

## SUPPLEMENTS FOR MAXIMIZE THE PERFORMANCE OF BODY BUILDERS

### 1. Creatine

The safest supplements are creatine monohydrates. It cannot affect any part of the body like liver and kidneys. During training programme this produces significant effects and increases the muscle mass and give strength. Marketed products are CEE (creatine ethyl ester) and KA (kre alkalyn).<sup>63,64</sup>

### 2. Beta-alanine

It is a natural occurring beta amino acid in which the amino group is at  $\beta$ - positions in carboxylate group. It is the most popular supplements in body building. It enters into circulation and goes to skeletal muscles where carnosine is synthesized. It may help to decrease the fatigue and increases the muscle tone. When it taken orally it break into histidine and  $\beta$ -alanine.<sup>65,66</sup>

### 3 HMB (Beta-hydroxy-beta-methyl butyrate)

It is also a conjugate base. It naturally occurring in human body. it is also used a dietary supplements and medical foods that helps for wound healing and for muscles wasting due to HIV or cancer. It may help to gain the muscle sizes, muscle strength and lean body mass. It may lead to improve aerobic exercise performances and recovery of body. these may help to increase the lean body mass and muscle strength.<sup>67,68,69</sup>

### 4. Branched chain amino acids

Amino acids having an aliphatic side chain is known as branched-chain amino acid (BCAA). BCAA contains three amino acids: leucine, isoleucine and valine. Humans contains nine essential amino acids. Muscle proteins contains 35% of essential amino acid.<sup>70,71</sup> BCAA may be synthesis at all location of plants. It may



determine by presence of mRNAs, which encoded for enzymes in metabolic pathways. It also helps in synthesis of proteins, signal pathways and metabolism of glucose. BCAA may be oxidised it may increase the fatty acid and play a role in obesity.<sup>72,73</sup> It also helps in immune system and brain functions. dehydrogenase and decarboxylase enzymes may broken down the BCAA. It is also helps in growth of lymphocytes and proliferation and cytotoxic T lymphocytes activity.<sup>74</sup>

### 5. Arginine

Arginine contains  $\alpha$ - amino acid,  $\alpha$ -carboxylic acid and a side chain. This helps to synthesis of proteins. It is a semi-essential or essential amino acid. Protein containing foods may complete the need of arginine it can be synthesized in the body from glutamine. It is a precursor of NO. NO is the signalling molecule it acts like a secondary messenger.<sup>75,76</sup> It can regulate vasodilation and also helps immune system to fight against infections. For the synthesis of creatine some precursors like urea, ornithine and agmatine is used. asymmetric dimethylarginine (ADMA) is used for vascular diseases.<sup>77,78</sup>

### 6. Citrulline malate

It is a naturally occurring amino acids. It is a non-essential amino acid. These are founds in some foods like watermelons and also produced naturally. It is used for heart failure patients and also used for improving athletic performance. It also helps for the production of nitric oxide. It may help in potent vasodilator modulating blood flow and oxygen delivery into the body.<sup>79,80</sup> during exercise body needs oxygen for energy productions, citrulline Malte produces more NO which leads to greater supply of oxygen to working muscles.<sup>81</sup>

### 7. Glutamine

Glutamine contains  $\alpha$ - amino acid. It is used for the biosynthesis of proteins. Side chain is similar to glutamic acid, carboxylic acids are replaced by amines. It contains charge-neutral, polar amino acid. It is both essential and non-essential, so that it can synthesized into the body. in blood it is a most abundant free amino acid. Sources of glutamines are like beef, chicken, fish, eggs, vegetables etc.<sup>82,83</sup>

### 8. Caffeine

Caffeine can stimulate the central nervous system. It is a class of methylxanthine. It is also known as psychoactive drug. It helps to block the action of adenosine and prevents the onset of drowsiness. It can also stimulate autonomous nervous system. It is chemically related to adenine and guanine bases of deoxyribonucleic acid (DNA) and ribonucleic acid.<sup>84,85</sup> It may help to treat the premature infant breathing disorders. It may give some protective effect against some diseases. It can produce some drug dependence. It also has some withdrawal symptoms like sleepiness, headache and irritability.<sup>86,87</sup>

## PHYSIOLOGICAL AND BIOLOGICAL ASPECT OF HORMONE LEVEL IN MALE AND FEMALE BODY-BUILDER

Now a days, bodybuilders may abuse the anabolic androgenic steroids. It is a synthetic compound which are similar to testosterone and dihydrotestosterone hormones.

Anabolic steroids have ethyl, methyl, hydroxyl or benzyl groups. AAS may have low chronic risks as compare to tobacco and alcohol.<sup>88,89</sup> There are some hormones which may affects the body builders.

### 1. GROWTH HORMONE

Growth hormones stimulates the growth, helps in cells reproduction and cell regenerations. It is the most important hormones in human. It can also stimulate the production of IGF-1 hormones. It may increase the concentrations of glucose and free fatty acids. INN (somatropin) is the recombinant form of human growth hormones. Its helps to treat the children and adult growth hormones deficiency. Many bodybuilders may use this for more growth and more strength.<sup>90,91</sup>

### GROWTH HORMONE AND EXERCISE

These hormones can affect the exercise. Concentration of growth hormones may help to increases the duration of exercise. For more intensive exercise body need more amount of hormones in this time growth hormones will be increased by 5-10 fold. For short duration of exercise growth hormones may lead to its peak point after 30 minutes.<sup>92,93</sup> Training may endurance the pulsatile and it may elevate the growth hormones amplitude. Other factors which are responsible are it may lead to increase in hypoglycaemia, temperature increases and it may be decreases the obesity, carbohydrate- rich diet.<sup>94,95</sup>

### EFFECT OF hGH IN THE BODY

This are secreted from pituitary gland. These contains two hypothalamic peptides. By back regulations, growth hormones inhibit the hGH secretions. The secretion of hGH is higher in women with respect to men. During slow wave sleeping and during exercise hGH level are very much higher. Some drugs may increase their secretions like clonidine, L-dopa etc. it has both direct and indirect effects.<sup>96,97</sup>

### THERAPEUTIC USE OF hGH

These may be used for both children and adulthood and also for girls which has turner syndromes. For relief from burning and thermal injuries, a high dose of growth hormones is used. Long term uses of growth hormones may increases the bone mass. These body compositions are due to anabolic, lipolytic properties of growth hormones.<sup>98,99</sup>

### 2. INSULIN

Insulins are secreted by beta cells of pancreatic islets. It is a peptide hormone. It is the main anabolic hormones in the body. It metabolized the carbohydrates, protein and fats by absorption of glucose form the blood into liver, fat and skeletal muscles. After absorption glucose is converted into glycogen by glycogenesis or triglycerides. High concentration of insulin may inhibit the production and secretion of glucose into the blood.<sup>100,101</sup> Synthesis of protein are also affected by insulin. If the insulin level is decreases it gives opposite effects and may reverse body fats. Beta cells secreted insulin into the blood in response to high level of glucose which inhibits secretion of insulin. By stimulating glycogenolysis and gluconeogenesis, glucagon increases blood glucose level.<sup>102,103</sup> In glucose homeostasis, insulin and glucagon are secreted into the blood in response to



blood glucose concentration. Insulin may compose of 51 amino acids and it will be linked with each other by disulfide bonds.<sup>104,105</sup>

### **EFFECT OF INSULIN ON BODY BUILDING**

Misuse and inappropriate compliance are the correlation with chronic medical conditions and it may induce anxiety and depression disorders. Psychiatric disorder may be occurs in insulin dependent diabetes. It has higher co-morbid substance misuse.<sup>106,107</sup> Hypoglycemia is occurred in insulin depended diabetics. Mood changing, depressive and anxiety may occur in this diabetes. Misuse of insulin is related with suicide, parasuicide or factitious illness. Glucose metabolism may be increases in body builders. It may also helps in synthesis of protein and improve the performances. Insulin treated diabetes may help for lean body mass, regulated glucose metabolism, it helps to transport amino acids. Body builder may use this because it stimulates the lipogenesis and diminished lipolysis.<sup>108,109</sup>

### **3. TESTOSTERONE**

Male sex hormones and a natural anabolic steroid. It may help to development of male reproductive tissues like testes and prostate. It may also promote the secondary sexual characteristics. It may also increase the muscle and bone mass and growth of body hair. It may also prevent them from osteoporosis.<sup>110,111</sup> It can take several steps from cholesterol and converted in the liver to inactive metabolites. Testosterone secreted from testicle of males. Testosterone level is very high in adult male as compare to adult female. It is also used as a medication in the treatment of low-level testosterone level in men and breast cancer in women.<sup>112,113</sup>

### **4. Androgenic-Anabolic Steroids Effects on Athletes**

It is made up in synthetic process. It is also a male testosterone hormone. Testosterone may be produced from Leydig cells which are located in testes. It was believed that castration may loss some characteristics of certain secondary male sex by this a same potential of substances are made.<sup>114,115</sup> The active extraction is been available and production of synthetic androgens are taken places but androgenic and anabolic properties are not separated. androgenic properties are development of male characteristics, deepening of voices and a hair growth. It effects protein metabolisms and also inhibits the protein metabolism.<sup>116,117</sup> Some modifications are done in the AAS. The uses are limited. It may have some problems like endocrine dysfunctions of testes and hypothalamus-pituitary-gonadal axis. It also used to treat nitrogen balance, growth muscles and other non-endocrine diseases. It may also helps in male infertility treatment by administration of testosterone.<sup>118,119</sup> It may also used as medically a small amount of AAS may give the positive effects on nitrogen balance in polytrauma patients, in burn injuries and for HIV patients. This drug used in muscle dystrophy and also some dermatological diseases. These drugs are also used for body builders for better performances and muscle building. It gives bad effects on body builders and have lots of disadvantages. AAS is been abused by many body builders.<sup>120,121,122</sup>

### **1. Uses of Androgenic-Anabolic Steroids (AAS)**

Due to AAS administrations the body weight increases about 10-15kg. it also helps to reduces the fat mass. In some studies, it was found that uses of AAS may reduce the fat. It is used for paediatric endocrinologists. It may also help in appetite stimulation and increases of muscle mass. It may also used in cancer and AIDS patients. In body builders it may helps in development and maintenance of secondary sexual characteristics<sup>123,124</sup>.

### **ADVANTAGES OF BODY-BUILDING**

There is several importance of body building. Some are-

#### **1. Improve bodily health**

Body building may help to improve the health. It may decrease the risk of coronary heart disease. training and aerobic exercises may reduce the chance of obesity and high cholesterol and control high blood pressures. It gives great impacts on muscle, bones and joints. It also helps to make muscles and body strong and flexible. Training and exercise may helps to free from many diseases like osteoporosis and arthritis.<sup>125,126</sup>

#### **2. Improve mental health**

Yoga, body building, training and aerobic exercise may boost mind and mental well-being. stress, anxiety and depression may be reduced by weight training and aerobic exercises. It can also help to rising in self-esteem and confidences. Bodybuilding may help to develop positive self-image. This can help in lose weight, feel body as a leaner, stronger and better. To deal with negative emotions bodybuilding, aerobic exercise and weight training is most important things. Bodybuilding or some physical activity helps to released endorphin. This helps to influences mood. It can also help to sleep better, reduces fatigue and psychological tension.<sup>127,128</sup>

#### **3. Improve nutrition**

Weight training, aerobic exercise, healthy nutrition and rest may improve health. Healthy eating food can make the body and mind function properly. Antioxidant food may improve focus and memory. Iron containing food may provide healthy brain and mind. Vitamin B is very much required for healthy mind. Water is most important. It can hydrate the body and brain and keeping detoxified and oxygenated.<sup>129,130</sup>

### **DISADVANTAGES OF BODY-BUILDING**

#### **1. Low Energy Availability**

Energy intake by a body builder is more. They take high calorie diet in training time and low calories in competition time. Low calories give low energy availability. It has negative effects on bodybuilders.

#### **2. Greater Injury Risk**

During training and bodybuilding routine it makes gain some risk for injuries. During beginners, knee joints, hands and almost whole body is in pain. Some athletes may have chronic pain.<sup>131,132</sup>

#### **3. Social Anxiety and Dysmorphia**

Some bodybuilder experiences psychosocial disorders then athletes. Muscle dysmorphia is the condition. In this situation, people may obsess over the shape and size of their muscles. Bodybuilder engage for risk to meet their goal of getting leaner and bigger. This



behaviour can lead to intense feelings of social anxiety.<sup>133,134</sup>

## REFERENCES

1. Alkahtani S. (2014). Comparing fat oxidation in an exercise test with moderate intensity interval training. *J Sports Sci Med.* 13(1):51-8.
2. Alkahtani, S.A., Byrne, N.M., Hills, A.P. & King, N.A. (2014). Interval Training Intensity Affects Energy Intake Compensation in Obese Men. *Int J Sport Nutr Exerc Metab.* 2014 Mar 25.
3. Alves, J.M.V.M., Rebelo, A.N., Abrantes, C., and Sampaio, J. (2010). Short term effects of complex and contrast training in soccer players' vertical jump, sprint, and agility abilities. *J Strength Cond Res*;24(4): 936–941.
4. Comyns TM, Harrison AJ, Hennessy LK, Jensen RJ. (2006). The Optimal Complex Training Rest Interval for Athletes From Anaerobic Sports. *J Strength Cond.* 20(3):471-476.
5. Conroy, T.R. (1991). Plyometric Training and its Effects on Speed, Strength and Power of Inter-Collegiate Athletes, Abstract, *Microform Publication Bulletin*, 72.
6. Daniel, J., Jose, M., Gonzalez, R., & Fernando, N. (2009). Effects of complex vs noncomplex training programs on lower body maximum strength and power. *Isokinetics and Exercise Science.* 17-4. 233-241.
7. Dhayanithi, R. (1991). Comparative Analysis of Continuous Running, Interval Running and the Combined Effects on Cardio respiratory Endurance”, Unpublished M.Phil., Dissertation, Pondicherry University, Pondicherry.
8. Eduardo, J.A. M. S., & Manuel, A. A. S.J., (2008). Effects of complex training on explosive strength in adolescent male basketball players. *The Journal of Strength and Conditioning Research.* 22(3):903-9.
9. Engel, F.A, & Sperlich, B. (2014). High Intensity Interval Training for Young Athletes. *Wien Med Wochenschr.* 2014 Apr 15.
10. Esformes, JI, Keenan, M, Moody, J, and Bampouras, TM. Effect of different types of conditioning contraction on upper body postactivation potentiation. *J Strength Cond Res* 25(X): 000-000, 2011.
11. Fagan, C.D. & P.K. Doyle Baker. (2000). The Effects of Maximum Strength and Power Training Combined with Plyometrics on Athletic Performance. *Medicine and Science in Sports and Exercise*, 32(5).
12. Faude, O., Schnitker, R., Schulte, Z. R, Muller, F. & Meyer, T. (2013). High intensity interval training vs. high-volume running training during preseason conditioning in high-level youth football: a cross-over trial. *J Sports Sci.* 2013;31(13):1441-50.
13. Faude, O., Steffen, A., Kellmann, M. & Meyer, T. (2014). The Effect of Short Term Interval Training During the Competitive Season on Physical Fitness and Signs of Fatigue: A Cross-Over Trial in High Level Youth Football Players. *Int J Sports Physiol Perform.* 2014 Mar 11.
14. Ferrari, B.D., Impellizzeri, F.M., Rampinini, E., Castagna, C., Bishop, D. & Wisloff, U. (2008). Sprint vs. Interval Training in Football. *Int J Sports Med.* 29(8):668-74.
15. French, D.H., Kraemer, W.J., Cooke, C.B. (2003). Changes in dynamic exercise performance following a sequence of preconditioning isometric muscle actions. *Journal of Strength and Conditioning Research*, 17(4), 678-685.
16. Gabbett, T.J., Whyte, D.G., Hartwig, T.B., Wescombe, H. Naughton, G.A. (2014). The Relationship Between Workloads, Physical Performance, Injury and Illness in Adolescent Male Football Players. *Sports Med.* 2014 Apr 9.
17. Gillen, J.B. & Gibala, M.J. (2014). Is high-intensity interval training a time efficient exercise strategy to improve health and fitness? *Appl Physiol Nutr Metab.* 39(3):409-12.
18. Goran, S., Zoran, M., Nebojsa, T. & Aleksandar, J. (2011). Correlation between Speed, Agility and Quickness (saq) in Elite Young Soccer Players. *Acta Kinesiologica*, 2: 36-41.
19. Ingebrigtsen, J., Dillern, T. & Shalfawi. (2011). Aerobic capacities and anthropometric characteristics of elite female soccer players. *J Strength Cond Res* 25(12): 3352–3357.
20. Jovanovic, M., Sporis, G., Omrcen, D. & Fiorentini, F. (2011). Effects of speed, agility, quickness training method on power performance in elite soccer players. *J Strength Cond Res.* 25(5):1285-92.
21. Keating, S.E., Machan, E.A., O'Connor, H.T., Gerofi, J.A., Sainsbury, A., Caterson, I.D. & Johnson, N.A. (2014). Continuous exercise but not high intensity interval training improves fat distribution in overweight adults. *J Obes.* 2014:834865.
22. Lesinski, M., Muehlbauer, T., Busch, D. & Granacher, U. (2014). Effects of Complex Training on Strength and Speed Performance in Athletes: A Systematic Review. *Sportverletz Sportschaden.* 2014 Mar 5.
23. Lloyd, R. & Deutsch, M. (2008). Effect of order of exercise on performance during a complex training session in rugby players. *J Sports Sci.* 26(10):1122.
24. Logan, G.R., Harris, N., Duncan, S. & Schofield, G. (2014). A Review of Adolescent High-Intensity Interval Training. *Sports Med.* 2014 Apr 18.
25. Loudovikos, D. L., Jacky, F., George, L. & Charilaos, T. (2013). The Acute Effect of Upper-Body Complex Training on Power Output of Martial Art Athletes as Measured by the Bench Press Throw Exercise. *Journal of Human Kinetics.* Volume 39, Issue 1, Pages 167–175.
26. Mahdiabadi, J., Gaeini, A.A., Kazemi, T. & Mahdiabadi, M.A. (2013). The effect of aerobic continuous and interval training on left ventricular



- structure and function in male non athletes. *Biol Sport*. 30(3):207-11.
27. Markus, D. & Rhodri L. (2008). Effect of order of exercise on performance during a complex training session in rugby players. *Journal of Sports Sciences* 26(8): 803 – 809.
28. McBride., N.M. (2002). The Effect of Heavy-Vs. Light-load Jump Squats on the Development of Strength, Power, and Speed. *Journal of Strength Conditioning Research*, 16(1), 75-82.
29. McMillan, K., Helgerud, J., Macdonald, R. & Hoff, J. (2005). Physiological adaptations to soccer specific endurance training in professional youth soccer players. *Br J Sports Med*. 39(5):273-7.
30. Orendurff, M.S., Walker, J.D., Jovanovic, M., Tulchin, K.L., Levy, M. & Hoffmann, D.K. (2010). Intensity and duration of intermittent exercise and recovery during a soccer match. *J Strength Cond Res* 24(10): 2683-2692.
31. Perez-Gomez, J. (2008). Effects of Weight Lifting Training Combined With Plyometric Exercises on Physical Fitness, Body Composition, and Knee Extension Velocity During Kicking in Football. *Applied Physiology and Nutrition Metabolism*, 33:3.
32. Raja, Chidambara. S. (1992). Comparative Analysis of the Effects of Continuous and Interval Running on Cardio-respiratory Endurance, Unpublished M.Phil., Dissertation, Annamalai University. Robbins, D.W. (2005). Postactivation potentiation and its practical applicability: a brief review. *J Strength Cond Res*. 19(2):453-8.
33. Rubley, M.D., Haase, A.C., Holcomb, W.R., Girouard, T.J. & Tandy, R.D. (2011). The effect of plyometric training on power and kicking distance in female adolescent soccer players. *J Strength Cond Res*. 25(1):129-34.
34. Sale, D. (2004). Postactivation potentiation: role in performance. *Br. J. Sports Med*. 38:386-387. Sathiyarayanan, Reddy. (1993). Relative Effects of Plyometric and Weight Training Followed by Plyometric Training on Power, Speed, Stride Length and Stride Frequency. Unpublished Doctoral Thesis, Annamalai University.
35. Slettalokken, G. & Ronnestad, B.R. (2014). High intensity interval training every second week maintains VO<sub>2</sub>max in soccer players during off- season. *J Strength Cond Res*. 2014 Feb 20.
36. Sundramoorthy, V. (1999). Effect of Isolated and Combined Weight and Plyometric Trainings on Selected Strength Parameters, Speed and Power”, Unpublished Doctoral Thesis, Alagappa University.
37. Thomas, K., French, D. & Hayes, P.R. (2009). The effect of two plyometric training techniques on muscular power and agility in youth soccer players. *J Strength Cond Res*. 23(1):332-5.
38. Zoran, M., Goran, S., Nebojsa, T., Nic, J. & Kresimir, S. (2013). Effects of a 12 Week SAQ Training Programme on Agility with and without the Ball among Young Soccer Players. *Journal of Sports Science and Medicine*. 12, 97-103.
39. Barrow, M. H. & McGhee, R. (1979). A practical approach to measurement in biochemical education. Philadelphia: Lea and Febiger, Edition-3rd.
40. Baumeister, R. F. (Ed.) (1999). The self in social psychology. Philadelphia, PA: Psychology Press (Taylor & Francis).
41. Beim, G. (1977). Principles of Modern Soccer. U.S.A.: Houghton Mifflin Company.
42. Chakrabathi, Ghosh & Sahana. (1984). Human Physiology. India: The New Book Stall, Calcutta.
43. Clarke, H. H & David, H. C. (1986). Application of Measurement to Physical Education. (6th ed) Englewood Cliffs, New Jersey: Prentice Hall:P.52-103. Costill, David L. (1986). Basics of Sports physiology. Indianapolis, IN: Benchmark Press, Inc. Fox, Edward, L. (1984). Sports Physiology. Philadelphia: Saunders College Publishers.
44. Fox, Edward. L, Richard Bowers and Merle L. Foss. (1993). The Physiological Basis for Exercise and Sport (5th ed). Dubuque, Iowa: WCB Brown and Bench Mark Publishers.
45. Hardayal, Singh. (1991). Science of Sports Training. New Delhi, India: D.V.S. Publication, pp.13.
46. Kaka, T.S. & Biru, M. (1986). Improve Football Techniques. Patiala: NSNIS Publications.
47. Kamlesh, M. L. (2009). Ugc Net Digest Physical Education. New Delhi, India: Khel Sahitya Kendra, pp.608.
48. Loehr, J. E. (1986). Mental Toughness training for sports: Achieving Athletic excellence. Lexington, MA: Stephen Greene press.
49. Alkahtani S. (2014). Comparing fat oxidation in an exercise test with moderate intensity interval training. *J Sports Sci Med*. 13(1):51-8.
50. Alkahtani, S.A., Byrne, N.M., Hills, A.P. & King, N.A. (2014). Interval Training Intensity Affects Energy Intake Compensation in Obese Men. *Int J Sport Nutr Exerc Metab*. 2014 Mar 25.
51. Anuradha.K.N & Dr.R.Gandhi. (2015). Effect of Circuit Training on Selected Physical Fitness Variables among School Children of Karnataka State. *International Journal of Recent Research and Applied Studies*, 2, 5(7), 29 -31.
52. Arul. S. (2014). Effect of Aerobic Interval Training on Cardio Respiratory Endurance and Resting Pulse Rate among University Men Football Players. *International Journal of Recent Research and Applied Studies*, 2014, 1, 3(14), 55 - 57.
53. Benkins Dinesh S. & Glady Kirubakar S. (2014). Influence Prediction of Volleyball Playing Ability from Selected Physical and Physiological Variables of State Level Volleyball Players. *International Journal of Recent Research and Applied Studies*, 2014, 1, 5(10), 43 - 47.
54. Bharathiraja, S., Umamaheswari, M. & Palanisamy. A. (2015). Prediction of Batting Abilities from the Selected Kinanthropometric Physical and Physiological Variables Among Cricketers. *International Journal of Recent Research and Applied Studies*, 2015, 2, 7(5), 18 -21.
55. Bupesh S. Moorthy. (2014). Effect of Cross Training Program on Leg Strength and Leg Explosive Power among Football Players. *International*



- Journal of Recent Research and Applied Studies*, 2014, 1, 5(5), 23 - 25.
55. Dhanalakshmi, M. & Amsa Natarajan. (2014). Effect of Aerobics Training on Selected Motor Variables of High School Soccer Players. *International Journal of Recent Research and Applied Studies*, 2014, 1, 7(14), 56 - 58.
56. Engel, F.A, & Sperlich, B. (2014). High Intensity Interval Training for Young Athletes. *Wien Med Wochenschr.* 2014 Apr 15.
57. Faude, O., Steffen, A., Kellmann, M. & Meyer, T. (2014). The Effect of ShortTerm Interval Training During the Competitive Season on Physical Fitness and Signs of Fatigue: A Cross-Over Trial in High Level Youth Football Players. *Int J Sports Physiol Perform.* 2014 Mar 11.
58. Faude, O., Steffen, A., Kellmann, M. & Meyer, T. (2014). The Effect of ShortTerm Interval Training During the Competitive Season on Physical Fitness and Signs of Fatigue: A Cross-Over Trial in High Level Youth Football Players. *Int J Sports Physiol Perform.* 2014 Mar 11.
59. Ferrari, B.D., Impellizzeri, F.M., Rampinini, E., Castagna, C., Bishop, D. & Wisloff, U. (2008). Sprint vs. Interval Training in Football. *Int J Sports Med.* 29(8):668-74.
60. Gabbett, T.J., Whyte, D.G., Hartwig, T.B., Wescombe, H. Naughton, G.A. (2014). The Relationship Between Workloads, Physical Performance, Injury and Illness in Adolescent Male Football Players. *Sports Med.* 2014 Apr 9.
61. Gillen, J.B. & Gibala, M.J. (2014). Is high-intensity interval training a time-efficient exercise strategy to improve health and fitness? *Appl Physiol Nutr Metab.* 39(3):409-12.
62. Giridharan, K. & CH. VST. Saikumar. (2015). Effects of High Intensity Aerobic Interval Training Concurrent Low Intensity Aerobic and Resistance Interval Training on Physiological Variables of College Level Football Players. *International Journal of Recent Research and Applied Studies*, 2015, 2,3 (9), 35 -39.
63. Gobikrishnan, S. Rajendran, K. & K. Murugavel. (2014). Influence of Isotonic and Isometric Strength Training on Selected Physical Fitness Variables among College Football Players. *International Journal of Recent Research and Applied Studies*, 2014, 1, 3(17), 65 - 71.
64. Goran, S., Zoran, M., Nebojsa, T. & Aleksandar, J. (2011). Correlation between Speed, Agility and Quickness (saq) in Elite Young Soccer Players. *Acta Kinesiologica*, 2: 36-41.
65. Ingebrigtsen, J., Dillern, T. & Shalfawi. (2011). Aerobic capacities and anthropometric characteristics of elite female soccer players. *J Strength Cond Res* 25(12): 3352-3357.
66. Jayaraja. K. (2015). An Impact of Yoga Practices and Aerobic Dance on Shooting Performance among College Men Soccer Players. *International Journal of Recent Research and Applied Studies*, 2015, 2, 3 (11), 47 - 50.
67. Jovanovic, M., Sporis, G., Omrcen, D. & Fiorentini, F. (2011). Effects of speed, agility, quickness training method on power performance in elite soccer players. *J Strength Cond Res.* 25(5):1285-92.
68. Keating, S.E., Machan, E.A., O'Connor, H.T., Gerofi, J.A., Sainsbury, A., Caterson, I.D. & Johnson, N.A. (2014). Continuous exercise but not high intensity interval training improves fat distribution in overweight adults. *J Obes.* 2014:834865.
69. Lloyd, R. & Deutsch, M. (2008). Effect of order of exercise on performance during a complex training session in rugby players. *J Sports Sci.* 26(10):1122. Logan, G.R., Harris, N., Duncan, S. & Schofield, G. (2014). A Review of Adolescent High-Intensity Interval Training. *Sports Med.* 2014 Apr 18.
70. Loudovikos, D. L., Jacky, F., George, L. & Charilaos, T. (2013). The Acute Effect of Upper-Body Complex Training on Power Output of Martial Art Athletes as Measured by the Bench Press Throw Exercise. *Journal of Human Kinetics. Volume 39, Issue 1, Pages 167-175.*
71. Lucas SJ, Cotter JD, Brassard P, & Bailey DM (2015). High-intensity interval exercise and cerebrovascular health: curiosity, cause, and consequence. *Journal of cerebral blood flow and metabolism: official journal of the International Society of Cerebral Blood Flow and Metabolism*, 35 (6), 902-911.
72. Lucas SJ, Cotter JD, Brassard P. & Bailey DM. High-intensity interval exercise and cerebrovascular health: curiosity, cause, and consequence. *J Cereb Blood Flow Metab.* 35(6):902-11.
73. Mahdiabadi, J., Gaeini, A.A., Kazemi, T. & Mahdiabadi, M.A. (2013). The effect of aerobic continuous and interval training on left ventricular structure and function in male non athletes. *Biol Sport.* 30(3):207-11.
74. Manikandan, S. (2014). Impact of Moving Circuit Training on Muscular Strength and Leg Strength among Male Handball Players. *International Journal of Recent Research and Applied Studies*, 5 (25), 110-111.
75. Manikandan. S. (2014). Effect of Specific Soccer Training Programme on Selected BioMotor Abilities among Soccer Players. *International Journal of Recent Research and Applied Studies*, 2014, 1, 7(25), 103 - 104.
76. Manikandan. S. (2014). Influence of Progressive Anaerobic Training on Selected Physiological Variables of Football Players. *International Journal of Recent Research and Applied Studies*, 2014, 1, 6(23), 90 - 91.
77. Manoj Kumar.A. Effect of Futsal and Beach Football on Selected Game Skill Variables among Football Players. *International Journal of Recent Research and Applied Studies*, 2014, 2 (6), 24 -26. McMillan, K., Helgerud, J., Macdonald, R. & Hoff, J. (2005). Physiological adaptations to soccer specific endurance training in professional youth soccer players. *Br J Sports Med.* 39(5):273-7.
78. Orendurff, M.S., Walker, J.D., Jovanovic, M., Tulchin, K.L., Levy, M. & Hoffmann, D.K. (2010). Intensity and duration of intermittent exercise and recovery during a soccer match. *J Strength Cond Res* 24(10): 2683-2692.



79. Perez-Gomez, J. (2008). Effects of Weight Lifting Training Combined With Plyometric Exercises on Physical Fitness, Body Composition, and Knee Extension Velocity During Kicking in Football. *Applied Physiology and Nutrition Metabolism*, 33:3.
80. Prem Edwin A. & Ramesh. C. (2015). Correlations of Selected Physical Variables with Playing Ability among College Level Soccer Players. *International Journal of Recent Research and Applied Studies*, 2015, 2,3 (3), 9 -11.
81. Rajesh, K. (2012). A Study on the effect of Plyometric exercises for development of Speed among Foot Ball Players of Osmania University, Asian Journal of Physical Education and Computer Science in Sports. Volume.7 No.1 pp50-52.
82. Ramakrishnan, A. & Gopinath, R. (2014). Effects of Weight Training and Circuit Weight Training on Selected Strength and Physiological Variables. *International Journal of Recent Research and Applied Studies*, 1, 3(1), 1 - 4.
83. Ratheesh Babu. C. & Vallimurugan. (2014). Effect of Interval Training on Cardio Respiratory Endurance among Football Players. *International Journal of Recent Research and Applied Studies*, 1 (11), 40 - 42.
84. Rubley, M.D., Haase, A.C., Holcomb, W.R., Girouard, T.J. & Tandy, R.D. (2011). The effect of plyometric training on power and kicking distance in female adolescent soccer players. *J Strength Cond Res*. 25(1):129-34.
85. Santhosh, J. & Sivakumar. K. (2015). Prediction of Shooting Ability through Selected Physical Fitness Components among University Male Football Players. *International Journal of Recent Research and Applied Studies*, 2015, 2, 6(6), 25 -27.
86. Senthilkumar, J. & Gokulakrishnan. D. (2015). Effect of Aerobic Interval Training on Selected Physical Variables among College Level Football Players. *International Journal of Recent Research and Applied Studies*, 2015, 2, 2(7), 31 - 34.
87. Senthilkumar, P. & Annadurai. R.A. (2014). Study on Effects of Isolated and Combined SAQ and Strength Trainings on Selected Performance Variables of Intercollegiate Men Football Players. *International Journal of Recent Research and Applied Studies*, 2014, 1, 7(19), 74 - 77.
88. Senthilkumar, P. Annadurai. R.A (2014). Study on Effects of Isolated and Combined SAQ and Strength Trainings on Selected Physical Variables of Intercollegiate Men Football Players. *International Journal of Recent Research and Applied Studies*, 2014, 1, 7(17), 66 - 70.
89. Sethu. S. (2014). The Comparative Effect of Hill Training and Plyometric Training on Speed and Vertical Explosive Power among Football Players. *International Journal Of Recent Research And Applied Studies*, 2014, 5 (19), 86-90.
90. Sethu. S.A. (2014). Comparison of Endurance Training Responses to Hill and Sand among School Football Players. *International Journal of Recent Research and Applied Studies*, 1 (14), 52 - 58.
91. Sivakumar, M., Johnson, S. & Rajendran. K. (2014). Influence of Plyometric Training Circuit Training and Weight Training on Leg Strength Back Anaerobic Power among Inter Collegiate Volleyball Players. *International Journal of Recent Research and Applied Studies*, 1, 3(11), 45 - 49.
92. Slettalokken, G. & Ronnestad, B.R. (2014). High intensity interval training every second week maintains VO<sub>2</sub>max in soccer players during off-season. *J Strength Cond Res*. 2014 Feb 20.
93. Sooriyanarayanan, M. & Sundar. K. (2014). Effects of Anaerobic and Aerobic Training on Overall Playing Ability Performance of Collegiate Football Players. *International Journal of Recent Research and Applied Studies*, 2014, 1, 6(5), 23 - 25.
94. Suresh Kumar, M. (2014). Influence of Circuit Training on Selected Physical Fitness Variables among Men Hockey Players. *International Journal of Recent Research and Applied Studies*, 1, 7(6), 16 - 19.
95. Suresh Kumar. G. (2015). Effects of Sports Loading Program on Speed Endurance Related Parameters in Football Players. *International Journal of Recent Research and Applied Studies*, 2015, 2, 2(2), 1 - 3.
96. Vaczi, M., Tollar, J., Meszler, B., Juhasz, I. & Karsai I. (2013). Short-term high intensity plyometric training program improves strength, power and agility in male soccer players. *J Hum Kinet*. 36:17-26.
97. Vaczi, M., Tollar, J., Meszler, B., Juhasz, I. & Karsai I. (2013). Short-term high intensity plyometric training program improves strength, power and agility in male soccer players. *J Hum Kinet*. 36:17-26.
98. Vallimurugan. V. & Vincent, P. J. (2013). Effect of SAQ Training on Selected Physical Fitness Parameters of Men Football Players. *International Journal of Advanced and Innovative Research*. 1-2.
99. Venkatachalapathy, R. (2015). Effect of Circuit Training Programme on Speed and Agility. *International Journal of Recent Research and Applied Studies*, 2, 2(17), 71 - 72.
100. Venkatachalapathy. R. (2015). Effect of Target Shooting Practice on Accuracy in Goal Scoring Among Football Players. *International Journal of Recent Research and Applied Studies*, 2015, 2,4 (13), 52 - 54.
101. Vigneshwaran, G. Kalidasan, R. Srinivasaragavan S. (2014). Mapping of Soccer Research through Publications Output - A Study of





- Global Level during  
2009-2013. *International Journal of Recent Research and Applied Studies*, 2014, 1, 7(12), 45 - 50.
102. Zoran, M., Goran, S., Nebojsa, T., Nic, J. & Kresimir, S. (2013). Effects of a 12 Week SAQ Training Programme on Agility with and without the Ball among Young Soccer Players. *Journal of Sports Science and Medicine*. 12, 97-103.
103. Walberg-Rankin J. A review of nutritional practices and needs of bodybuilders. *J Strength and Cond Res* 1995;9:116-124.
104. *Journal of the American Society of Echocardiography* 2010;23:516-522.39. Rogol AD, Yesalis CE, 3rd. Clinical review 31: Anabolic-androgenic steroids and athletes: what are the issues? *J Clin Endocrinol Metab* 1992;74:465-9.
105. Kutscher EC, Lund BC, Perry PJ. Anabolic steroids: a review for the clinician. *Sports Med* 2002;32:285-96.
106. Spendlove, J.; Mitchell, L.; Gifford, J.; Hackett, D.; Slater, G.; Cobley, S.; O'Connor, H. Dietary intake of competitive bodybuilders. *Sports Med*. 2015, 45, 1041–1063.
107. Kennedy, R.H. *Encyclopedia of Bodybuilding: The Complete A–Z Book on Muscle Building*; Robert Kennedy Publishing: Toronto, ON, Canada, 2008.
108. Slater, G.; Phillips, S.M. Nutrition guidelines for strength sports: Sprinting, weightlifting, throwing events, and bodybuilding. *J. Sports Sci.* 2011, 29 (Suppl. S1), S67–S77.
109. Giampreti, A.; Lonati, D.; Locatelli, C.; Rocchi, L.; Campailla, M.T. Acute neurotoxicity after yohimbine ingestion by a body builder. *Clin. Toxicol.* 2009, 47, 827–829.
110. Faber, M.; Benade, A.J. Nutrient intake and dietary supplementation in body-builders. *S. Afr. Med. J.* 1987, 72, 831–834.
111. Hackett, D.A.; Johnson, N.A.; Chow, C.M. Training practices and ergogenic aids used by male bodybuilders. *J. Strength Cond. Res./Natl. Strength Cond. Assoc.* 2013, 27, 1609–1617.
112. Schafer, C.N.; Guldager, H.; Jorgensen, H.L. Multi-organ dysfunction in bodybuilding possibly caused by prolonged hypercalcemia due to multi-substance abuse: Case report and review of literature. *Int. J. Sports Med.* 2011, 32, 60–65.
113. Andersen, R.E.; Barlett, S.J.; Morgan, G.D.; Brownell, K.D. Weight loss, psychological, and nutritional patterns in competitive male body builders. *Int. J. Eat. Disord.* 1995, 18, 49–57.
114. Brill, J.B.; Keane, M.W. Supplementation patterns of competitive male and female bodybuilders. *Int. J. Sport Nutr.* 1994, 4, 398–412.
115. Helms, E.R.; Aragon, A.A.; Fitschen, P.J. Evidence-based recommendations for natural bodybuilding contest preparation: Nutrition and supplementation. *J. Int. Soc. Sports Nutr.* 2014, 11.
116. Rossow, L.M.; Fukuda, D.H.; Fahs, C.A.; Loenneke, J.P.; Stout, J.R. Natural bodybuilding competition preparation and recovery: A 12-month case study. *Int. J. Sports Physiol. Perform.* 2013, 8, 582–592.
117. Bamman, M.M.; Hunter, G.R.; Newton, L.E.; Roney, R.K.; Khaled, M.A. Changes in body composition, diet, and strength of bodybuilders during the 12 weeks prior to competition. *J. Sports Med. Phys. Fit.* 1993, 33, 383–391.
118. Sandoval, W.M.; Heyward, V.H. Food selection patterns of bodybuilders. *Int. J. Sport Nutr.* 1991, 1, 61–68.
119. Walberg-Rankin, J.; Edmonds, C.E.; Gwazdauskas, F.C. Diet and weight changes of female bodybuilders before and after competition. *Int. J. Sport Nutr.* 1993, 3, 87–102.
120. Withers, R.T.; Noell, C.J.; Whittingham, N.O.; Chatterton, B.E.; Schultz, C.G.; Keeves, J.P. Body composition changes in elite male bodybuilders during preparation for competition. *Aust. J. Sci. Med. Sport* 1997, 29, 11–16.
121. Van der Ploeg, G.E.; Brooks, A.G.; Withers, R.T.; Dollman, J.; Leaney, F.; Chatterton, B.E. Body composition changes in female bodybuilders during preparation for competition. *Eur. J. Clin. Nutr.* 2001, 55, 268–277.
122. Lemon, P.W.; Tarnopolsky, M.A.; MacDougall, J.D.; Atkinson, S.A. Protein requirements and muscle mass/strength changes during intensive training in novice bodybuilders. *J. Appl. Physiol.* 1992, 73, 767–775.
123. Della Guardia, L.; Cavallaro, M.; Cena, H. The risks of self-made diets: The case of an amateur bodybuilder. *J. Int. Soc. Sports Nutr.* 2015, 12.
124. Robinson, S.L.; Lambeth-Mansell, A.; Gillibrand, G.; Smith-Ryan, A.; Bannock, L. A nutrition and conditioning intervention for natural bodybuilding contest preparation: Case study. *J. Int. Soc. Sports Nutr.* 2015, 12.
125. Kistler, B.M.; Fitschen, P.J.; Ranadive, S.M.; Fernhall, B.; Wilund, K.R. Case study: Natural bodybuilding contest preparation. *Int. J. Sport Nutr. Exerc. Metab.* 2014, 24, 694–700.
126. Mountjoy, M.; Sundgot-Borgen, J.; Burke, L.; Carter, S.; Constantini, N.; Lebrun, C.; Meyer, N.; Sherman, R.; Steffen, K.; Budgett, R.; et al. The IOC consensus statement: Beyond the female athlete triad—Relative Energy Deficiency in Sport (RED-S). *Br. J. Sports Med.* 2014, 48, 491–497.
127. De Souza, M.J.; Nattiv, A.; Joy, E.; Misra, M.; Williams, N.I.; Mallinson, R.J.; Gibbs, J.C.; Olmsted, M.; Goolsby, M.; Matheson, G. 2014 Female Athlete Triad Coalition Consensus Statement on Treatment and Return to Play of the Female Athlete Triad: 1st International Conference Held in San Francisco, California, May 2012 and 2nd International Conference Held in Indianapolis, Indiana, May 2013. *Br. J. Sports Med.* 2014, 48.
128. National Nutrient Database for Standard Reference, Release 28. United States Department of Agriculture. Available online: <http://www.ars.usda.gov/ba/bhnrc/ndl> (accessed on 30 September 2015).
129. Pescatello, L.S.; American College of Sports Medicine. *Acsm's Guidelines for Exercise Testing and Prescription*; Wolters Kluwer/Lippincott Williams & Wilkins Health: Philadelphia, PA, USA, 2014.
130. Jackson, A.S.; Pollock, M.L.; Ward, A. Generalized equations for predicting body density of women. *Med. Sci. Sports Exerc.* 1980, 12, 175–181.
131. Ainsworth, B.E.; Haskell, W.L.; Herrmann, S.D.; Meckes, N.; Bassett, D.R., Jr.; Tudor-Locke, C.; Greer, J.L.; Vezina, J.; Whitt-Glover, M.C.; Leon, A.S. 2011 compendium of physical activities: A second update of codes and met values. *Med. Sci. Sports Exerc.* 2011, 43, 1575–1581.



132. Loucks, A.B.; Kiens, B.; Wright, H.H. Energy availability in athletes. *J. Sports Sci.* 2011, 29 (Suppl. S1), S7–S15.
133. Maclean, P.S.; Bergouignan, A.; Cormier, M.A.; Jackman, M.R. Biology's response to dieting: The impetus for weight regain. *Am. J. Physiol. Regul. Integr. Comp. Physiol.* 2011, 301, R581–R600.
134. Thomas, D.T.; Erdman, K.A.; Burke, L.M. Position of the academy of nutrition and dietetics, dietitians of Canada, and the American college of sports medicine: Nutrition and athletic performance. *J. Acad. Nutr. Diet.* 2016, 116, 501–528.



# THE ROLE OF LIVESTOCK PRODUCTS IN THE FOREIGN TRADE OF UZBEKISTAN IN 1917-1941 YEARS

**Djuraev Ravshan Xurramovich**

Basic doctoral student of the  
National University of Uzbekistan

## DISCUSSION

In 1917-1930, agricultural products played a key role in foreign trade. In particular, agricultural products accounted for 65% of total goods, while industrial products accounted for 10% of foreign trade [1, p.139]. Turkestan is a trade center not only with its natural and material resources, but also with its geographically interconnected neighbors Iran, Afghanistan and China. Livestock and their raw materials played an even more important role in foreign trade relations with them.

According to archival data, in 1914 there were 1.4 million pounds of wool, 2.5 million pieces of gut, 6.5 million pieces of , 6,000 pounds of horsehair, 2 million pieces of reindeer and lamb skins, and about 1 million pieces each. various wild animal skins were exported from Turkestan to world markets.

The above data also includes raw materials from Bukhara, Khiva, Iran (Persia), Afghanistan and China. Of these: 700,000 pounds of wool, 150,000 skins of large horned animals (cattle), 2 million. 500,000 skins of small animals (karakul and lamb skins from Bukhara) were delivered.

Trade with foreign countries was dominated by firms with large working capital, such as the gut trade, which was entirely in the hands of a German firm called Dürshmidt. Trade in raw materials and fur was in the hands of Zalm, Erman Glikin, partly in Durshmidt and Stuken, and wool in the hands of large factories Asaevs, Kuznetsov and others.

The participation of Stuken in this foreign trade was significant. Because the firm had a monopoly position in the markets of Iran and the Caspian region.

All of the above raw materials were in demand in the markets of Russia and foreign countries. The bulk of the intestines were exported to Germany and from there to markets in other countries. The market for this raw material, which is exported from Turkestan, was also active due to the large intestines of animals grazed in the desert and steppes. Wool is also exported to Russia or foreign countries, depending on its quality. Low quality wool

was grown in the Syrdarya, Semirechensk and Kulji regions and exported to Russia. Only high-quality wool from Khorasan, Kashgar, and Merinos sheep was mainly exported.

Most of the raw materials from large cattle, ie 80%, were sent to Russia, and only 20% to Germany. Raw materials for small animals, such as 50% sheep, up to 70% goats, as well as up to 70% fur and wool, were exported to Germany. America would also benefit from a portion of the sheep and goat raw materials.

However, World War II had a negative impact on Turkestan's trade in raw materials. Because the closure of the German border, as well as in 1915 the export of raw materials was prevented. At the same time, the growing demand of the army for horses has led to a sharp decline in their number in the livestock sector. The Kyrgyz uprising of 1916 led to the deportation of many cattle to China, and the famine of 1917-1918 led to the destruction of many cattle, leading to the complete disappearance of the above-mentioned livestock farm in Turkestan.

Even the October coup did not allow the resumption of animal husbandry in its early years, on the contrary, the number of cattle decreased. According to archival documents, by 1920 only 43% of equestrianism, 61% and 33% of large horned animals remained. If we compare it with 1915, it seems that the number of livestock has decreased by 3 times. In 1921, this trend intensified, in other words, the country, which was extremely rich in its natural resources, fell to the level of a very poor, hungry, deprived of property due to the total destruction of farms as a result of Bolshevik rule [2, p.121]. In addition, the influx of raw materials into the Turkestan market from neighboring countries has completely stopped.

By 1918, the situation in the Turkestan raw materials market had led to the accumulation of old stocks of raw materials in warehouses, and it was self-evident that due to nationalization they were transferred to the state.



Relevant organizations and agencies of the Soviet government on raw materials have now begun to collect raw materials using administrative rights, and they have established their monopoly in this area. However, the process of collecting new raw materials was slow. This was because the fixed price system and the poor management of the Soviet administration and executive apparatus, the inability to export abroad and to Russia, transport problems and the civil war did not negatively affect the production of raw materials and did not encourage it. Only the work in the field of wool production was somewhat good. The reason for this was that the government felt a great need to produce wool for its factories. As a result, 110,000 pounds of wool were produced in 1919, 180,000 pounds in 1920, and 90,000 pounds in 1921[3,p.321].

Since 1919, Turkestan has sought to develop trade relations with Afghanistan and Iran. In particular, the Turkic Commission sent commissions to the borders to study the possibility of trade relations with Iran and Afghanistan. As a result, at the end of 1919, trade offices were established in Poltoatsk, Merv and Takhtabazar, located on the Turkestan-Iranian border, where Iranian and Afghan goods could be purchased. In December 1919, the Poltortsk and Dushaks customs offices were established to serve trade with Iran and Afghanistan, and the Gavdan, Khivaabad, and Serakhs border checkpoints were established[4,p.130].

In Turkestan, foreign trade relations were carried out by the Foreign Trade Department, which issued licenses to trade parties and supervised trade relations. On December 12, 1919, the Department of Foreign Trade issued instructions to all institutions and individuals engaged in trade to provide information on the status and conditions of cross-border trade. The department will begin accepting the first trade offers from Afghan traders in the first months of these efforts. In particular, Afghan traders are asking to send a variety of goods to Turkestan through the Takhtabazar and Kerki border checkpoints. The Foreign Trade Department is working successfully in this direction, and in the first 3-4 months, contracts will be signed for the import of various goods from Afghanistan. For example, on March 23, 1920, a contract was signed between the Foreign Trade Department and an Afghan trader named Nurmuhammad for the sale of 10,500 pounds of animal skins and 150 pounds of wool worth a total of 506,800 rubles. During this period, livestock, rice, wheat and tea were purchased on the Turkestan-Afghan border to supply the Red Army units in Central Asia. Afghan traders mainly exchanged livestock and livestock products for various tableware, kerosene and metal goods in Turkestan. The Moscow-based Foreign Trade Commission allowed the Tashkent Foreign Trade Department to exchange goods with Iran and Afghanistan[5]. In the

second half of 1920, the Department of Foreign Trade entered into a contract with Afghanistan for the purchase of a total of 17,793 pounds of livestock meat and with Iran for 34,701 pounds of meat products, and offered to purchase these meats for establishments in Turkestan for their own needs[6]. Because one of the tasks of this organization is to bring the necessary goods in the country and provide institutions with these products. In the 1920s, due to the decline in the number of livestock in Turkestan, they were forced to import livestock products from neighboring areas. In late 1919 and mid-1920, a total of 5,105 head of livestock, 193,831 pounds of meat, 3,084 pieces of hides, 107,633 pieces of astrakhan skins and 2,904 pounds of wool were imported to Turkestan from Iran and Afghanistan[7]. This year, not only goods were imported to Turkestan, but also some goods were sold to neighboring countries. For example, in the first half of 1920, a total of 117,622 head of karakul sheep were exported[8].

Government organizations and agencies had focused their attention only on preserving stocks of old raw materials, and from 1920-1921, shipments of raw materials and wool were re-established. Because Russia's textile and leather processing industry could not operate without Turkestan raw materials[9].

According to the documents of the Economic Council under the Council of People's Commissars of the Turkestan ASSR, in 1920-1921 520 thousand pounds of wool, 750 thousand pieces of raw materials for small animals and 350 thousand pieces of raw materials for large animals and 5297 pounds of horse wool, of which raw raw materials and horse wool consisted of stocks produced before the October Revolution, and wool was partly made of old and new raw materials produced in 1919-1921.

The new economic policy has brought some positive changes in the Turkestan raw materials market. These were: the abolition of fixed prices, competition among buyers, changes in production systems, and, most importantly, the material security of the workers working in this system. In addition, in order to improve foreign trade relations, the opening and liberalization of borders during this period, as well as the beginning of a well-established transport system, have been set in motion.

Based on archival data, it should be noted that the changes that took place in 1922-1923 due to the new economic policy are as follows:

1. The emergence of unlimited demand in foreign markets for raw materials from the intestines and small animals;
2. Increased demand for wool and leather products by government factories and plants;
3. Increased supply of all types of raw materials;



4. Establishment of trade relations with neighboring countries for the supply of raw materials.

Coverage of the above changes is based on data from the Raw Materials Procurement Department (Upsyrzag). This Board was established on January 1, 1922, owned the remaining raw materials from all the old firms, and administratively acquired its own monopoly (sole authority) position over the right to sell and buy.

## REFERENCES

1. Chebotareva V.G. *From the history of relations between the USSR and the neighboring countries of the Middle East in 1918-1924 through Central Asia. Dissertation for the degree of candidate of historical sciences. Tashkent. 1963.P. 139.*
2. *State Archive of Uzbekistan, fund I.18, list 1, case 23, sheet 321.*
3. *State Archive of Uzbekistan, fund I.18, list 1, case 23, back of page 321.*
4. Chebotareva V.G. *From the history of relations between the USSR and the neighboring countries of the Middle East in 1918-1924 through Central Asia. Dissertation for the degree of candidate of historical sciences. Tashkent. 1963.P. 130*
5. Chebotareva V.G. *From the history of relations between the USSR and the neighboring countries of the Middle East in 1918-1924 through Central Asia. Dissertation for the degree of candidate of historical sciences. Tashkent. 1963.P. 131-132.*
6. Chebotareva V.G. *From the history of relations between the USSR and the neighboring countries of the Middle East in 1918-1924 through Central Asia. Dissertation for the degree of candidate of historical sciences. Tashkent. 1963.P. 136.*
7. Chebotareva V.G. *From the history of relations between the USSR and the neighboring countries of the Middle East in 1918-1924. through Central Asia. Dissertation for the degree of candidate of historical sciences. Tashkent. 1963.P. 143.*
8. Chebotareva V.G. *From the history of relations between the USSR and the neighboring countries of the Middle East in 1918-1924. through Central Asia. Dissertation for the degree of candidate of historical sciences. Tashkent. 1963.P. 142.*
9. *State Archive of Uzbekistan, fund I.18, list 1, case 23, back of page 321.*



# FACILITATE DECISION MAKING OF OPTIMUM UTILIZATION URBAN ROOFTOP RWH, CASE STUDY KOLKATA METROPOLITAN AREA

**Dr. Indrani Chakraborty<sup>1</sup>**

<sup>1</sup> Professor & Dean,  
Faculty of Architecture & Planning  
Integral University Lucknow (U.P.)

**Dr. Subhrajit Banerjee<sup>2</sup>**

<sup>2</sup> Associate Professor<sup>2</sup>,  
Faculty of Architecture & Planning  
A.K.T.U Lucknow (U.P.)

Article DOI: <https://doi.org/10.36713/epra4981>

## ABSTRACT

*The study is done for assessment of Rooftop Rain Water Harvesting (RRWH) for non potable uses in a humid urban catchment. In this study, an user response survey was conducted, with 390 sample size, in five types of building uses; Residential, Educational, Medical, Institutional and mixed use Commercial, with variable roof sizes and situated in four different zones of KMA, having wide variation in piped water supply. A database of 32 years of daily rainfall data has been analyzed, in order to find out demand for different end uses for various building, supply from roof runoff, demand supply ratio, priority of different socio-economic factors for each type of building using AHP analysis, user's opinion on choice of end-use using regression analysis and finally developed a DSS model. Analysis also revealed that the highest acceptance of RRWH are in favor of the Medical uses building, the lowest being mix-Commercial building. Further factors like toilet flushing is found to be most potential end use options, followed by landscaping and cleaning. The regression model clearly show that the variables like ground condition, scale of development, degree of contact, storey's of building and water scarcity are key to decision making.*

**KEYWORDS :** *Roof top Rain Water Harvesting (RRWH), non potable use, Decision support system (DSS), Analytical Hierarchy Process (AHP), End-use potential, Urban Local Bodies (ULB).*

## 1.0. INTRODUCTION

Once thought to be a never-ending renewable resource, clean, fresh water supplies are rapidly depleting, causing drought and drought-like conditions around the world. "Today, one billion people lack access to safe and affordable sources of clean water, and over 2.4 billion people lack adequate sources for sanitation" (UN Water, 2006). The state of West Bengal receives an annual rainfall close to 1700mm. During some events it causes water logging for more than two days. West Bengal especially KMA is frequently perceived as 'wet regions' which should not have any difficulties relating to the availability of water. The existing ground water table is at 1.8 m. The city might boast of excess water supply at present, but the scenario is set to undergo a dramatic change by 2025. The demand-supply ratio could drop to 100:75 from the present 101:125, if the usage pattern is not altered and steps not taken to conserve water (study by JU August 2009). Some pockets of Kolkata Metropolitan Area faces serious water crisis during every summer.

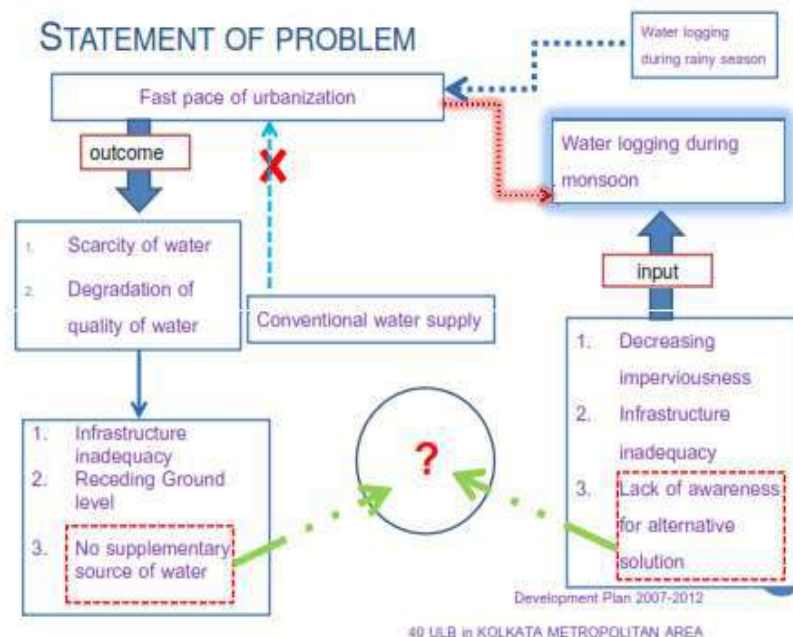
However a serious thought for the rain water management for the city should be given to counteract this conflicting situation. Moreover there are increasing pressures on the water resources in KMA and parts of West Bengal. The urban development has been sporadic in nature and the distribution of infrastructure is not evenly spread (Ghosh, 2010). The shortfalls of integrated surface water management in the ULBs has called upon problems related to water quantity (floods and droughts) and quality (pollution of ground water and surface waters), and water resource management. At present traditional methods of water management in urban areas focus primarily on so called "end of pipe" approaches. However, urban water systems normally are very complex and they need to be fully integrated into the process of urban planning. Though Governments are working frantically to develop solutions to these shortages and have introduced the issue of water conservation for the community. There is an urgent need to take action due to:

1. Increasing water usage due to population growth

2. The effects of climate change (including extended periods of drought)
3. The huge cost to develop new water infrastructure (such as water treatment plant and rain water management systems)

Growing water shortage or unexpected drought can be met with the utilization of *non-conventional resources* as harvesting *Rain Water*. The feasibility of

harvesting rainwater is based on many factors, i.e. precipitation frequency, water consumption needs, prices of local water and wastewater treatment, and the cost of installation and maintenance (Sen, 2012). Storm water has become a vulnerable issue in terms of provision of large number of drainage infrastructure within urban environments; through it can be turned into a reliable and sustainable water resource.



Source: Draft Development Report (2005-09) for forty numbers of ULBs in KMA, DFID, India

Present water usage of Metropolitan area cannot be considered sustainable because too much water of high quality is taken from the eco-systems and too much polluted water is discharged (Terpstra, 1998). Utilization of natural resources and of the environment should be attuned to availability for future generations. The general principle of sustainability is put into practice to address three issues: running out of resources; polluting of the ecosystem; and disrupting the natural systems.

The humid tropics are having some typical characteristics of urban development. As the water is found in abundance in this part the residents never cares for water conservation. The goal of the thesis is to measure the factors responsible for the implementation of rain water harvesting for non potable uses in a humid urban catchment. As the thesis considers only the municipal uses of water; the other urban water uses like industrial, irrigation is assumed to remain outside the system boundary. Public rejection of Rooftop Rainwater Harvesting has been assumed to be based on misunderstanding of the technologies of water treatment and misconceptions of health risks.

The objectives of this thesis are manifold

1. Reviewing literature available on rooftop rainwater harvesting and its applicability at plot level
2. Finding the probability of rainfall and its distribution pre-monsoon, Monsoon and Post Monsoon Period in humid west Bengal
3. Identify the need for non potable water uses in various type of building
4. Identify the factors responsible for reuse of harvested rainwater in urban catchment
5. Developing a conceptual model for re-use of rooftop rainwater in decision making process for different building uses

### 1.1. Significance of the study

The majority of previous studies on RWH in the past (some of these are described in literature review) have taken either a social or technical viewpoint. This study intends to contrast these studies by presenting a feasibility of RRWH in a Humid Region. This study finally derives a DSS Model for deriving type of enduses of harvested rainwater in a system environment. In order to appropriately implement RWH into a development of any scale, the available resources as well as site specific constraints need to be understood. Furthermore, user

behavior plays a major role in the performance of RWH systems. This study is based on the actual survey for the development of RRWH in the study areas. Consequently it is based on a real time process. The author did not spend more than three weeks at a time in any of the study area. There is a possibility that dynamic change in societal and cultural issues might influence and re-direct the focus of further research. This study has not intervened for treatment of rainwater as a potable water resource.

## 2.0 LITERATURE REVIEW

In Kolkata, centralised water supply systems depend on surface water sources like rivers and lakes. Where surface water sources fail to meet the rising demand, groundwater reserves are being tapped, often to unsustainable levels. According to a World Bank study, of the 27 Asian cities with populations of over 1,000,000, Calcutta fourth worst (Source: Background Paper - International Conference on New Perspectives on Water for Urban & Rural India - 18-19 September, 2001, New Delhi.). Anyhow, there is a growing demand for alternative water systems, wherever the conventional systems are not affordable in terms of money or in terms of natural water resources. Surrounding the Rain water runoff system, there are other systems that compose the system environment. These can of course be grouped in different ways, but here three entities are chosen to

represent the context of the Rain water runoff systems: the environment, society and the urban water system.

Gould (1999) clearly summarized the history of rainwater harvesting. Water harvesting is a term describing techniques for collecting, concentrating, and conserving water from various sources for various purposes. Agarwal (2001) defined Rain Water Harvesting as the art, technique, and science of collecting rainwater where it falls, while Pacey and Cullis (1986) referred to rainwater harvesting as the principle of using precipitation from a small catchment.

Generally, rainwater-harvesting methods are classified based on the characteristics of the runoff producing and storage elements of the system. At the simplest level, the various methods can be divided into two groups (CSE, 2003):

- Rooftop Rain Water harvesting method: Rainwater is collected from roof of buildings, concentrated in gutters and conveyed by pipes to a storage system for domestic uses, groundwater recharging, and/or micro irrigation.
- Non-rooftop rainwater harvesting, including micro-catchment and macro-catchment. Micro catchment includes contour ridges, furrow dyke, strip planting, stone bunds, etc. Macro catchment includes terraced systems, hillside conduit system, dam used for recession planting, etc.

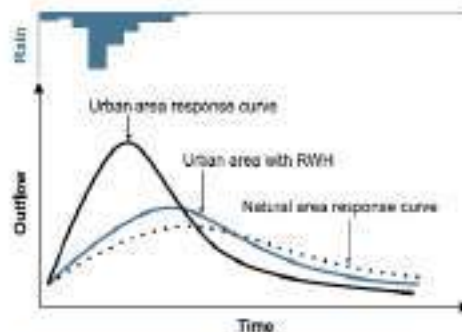


Figure 2.2: principal flow response curve from an urban catchment with and without rainwater harvesting in place, showing the effect of slower flow through the landscape (contributed by K. König)

### 2.1 Factor responsible for choosing the option for RWH

The harvested rainwater is a resource. The factor responsible for choosing the option for RWH is given below:

**1) The rainfall pattern:** Areas where the total annual rainfall occurs during three or four months are examples of places where groundwater recharge is

usually practiced. In places where rain falls throughout the year with a short dry period, a small sized tank is reliable enough for storing rainwater.

**2) The sub-surface geology:** The most important factor of sub-surface geology for recharging the water is the structure should be permeable. Wherever sub-strata are impermeable, recharging will not be feasible.





**3) Groundwater salinity:** In places where the groundwater is saline or not of potable standards, the alternate system could be that of storing rainwater (DGIS, 2001).

**4) Density of population** in a given area determines whether to reuse or recharge harvested Rainwater.

**5) Availability of water** and availability of alternative sources of water, e.g. surface water are influencing factor in the choice of the system.

**6)** Human induced (deterioration of) quality of the groundwater (need for improvement by surplus water of good quality).

**7)** Quantity of excess water during the monsoon season that has to be drained and could potentially be recharged.

**8) Depth of the recharged aquifer** and technical means to lift the water, etc. will possibly improve the existing groundwater quality, especially in urban areas.

#### Pattern of RWH

- **Occasional** – Rain water is collected occasionally with a small storage capacity, which allows the user to store enough water for a maximum of, say, one or two days.
- **Intermittent** - This type of pattern is one where the requirements of the user are met for a part of the year. A typical scenario is where there is a single long rainy season and, during this time, most or all of the users' needs are met. During the dry season, an alternative water source has to be used.
- **Partial** - This type of pattern provides for partial coverage of the water requirements of the user during the whole of the year.
- **Full** - With this type of system the total water demand of the user is met for the whole of the year by rainwater only.

There is a wide range of tried and tested Rain water harvesting reuse techniques used around the world. These include Aquifer storage and recovery; Urban lakes; wetlands; lakes and ponds uses for swimming, snowmaking, Fishing, boating, and other noncontact recreational activities and non-potable reuse; The choice of end use depends on Space availability, Options available locally, Local traditions for water storage, Cost of purchasing new tank, Cost of materials and labour for construction, Materials and skills available locally, Ground conditions, Style of RWH – whether the system will provide total or partial water supply, Sizing the system.

There are many decentralized water solutions described in the literature. Burkhard et al. (2000) present a broad review of techniques in rainwater management, domestic wastewater management, and water and waste re-use. Local Rain water harvesting management solutions, such as infiltration basins, swales, and infiltration trenches, are

suitable where there is sufficient open space (Burkhard et al. 2000; Harremoës 1997). In addition, local water reuse solutions, such as rainwater, liquid waste, and greywater reuse systems, have the potential to reduce total water consumption; however, their economic feasibility depends significantly on the scarcity of water resources (Burkhard et al. 2000; Harremoës 1997). The planning of decentralized, integrated water, Rain water harvesting, and wastewater management is a complex process involving land use planning and control legislation. Smerdon et al. (1997) elaborate on methods to plan and implement decentralized water supplies and sewerage for single units, clusters of houses, villages, and towns. The literature contains several examples of demonstration projects at the scale of a single dwelling (Berndtsson, 2004), neighborhood (Hofman, 2014), and town (Ward et al. 2012).

From the literature review the following gap has been identified

- Socio cultural and Socio economic behavior of the stakeholders towards acceptance of RWH
- Feasibility of RWH for different building uses in metropolitan catchments depends on the selection of correct end use of harvested Rain water.
- Regional and local policies and other institutional mechanism to support RWH
- a Specific DSS model to assess impediments for Acceptance of RWH in the study area
- Interdependencies between demand and supply of rain water at specific plot level.

This study had integrated socio economic factor to formulate policy for acceptance of roof top rain water harvesting at plot. It has also devised mechanism for proper end use of harvested rainwater at different plot level.

### 3.0 DEVELOPMENT OF INDICATORS

Since one single indicator cannot describe sustainable systems, thus a number of indicators must be chosen, and a framework for making them cover all the important aspects of sustainability are needed (Maclaren 1996). In a discussion on rain water sustainability the concept of integrated rain water management is valuable (Niemczynowicz 1999). The indicators are formulated with local conditions in mind. In general, indicators shall be formulated to facilitate an assessment of the degree of fulfillment (Bossel 1998, 1999), and they shall be measurable (Lundqvist 2000; Spangenberg 2002), something which does not necessarily imply quantitative measures. The indicators presented here are not suggested in order to be quantitative or measurable on a common scale, but to reflect relevant issues within their own frames of logic In Table below, a number of indicators are listed with the intention of illustrating possible characteristics comprised by the six basic



orientors of system sustainability. The set of indicators presented here, both illustrate the approach as well as summarize relevant indicators generated in previous research. The indicators in the columns reflect either the

internal rain water system, or the interaction between the rain water system and its different superior systems.

<b>AHP Analysis</b>			
<b>Components</b>	<b>Indicator</b>	<b>Variable</b>	<b>Question no</b>
C1	Judgment Strategies	Association/Participation	
		People's risk perceptions/ Health	32,29
		Scientific knowledge/ awareness	15
C2	Cost	Cost Recovery	30
		Investment Level	30
		Capacity to Pay	14
C3	Co Existence	Flexibility	23,
		Skeptical about durability	30
		Adaptability	30
C4	Adaptability	People priorities	30
		Disgust emotion	30
		Scope/Demonstration projects	30
C5	Performance	Safety	30
		Operation and maintenance	25,27
		Level of infrastructure	9
C6	.Policy framework and legislation	Service Delivery	13,7,11,7
		Compensation	31
		Water availability	12
<b>Regression Analysis</b>			
<b>Variable</b>		<b>Question No</b>	
<i>Space availability</i>		18	
<i>Options available locally</i>		20,17,21,22,24,26	
<i>Style of RWH</i>		1	
<i>Ground conditions</i>		19	
<i>Scale of development</i>		4	
<i>Stories of the building</i>		3	
<i>Water Scarcity</i>		15	
<i>Degree of Contact</i>		25	
<i>Number of WCs more than 1per 500sqft</i>		5	
<b>Demand Supply Balance</b>			
<b>Variable</b>		<b>Question No</b>	
Rainfall		Data availed from IMD	
Roof area		18	
Outcome		Total supply	
Total number of non potable water consumer		2	
Period of operation		3	
Type of demand as per end use		8,28	
<b>Outcome</b>		Total Demand as per different end use	



#### 4.0 DATA COLLECTION

A 32 years daily rainfall data was collected from IMD for Airport station, Dumdum. The data ranges from 1982 to 2013. The user response survey was conducted in December, 2010 – March, 2011, through 400 set of questionnaires of open end, structured and using five-point Likert-type scale designed to identify respondents' preferences. Survey participants were interviewed through a convenient sampling approach in urban area of KMA with sample sizes conforming to the population ratio of each ULB. Finally a qualified sample size of 390, or a response rate of 97.5% was achieved. The questionnaire survey has been conducted in five types of building uses. Namely Residential, Educational, Medical, Institutional and mixed use Commercial.

#### Introduction to Study Region

Kolkata Metropolitan Area (KMA), the largest urban agglomeration in eastern India, extends over 886.67 sq. km. and envelopes 3 Municipal Corporations (including Kolkata Municipal Corporation), 39 Municipalities and 24 Panchayat Samitis. Kolkata includes the city proper, urban and rural area. Kolkata is within the Ganges Delta (Latitude- 22° 33' N, Longitude- 88° 30'E) and is situated on an average of 9m from sea level. Due to this location advantage Kolkata enjoys a humid tropical climate. Consequently, the city sits on alluvial deposits and within a considerable seismic zone, and thus is prone to earthquakes.

The metropolitan region suffers from scarcity in clean water and flooding, in periodic cycles, depending on the climate, topography and condition of the river Hooghly, its tributaries, distributaries and canals that flow through the area.

#### Selection of the study area

The recently released Perspective Plan 2025, by the Kolkata Metropolitan Development Authority which provides an outline for urban planning till 2025,

envisages that the per capita availability shall be 150 litres per day. The water is supplied via six service districts identified by the water treatment plants in the specified areas — Palta, Kolkata, Garden Reach, Sonarpur, Howrah and Serampore. The supplied water had been unable to reach 100% household. Greater Kolkata consists of Kolkata Municipal Corporation of parts of Kolkata metropolitan development officer and Kolkata Municipal Corporation. There are two other municipal and 40 municipalities in KMA. Out of 40 municipalities, 4 municipalities have been selected for study- Bally, Srerampur, Panihati and South Dumdum.

#### **Bally**

Total area of bally municipality is 11.81 and total population is 275000(as per 2011 census). The localities which has been surveyed are Balibazar, Chaitalpara, Pathakpara, Badamtala, Ghoshpara, Ramchandrapur, Sahebbagan. There are lots of water bodies in this north western part of bally. Rate of water supply by municipality is 36.61 LPCD

#### **Panihati :**

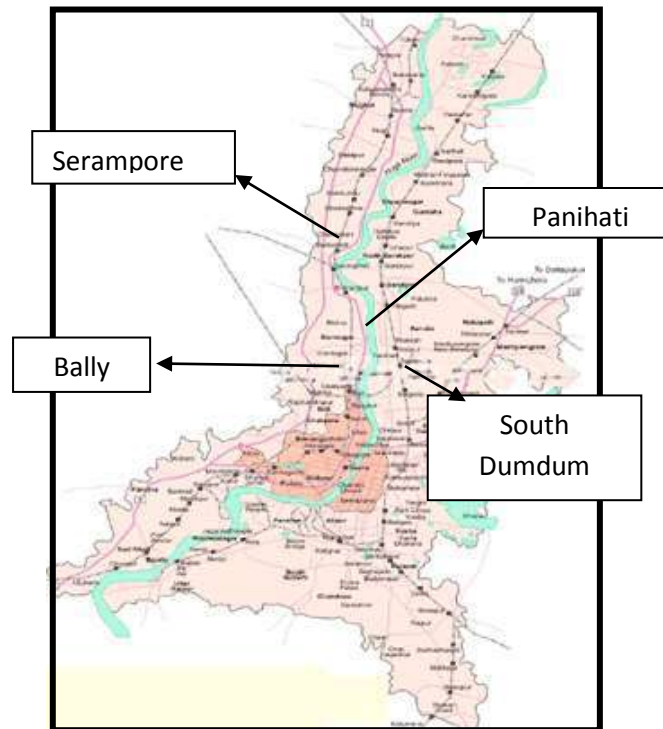
Panihati covers total area of 9.38 sq.km. and 380000 population (as per 2011 census). The locality which had been surveyed for this study are Panihati, Agartala, Krishnapur, Natagarh, Ghola and Ushampur. Rate of water supply by municipality is 57.33 LPCD.

#### **Serampur :**

Serampur has a population of 210000 (as per census 2011) and covers an area of 14.50sqkm. Rate of water supply by municipality is 59.01 LPCD

#### **South Dumdum:**

South Dumdum has total area of 15.3 sq. km. and the total population of 420000 (as per census 2011). Area surveyed are Dumdum park, Lake town, Pikepara, Nagerbazar, Private road. Rate of water supply by municipality is 44.98 LPCD. Total numbers buildings surveyed in the Study Area is given below.



	Residential	Educational	Medical	Institutional	Mixed Commercial
<i>South Dumdum</i>	55	13	9	12	20
<i>Panihati</i>	50	16	10	12	30
<i>Serampur</i>	40	11	8	11	20
<i>Bally</i>	36	12	8	10	14

### 5.0 Analysis and finding

The analysis has been divided in the following sections

1. Analysis of rainfall pattern
2. Calculation of supply from runoff from the roof.(module roof area 1000sqm)
3. Type of RRWH from Demand supply ratio
4. Calculation of demand different end uses for various buildings (from survey)
5. AHP for Priority of different Socio-Economic Component for each type of Building
6. Correlation effect of other factor from regression analysis
7. DSS model

#### 5.1 ANALYSIS OF RAINFALL

32 years (1982-2013) of daily rain-fall data pertaining to Kolkata Metropolitan Area rain-gauge station has been obtained from India Meteorological Department (IMD), Pune. The summary of the rainfall analysis is depicted in Table below. The region receives an average annual rainfall of 1662.2 mm occurring over average 44 rainy days. The highest observed rainfall over 32 years is 2303 mm during the year 1986 and minimum

is 1215 mm during the year 1989. 95% of the annual rainfall occurs during the South West monsoon (June to September). From Table below it can be seen that the month of August receives highest rainfall in a year, 338 mm (avg) and with lowest rainfall during Dec. Over the past 32 years the area has seen a maximum of 56 rainy days in 1986 and minimum of 33 rainy days in the year 1994. Rainfall data has been used in estimating the volume of water to be stored in order to meet the daily water demand for the specific end use throughout the year.

32 years rainfall data were analysed for mean, range and variance of rainfall. Total wet days-dry days per month were also calculated. Total number of 1,2,3,4,and more than 7 days events were derived from the Analysis. Probability of each event has also been calculated. Calculation of reliability requires consistent data of daly and henceforth monthly rainfall data. The chance of rain rose sharply during the month of June, reached a peak in July and August and then started decreasing gradually during September.

- a. The start of the season is not considered before June 1,
- b. A date after June 1 indicates a potential start date, defined as the first occurrence of at least 70 mm of rain totaled over at least 2 consecutive days and,



- c. The potential start could be a false start if a dry spell of 10 or more days occurs in the next 30 days.
- d. The first occurrence of a long dry spell of atleast 15 days, after September 15.

The decade rainfall amounts for the period from June 1 to September 30 over the 32-year data base were

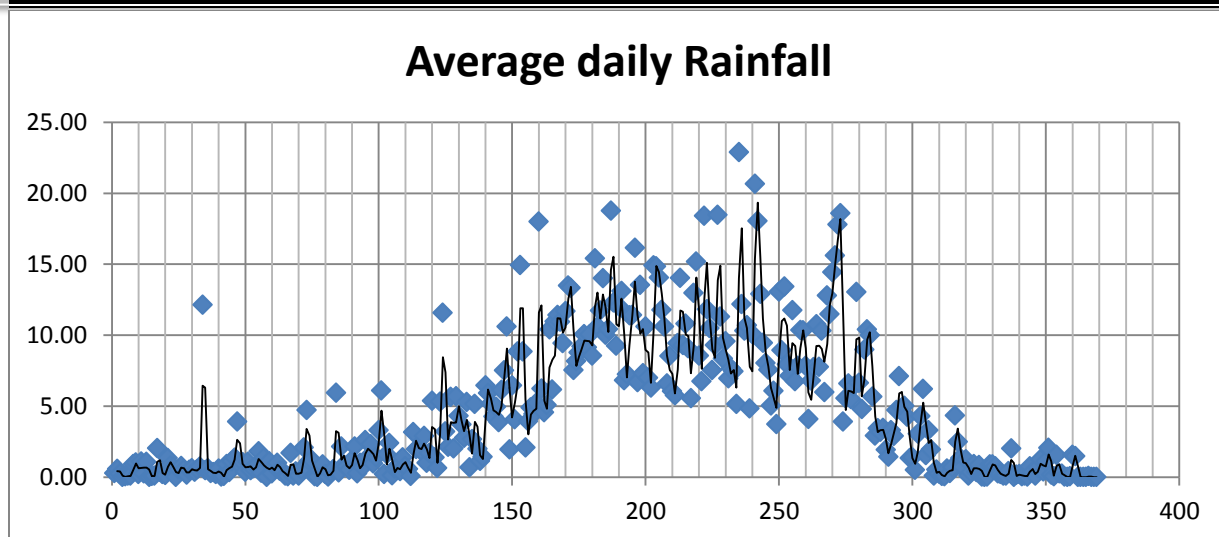
statistically analyzed to estimate the amounts of rain that can be expected at given probability levels. Percentage points of decade rainfall amounts alongwith approximate 95% confidence limits have been estimated and these are given in Table below.

**Table 5.1. Percentage Points and 95% Confidence Limits for Decade Rainfall Amounts**

Year	Month	Decade	Percentage Point	Amount (mm)	Confidence Limits
1982-2013	June	I	25%	0.0	(0.0 ,3.0)
			50%	11.2	( 5.3, 14.0)
			75%	29.8	(17.871.9)
		II	25%	19.0	(10.2, 29.1)
			50%	50.5	(32.0, 61.8)
			75%	77.4	(64.3, 120.9)
		III	25%	42.0	(21.1, 56.3)
			50%	92.6	(62.4,112.7)
			75%	135.1	(121.2,160.1)
	July	I	25%	53.4	(43.8, 71.1)
			50%	96.2	(84.3, 117.5)
			75%	143.2	(131.5, 169.4)
		II	25%	53.4	(43.8, 71.1)
			50%	96.2	(84.3, 117.5)
			75%	143.2	(131.5, 169.4)
		III	25%	66.6	(44.4, 75.8)
			50%	104.1	(85.1, 131.6)
			75%	173.2	(144.3, 210.8)
	Aug	I	25%	45.5	(29.5, 58.9)
			50%	99.4	(70.1, 114.5)
			75%	123.6	(117.2,157.5)
		II	25%	34.2	(20.6, 44.5)
			50%	65.9	(49.7, 96.8)
			75%	129.1	(107.9, 152.0)
		III	25%	28.9	(13.8, 50.6)
			50%	79.6	(54.8, 101.5)
			75%	130	(112.8, 164.3)
	Sept	I	25%	36.6	(23.1, 45.5)
			50%	71.8	(51.6,84.9)
			75%	111.8	(97.6, 143.6)
		II	25%	14.8	(7.6, 22.4)
			50%	39.5	(27.3, 54.2)
			75%	76.2	(58.2, 85.8)
		III	25%	7.1	(2.6, 10.5)
			50%	32.1	(15.7, 43.0)
			75%	84.8	(57.3, 94.8)

The analysis of dry spells is useful to design storage of rain water. Analysis has been done to determine the probability of dry days. It was found that

probability of dry spell for more than 5 days is on june 1-6, and 11-16, Aug 11-16 and September 21-26. Dry spell of more than 7 days starts after October 13.



Average daily rainfall data was interpreted and plotted against each day for the whole annual period.

#### 5.2. Type and Size of the Roof area

The survey conducted for five types of building and the roof area was calculated from satellite imagery. Roof area greater than 1000 sqm was chosen. Then roof areas were grouped into five types namely *very small* 1000-1500 sqm, *small* 1501-3500 sqm, *medium* 3501-6000 sqm, *large* 6001-10000 sqm, and *very large* 10000-150000 sqm. From the graph it can be interpreted

that only educational, institutional and mix commercial buildings has considerable number (>10%) of very large roof (10000-15000). Small roof area represents 23% in education, 43% in Medical building. Larger roof area ensures better reliability in terms of supply of rain water versus demand for particular end use.

#### 5.3. Demand of water

Harvested Rainwater can be used in Landscape irrigation Per unit demand of water is extracted from survey given in the table below;

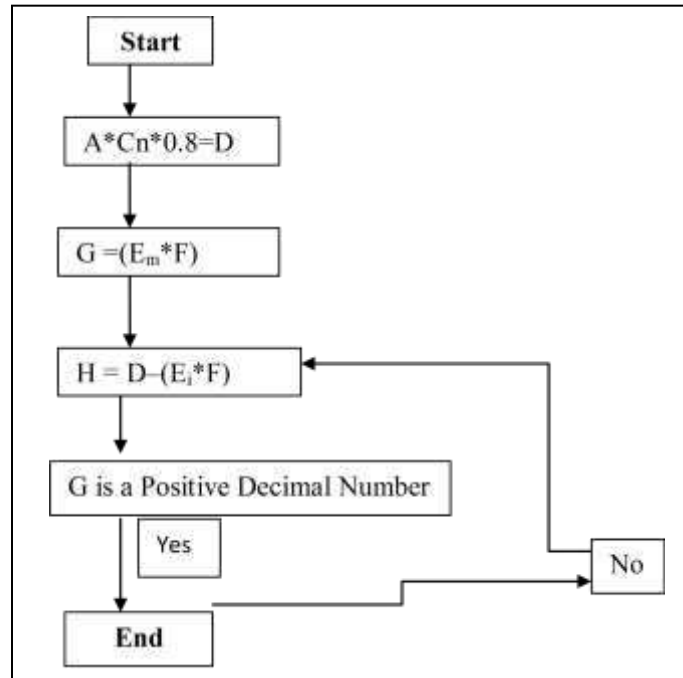
Sl No.	Type of end use	Water demand
1	Garden Landscping	3-6 litres per square metre
2.	Health Centres	5 litres per Out-Patient 40-60 litres per In-patient
2.1.	Hospital (with laundry facilities	220-300 litres per bed
	Schools	<ul style="list-style-type: none"> <li>• 2 litres per student</li> <li>• 10-15 litres per student if water-flushed toilets</li> </ul>
5.	Educational	
	a) Day schools	45 per user
	b) Boarding Schools	135 per user
6.	a) In Residential living units	135 per user
	b) Hotels with lodging accommodation	180 per user
7.	Assembly- Cinema theatres, auditoria, etc. (per seat accommodation)	15 per user
8.	Government or semi public business	45 per user
9.	Mercantile (Commercial)	
	a) Restaurants (per seat)	70 per user
	b) Other business building	45 per user



### 5.4. Couple supply- demand

The demand for specific end use is derived from the survey. For outcome of the result total number of the

consumer as input to DEPRaH model. The supply of rainwater can be derived from the roof area and max available rainfall.



A = Roof area of the Building

C<sub>1-12</sub> = Max available rainfall

D = Total Runoff to RW tank

E<sub>i-m</sub> = Demand for each user for end use m

F = Total Number of User

G = Total Demand

H = Cumulative monthly supply

From the model it can be interpreted that choice of the type of end use is dependent on Supply of runoff and no of user.

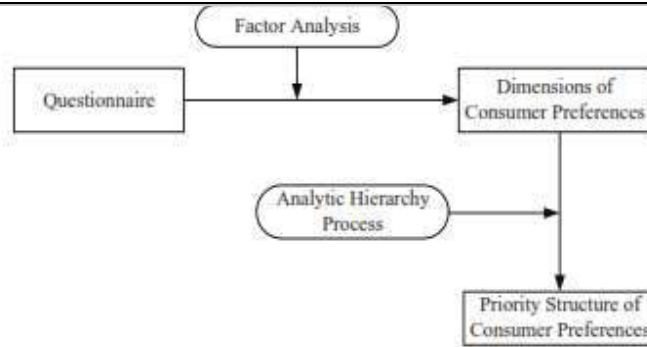
**Table Rainwater supply vs. feasible end use demand**

SI No	Demand:Supply	Type of RWH proposed
1.	1	Full
2.	0.75	Occassional
3.	0.5	Partial
4.	0.3	Intermittent

### 5.5. AHP Analysis

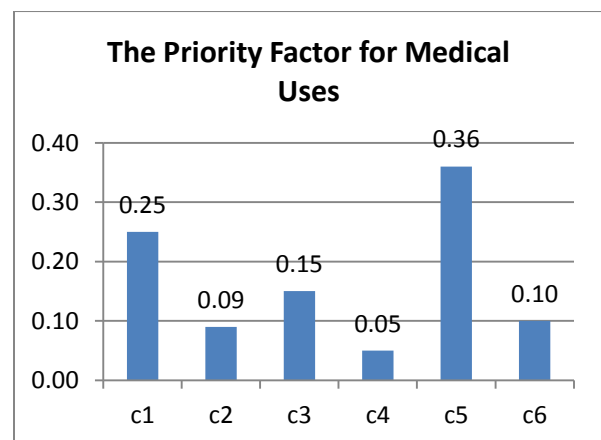
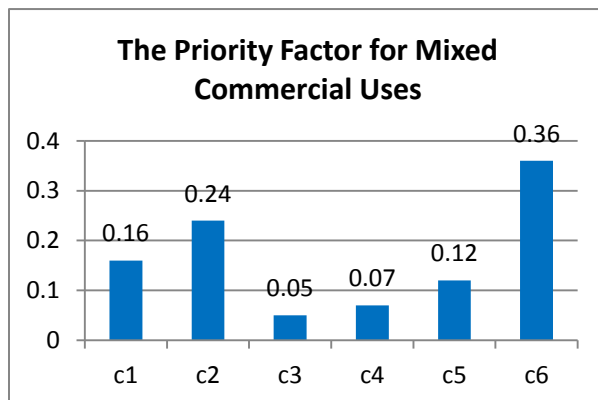
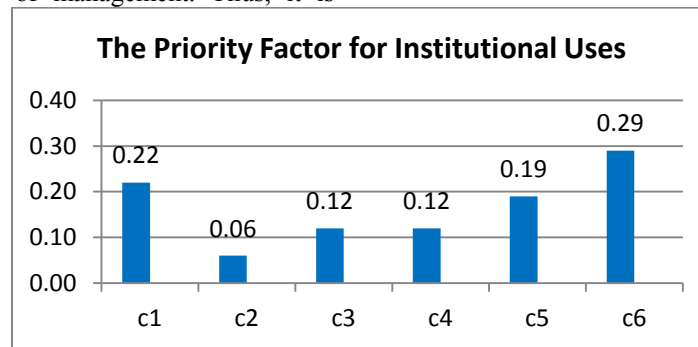
AHP analysis has been adopted for determine the priority factor for each building use. Likert response survey questions have response choices such as; strongly disagree, disagree, agree, strongly agree. The response choices are typically considered ordinal;

essentially, we will be using factor analysis to generate the composite scores. The Decoding of the responses into numbers which reflect the ordinality of the original responses is done for all five building. From the factor scores

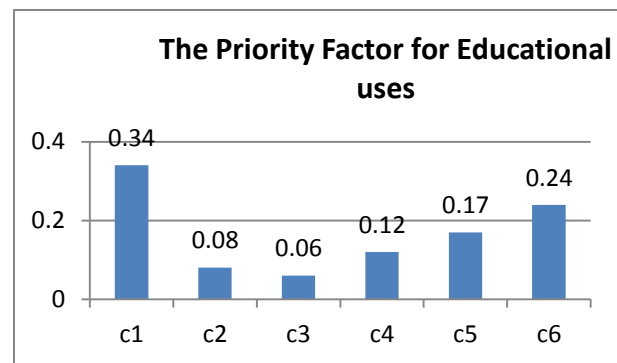
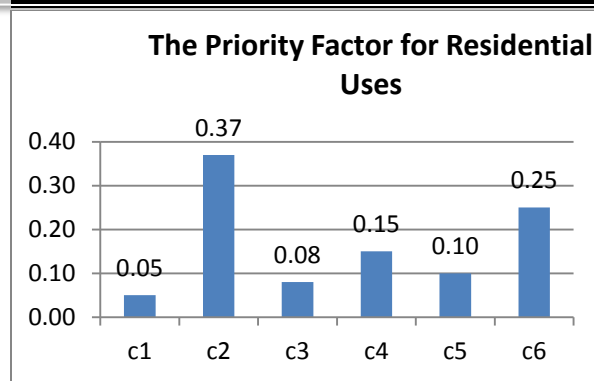


As the results suggest, Policy framework and legislation factor obtained the most important Coefficient for Institutional and mixed commercial buildings. So, this factor has the most effect on the *Acceptance of Rain Water Harvesting*. In fact the results correspond to the reality. The other factors; even though, regarded as one of the key and main effective factor on *Acceptance of Rain Water Harvesting*, but one has to keep in mind that their efficiency even directly or indirectly influenced by the factor of management. Thus, it is

recommended to authorities of the branches, in order to increase the efficiency, attending to their role and management assignment as more as they can. Next, the most important coefficients have been obtained by the consumer, Performance factors for Medical Buildings and Judgment Strategies for educational buildings and Cost factors for Residential buildings; these factors have placed in their rank of importance and it's recommended that factors are to be addressed accordingly by Decision makers as for different building uses.







Weights of the Criteria for the Building use

Sl no	Residential	Educational	Medical	Institutional	Mix- Commercial
C1	0.26	0.20	0.26	0.18	0.10
C2	0.16	0.19	0.20	0.21	0.24
C3	0.24	0.17	0.18	0.21	0.20
C4	0.26	0.20	0.26	0.17	0.11
C5	0.24	0.20	0.28	0.16	0.10
C6	0.25	0.21	0.25	0.17	0.13

Normal Weights of the Criteria for the different building use

	Residential	Educational	Medical	Institutional	Mix- Commercial
C1	0.065	0.049	0.063	0.044	0.026
C2	0.036	0.037	0.041	0.041	0.049
C3	0.031	0.027	0.021	0.026	0.021
C4	0.027	0.035	0.045	0.035	0.013
C5	0.028	0.025	0.034	0.015	0.017
C6	0.046	0.026	0.032	0.030	0.015
Total	0.233	0.199	0.236	0.191	0.14
Rank	2	3	1	4	5

Level of acceptance of RRWH varies from different uses of building. From this study it was found medical uses building has highest acceptance of rrwh while mix-commercial has lowest acceptance. Further research suggest for end use options for different scale and type of activities in similar uses of building.

**5.6. Regression analysis**

1. The variables listed first in the problem statement are the independent variables(IV): “Space availability for storage tank”, “Options available locally” “Ground conditions” “Scale of development” “Stories of the building” “Water Scarcity” “Degree of Contact” “Number of WCs more than 1per 500sqft”. The variable used to define groups is the dependent variable (DV): “Opinion on type of end use on RWH”

2. The responses to The analysis will result in two comparisons:
  - a. Survey respondents who thought RWH water enduse as toilet flushing versus survey respondents who thought to recharge it.
  - b. Survey respondents who thought RWH water enduse as landscaping versus survey respondents who thought to recharge it.
  - c. Survey respondents who thought RWH water enduse as cleaning versus survey respondents who thought to recharge it.
3. Multinomial logistic regression requires that the dependent variable be non-metric and the independent variables be metric or dichotomous.



4. It contains four categories: TOILET FLUSHING, LANDSCAPPING, CLEANING, RECHARGE TO THE GROUND.
5. Multinomial logistic regression requires that the minimum ratio of valid cases to independent variables be at least 10 to 1. The ratio of valid cases (390) to number of independent variables (3) was 130 to 1, which was equal to or greater than the minimum ratio. The requirement for a minimum ratio of cases to independent variables was satisfied.
6. The preferred ratio of valid cases to independent variables is 20 to 1. The ratio of 195 to 1 was greater than the preferred ratio. The preferred ratio of cases to independent variables was satisfied.

	Estimated coefficients for different waste management options		
	Toilet Flushing	Landscapping	Cleaning
Space availability	0.160 (0.096 <sup>**</sup> )	0.114 (0.175)	0.197 (0.013 <sup>***</sup> )
Options available locally	0.250 (0.633)	0.394 (0.385)	0.069 (0.866)
Location of building	-0.057 (0.507)	-0.012 (0.857)	-0.100 (0.118)
Ground conditions	0.681 (0.254)	-0.698 (0.224)	-0.122 (0.806)
Scale of development	0.145 (0.804)	0.650 (0.204)	0.299 (0.521)
Stories of the building	-0.189 (0.738)	0.588 (0.193)	1.194 (0.023 <sup>***</sup> )
Water Scarcity	4.312 (0.000 <sup>***</sup> )	5.286 (0.000 <sup>***</sup> )	2.688 (0.000 <sup>***</sup> )
Degree of Contact	0.308 (0.019 <sup>***</sup> )	0.048 (0.725)	-0.048 (0.714)
Number of WCs more than 1per 500sqft	2.295 (0.000 <sup>***</sup> )	1.095 (0.064 <sup>*</sup> )	2.222 (0.000 <sup>***</sup> )

**Notes:** Figures in parenthesis are p-values. \* 10 percent \*\* 5 percent \*\*\* 1 percent Significance level, Number of observations 390 , Note: (\*) Dy/Dx is for discrete change of dummy variable from 0 to 1, natural log of ground water level

Source: Survey Data 2010-2011

Independent variables	(Dy/Dx) Toilet Flushing	(Dy/Dx) Landscapping	(Dy/Dx) Cleaning
Space availability	0.006 (0.401)	0.004 (0.753)	0.025 (0.048 <sup>**</sup> )
Options available locally	0.010 (0.806)	0.066 (0.381)	-0.021 (0.755)
Location of building	-0.002 (0.746)	0.006 (0.580)	-0.017 (0.119)
Ground conditions	0.200 (0.123)	-0.139 (0.276)	-0.002 (0.976)
Scale of development	0.028 (0.010 <sup>***</sup> )	0.004 (0.853)	-0.021 (0.336)
Stories of the building	-0.067 (0.188)	0.189 (0.012 <sup>***</sup> )	0.039 (0.583)
Water Scarcity	0.102 (0.019 <sup>***</sup> )	0.623 (0.000 <sup>***</sup> )	-0.057 (0.285)
Degree of Contact	-0.017 (0.798)	-0.078 (0.477)	0.043 (0.691)
Number of WCs more than 1per 500sqft	0.121 (0.058 <sup>*</sup> )	-0.052 (0.513)	0.277 (0.002 <sup>***</sup> )

**Notes:** Figures in parenthesis are p-values. \* 10 percent \*\* 5 percent \*\*\* 1 percent Significance level, Number of observations 390 , Note: (\*) Dy/Dx is for discrete change of dummy variable from 0 to 1, natural log of ground water level

Results show that the key factors determining the choice of **Toilet Flushing** as a potential end use option are *Ground conditions, Scale of development, Degree of Contact, Number of WCs more than 1per 500sqft*. The determining factors for the choice of **Landscapping** is *Options available locally, Ground conditions, Scale of development, Degree of Contact, Water Scarcity*.



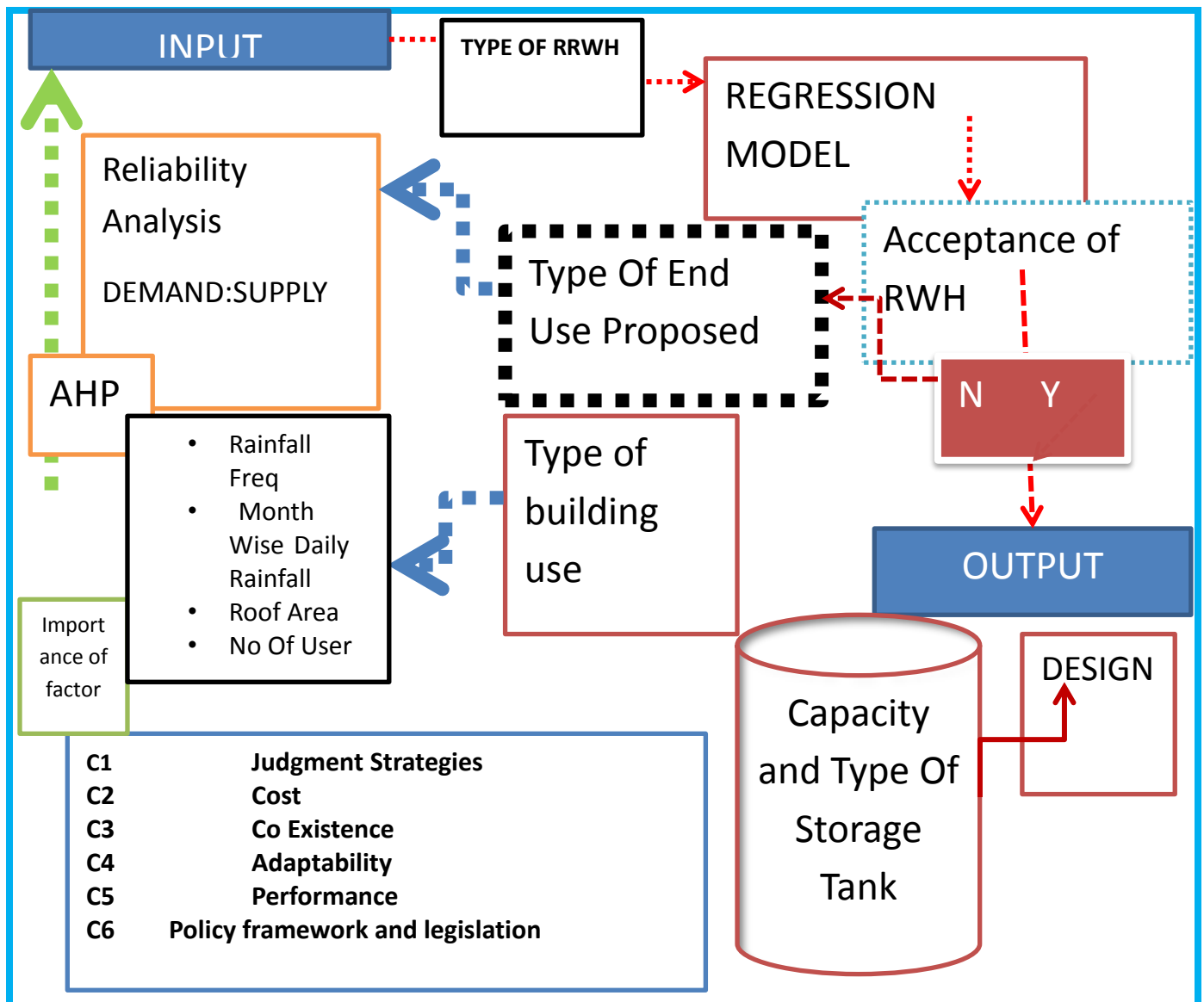
### 5.7. Development of final Decision Support System Model

Interpretation of the analysis from the previous section has generated outcomes

1. The priority factors for acceptance of rooftop rain water harvesting for different use of building has been derived from AHP analysis
2. Rain fall data has been analyzed for probability of occurrence, probability of dry spell and

henceforth calculation of total runoff from the building roof area.

3. The demand for particular end use and rain water supply from building's roof area is given as input for Demand Supply ratio
4. The regression model calculates the weight of different factors having influence on type of end use.
5. Use maximum (80% Probability) rainfall as input for choice of the storage tank



### 6.0. POLICY RECOMMENDATION

The barriers to find potential of Rooftop Rainwater Harvesting combine those of Water Recycling and WSUD and are compounded by the

consultation required between different authorities. Knowledge gaps and research needs identified in the review include the following:

- Current guidelines, standards and regulations need to be more flexible to



- allow innovation whilst conserving water and the environment.
- Few people have all the required skills and appropriate design tools and there are few decentralized maintenance services
- Local authorities avoid depending on central infrastructure and promote incentives for investment decisions of the stakeholders;

### Installation of supplementary pipe for rain water harvesting and Post Project Appraisal is to be Conducted;

- Source control measures, particularly those that require behavioral change of individuals are poorly understood;
- There is a need for Decision frameworks for use along with potable use.
- Public Perceptions of Water Reuse

The importance of community acceptance of water reuse is fundamental but a review of research (Po, Kaercher & Nancarrow, 2004) found a conspicuous lack of social research in understanding the basis of public perceptions of water reuse and the psychological factors governing individual decision making processes. However they identified some basic principles for engaging the community in water reuse projects. Firstly offering early and genuine involvement so that the community has the opportunity to shape the project, and consider the full range of options. Where developers or utilities endeavor to convince a community of the value of a reuse project after these decisions has been will have a high probability that the issue will become political and the chances of acceptance are more random.

### 7.0. CONCLUDING REMARKS

As explained, policy-makers wanted to maintain the present centralized water supply in the ULBs of KMA, but not considering protecting rain water a valuable resource from wastage. In this thesis seeing the End use potentiality for acceptance of RRWH for different building and studying the AHP the policy can be devised in a right way. The Model had developed **Six Criteria** and **Eighteen Sub Criteria**, for Acceptance of RWH which define what, makes up an improved process for acceptance of RWH in different Buildings: *Association, People's Risk Perceptions, Awareness, Cost Recovery, Investment Level, Capacity to Pay, Flexibility, Skeptical About Durability, Adaptability, People Priorities, Disgust Emotion, Scope, Safety, Operation And Maintenance, Level Of Infrastructure, Service Delivery, Compensation, Water Availability.*

Further the type of end use had been a determining factor for acceptance of RRWH. The potential type of end use is to be dependent on *Space*

*availability, Options available locally, Style of RWH, Ground conditions, Scale of development, Stories of the building, Water Scarcity, Degree of Contact, and Number of WCs more than 1per 500sqft.*

### 7.1. Recommendations for future research.

A number of areas where further research is necessary were recognised during this study. This thesis helps to identify certain socio-demographic variables which influence water consumption and their effects on water use

### BIBLIOGRAPHIC REFERENCES

- 1 Agarwal, A. (1998). 'Rainwater harvesting in a new age: when modern groundwater and river exploitation has reached its limits.' In: Paper 2 of Stockholm Water Symposium 1998, Stockholm International Water Institute.
- 2 Asish Ghosh (2010), Kolkata and Climate Change, Climate change Policy Paper IV
- 3 Baggett S, Jeffrey P and Jefferson B (2004). "Participatory water reuse planning: a conceptual model based on social learning and personal constructs." Presented at IWA World Water Congress, Marrakech 19-24 September, CDROM.
- 4 Baggett S, Jeffrey P and Jefferson B (2006). "Risk Perception in Participatory Planning for Water Reuse." *Desalination*, 187, 149-158.
- 5 Batchelor, C.H., Rama Mohan Rao, M.S., & James, A.J. 2000. Karnataka Watershed
- 6 Brown R.R, Ryan R and McManus R (2001) An Australian Case Study: Why A Transdisciplinary Framework Is Essential For Integrated Urban Water Planning. In Maksimovic, C., and J.A. Tejada-Guilbert. (eds). *Frontiers in Urban Water Management: Deadlock or Hope. UNESCO International Hydrological Program – V, Technical Documents in Hydrology, No.45 p251-259, IWA Publishing, London.*
- 7 Burkhard, R., Deletic, A., and Craig, A. 2000. *Techniques for water and wastewater management: a review of techniques and their integration in planning. Urban Water*, 2: 197–221.
- 8 "Brundtland Report." 1987. *World Commission on Environment and Development: Our Common Future.* New York: United
- 9 Chakraborty Indrani & Sen Somnath, 2009, "Effective rain water harvesting – an Indian experience", international conference on Water Resource Development, EWRI, ASCE, IIT, MADRAS
- 10 Chakraborty Indrani & Sen Somnath, 2009, "Rain water harvesting in kokata a big challenge for sutenance", 3<sup>rd</sup> international conference on Decisions in Management and Social Sciences for Sustainable Development, IISWBM, Kolkata
- 11 Chakraborty Indrani & Sen Somnath, 2010, "Methodology for a supplementary source of water supply in slums of Kolkata Metropolitan Area", 56<sup>TH</sup> international conference on poverty alleviation and urban development, ITPI, DELHI



- 12 *Development Project: Water Resources Audit. KAWAD report 17, KAWAD society, Bangalore, India.*
- 13 *Diaper, C. Jefferson, B., & Jeffrey, P. (2001). Water Recycling Technologies in the UK. Internationale Regenwassertage 2001. Mannheim 10-14 September 2001.*
- 14 *DITAC (1992) Managing rain water: The untapped resource. Workshop Proceedings, Environmental Technology Committee, Department of Technology Industry & Commerce, Canberra.*
- 15 *Dr. Priyadarshini Sen(2012), Implementing Rainwater Harvesting Methods- A study in Baishnabghata-Patuli, Kolkata, India IOSR Journal Of Humanities And Social Science (JHSS) ISSN: 2279-0837, ISBN: 2279-0845. Volume 5, Issue 1 (Nov. - Dec. 2012), PP 01-05*
- 16 *Falkenmark, M. & J. Rockström, (2004), Balancing water for humans and nature: The new approach in ecohydrology, Earthscan.*
- 17 *Gleick, P.H. (1993). Water in Crisis.OUP, New York pp.3-10*
- 18 *Goswami, A.B. (2002) Hydrological Status of West Bengal. In Changing Environmental Scenario of the Indian Subcontinent. Ed. By S.R. Basu.ACB Publication, Kolkata. pp.299-314).*
- 19 *Goswami,A.B (1995): A Critical Study of Water Resources of West Bengal. Unpublished Ph.D.. thesis,Jadavpur University,pp.57-65*
- 20 *Dr.ir. J.A.M.H. Hofman (1), Dr.ir. M. Paalman (1),2014,Rainwater harvesting, a sustainable solution for urban climate adaptation?;KfC 142/2014*
- 21 *John Butterworth and John Soussan, Water Supply and Sanitation & Integrated Water Resources Management: why seek better integration? WHIRL Project Working Paper 2,Prepared for WHIRL project workshop on 'Water Supply & Sanitation and Watershed Development: positive and negative interactions', Andhra Pradesh, India, 5-14 May 2001*
- 22 *Justyna Czemieli Berntsson (2004),Beneficial use of stormwater: a review of possibilities, Urban Water; Chalmers University Of Technology Gothenburg, Sweden, Report 2004:6.*
- 23 *Lanka Rainwater Harvesting Forum(2000),ERB IC18 CT98 0276 ,Milestone4:Report D4*
- 24 *Smerdon.T, Wagget.R, and Grey.R. (1997). Sustainable housing options for independent energy, water supply and sewage. Bracknell:BSRIA.*
- 25 *Ward, S., Barr, S., Butler, D. en Memon, F.A. (2012a) Rainwater harvesting in the UK: Socio-technical theory and practice. Technological Forecasting & Social Change 79, 1354-1361.*
- 26 *Terpstra P.M.J., (1998), Sustainable water usage systems; Models for the sustainable utilisation of domestic water in urban areas. In International WIMEK Congress on Options for Closed Water Systems, Sustainable Water Management, march 11-13, Wageningen, The Netherlands.*
- 27 *UN-Water Thematic Initiatives (2006), Coping with Water Scarcity*



# CUSTOMER ATTITUDE AND SATISFACTION TOWARDS INVESTMENT IN LIFE INSURANCE WITH SPECIAL REFERENCE TO ERNAKULAM CITY

**Ganga Devi T R<sup>1</sup>**

<sup>1</sup> Associate Professor,  
Department of Basic Science and Humanities,  
Adi Shankara Institute of Engg.& Technology,  
Kalady, Kerala

**Dr.Lekshmi Bhai P S<sup>2</sup>**

<sup>2</sup>Assistant Professor,  
Department of Management Studies,  
Adi Shankara Institute of Engg.& Technology,  
Kalady, Kerala

## ABSTRACT

*The concept of insurance is not new to the society. Its origin can be traced 5000 years back in ancient regime, where the people whose property vulnerable to the losses come together and created social fund by way of contribution. Such social fund was used to compensate the person who actually bears the loss. With increase in trade commerce and industry, the concept of insurance became more popular and with Industrial Revolution, the institution for insurance sprang up in me economy. The concept of making of provision for old age, provision for education and marriage of children, making provision to get regular income after retirement, provision for becoming disable due to accident, provision for medical aid and making provision for family members if death is caused earlier, these are new concepts that have come with the passage of time. Now insurance is an inseparable part of the society. Life insurance business is greatly influenced by the rate of growth of population, social security system, and health care system, changes in customs, social practices and changes in the attitudes. Hence it is relevant to study the customer's attitude towards investment in life insurance. This study is designed to investigate the influence of demographic profile of the respondents and their views on the investment in Life insurance schemes, identify the factors influencing selection of various insurance schemes by the customers and to study the customers attitude towards different schemes of different insurance companies.*

**KEYWORDS**— *Life Insurance, Insurance policy, customer attitude, Investment*

## 1. INTRODUCTION

The purchase of life insurance is one of the most important purchasing decisions for individuals and families and it is a critical component of a long-term financial plan. Although most of young Indians agree that life insurance is the best way to protect against the premature death of a primary wage earner, results of various research study reveal the fact that consumers consider the investing of life insurance to be a complex process and eight in ten find it difficult to decide how much and what type of life insurance to get. The worry about making an incorrect decision becomes an excuse for not getting life insurance. This issue creates interest in examination of the consumer demand for life insurance. It is necessary for financial planners to understand consumer life insurance purchasing behavior in order to help them to buy suitable life insurance. In this research work researcher makes an attempt to analyse consumers' (Policy holders') attitude towards investment in life Insurance Policies available in the Indian market, the study also aims to analyze customers' satisfaction towards life insurance investments.

## 2. STATEMENT OF THE PROBLEM

Life Insurance is intangible in its nature hence majority of the Indian population cannot understand its meaning. After history of more than two hundred years of life insurance sector history in India it is still under penetrated with 27 percent. Almost all the insurers knows that it is not bought and it has to be sold, even still there are lot of misconceptions in the minds of Indians towards the concept of insurance hence it caused complications in marketing its products. In reality making the uneducated, rural and economically backward people to understand the insurance concept is a challenging task. Insurers may succeed if they know the attitude of insured and uninsured to develop separate strategies for them. Marketing activities of life insurance companies is all about to inform, bringing awareness, develop belief, to form positive attitude, to reinforce trust etc. in the minds of the consumers by using tools such as advertising, public relations, displays, word of mouth, sales promotion, personal selling etc. Insurers may form positive attitude or may cause negative



attitude so knowing the feelings of respondents found essential. Today customers are more informed with number of options; even still majority of the population in India is still uninsured. Therefore the present study gives more importance to the attitudes of customers towards life insurance. Hence the selected topic is "Customer's Attitude towards Investment in Life Insurance with special reference to Ernakulam District"

### 3. OBJECTIVES OF THE STUDY

In view of the above introductory remarks, the following have been laid down as the specific objectives of the study.

- To study the influence of demographic profile of the respondents and their views on the investment in Life insurance schemes.
- To identify the factors influencing selection of various insurance schemes by the customers.
- To study the customers attitude towards different schemes of different insurance companies.

### 4. RESEARCH METHODOLOGY

#### (a) Type of Research

Out of descriptive, experimental and exploratory research types, the researcher has decided to undertake descriptive research to study the present topic. The study aims to find out the customer's attitude towards investment in life insurance with special reference to Ernakulam district. This is a descriptive study that reveals the association between variables and these associations are interpreted statistically.

#### (b) Data Collection

##### (i). Secondary Data

For the secondary data the researcher has gained data from the relevant text books, journals, reports, articles, news papers, unpublished dissertations, working papers and the internet.

##### (ii). Primary Data

The survey strategy allows the researcher to collect which can be analysed quantitatively using descriptive and inferential statistics. The data collected through survey strategy is easy to explain and understand. Moreover, it can be used to suggest possible reasons for relationships between variables and to produce models of these relationships.

#### (c) Sampling Method and Sample Size

The present study is focused on IT professionals of Info Park, Cochin. In Ernakulam district IT companies are established in Info parks, SEZ, Kinfra and private IT parks. Since there are many companies functioning in the Info park, the study is mainly focused on the employees of IT companies in Info park. There are a total of 92 IT companies functioning in the Info Park at Kochi. In the selected area there exist all the three types of companies namely Tire 1, Tire 2 and Tire 3.

Selection of industrial units is based on two criteria. One is based on the type of organisation and second is based on the level of management. On the basis of type of organisation companies are classified as wholly foreign owned, joint venture, state venture and private owned. On the basis of type of organisation companies are classified under Tire 1, Tire 2 and Tire 3 companies. Companies having revenue more than 1 billion dollars comes under Tire 1 companies with more than 50000 employees. Companies with revenue over 100 million comes under Tire 2 companies list with employment of 4000 to 10000 employees. Companies having revenue less than Tire 2 companies are classified as Tire 3. There are only one Tire 1 and one Tire 2 companies existing here. Hence all of them were included in the sample as the study wants to analyse customer's attitude towards investment in life insurance. There are 90 Tire 3 companies in the Info Park. Among them 10 companies were taken as sample units by using random sampling method. Again the IT professionals in different tire companies further classified as top level, middle level and lower level professionals, according to employees positions.

A multistage random sampling method was adopted in the selection of the sample. In the first stage Info Park, Kakkannad was selected from Ernakulam District. In the next stage companies in the Info Park was classified as Tire 1, Tire 2 and Tire 3 companies on the basis of Global Industry Classification Standard (GICS). According to this base in Info Park there is only one Tire 1 company (Wipro) and one Tire 2 company (TCS) and 90 Tire 3 companies in the Info Park. Hence these two Tire 1 & Tire 2 and 10 Tire 3 companies were selected as samples. As the next stage IT professionals in different tire companies further classified as top level, middle level and lower level professionals, according to employees positions. Chief Officers and Corporate Officers are the top level employees, Management and administrative employees are in middle level employees and others are considered as lower level employees. The total number of employees from these 12 companies are 5430, from this on the basis of 7 % of total employees in top level, middle level and lower level were taken as samples.

### 5. DATA ANALYSIS AND RESULT DISCUSSION

#### a. DEMOGRAPHIC FACTORS AND INSURANCE PURCHASING BEHAVIOUR

To measure the relationship between demographic factors and their saving allocations towards life insurance

policy(s), the following hypothesis was framed and tested with the support of multiple regression model.



**H0: There is no significant association between demographic factors and their savings allocation towards life insurance.**

**H1: There is significant association between demographic factors and their savings allocation towards life insurance.**

Insurance savings allocation is the dependent variable which would indicate the life insurance investment behaviour. A multiple regression model for insurance saving is attempted for computing the

investment behaviour on Age of Respondents (AR), Gender of Respondents (GR), Marital Status of the respondents (MS), Education of Respondents (ER), Area of Residence (AR), Designation (D), Experience (E), Annual Income (AI), Number of Earning Members (NEM), Number of Dependents (ND) and Kind of Investment prefer (KI). Using SPSS software, the model summary and ANOVA results have been generated as presented in Table.1 and 2.

**TABLE 1  
MULTIPLE REGRESSION MODEL SUMMARY**

R	R Square	Adjusted R Square	Std. Error of the Estimate
.742	.458	.443	.370

Level of Significance: 5 per cent

**TABLE 2  
RESULTS OF ANOVA FOR MULTIPLE REGRESSION MODEL**

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	75.114	10	7.511	31.063	.000
Residual	88.986	368	.242		
Total	164.100	378			

Source: Primary Data

**TABLE: 3  
MULTIPLE REGRESSION COEFFICIENTS**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	.873	.202		4.319	.000	.476	1.271
Sex of the employees	-.083	.057	-.061	-1.467	.143	-.194	.028
Age of the employees	.111	.029	.152	3.769	.000	-.169	-.053
Education of the employees	.072	.029	.110	2.538	.012	.016	.129
Marital status of employees	.144	.039	1.185	3.740	.000	.068	.220
Area of residence	.036	.033	.044	1.104	.270	-.028	.101
Designation	.429	.049	1.415	8.773	.000	.333	.525
Experience of employees	.090	.041	.100	2.218	.027	.010	.170
Annual Income	.026	.030	.050	.877	.381	-.085	.033
Number of Earning members	.052	.041	1.062	1.261	.008	-.132	.029
Number of dependents	.258	.038	.428	-6.723	.000	-.333	-.182

Dependent Variable: Salary savings allocation





Multiple Correlation Coefficient  $R=0.742$  indicates that there is a substantial correlation between the dependant variable insurance savings allocation and the predictor variables. Value of  $R^2 = 0.458$  indicate that about 45.8 per cent of the variation in the dependent variable insurance Savings allocation is explained by the set of predictor variables.

The  $\beta$  values indicate the relative influence of each of the predictor variables as shown in the empirical model. Variable with the highest influence in the model is the designation of the respondents with a regression coefficient of 1.415. Then comes marital status and number of earning members with regression coefficients of 1.185 and 1.062.

## NUMBER OF INSURANCE POLICIES PURCHASED

**TABLE: 4**  
**TOTAL NUMBER OF LIFE INSURANCE POLICIES BOUGHT**

Sl. No	Distribution	No. of Respondents	Percentage
1.	One	233	61
2.	Two	106	28
3.	Three	29	8
4.	Four	10	2.6
5.	More than four	1	.4
	<b>Total</b>	<b>379</b>	<b>100</b>

Source: Primary Data

According to the table given above out of the total 379 respondents included in the study, 61 per cent were having one life insurance policy, 28 per cent had two policies, 8 per cent had three policies, 2.6 per cent had 4 policies and .4 per cent having more than four policies which clearly defines the faith of the people towards life insurance policies.

## PREFERENCE OF COMPANIES

It could be observed that majority of the sample respondents have brought one policy from various insurance companies both for individual and family life protection.

The subsequent Table illustrates the name of insurance companies from where the sample population have bought insurance policy.

**TABLE: 5**  
**NAME OF INSURANCE COMPANY- POLICY HOLDING**

Sl. No	Insurance Company	No of Respondents		Total
		Individuals	Family	
1.	LIC	155(41)	90(45)	245(42)
2.	Max New York Life	30(8)	20(10)	50(9)
3.	HDFC Standard Life	13(3)	4(2)	17(2)
4.	SBI Life	47(12)	32(16)	79(14)
5.	ICICI Prudential Life	45(12)	30(15)	75(14)
6.	Bajaj Allianz	57(15)	4(2)	61(10)
7.	Tata AIG Life	3(1)	2(1)	5(1)
8.	ING Vysya life insurance	9(2)	2(1)	11(2)
9.	Shriram life insurance	3(1)	2(1)	5(1)
10.	Birla sun life	10(3)	8(4)	18(3)
11.	Kotak Mahindra	4(1)	4(2)	8(1)
12.	Met Life	3(1)	2(1)	5(1)
	<b>Total</b>	<b>379(65)</b>	<b>200(35)</b>	<b>579 (100.00)</b>

Source : Primary Data



Table 5 indicates that 42 per cent of the policy holders have made their investment in LIC life insurance, 14 per cent of the policy holders have invested in SBI Life insurance and 14 per cent of the policy holders have invested their money in ICICI Prudential life insurance. The Max New York Life have 9 per cent and Bajaj Allianz have 10 per cent of

customers. Followed by 3, 2 and 1 per cent of the policy holders have invested in Birla sun life, ING Vysya life insurance, Met Life, Kotak Mahindra, Shriram life insurance respectively.

### TYPE OF INSURANCE POLICY BOUGHT

**TABLE: 6**  
**TYPE OF INSURANCE POLICY**

Sl. No	Type of Insurance Policy	No. of Respondents (N=661)	Proportionate Percentage
1.	Endowment policy	129	26.88
2.	Term policy	125	26.04
3.	Money- back policy	114	23.75
4.	Children's policy	89	18.54
5.	Health Insurance policy	72	15.00
6.	Special plans	49	10.21
7.	Pension plans or annuities	28	5.83
8.	Whole life policy	24	5.00
9.	Unit Linked policy	23	4.79
10.	Joint life policy	4	0.83
11.	Women's policy	3	0.63
12.	Group insurance policy	1	0.21

Source: Primary Data

From the table 6, it is observed that the 26.88 per cent of the respondents have investment endowment insurance policy, followed by 26.04 per cent of the respondents have owning term policies; 23.75, 18.54 and 15 per cent of sample respondents have taken money back policy, children's policy, Health Insurance policy respectively and 10.21 per cent of

sample respondents have special insurance plans policy. While, pension plans or annuities, whole life policy, unit linked policy, joint life policy and women's policy customers have been recorded as 5.83, 5, 4.79, 0.83 and 0.63 per cent. Remaining 0.21 per cent of the respondents have owned group insurance policy.

### FACTORS AFFECTING THE PURCHASE OF LIFE INSURANCE POLICY

**TABLE: 7**  
**FACTORS /PARAMETERS CONSIDERED WHILE PURCHASING LIFE INSURANCE POLICY**

Sl.No.	Parameters Considered	Mean	SD	Rank
	Bonus and interests	3.10	1.031	6
	Rider Benefits	3.07	1.005	7
	Premium	3.87	.9636	2
	Charges	3.01	1.021	8
	Company Image	3.98	1.000	1
	Pre and Post Services	3.50	1.038	5
	Benefits	3.66	1.042	3
	Policy term	3.54	1.039	4

Source: Primary Data

Descriptive statistics and ranks for the importance of various factors or parameters taken into consideration

at the time of investing in life insurance or buying a life insurance policy are presented in Table 7.The



sample respondents were asked to rate the various factors looked in to at the time of investing in life insurance in the order of their importance. Since the mean values are higher than 3 indicates that the respondents are giving more importance to all these variables. They are giving more importance to company image/brand name, premium, benefits, policy term etc. while they are investing in life insurance policy.

**LEVEL OF SATISFACTION WITH THE SERVICES RENDERED BY INSURANCE COMPANY**

Customer service is an integral part of life insurance organization. It is necessary to identify the key success factors in life insurance industry, in terms of customer satisfaction so as to survive in intense competition and increase the market share. The subsequent Table illustrates the life insurance customers' level of satisfaction towards various services rendered by life insurance company(s).

**TABLE: 8**  
**POLICY HOLDERS' LEVEL OF SATISFACTION TOWARDS SERVICES RENDERED BY LIFE INSURANCE COMPANY(S)**

Service Rendered	Highly Satisfied	Satisfied	Neutral	Dissatisfied	Highly Dissatisfied	Mean	Rank
Intimation of premium	37.92	56.04	4.38	1.67	0.00	4.30	1
Bonus	16.25	61.46	18.54	3.54	0.21	3.90	4
Variety of policies	13.75	54.38	25.00	6.25	0.63	3.74	5
Loan facility	11.46	45.63	32.71	9.38	0.83	3.58	6
Terms of policies	10.00	39.79	37.08	11.88	1.25	3.45	10
Convenience	7.08	46.67	33.33	12.92	0.00	3.48	8
Response to enquiry at Office	37.50	21.04	38.33	0.83	2.29	3.91	3
Agents response	8.13	46.88	33.13	10.83	1.04	3.50	7
Customer treatment	47.08	20.6	17.08	13.33	1.88	3.98	2
Communication	6.46	25.83	29.38	35.83	2.50	2.98	12
Claims settlement	9.79	42.08	34.17	12.08	1.88	3.46	9
Others	5.63	40.83	33.54	19.17	0.83	3.31	11

Source: Primary data

The analysis of Table 8 indicates that majority of the policy holders have expressed satisfaction towards service feature of intimation of premium payment on time by their insurance company(s) and it is ranked at first with a mean score of 4.30. The respondents have opined that they have high degree of satisfaction towards the customer treatment and response to enquiry at office; these variables are duly ranked at second and third place with average score of 3.98 and 3.91 respectively. Sample subjects level of satisfaction towards bonus and variety of policies offered are placed at fourth and fifth places with an average score of 3.90 and 3.74 respectively. Respondents have placed their satisfaction towards loan facility at sixth place with a mean score of 3.58. As per the results of data analysis sample subjects satisfaction level towards agents response, convenience, claims settlement, terms of policies and others have secured seventh, eighth, ninth, tenth and

eleventh ranks with an average scores of 3.50, 3.48, 3.46, 3.45 and 3.31 respectively. Finally, the respondents have said that they have experienced least satisfaction towards communication services offered by the insurance companies and it is placed twelfth in order with a mean score of 2.98.

To measure the reliability of data presented in the Table: 9, the following test is conducted and its significance is measured with the support of F-test.

**H0: Policy holders' level of satisfaction towards the services rendered by their life insurance company(s) differs from one's view point to others.**

**H1: Policy holders' level of satisfaction towards the services rendered by their life insurance company(s) does not differs from one's view point to others.**



**TABLE: 9**  
**THE RESULT OF RELIABILITY ANALYSIS POLICY HOLDERS' LEVEL OF SATISFACTION TOWARDS SERVICES RENDERED BY LIFE INSURANCE COMPANY(S)**

Sl. No	Variables	Mean	SD	Cronbach's Alpha
1.	Intimation of premium	1.697	.631	.756
2.	Bonus	2.100	.706	
3.	Variety of policies	2.256	.793	
4.	Loan facility	2.425	.844	
5.	Terms of policies	2.545	.872	
6.	Convenience	2.520	.806	
7.	Response to enquiry at office	2.541	.894	
8.	Agents response	2.497	.832	
9.	Customer treatment	2.687	.873	
10.	Communication	3.020	.988	
11.	Claims settlement	2.022	1.160	
12.	Others	2.093	.995	

Cronbach's alpha is the most common form of internal consistency reliability coefficient. An examination had been made from the reliability of the data to check whether random error causing inconsistency and in turn lower reliability is at a manageable level or not, by running reliability test. From Table it is clear that values of Coefficient alpha

(Cronbach's Alpha) have been obtained, the minimum value of Coefficient alpha obtained was .756. This shows data has satisfactory internal consistency reliability.

The result of Cronbach's alpha draws a significant amount of correlation between the variables tested.

**TABLE: 10**  
**RESULT OF ANOVA TEST POLICY HOLDERS' LEVEL OF SATISFACTION TOWARDS SERVICES RENDERED BY LIFE INSURANCE COMPANY(S)**

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.388	11	.194	88.698	.000
Within Groups	657.710	5269	.278		
Total	3158.098	5280			

Level of significance: 5 per cent

The result of the Cronbach's Reliability Analysis and F-test establishes a significant reliability between the variables tested (0.756 i.e., 75.60per cent). Therefore, the null hypothesis framed stands

accepted and it is concluded that policy holders' level of satisfaction towards the services rendered by their life insurance company(s) differs from one's view point to others.

**OVERALL ATTITUDE TOWARDS INVESTMENT IN LIFE INSURANCE**

**TABLE: 11**  
**OVERALL ATTITUDE TOWARDS INVESTMENT IN LIFE INSURANCE**

Sl.No	Distribution	No. of respondents	Percentage
1.	Highly Negative	4	1
2.	Negative	159	42
3.	Positive	205	54
4.	Highly Positive	11	3
	<b>Total</b>	<b>379</b>	<b>100.0</b>

Source: Primary Data

According to the table given above out of the total 379 respondents included in the study, 54 per cent have positive attitude, 42 per cent of them have

negative attitude, 3 per cent of them have highly positive attitude and only 1 per cent of the



respondents have highly negative attitude towards the investment in life insurance.

## SUGGESTIONS

1. In present competitive world, customer satisfaction has become an important aspect to retain the customers, not only to grow but also to survive. Customer service is the critical success factor and private insurers through their best services would be able to reposition and differentiate itself from competitors.
2. Private insurers should emphasis more on advertising and building brand awareness through different modes of communication. This will help in spreading insurance awareness among the common man.
3. To achieve greater insurance penetration, the healthier competition has to be intensified by both the sectors and they should come up with new innovative products to offer greater variety or choice to the customers and also make improvement in the quality of services and sell products through appropriate distribution channel to win-win situation for both the parties.
4. Insurance companies should devise policies which provide effective risk coverage rather than focusing on the tax benefits and also encourages them for long term investment in insurance.
5. Life insurance companies should come up with innovative tailor-made products with high risk cover, more return and low insurance premium to attract more number of customers.

## CONCLUSION

From the study it has been inferred that investment preferences among policy holders have important socio-economic implications. Such preferences influence the direction in which, and the channels through which, household financial savings would flow. Safety is considered as the most preferred investment alternative because policy holders are not willing to take more risk. Company image and premium are the important factors considered before taking life insurance policy. Due to lack of awareness about financial management practices most of the people hesitate to invest in medium and high risk products. Life insurance is an important form of insurance and essential for every individual. Life insurance penetration in India is very low as compare to developed nation where almost all the lives are covered and stage of saturation has been reached. Customers are the real pillar of the success of life insurance business and thus its important for insurers to keep their policyholders satisfied and retained as long as possible and also get new business out of it by offering need based innovative products. There are many factors which affect customer's investment decision in life insurance and from the

study it has been concluded that demographic factors of the people play a major and pivotal role in deciding the purchase of life insurance policies.

## REFERENCES

1. Ahmed, (2013). *Perception of life insurance policies in rural india. Kuwait Chapter of Arabian Journal of Business and Management Review*, 6, 17-24.
2. Babita, Y. & Anshuja, T. (2012), *A study on factors affecting customers investment towards life insurance policies. International Journal of Marketing, Financial Services & Management Research*, 1(7), 106-123.
3. Bhargava B.D. (2010). *Insurance regulations and its supervision. New Delhi: Perl Books.*
4. Dash, G. & Sood, T. (2013). *Why should one invest in a life insurance product? An empirical study. Journal of Arts, Science & Commerce*, 4(1-1), 36-45.
5. Kavitha, T.N.R., (2012). *customers' attitude towards general insurance - a factor analysis approach. Namex International Journal of Management Research*, 2(1), 58-66.
6. Kothari, H. Agarwal R. Bhat A. & Sharma S. (2011). *A study on factors affecting individuals investment towards life insurance policies. Altius Journal of Management, Commerce and Law*, 1(1), 35-45.
7. Mishra, M. N. (2006), *Insurance Principles and Practice. New Delhi: S. Chand and Company Ltd.*
8. Mushtaq, (2013). *The attitudes of consumers and its effect over the business in life insurance companies. European Journal of Business and Management*, 3(3), 28-35.
9. Muthukumar, E. & Rajesh A.G., (2014). *Marketing mix of life insurance companies in Thrissur district. Scholars World-IRMJCR*, 2(1), 38-47.
10. Nagarajan, G. Ali A. & Sathyanarayana N. (2013). *A study on performance of unit-linked insuranceplans (ULIP) offered by Indian private insurance companies. International Journal of Advanced Research in Management and Social Sciences*, 2(8), 114-127.
11. Rejda G.E.(2002). *Principles of risk management and Insurance. New Delhi: Pearson Education.*
12. Sahu P., Jaiswal G. & Pandey V.K., (2009). *A study of buying behaviour of consumers towards life insurance policies. Article No: NRC301 ISSN 0974 – 9497*, 3 (3/4), 1-10.
13. Sandhu H.S. & Bala N., (2011). *Customers' perception towards service quality of Life Insurance Corporation of India: A factor analytic approach. International Journal of Business and Social Science*, 2(18), 219-231.
14. Shameem & Gupta, (2012). *Marketing strategies in life insurance services. International Journal of Marketing, Financial Services & Management Research*, 1(11), 132-141.
15. Shrivastava D.C. (2006). *Indian Insurance Industry. New Delhi: New Century Publications.*



16. Sreenivas & Anand, (2012). *Investors perceptions on public and private life insurance companies in India with special reference to life insurance investors in Karnataka. International Journal of Research in Commerce & Management, 3(2), 37-45.*
17. Sridevi, (2012). *A study of buying behaviour of consumers towards life insurance policies in Perambalur District. International Journal of Research in Management, Economics and Commerce, 2(5), 84-95.*
18. Venkaiah & Sudhir, (2013). *customers perception towards private life insurance companies' policies with reference to Prakasam (DT), AP. Research Journal of Social Science & Management, 2(11), 81-84.*
19. Venugopa P., (2012). *Attitude of uninsured towards life insurance a study in East Godavari District, Andhra Pradesh. Global Journal of Management and Business Research, 12(4), 83-96.*
20. Vinoth S., (2013). *Attitude of working women towards investing in life insurance with special reference to private bank employees of Coimbatore city. Innovative Journal of Business Management, 1(1), 1-4.*
21. Yusuf T.O., Gbadamosi A. & Hamadu D., (2009). *Attitudes of Nigerians towards insurance services: An empirical study. African Journal of Accounting, Economics, Finance and Banking Research, 4(4), 34-46.*



# STRATEGY FOR CONTEMPORARY BUSINESS ENVIRONMENT-

## An analysis of tools and media for the development of Marketing strategy

**Dr. K C Prashanth**

Associate Professor in Business Administration  
Vijayanagara Sri Krishnadevaraya University, Ballari,  
Karnataka, India.

**Dr. Veena M**

Assistant Professor in Commerce  
Vijayanagara Sri Krishnadevaraya University, Ballari,  
Karnataka, India.

Article DOI: <https://doi.org/10.36713/epra4974>

### ABSTRACT

*Businesses are taking multifold strides as time passes by, which may be due to the range of opportunities offered by the internet and other technologies. The new technologies have provided marketers with new ways of promoting their products or services to the customers. The paper dodges the traditional marketing media with the new ones and looks at marketing tools which can be used to create a successful e-marketing strategy. The paper also tried to analyse different e-marketing mediums using Porter's 5 forces and SWOT (strengths, weaknesses, opportunities and threats) analysis.*

**KEYWORDS**—*e-business, e-marketing, strategy, digital marketing, social media, Porter's 5 forces, SWOT analysis*

### I. INTRODUCTION

Marketing has always been an important aspect to every business, in fact one could say that it is one of their core functionalities. Since the great evolution of the internet, a lot of concepts had to evolve from the traditional way of doing things. This also applies for marketing, as the internet has introduced various new opportunities in this domain.

The web is now indispensable in both business and everyday life as we use it for a lot of things [1]. Businesses were also touched by this era, and that is where the term e-Business was born. Colin Combe [2] defines e-business “*as the use of the internet to network and empower business processes, electronic commerce, organizational communication and collaboration within a company and with its customers, suppliers, and other stakeholders.*”

The remarkable increase in popularity of such businesses, and the advancement of technology, leads to various innovations in marketing. This is widely referred to as e-Marketing or Digital Marketing, which Strauss and Frost [3] defines it as “*The use of electronic data and applications for planning and executing the conception, distribution and pricing of ideas, goods and services to create exchanges that satisfy individual and organizational goals.*”

E-Businesses are now using various mediums available on the internet, to interact with their audience and market their brands, products or services to the public. These mediums help businesses to widen their reach further, and to target better their audience. Doing so, enables businesses to achieve their marketing objectives. The following sections compare the

traditional marketing media with the new ones, and outline how an e-Marketing strategy could be successfully developed.

### II. TRADITIONAL MEDIA MARKETING

Before businesses adopted the idea of internet technology to their marketing strategies, they had to rely on other media to spread their word out and promote their products or services to the public. Some forms of media used, which will be considered “*tradition media*” are [4];

- **Television:** Television has long been used as a form of advertisement, which is meant to persuade and inform the watcher visually and verbally. The reason why television has been able to work so effectively as many advertisements is through the use of visuals [4].
- **Radio:** Radio has been around for numerous generations and can be considered the oldest form of informative marketing, where the listeners or users do not need to see or read anything [4]. In fact radio commercials are generally short and straight forward so that the listeners are not distracted.
- **Billboards:** This type of advertisement has been existing for quite a long time and it is in fact still being used nowadays. The main reason of their effectiveness is their ability to catch people's eyes and easily convey a message [4].
- **Corporate gifts:** This idea is still being adopted nowadays, where companies hand out various items with their logo printed on them. The overall idea of a small corporate gift is to remind the receiver of the company [4].

- Corporate fairs or expos: Fairs and expos are organised by businesses to show off their products or services to the public. This gives companies the opportunity to reach a larger number of people who might not have known about the products before visiting the fair [4].

### III. E-MARKETING MEDIA

The concept behind e-marketing is still the same to any other form of marketing; people (marketers) connecting with other people (consumers) to build relationships and ultimately drive sales [5]. The only differences here are the mediums that are used to interact with the public, and understanding the technical tools being used so that one could engage more with their audience.

Furthermore, e-marketing is not only about selling products or providing services through IT but it is a lot more than that – it is a strategic model to get brand value and provide customer satisfaction [6]. E-marketing provides other mediums to do so and some of these are outlined in the following sub-sections.

#### A. Social Media

This medium has shifted from just a personal activity to a commercial one. Businesses are using social media platforms to promote their products or services while interacting with their audience [7]. Some famous platforms include Twitter, Facebook, YouTube, Instagram, and many others.

Such platforms are also used for brand awareness and feedback. Customers tend to engage with a company's page on the platform by sharing their experience and writing their opinion on the brand. Although this can sometimes have a negative effect, it helps other users to decide whether one should trust the said company. Figure 1 shows the famous Social Feedback Cycle which illustrates this better.

Additionally, most of the platforms provide various insights to the company to help them understand their audience and hence target them better. These insights include;

- Demographics: society-based information like gender, age, nationality etc.
- Activity: information about the times people are mostly active
- Content: information about the most popular content

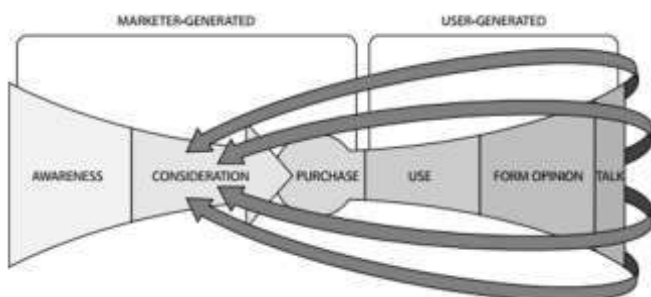


Fig 1. Social Feedback Cycle [8]

used by the business

These insights together with others, help businesses to perform better marketing as they know how to reach other users.

#### B. Websites

The majority of the mediums used are to market campaigns and reach as much as customers as possible, however, all of these will be ultimately channelled back through a single point: the company's website [5].

The website should include information about the business and the products or services they offer, but should also focus on how to convert traffic to leads and opportunities. These conversions include online purchase (a sales transaction), to an online query (lead generation), to subscribing for the business's online newsletter, or whatever else the businesses decide is appropriate to their customers [5].

#### C. Email Marketing

Email marketing is a mean of communication available between a business and its customers. This is done on a personal level through a universally accepted digital medium [5]. Businesses send emails to various groups of customers depending on their type of involvement, to let them know about new products or services, and update them on what the business is up to. This serves as a mechanism to maintain consumer engagement, strengthen a brand and add credibility to the business [5].

#### D. Online Advertisement

Targeted online advertising is another effective way of promoting a brand, used by various businesses. Popular channels of such advertisements include:

- Google Adwords: when searching on Google, advertisements appear on the right hand side of the search and sponsored advertisements across the top [9]. This can be seen in Figure 2 below:



Fig 2. Google Adwords [9]

Businesses pay for these advertisements based on a cost per click or cost per impression basis. This works by specifying a set of keywords which are matched to user's searches and when the specified keywords are used, the advertisement is shown.

- Banner Advertisements: A banner advertisement is an advertisement that appears on a website that is clickable [9]. When the banner is clicked, the user is redirected to the company's website, or to a specific page.

### IV. MARKETING MODELS FOR E-MARKETING STRATEGY

A marketing strategy is combining all the marketing goals of a company into one comprehensive plan. To do so, businesses have to understand and analyse the market that they are operating in.





**Fig 3. The four P's [10]**

In order to assist marketers in creating marketing strategies, popular models such as the Marketing Mix, the Porter Five Forces and the SWOT analysis have become widely adopted [10]. All of these tools help businesses to evaluate what they have to offer, while assessing the competitiveness of the market. Even though the internet had a great impact on marketing, the concept is still the same and these tools can still be used to help develop a good strategy for the business.

#### A. Marketing Mix

The marketing mix is used to depict what the business has to offer in terms of products or services. This is often portrayed by the 4 P's.

##### Product:

This part deals with the products and services a business offers. From tangible products to digital goods and consultancy, the internet has allowed for a wide range of new products [10]. The internet gave rise to e-commerce systems where tangible products could be sold online. Digital products such as software and music could now be sold online by using the internet as the distribution medium. This part of the marketing mix helps marketers to analyse the product being offered. Unique selling propositions are identified so that these could be used to target customers better.

##### Price:

Customers could easily access pricing information on the internet which makes it growing a market of near perfect competition [10]. This allows customers to compare prices offered by different retailers. Because of this, companies had to decrease prices as much as possible and have to consider differentiating on value. Value can be added by offering a better service and hence customers might be willing to pay a higher price for a better experience [10]. Marketers need to outline these value added characteristics so that they could attain more customers by achieving better marketing.

##### Placement:

This is quite straight forward as the place for an e-marketing strategy would be the internet. Digital products and services are no longer restricted to a specific geographical area, as the internet gave companies access to a global marketplace [10]. Tangible products are also not bound to a specific area, as one could find various shipping channels which transfer goods around the World.

Marketers need to keep this in mind when choosing the marketing mediums used for promotions. This is because one needs to pay attention to where the products offered could be accessed.

##### Promotion:

The Internet has offered another place of promoting businesses' products and services by offering a range of tools which allows for the marketing of such goods. These tools or media were outlined in the previous sections and include social media, online advertisement, and many more. As already mentioned, this promotion could be measured and targeted by analysing data and insights.

#### B. Porter's Five Forces

Another tool used by marketers to analyse the industry is Porter's Five Forces, which specifically helps to determine competitive intensity and therefore the attractiveness of the market [10, 11]. The internet affected the analysis of these forces in various aspects and hence marketers need to take these in consideration when creating an e-marketing plan.



**Fig 4. Porter's Five Forces**

##### Power of Customers:

The bargaining power of customers is when buyers have more power than the seller [12]. This means that the higher the bargaining power is, the higher the ability for buyers to drag prices down. An example of such case is when a business has a small number of customers, or it is very easy for the customer to switch to another product or service. The former affects e-Businesses positively as the internet provides a broader range of potential customer from around the world. This helps to keep the bargaining power of customers low as the company has better control on its products. On the other hand, the latter might be more achievable over the internet as the competition is increased; this will be tackled later on in this section. Marketers need to analyse this bargaining power to come up with ways to improve their service and promotion to attract and influence customers positively.

##### Power of Suppliers:

The bargaining power of suppliers is the contrary of the previous one when looking at it from the business's perspective. When this power is high, the suppliers have the overall control over the business. This is likely to happen when dealing with unique products or services or when there a limited number of suppliers. Similarly, internet contributed to this effect by its globalisation, as it is much easier for e-Business to find other suppliers.

##### Threat of new Entrants:

The easier new rivals can enter in an industry, the easier it is for prices and profits to decrease [11]. The internet has low barriers to entry and hence e-businesses need to find ways to offer uniqueness and better service for their customers. Having strong barriers to entry, helps e-businesses to have a better position in the market and hence have an advantage over new entrants.

#### *Threat of Substitute Products:*

This threat deals with the possibility for customers to turn to substitute products. A substitute product or service can be any other product or service which serves a similar function. This is increased because the internet introduces new ways to accomplish the same tasks and hence e-businesses thrive to add unique value to their offerings to have a competitive advantage.

When developing an e-marketing strategy, marketers need to analyse substitute products so that they could come up with unique offerings so that the business could stand out over other competing firms.

#### *Competitive Rivalry within Industry:*

All the mentioned four forces constitute in the competitive rivalry within the industry. Analysing all these areas provides a profound study of the competitiveness between rivals in a given market. As mentioned earlier, the internet provides a range of tools and media where e-businesses could market their goods, and hence this creates a means of competitiveness. This therefore intensifies the rivalry between competitors and marketers has to be very innovative to reach as many customers as possible.

#### *C. SWOT Analysis*

The SWOT analysis is another way to understand the business and the market by analysing the business's strengths, weaknesses, opportunities and threats [13, 14].



**Fig 5. SWOT Analysis [10]**

#### *Strengths:*

Here, one needs to depict the main strengths of the business. The inclusion of the internet adds various strengths to the business which includes:

- 24/7 operation
- globalisation
- fast and effective selling
- more marketing media, and many more.

Outlining these strengths help marketers to focus on them and attract more customers. Promotions could be based on strengths outlined in this section.

#### *Weaknesses:*

This section outlines the main weaknesses of the business. Once again, the internet also adds multiple weaknesses to e-business and include the following:

- no direct interaction with customers
- shipping costs increase product costs
- non-technical people might not want to buy online

These weaknesses with others must be taken care of, so that marketers could mitigate them as much as possible. During the development of the strategy, marketers could plan ahead as to minimize these weaknesses.

#### *Opportunities*

The business's opportunities are outlined in this section. The opportunities might be bound to a specific industry but other than those, the internet itself also provides a number of opportunities to e-businesses. These include but are not limited to:

- Internet users are increasing by time
- social media awareness is increasing, making it easier to market products
- business intelligence offers various insights and analytics which helps target people better when applied to marketing campaigns

These opportunities are helping e-businesses to improve their services and hence must not be taken for granted. Marketers need to remain on the lookout for new opportunities to proceed with them and hence have an advantage over other competing firms. For example, trends on social media are continuously evolving, and marketers should make use of such trends so that they could engage with the customers more.

#### *Threats*

It is very important for businesses to outline and assess threats to their business so that they can find ways to mitigate them as much as possible. Threats could sometimes also be triggered by the internet for example:

- threat of new entrants as outlined in the previous sub section
- changes in technology might incur further costs to change an e-business strategy

Other threats exist for specific industries and hence one needs to expose as much of these as possible, to assess their significance and find ways to recover from them. Marketers need to outline these threats so that they could plan their strategy in a way to offer more value and hence mitigate these risks as much as possible.

## **V. DEVELOPING AN E-MARKETING STRATEGY**

Now that the main models and mediums used in an e-marketing scenario are outlined, the next step is to combine everything together to come up with a successful e-marketing strategy. E-businesses need to plan effectively to achieve prosperous tactics and hence reach their goals.



Having analysed the market and the industry of the e-business through the marketing models outlined previously, helps to develop a better structured and optimised marketing plan. Once the acquired knowledge is at hand one could come up with the main content of the strategy.

*A. Objectives*

First and foremost, an e-marketing strategy or plan must have a set of objectives. These normally depend on the business needs and some possible objectives include raising awareness of a brand, increasing business profit, and improving customer retention. Having these objectives outlined, helps marketers to focus the overall plan on them.

*B. Competitor Awareness and Target Audience*

Previously mentioned analysis help to identify competition in the industry. Being aware of what competitors has to offer, help e-businesses to improve their tactics and plan ahead of what they can offer. Benchmarking against such competitors could also help to understand the environment in which the business is operating in. The Porter’s five forces outlined in the previous section constitutes a great part of this section in the strategy.

Identifying the target audience is also important when developing an e-marketing strategy. Knowing who the prospective customers are, helps to target them better by having specific promotion to that particular sector. This normally involves customer segmentation and this assists marketers to choose the right tactics for the plan. By analyzing characteristics from the marketing tools outlined, marketers could come up with various profiles of targeted audiences who might be willing to but the products or services offered.

*C. E-Marketing Media or Tactics used*

Once the main objectives are outlined and the business knows about its competitors and target audience, marketers need to come up with a plan on how to achieve the mentioned objectives. Knowing what is out there helps to choose wisely depending on the business needs. The media outlined in the beginning of this paper are some of the platforms or tools that might be used to achieve those objectives. It is very important to conduct some research every now and then to keep informed about new technologies which might help the business to perform better. Choosing the right media and tactics is vital for a successful strategy and these are unique to every scope. The marketing tools outlined in the previous section help to choose the media required based on the characteristics of the business.

Here, one also needs to plan how the e-business is to measure its success by assessing the performance of the e-marketing strategy and identifying areas of improvement. Since this is to be done on online tactics, the internet provide various tools which help convert data into knowledge by offering various analysis and insights on how the business is performing. For example a website’s heat map is used to depict how users interact with specific web pages and content. One could find other tools which portray significant meaning to other marketing tactics. These tools provide various opportunities to the business as they provide ways to acquire further knowledge and hence achieve better marketing.

*D. Budget*

Finally, the e-marketing strategy includes a budget which estimates the costs needed to execute the marketing plan. Different objectives and tactics are allocated a fixed amount of money which help to have a definite amount that could be spent on each of them. Although a budget is sometimes hard to create, it is important for the business to have a clear amount of what could one spend. Even though the internet offers various tools for free, e-businesses might require additional tools to achieve certain ones.

These outlined sub-sections help develop a successful marketing strategy and marketers need to pay attention to such areas to make sure that the e-business objectives are achieved.

**VI. DISCUSSION**

The previous sections outlined how an E-marketing strategy could be developed with the help of different marketing models and marketing mediums.

The tables in the following sub-sections outline the main points of the Porter’s 5 forces (Table 1, 3, 5 and 7) and the SWOT analysis (Table 2, 4, 6 and 8) for the marketing mediums mentioned previously.

*A. Social Media*

**Table 1: Porter's 5 Forces for Social Media**

Power of Customers	Social Media could be used to widen the reach and attract more customers by using the social network itself as a mean of communication. Acquiring more fans helps the business to lower the bargaining power of customers.
Power of Suppliers	This type of media provides the business with contacts globally. Businesses could use this media to learn about new suppliers, as well as to keep a good relationship with the current ones.
Threat of new Entrants	This threat might be tremendous and hence it is important to look out for new entrants. Nowadays, businesses start off by creating social media profiles, and this allows the business to gather some information at first hand. Additionally, frequent communication with the audience help to improve the relationship with the customers which is known to ultimately impact the customer’s choice when selecting a company.
Threat of Substitute Products	Once a product is on the market, other companies will try to mimic the product and offer other similar ones which can be used to substitute them. Once again social media could be used to look out for these kind of products. The platform could then be used to outline unique selling propositions of the company’s products.
Competitive Rivalry	This type of media provides businesses with a network of contacts which include



within Industry	those of the competitors'. Looking at what competitors are doing, help businesses to add unique value to their offerings so that they could stand out from others.
-----------------	--

Table 2: SWOT Analysis for Social Media

Strengths	Social media provides for better ways to target and communicate with the business audience. This is known to help businesses to attain new customers as well as retain loyal customers.
Weaknesses	The information shared on the platforms is available to the public and hence could be seen by competing brands. This might impact the business as competitors could use detailed information and news for their own good.
Opportunities	This medium is still evolving and new trends are continuously coming out. This provides businesses with a lot of opportunities that businesses must be on the lookout for.
Threats	Comments and reviews from the public should be well managed and communicated. This is due to the fact that social media affects the reputation of the brand, and this could be easily damaged by bad comments and reviews on these platforms.

B. Website

Table 3: Porter's 5 Forces for Websites

Power of Customers	Enabling online sales helps to acquire customers globally which is known to lower the power of customers. Additionally the website consists of various information about the company which help to provide a better understanding to the customers.
Power of Suppliers	The website is visible by suppliers across the globe and hence it is the formal point of attaining new suppliers.
Threat of new Entrants	Normally, new entrants in a market do not offer full blown functionality and sales on their websites. This could be used as an advantage over them by offering better services online.
Threat of Substitute Products	Websites have increased the power of this threat significantly as one could find substitute products easily all over the World. Therefore, marketers need to find ways how to add unique value to their

	offerings so that they stand out from others.
Competitive Rivalry within Industry	Competitors would likely look at what the business is doing in terms of events, and even pricing. Websites expose this kind of information to everybody and hence it is essential to similarly keep an eye of what the competitors are doing themselves.

Table 4: SWOT Analysis for Websites

Strengths	Websites are the main point to provide detailed information about the company and its offerings. E-commerce websites also provides a 24/7 operation.
Weaknesses	Pricing information is available publicly which hence could be also seen by competitors. Selling online incur shipping costs which increase the product cost.
Opportunities	Having an e-commerce system also provides various opportunities in respect to globalization. This is because the target audience is significantly widened.
Threats	Web technology is constantly evolving, this might incur further costs to keep the website up to standards.

C. Email Marketing

Table 5: Porter's 5 Forces for Email Marketing

Power of Customers	This type of marketing could be used to target customers in a more formal and private manner. Email marketing lets businesses have a more personal communication with their audience. This type of communication allows for customer retention which helps to keep the power of customers low.
Power of Suppliers	Newsletters could also be sent to suppliers, to let them know what the business is up to. Suppliers might want to invest more in the business if they see that the business is using good strategies with their customers.
Threat of new Entrants	New entrants will not start off with this type of marketing due to their limited contacts base. It is therefore beneficial to use this type of marketing as a competitive advantage over these start-ups.
Threat of Substitute Products	Private emails could be used to communicate confidential information such as special offers which entice customers to stick to a particular product. Additionally, sending targeted email to group of people help to offer and include information specific to them. This helps to offer better service in hope to retain customers.



Competitive Rivalry within Industry	Email marketing is a more private way of communicating things. It is therefore important for businesses to take an advantage on this fact, to communicate offers and news which are more confidential or targeted.
-------------------------------------	--

Industry	This could also be used to have a listing on top of a search page and hence will most likely be clicked before other competitors.
----------	---

**Table 6: SWOT Analysis for Email Marketing**

Strengths	Email marketing allows for private and targeted marketing. It is also a cheap marketing medium when compared to others. Responses and interaction to emails could also be easily tracked by available software.
Weaknesses	Emails could be filtered as spam which therefore would not have the desired impact. Marketers should be attentive when creating emails to avoid this as much as possible.
Opportunities	Various software are being released which help with the automation of creating the content, targeting people, sending the emails, and analysing the responses.
Threats	B2C companies might not receive a great success from this type of marketing, since customers might abandon their emails, and are more prone to use other mediums such as social media.

**Table 8: SWOT Analysis for Online Advertisements**

Strengths	New customers could be attained from online advertisements. It is also a very effective way of advertisement since a lot of people search online.
Weaknesses	This type of advertisement is not cheap and is typically payed per click. This means that the business has to pay even if the customer does not buy anything after clicking.
Opportunities	The internet is widely being used by various people, therefore the reach is constantly increasing. Services such as Google AdWords help to automate this function.
Threats	Other competitors might also be using such advertisements. Therefore it is important for businesses to make use of such mediums to benefit from their returns and have a competitive advantage over other competing firms.

*D. Online Advertisement*

**Table 7: Porter's 5 Forces for Online Advertisements**

Power of Customers	Online advertisements help businesses to reach more people based on their searches. This will also reach people who might not have heard about the brand before. Therefore this type of medium help to keep the bargaining power of customers low.
Power of Suppliers	Various suppliers could also learn about the business from such advertisements and might be willing to invest in the company.
Threat of new Entrants	Having advertisements visible at the top of a search page would mean that the customer will most likely click on links at the top. This would therefore make it harder for new entrants to compete.
Threat of Substitute Products	Online banners and advertisements could be used to outline unique selling propositions, and hence entice customers to buy that particular product.
Competitive Rivalry within	This gives a competitive advantage over other firms as the business reaches people who might not know about the company.

**VII. CONCLUSIONS**

As seen already, e-marketing evolves around the same concept as traditional marketing. The only differences are the media used for this promotion to take place. The evolution of the internet and technology has provided business with a range of services that can be used to perform better.

E-marketing strategies mimic the plans done traditionally, however, looks at the impact of technology on the tools used. This paper looked at popular marketing models and analysed how technology influenced the way they are studied. Additionally, this paper looked at how these models could be used to create a successful e-marketing strategy. The main sectors of the strategy were also outlined.

**VIII. REFERENCES**

1. A. Cordella, A. Martin, M. Shaikh S. Smithson, "Management and innovation of e-business", University of London International Programmes, 2011
2. Colin Combe, "Introduction to E-business", Elsevier Ltd., 2006
3. J. Strauss, R. Frost, "E-Marketing", NJ, USA, Prentice Hall, 2001, p454
4. Patrick Thurman, "Traditional and Social Media Marketing Comparison", Lahti University of Applied Sciences, 2013
5. Damian Ryan, Calvin Jones, "Understanding Digital Marketing- Marketing strategies for engaging the digital generation", London, Philadelphia, Kogan Page Ltd., 2009
6. Hanieh Mirzaei, Ehsan Jaryani, Mohammadreza Aghaei, Mehrdad Salehi, Mojtaba Saeidinia, "Differences of 'Traditional Marketing' in opposition to 'Electronic



- Marketing", *International Conference on Economics, Business and Marketing Management IPEDR* vol.29, 2012
7. Ahmad Roumieh, Lalit Garg "E-Marketing Strategies Exploiting Social Media for Islamic Banking", *International Journal of Emerging Technology and Advanced Engineering*, vol 4, Issue 2, 2014.
  8. Dave Evans, Jake McKee, "Social Media Marketing- The next generation of business", Wiley Publishing, Inc., 2010
  9. Failte Ireland, "Overview of internet marketing", *National tourism Development Authority*, 2012
  10. Rob Stokes, "EMarketing- the essential guide to digital marketing", *Quirk Ltd.*, 2011
  11. Michael E. Porter. "The Five Competitive Forces that Shape Strategy", *Harvard Business Review*, January 2008, p.86-104.
  12. Siamak Azadi, Elham Rahimzadeh, "Developing marketing strategy for electronic business by using McCarthy's four marketing mix model and Porter's five competitive forces", *Emerging Marketing Journal, University Library System of the University of Pittsburgh*, 2012.
  13. *Harvard Business Essentials. "Strategy: Create and implement the best strategy for your business"*, Boston: Harvard Business School Press, 2005
  14. Terry Hill, Roy Westbrook, "SWOT analysis: it's time for a product recall. Long range planning". February 28, Vol. 30, Issue 1, 1997 p.46-52.



## DETERMINATION OF FACTORS EXERTING INFLUENCE ON INVESTMENT BEHAVIOR WITH SPECIAL FOCUS ON WORKING WOMEN

**Dr. Veena M**

Assistant Professor,  
Department of Commerce,  
Vijayanagara Sri Krishnadevaraya University,  
Ballari.

Article DOI: <https://doi.org/10.36713/epra4971>

### ABSTRACT

*Investors are most important segment of financial markets. In fact, the vast majority of the money that is at work in the financial markets belongs to investors. Hence the stability of financial system and markets of any country depends on the decisions and behaviors of Investors at financial markets. The influence of retail increasing day by day as they have started to taking care of their portfolio's on their own. Hence it is imperative to have in-depth knowledge of factors exerting influence on investment behavior. According to previous research studies, investment behavior of individual investors is often influenced by set of factors. These factors may be internal or/and external environmental factors. The objective of this research paper was to identify the key factors influencing investment behavior investors with special focus on working women. The objective has been achieved with the help of previous empirical researches on women investment behavior and also confirmed through the survey results of the study conducted on 480 working women of Hyderabad Karnataka Region, Karnataka*

**KEY WORDS:** *Investment, Individual Investors, Investment Behavior, Factors influencing Investment Behavior etc.*

### INTRODUCTION

Investors are most important segment of financial markets. In fact, the vast majority of the money that is at work in the financial markets belongs to investors. Hence the stability of financial system and markets of any country depends on the decisions and behaviors of Investors at financial markets. There are many different investors that are active in the marketplace. The "Investor" can be an Individual, a Government or a Corporation.

Individual investors are individuals who are investing and managing their funds on their own. Individual investor is "An individual who purchases small amounts of securities for himself/herself, as opposed to an institutional investor.

Investors Behaviour has a significant influence on Stock market performance. The study "Quantitative Analysis of Investor Behaviour" conducted by

DALBAR Inc. (2016)<sup>17</sup> Boston analysed investor return for 20 years of period from 1987 to 2006 for equity, fixed income and asset allocation funds, and the study concluded that investment return largely depends on investor behaviour.

At first, the influence of retail traders may seem small, but as time passes more people are taking control of their portfolios and, as a result, the influence of this group is increasing. Hence it is imperative to have in-depth knowledge of what investment behaviour is all about.

Investment Behaviour is defined as how the investors judge, predict, analyze and review the procedures for decision making, which includes investment psychology, information gathering, defining and understanding, research and analysis. The whole process is "Investment Behaviour" (Alfredo and Vicente, 2010)<sup>18</sup>.



The term investment Behaviour can also be defined as portfolio practices, preferences, and investment intentions, pattern of investment and risk perceptions of investors. The Investor Behaviour is the process by which Investor tends to satisfy his/her needs by showing their choices.

### **Indian Women and Investment**

21st century and Indian women have come a really long way in terms of empowerment and leaving their signs in the country. The status of women in India has been subject to many great changes over the few millennia. Today's women are outpacing men in several areas and have high offices including that of the president, Prime Minister, Chief Ministers and Governors of the states. There are 42.8% women who earn equal to or more than their husbands.

Surprisingly investing is one such area which still proves gender gap between men and women. Because, still there are women outside with low confidence and believe they have less knowledge about finance than men when it comes to investing. Few literatures on women finance literacy evidenced women consistently score lower than men on measures of financial literacy, and this gender-based gap can negatively impact the financial well-being of women.

However, few studies have been carried out on gender differences in investment behaviour and women investment behaviour, it was evidenced from those studies that women are more risk averse than men and thus when it comes to investing they invest more conservatively and less in amounts than men, frequency of investment in female is lesser when compared to the male (Dr. Monica Sharma, 2013). Working women are conservative in nature. And they lack the knowledge needed to make proper decision about their finance (Juwairiya P P, 2014). Social norms, family responsibilities have negative impact on investment activities of women (Diana J Beal et. al., 2015).

But, it is important to note that the studies on gender differences in investing have been mostly concentrated on data from developed countries, especially from the U.S. And it is widely acknowledged that women in developed countries differ drastically in many aspects, such as beliefs, life styles, behaviours, habits, personal characteristics, etc. and it may be expected that investment attributes of women living in developed countries differ from investment attributes of women living in the emerging and developing country like INDIA, where the status of women is typical.

Hence this study is the beacon of light in exploring the factors impacting on the financial well being of women and their Behavioral pattern. To the best of researcher's knowledge this is the first study exploring the investment Behaviours of women that

provides evidence on this issue from an emerging country like India.

In consideration with the above discussion the topic of the present research is embodied as **Determination of factors exerting influence on Investment Behaviour with special Focus on working women.**

### **OBJECTIVE OF THE STUDY**

The objective of the research was to identify the key factors influencing investment behaviour of working women. The objective has been achieved with the help of previous empirical researches on women investment behaviour (provided in chapter 2) and also confirmed through the survey results of the study (reported in chapter 5).

### **IDENTIFICATION OF FACTORS INFLUENCING INVESTMENT BEHAVIOUR OF WORKING WOMEN**

Demographical factors play significant influence on investment behaviour of the investors (Dr. R Sellapan and Mrs. S Jamuna 2013). Among all the demographical factors, Age plays crucial role by influencing investment decisions of the investors. Risk temperament depends crucially on age and income. The level of education of women does influence behaviour. Highly qualified women may make better decisions while investing than the women with lower qualification. Security of funds and stable income are the desired requirements of married women whereas, unmarried women with less commitments may invest in risky assets. Married investors are conservative in nature than unmarried; women with more income may save more and invest more than women with less income. Likewise demographical factors affect differently to different persons.

A person with greater wealth takes greater risk (KathleenTerry, and Parker, 2002). Persons with upper level of income and millionaires tend to take higher risk than individual with lower level of income (MacCrimmon, and Wehrung, 1986). Researcher explored that level of risk tolerance increase with the increasing level of income (Friend I Blume et al.1994)- Investors invest their funds in more volatile portfolio composed of more volatile stocks when they have higher level of income (Barber, and Odean , 2001). Higher level of income creates the ability of bearing the losses, so wealthier people preferred higher level of risk (Bayer and Bernheim et al, 2001, Dr. A Charles and Dr. R Kasilingam 2013)

. Majority of the women investing community are between the age group of 30 and 40 (LMA Preethi





and Dr. Magesh Kuttalam 2014, Geetha and Ramesh 2012). There existed a close association between age and investment behaviour of working women. Education level, Awareness about the current financial system, Age of investors etc. make significant impact while making the choice of investment avenues (V.R.Palanivelu & K.Chandrakumar 2013). Younger Investors are more interested in investment in comparison to elder and middle aged people (Heena Kothari).

In the study conducted by Dr. Kuashal A Bhatt (2013), revealed that majority of the investors belong to the age group of 35 to 45, and investors belong to this age group prefers to invest in stock markets. According to his study around 41% of investors were graduates, and those were interested to invest in stock market than the people belong to other categories of education. This study also revealed most of the investors were businessmen. Businessmen trade their stocks online in consultation with the advices of bankers and other investment professionals. Most of the businessmen are trading intraday and it is the highest number of people trading intraday.

Income and Occupation has significant impact on the behaviour of investors while making choice of Investment avenues. Higher income level people invest in equity stocks (D. Harikanth & B. Pragathi 2012). Higher income group shows relatively high preference towards investment in share market, conversely lower and average income group show keen preference towards insurance and banks as the most preferred investment avenues (Ramanujam,V and Chitra Devi,K 2012).

A study was conducted by Mohammed Naumann Sadiq (2014) at Pakistan on a sample of 100 investors to examine the Effect of Demographic Factors on the Behaviour of Investors during the Choice of Investment. The study revealed positive correlation between Income level, education level and risk tolerance ability. The study revealed negative correlation between Income family sizes and risk tolerance ability. The study also found close association between marital status and risk tolerance ability of investors.

The significant effect of Demographic Factors and Awareness on Investment Behaviour of individual investors of stock market has been found in the study made by Arup Kumar Sarakar and Dr. Tharak Nath Sahu (2017) on 377 randomly selected investors at

West Bengal, Study indicated that people of ages between 28 years and 37 years invest more in the stock market.

Age, occupation, education, income and experience are the top five demographical factors which have significant influence on investment behaviour of investment decisions of the investors during buy, sell and hold shares during dividend declaration. The findings of his research revealed that all selected demographical variables have significant relationship with investment decisions to buy, sell and hold shares during dividend declaration (Zhubaida Khanam 2017).

As per the study conducted by Lutfi (2010) Investors' education and income positively correlated with the risk tolerance ability of the investors. The result of his study also revealed that investors' risk behaviour positively correlated with the type of investment they select. Risk seeking Investors prefer to invest most of their money in riskier assets, mainly stocks, and put the residual in other assets, such as bank accounts and real assets. In general, the risk seekers are those who are single, well educated, relatively wealthy, and small family investors.

Among all Demographical factors like investor's gender, age, marital status, education, and income were considered as most influencing factors of investment behaviour of the investors (Dr. Mandeep Kaur 2012). Demographic factors like age, marital status, gender, city, income level, market knowledge, occupations and qualifications etc have major impact on investment decision of investors (Dr. Dhiraj Jain 2012). Marital Status and gender and age negatively correlated with the investment decision whereas educational qualification and occupation of the investors positively correlated with the investment decisions of the investors.

Many research studies have been carried to examine the impact of demographical factors on the investment decision of the investors. In consultation with findings of these research studies demographical factors have considered as the most significant factors influencing investment behaviour of women.

Further, on this basis following 6 demographical factors have been considered for the study as independent factors:



**Demographical Factors**

SL.No.	Demographical Factors
1	Age
2	Marital Status
3	Level of Education
4	Occupation
5	Income
6	Family Size

Source: Created by the researcher

**Demographical Factors and Investment Behaviour:**

Demographical factors are the characteristics of population. These include Age, Sex, Education, Marital Status, Income level, Family Size, profession, occupation, financial dependents etc. Generally the behaviour of persons can be affected by several factors. It can be different from person to person based on their Age, Sex, Education, Marital Status, Income level, Family Size, Profession, Occupation, Financial dependents etc. There are noticeable differences in investment decision between two persons from different economic groups. Many studies evidenced significant differences in the behaviour of investors with different demographics. Few such studies are summarised as follows:

**Social Factors:** There are certain factors that affect our thought and behaviour in social situations which are called as Social Factors.

Social Psychologists believed that behavioural outcomes are determined by individual acting in the context of their social context. Individuals often make their investment decisions based on their primary influence group. That is Friends, Family members, relatives and co-workers may influence women’s financial decisions.

Financial decisions can be impacted by an individual’s experience in financial markets, as well as those of that individual’s peer group. Groups with more money to spend and a more sophisticated knowledge of investment instruments have more access to capital than those from different socio-economic groups. Knowing the comfort level of a particular market is important in designing products and services that meet its needs.

There are numerous instances proving the influence of these social factors on investment behaviour of individuals in general and countable studies on behaviour of women in particular.

Dr. Sindhu K.P and Dr. Rajitha (2014) Kumar have found in their study that majority of the investors depend on their brokers to decide where, when, how, and how much funds should be invested in different avenues.

Centre For Insurance Research (CFIR) conducted a study to examine the factors influencing

investment behaviour of individual investors. The study revealed that Investors ranked Banking entities, Investment Depositories, Insurance Companies and Financial advisors as number 1, 2, 3 and 4 trustworthy agencies to make investment decisions. It has by the study of CFIR majority of the investors depended on banking entities to make their investment decisions.

Investors make decisions to buy sell and hold in response to the recommendations of financial analysts. Investors hold their securities on the hold recommendation, sell their securities or sell recommendation and buy securities or buy recommendations by the financial analysts. Majority of the investors buy their stocks through individual stock brokers (Ambrose Jagongo et.al). Recommendations from friends or co-workers have been marginally loaded on this factor as well in previous research studies.

The study conducted by Arian Borgers (2015), was aimed at clarifying the economic significance of social dimensions in investment decisions. The study was conducted on US equity Mutual fund holders. Their study found that US equity mutual fund investors were responsive to the local political, religion and social environment. The study concluded that investors were socially conscious in making their investment decisions. Among all social factors, one of the most influencing factors of investment behaviour of the investors is influence of family members (Dr. Mandeep Kaur 2012).

A study was conducted by Anna A. Merikas and Andreas G Merikas (2013), attempted to study the impact of economic factors on individual investor behaviour, in Greek Stock Exchange. Their study considered factors relating to accounting information, family factors and other political influence on investment behaviours of investors.

In the study conducted by Bouteska Ahmad S (2015), it has been found that nearly 30.9% of the investors were influenced by the family members’ opinion. And the author also concluded that broker recommendation is the most influencing factor of investment behavior.



In consultation with these studies following for the present study: social factors were considered as independent factors

Social Factors

SL No	Social Factors
1	House Hold financial needs and daily money Management
2	Family influence on decision making
3	Family members opinion on Investment
4	Sources of Financial Information

Source: Created by the researcher

Psychological Factors: Individuals behaviour is influenced by many factors some are internal and some are external. There are certain factors which are individual itself; those significantly affect the behaviour of the investors. These factors are called Psychological factors. Psychological factors are the factors that drive individuals' action and seek satisfaction. Many studies witnessed the significant influence of psychological factors on investment behaviour of individuals in general and in particular with women. The findings of few such studies are summarized as follows:

Kadijeh Ebrahimi and Mohsen Dastgir (2016), have tested the relationship personality characteristics and Investment trends of Capital Market Analyst, and their study showed the significant correlation extraversion, agreeableness and consciousness on risk aversion. In addition, no significant negative relationship was found by the author between risk aversion and analyst's tendency of investment.

Gender has significant influence on psychological factors of women, further both gender and psychological factors significantly influence the investment behaviour of investors. women are more risk averse than men even when they have sufficient investment knowledge and experience (Jenna Fish 2012).

Five big traits like consciousness, Openness to experience and agreeableness had direct positive impact on investment performance (as identified by psychologists) have significant impact on investment behaviour of investors (Phung Thai Minh Trang and Mai Ngoc Khuong).

Psychological Factors

Sl. No.	Psychological Factors
1	Confidence Level
2	Investor Optimism
3	Investor Conservatism
4	Investor Beliefs

Source: Created by the researcher

Other Factors: there are several factors apart from the factors discussed so far, that have significant impact on investment behaviour of the investors. Among all

Investors driven by objectives related to speculation have higher aspirations and turnover, take more risk, judge themselves to be more advanced, and underperform relative to investors driven by the need to build a financial buffer or save for retirement (Arvid O. I. Hoffmann, Hersh Shefrin and Joost M. E. Pennings).

Among all factors Psychological factors were considered as the significant factors influencing investment behaviour of the investors. Confidence level, dependency level, desires, goals, prejudices, biases, emotions and beliefs were identified as psychological factors influencing investment behaviour of the investors (Dr. Mandeep Kaur 2012). Herding has negative influence on choice of Investment Avenue. Over confidence has negative impact on investment behaviour of investors. Anchoring has positive influence on choice of investment avenues (Lingesiya Kengatharan and Navaneethakrishnan Kengatharan 2014).

Lubna Riaz, Ahmed Imran Hunjra and Rauf-i-Azam (2012), have considered investment decisions of investors as dependent variable while risk propensity, problem framing, asymmetry of information, confidence level were considered as Independent variables. And their study found the significant association among them. investor optimism is the key factor in making investment decision of investors at equity markets (R . Jayaraman and Dr. G Vasanthi (2014).

In consultation with these studies following psychological factors are identified as most significant factors influencing investment behaviour of the working women and are considered for the present study:

other Accounting information is the most significant one. In the present study accounting information was considered under "Other" group category in



consultation with the empirical findings of following studies.

Hussein A. Hassan Al-Tamimi (2012), again it has proved from the study expected corporate earnings, get rich quick, stock marketability, past performance of the firm’s stock, government holdings and the creation of the organized financial markets have significant influence on investment behaviour. Moderately influencing factors in order of importance were: expected losses in other local investments, minimizing risk, expected losses in international financial markets, family member opinions, gut feeling on the economy. Religious beliefs and family members’ opinion were proved as least bothering factors according to his study.

It has been found from the study conducted by Dr. Shaffeq Ahmad(2017), around 76.47% and 72.4% of investors consider expected earnings of the company

and Dividend payment while making investment decisions respectively. Another 68.62%, 65.68% and 63.72% of the respondents were influenced by stock marketability, financial statements and expected dividends of the company respectively. So from these statistics it can be concluded that accounting information plays vital role in investment behaviour of the investors. It has been found that annual reports of the company are the major source of information to the investors (G. Gniewosz 1990). And the accounting information is considered as the most useful information to make investment decisions.

With reference to these studies accounting information was considered as one of the factors influencing investment behaviour of the investors under the category of other factors. Opinion survey of respondents on the following factors of accounting information was made in the present study:

**Other Factors**

<b>Factors relating to accounting information</b>	
<b>1</b>	<b>Fundamental factors</b>
1.1	Past performance of the company
1.2	Financial Position of the company
1.3	Earnings of the Company
1.4	Dividend Payment
1.5	Risk return factors of the stock
1.6	Share Price in the market
1.7	Credit rating
1.8	Capital structure of the company
1.9	Quality of Management
1.10	Brand and reputation of the Co.
1.11	Listing of co. on stock exchange
1.12	Marketability of stock
1.13	CSR practices of the Co.
<b>2</b>	<b>Technical factors</b>
2.1	Past price movements
2.2	Daily price movements
2.3	Use of charts, trends and patterns
2.4	Active trading volume of the stock
<b>3</b>	<b>Market information</b>
3.1	News about stock in media and market
3.2	Current market trends
3.3	Recommendations of professionals, family, friends and peer

Source: Created by the researcher

**FACTOR ANALYSIS**

Factor analysis is a useful tool for investigating variable relationships for complex concepts including behavioural patterns. It involves grouping similar variables into dimensions. It helps the researcher to evaluate the concepts that are not easily measured by collapsing a large number of variables into a few interpretable variables. It is used as a data

reduction method. But most importantly it is often used to determine a linear relationship between variables before subjecting them to further analysis. The relationship of each variable to the underlying factor is expressed by the factor loadings.

The present work used exploratory factor analysis to extract maximum variance from the data set of 60 variables and to reduce a large number of



variables down to a smaller number of components/clusters.

Generally accepted criteria for factor analysis is Eigen Values of greater than 1.0 and factor loading of 0.5 were considered in this study. Kaiser (1974) pointed that KMO measures sampling adequacy which is greater than 0.5 as acceptable. Furthermore, the Bartlett's Test of Sphericity is highly significant at p value less than 0.001 ( $p < 0.001$ ). Identification factors influencing investment behaviour of the study followed the above criteria for conducting Exploratory Factor analysis.

Factor analysis with Varimax rotation method has been performed on all 60 statements or variables using principal components extraction method. In the rotated factor matrix, variables which have factor loading less than 0.5 were removed and factors with the high factor loading were considered as critical variables. In this regard, 43 variables out of 60 variables have been removed for the further analysis. After performing factor analysis, 17 reliable and valid factors were identified with Kaiser Normalization criteria Eigen value more than one. The same is depicted in the table following table:

**Results of Exploratory Factor Analysis Matrix of Factors influencing Investment Behavior of selected Working Women (Independent Variables)**

Factors Identified	Constructs	Factor Loadings
Factor 1	Brand and reputation of the Co.	0.612
	Marketability of stock	0.835
	CSR practices of the Co.	0.811
	Past price movements	0.854
	Daily price movements	0.623
	Use of charts, trends and patterns	0.634
	Current market trends	0.616
	Reputation of the firm	0.614
Factor 2	Dividend Payment	0.245
	Quality of Management	0.592
	Listing of co. on stock exchange	0.516
	Active trading volume of the stock	0.598
Factor 3	I have complete knowledge of Financial instruments available at stock markets	0.621
	I am satisfied with my present financial position	0.695
	I am confident that I have secure financial future	0.523
	I have clear plans for my future retirement life	0.601
	Investment is exciting and satisfies financial needs.	0.758
Factor 4	I increase my investment in Stocks	0.839
	I hold my investment in stock market for long time	0.781
	The prices of my securities will increase in future	0.862
	I do not hesitate to invest in new securities	0.757
Factor 5	Perceived ethics of firm	0.806
	Firm position in industry	0.666
Factor 6	I rely on fundamental analysis to take investment decision(Economy, Industry and Company analysis)	0.826
	I rely on Past performance and Price movements to take investment decision(Technical Analysis)	0.814
Factor 7	I take investment decisions based on my emotions	0.546
	I am responsible for my financial well being	0.745
	I need to plan for my financial future	0.776
Factor 8	Past performance of the company	0.798
	Share Price in the market	0.611
Factor 9	Does your family influence your investment decision?	0.594
	Recommendations of professionals, family, friends and peer	0.593
Factor 10	Financial Position of the company	0.736



<b>Factor 11</b>	I depend on my spouse to take investment decision	0.754
	I don't wish to take any financial responsibilities	0.596
<b>Factor 12</b>	Dividend Payment	0.548
	Risk return factors of the stock	0.777
<b>Factor 13</b>	I invest in companies with stable returns	0.794
<b>Factor 14</b>	I don't have any financial needs to be satisfied through investment income	0.832
<b>Factor 15</b>	It is important to setup clear financial goals with timelines	0.521
	Investment is a man's job	0.771
<b>Factor 16</b>	Investment is time consuming, difficult and stressful	0.605
<b>Factor 17</b>	Who manages your investment?	0.868

**Seventeen constructs have been identified through factor analysis. These include:**

1. Accounting information of the company
2. Stock market information
3. Financial Position and plans
4. Investment Optimism
5. Co. specific factors
6. Fundamental factors
7. Beliefs
8. Market Performance
9. Family and Peer group
10. Financial position
11. Dependency
12. Returns
13. Performance stability
14. Financial needs
15. Investment goals
16. Investment sentiments
17. Investment management

**Results of KMO and Barlett's Test**

<b>KMO and Barlett's Test</b>		
KMO measure of sampling adequacy		0.519
Total Variance Explained		77.839
<b>Barlett's test of sphericity</b>	Approximate Chi-square	27009.414
	DF	1770
	P value	0.000

Source: Created by the researcher

The above table shows the result of two tests say Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Barlett's test of sphericity that indicates the proportion of variance caused by the underlying factors on the variables. The KMO value of 0.519 indicates factor analysis is useful with the data.

Barlett's test of Sphericity tests the hypothesis that correlation matrix is an identity matrix which could indicate variables that are unrelated and therefore unsuitable for structure detection. P value of 0.000 indicates (generally  $P < .05$ ) factor analysis is useful with the data.

**SUMMARY OF FINDINGS IN TERMS OF FACTORS IDENTIFIED**

The objective of identification of factors influencing investment behavior of working women was achieved through the extensive review of existing literature on investment behavior of investors. Following factors have been identified as most influencing factors of investment behavior of working women:

**Demographical factors** – Age, Marital Status, Level of Education, Occupation, Income and

Family Size (McCrimmon, and Wehrung, 1986, Blume et al.1994, Barber, and Odean, 2001Terry, and Parker, 2002, Preethi and Dr. Magesh Kuttalam (2014), Geetha and Ramesh (2012) Dr. A Charles and Dr. R Kasilingam, V.R.Palanivelu & K.Chandrakumar (2013), Heena Kothari, by Dr. Kaushal A. Bhatt, by Dr. D. Harikanth & B. Pragathi (2012), Mhammed Naumann sadiq (2014))

**Social Factors** – Influence of Family, Family members opinion, Recommendations of Brokers and investment professionals, friends and peer group (Dr. Sindhu K.P and Dr. Rajitha Kumar, Centre for insurance research (CFIR), Ambrose Jagongo and Vincent S. Mutswenje, Arian Borgers, Jeroen Derwall, Kees Koedijk, and Jenke ter Horst, Dr. Mandeep Kaur (2012), Anna A. Merikas and Andreas G Merikas (2013), Ahmad S 2017).

**Psychological Factors** – Confidence Level, Investor Optimism, Investor Conservatism and Investor Beliefs (Kadijeh Ebrahim and Mohsen Dastgir, Jenna Fish, Phung Thai Minh Trang and Mai Ngoc Khuong, Arvid O. I. Hoffmann, Hersh Shefrin and Joost M. E. Pennings, Dr. Mandeep Kaur (2012), Lingsiya Kengatharan and Navaneethakrishnan Kengatharan,



Lubna Riaz, Ahmed Imran Hunjra and Rauf-i-Azam, R. Jayaraman and Dr. G vasanthi).

**Other Factors** – Accounting Information (G. Gniewosz Hussein A. Hassan Al-Tamimi(2012) Dr. Ahmad(2017),)

### Reference Studies

The brief demographical and investment profile of Working women selected for the study has been presented in the paper entitled “Investment Profile of Working Women of Hyderabad Karnataka Region” EPRA International Journal of Economic and Business Review-Online ISSN 2347-9671 & Print ISSN 2349-0187, Volume 7, Issue 2, 17<sup>th</sup> February 2019.

The Impact of the identified factors also presented in the other research papers.

### REFERENCES

1. Robert Christopher Hammond, “Behavioural Finance – Its History and Its Future”, Fire Scholars, South Eastern University, Lakeland
2. Arvid O I Hfmann And Hersh Shefrin, “Behavioural Portfolio Analysis of Individual Investors”
3. Nathalie Abi Saleh Dargham, “The Implications Behavioural Finance”
4. Gefrey Gitau Mwangi, “Behavioural Factors Influencing Investment Decisions in the Kenyan Property Market”, Thesis Submitted to Strathmore University, Kenya
5. Federal Research Division, “Customised Research and Analytical Services of US Government”
6. L.M.A. Preethi and Dr. Magesh Kuttalam (August - 2014), “Influence Personality and Demographics in Investment Choice”, International Journal of Applied Research and Studies, ISSN: 2278-9480 Vol. 3, Issue 8
7. Brahmabhatt, P.S Raghu Kumari and Dr. Shamira Malekar (September 2012), “A Study of Investor Behaviour on Investment Avenues in Mumbai Fenil”, Trans Asian Journal Marketing & Management Research Vol.1 Issue 1
8. Khoa Cuong Phan, Jian Zhou (2014), “Factors Influencing Individual Investor Behavior: An Empirical Study The Vietnamese Stock Market”, American Journal Business and Management, Vol. 3, No. 2, 77-94
9. Dr. K Ravichandran (July-2008), “A Study on Investors Preferences towards Various Investment Avenues in Capital Market with Special Reference to Derivatives”, Journal of Contemporary Research In Management
10. Pr. Gouri Prabhu And Pr. NM Vechlekar “Perception Indian Investors Towards Investment In Mutual Funds With Special Reference To MIP

Funds”, IOSR Journal Economics And Finance PP 66-74

11. Geetha, N., & Ramesh, M. (2012), “A Study on Relevance Demographic Factors In Investment Decisions”, Perspectives of Innovations, Economic & Business, 14-27.
12. Ramanujam, K., & Devi, K. (2012). “A Study on Impact Socio-Economic Profile on Investment Pattern Salaried & Business People in Coimbatore City” International Journal Management & Information Technology, 67-77
13. T. Velmurugan, And N. Vijai Anand (2015), “A Study On Factor Influencing Mutual Fund Investment - Special Reference to Investor in Pharmaceutical Sector At Chennai Metro City”, Int. J. Pharm. Sci. Rev. Res., 34(1)
14. Ambrose Jagongo and Vincent S. Mutswenje (2014), “A Survey of the Factors Influencing Investment Decisions: The Case of Individual Investors at The NSE”, International Journal Humanities And Social Science, Vol. 4 No. 4
15. Samreen Lodhi (2014), “Factors Influencing Individual Investor Behavior: An Empirical Study City Karachi”, IOSR Journal of Business and Management (IOSR-JBM), E-ISSN: 2278-487X, P-ISSN: 2319-7668. Vol. 16, Issue 2. Ver. III
16. Neha Parashar, “Factors Affecting Perception Investors on Mutual Funds”, Symbiosis Centre Management, Maharashtra
17. Anna A Merikas and Andreas G Merikas, “Economic Factors and Individual Investor Behaviour: The Case of the Greek Stock Exchange”, Journal of Applied Business Research, Vol. 20, Number 4
18. Hussein A. Hassan Al-Tamimi, “Financial Literacy And Investment, Decisions of US Investors”, Www.Emeraldinsight.Com
19. Dr. R Sellappan and Jamuna “Investment Attitude of Women towards Different Sources of Securities- A Factor Analysis Approach”, Global Journal Management And Business Research Finance, Vol. 13 Issue 3
20. Dr. Mandeep Kaur And Tina Vohra (December 2012), “Understanding Individual Investors Behaviour- A Review Empirical Evidences”, Pacific Business Review International, Vol. 5, Issue 6
21. Abhijeeth Chandra And Ravindra Kumar(2011), “Determinants Individual Investor Behaviour: An Orthogonal Linear Transformation Approach”, Munich Personal Rep Eo Archieve, Paper No. 29722
22. Dr. Hayat A Awan and Shanza Arshad (May 2012), “Factors Valued By Investors While Investing in Mutual Funds- A Behavioural Context”, International Journal of Contemporary Research In Business, Vol. 4, No. 1
23. Olsen Robert (2010), “Toward A Theory Behavioural Finance – Implications from the Natural Sciences”, Conceptual Paper Published in



- Qualitative Research in Financial Market*, Emerald Group Publishing Limited
24. Iqbal Mahmood, H. A. (2011). "Behavioural Implications Investors for Investments in the Stock Market", *European Journal of Social Science*, No.20
  25. Suleyman Gokhan Gunay, E. D. (2011). "Interaction Between Demographic and Financial Behaviour Factors in Terms of Investment Decision Making", *International Research Journal Finance And Economics* (66), 1450-2887
  26. Phung Thai Minh Trang And Mai, "The Impact of Big Five Traits and Mood on Investment Performance – A Study of Individual Investors In Vietnam"
  27. Kadijeh Ebrarimi and Mohsen Dastgir (September 2016), "The Effect of Personality Characteristics of Capital Market Analysis on Investment Trends, Risk and Return and their Performance", *Article 3, Vol. 1, Issue 2*
  28. Haritha PH and Rashmi Uchil, "Conceptual Framework on Market Factors Influencing Investors Sentiments and Effect of Behavioural Pitfalls on Investment Decision", *IOSR Journal Economics and Finance*, PP 29-34
  29. Dr. Gagan Kukreja (Dec. 2012), "Investors Perception for Stock Market- Evidences from National Capital Region of India", *Interdisciplinary Journal of Contemporary Research in Business*, Vol. 4, No.8
  30. Bhuvaneshwari C, "A Study on Investors Perception towards Equity/Tax Saving Mutual Fund", *International Journal of Engineering and Management*
  31. Murat Kiyilar and Ocan Acar , "Behavioural Finance and the Study of the Irrational Financial Choices of Credit Card Users", *Annales University Apulensis Series Oeconomica*, 11(1)
  32. Mehmet Islamoglu, Mehmet Apan, and Adem Ayvalli (2009), "Determination of Factors Affecting Individual Investor Behaviours: A Study on Bankers", *International Journal of Economics And Financial Issues*, 5(2), 531-543.
  33. Anna A Merikas and Andreas G Merikas, "Economic Factors and Individual Investor Behaviour: The Case of the Greek Stock Exchange", *Journal of Applied Business Research*, Vol. 20, No.4
  34. Arvid O I Hfmann , Hersh Shefrin and Joost M E Pennings, "Behavioural Portfolio Analysis of Individual Investors", Report Submitted to Maastricht University, School Business and Economics, Netherland
  35. Jenna Fish (2012), "Behaviour Finance- A Study Gender Affects on Investment Decisions", Report, Calrson School Management, University Minnesota, Spring
  36. Black et al, "Capital Investment Effects Dividend Imputation", *The Journal of American Taxation Association*, PP40-59
  37. Anna Merikas (Ocober 2004), "Economic Factors and Individual Investor Behaviour – The Case of the Greek Stock Exchange", *Journal of Applied Business Research*
  38. Ranjani Krishnan and Donna M Brooker (Feb 2002), "Investors Use of Analysts' Recommendations", *American Accounting Association*, Vol. 14, Issue 1
  39. Syama Sundar P V, "Growth Prospects of Mutual Funds and Investor Perception With Special Reference to Kothari Pioneer Mutual Fund", Project Report, Sri Srinivas Vidya Parishad, Andhra University, Vishakpatnam
  40. R Suyam Praba (2016), "An Empirical Study on Gender Difference in the Investment Pattern of Retail Investors" *Acme Intellects International Journal Research in Management, Social Sciences & Technology*, Vol. 14
  41. Priyanka Pandey (May-2014), "A Study of Gender Biasness in Investment Behaviour of Investor", *Golden Research Thoughts*, Vol.-3 Issue-11
  42. Madhurima Deb and Kavita Chavali (July 2009), "A Study on Gender Differences in Investment Behaviour", *Asia Pacific Journal of Management Research and Innovation*, Vol. 5 No. 3 45-55
  43. Dr. Monica Sharma And Dr. Vani Vasakarla (July 2013), "An Empirical Study of Gender Differences in Risk Aversion and Overconfidence in Investment Decision Making", *International Journal of Application or Innovation in Engineering & Management (IJAIEM)*, Vol. 2, Issue 7
  44. Iowa State University Report On "Gender Differences in Investment Behaviour"
  45. Rebecca Sophia Meade, "Women, Micro Finance and Saving- Lessons and Proposals", Centre For Social Development, Washington University
  46. Arti Gaur, Julee and Sunitha Sukhija (2011), "Difference in Gender Attitude in Investment Decision Making in India", *Research Journal of Finance and Accounting*, Vol. 2, No. 12
  47. Michael Liersch (2009), "Women and Investing – A Behavioural Finance Perspective", *Journal of Economic Literature*
  48. Vickie L Bajtelsmit and Alexander Bernasek (1996), "Why Do Women Invest Differently than Men", *Association for Financial Counselling and Planning Education*
  49. Matthais Gysler, Jamie Brown and Renate Schubert (May 2002), "Ambiguity and Gender Differences in Financial Decision Making- An Experimental Examination Competence and Confidence"
  50. Annika E Sunden and Brain J Surette (1998), "Gender Differences in the Allocation of Assets in Retirement Saving Plans", *American Economic Review*, Vol. 88, Issue 2, PP 207-211
  51. Elezebeth Mcbride (Jan 2015), "Emotions Count-Brain Chemistry Behind Investing", *WWW.Goarticles.Com*
  52. Gert Abraham Lowies, John Henry Hall and Christian Ernst Cloete (2012), "The Role of





- Behavioural Aspects in Investment Decision Making By Listed Property Fund Managers in South Africa*, Master Thesis, University Pretoria
53. Mohd Abass Bhat and Fayaz Ahmad Dar, "A Conceptual Framework on Emotions and Investment Decisions", *National Monthly Refereed Journal Research in Commerce & Management*
54. Yu-Je Lee and Kae-Shuan Kao, "The Investment Behaviour, Decision Factors and their Effects Toward Investment Performance in the Taiwan Stock Market".
55. Zipporah Nyaboke Onsomu (Jun 2014), "The Impact of Behavioral Biases on Investor Decisions in Kenya: Male Vs Female", *International Journal of Research in Humanities, Arts And Literature*, Vol. 2, Issue 6, 87-92.
56. Dhimen Jani1 and Dr. Rajeev Jain(March '13), "A Comparative Analysis of Investors Buying Behavior Urban Rural For Financial Assets", *International Monthly Refereed Journal of Research in Management & Technology*, Vol. II
57. Gnani Dharmaja .V, Ganesh .J, and Dr. Santhi V (April 2012), "A Study on the Individual Investor Behaviour With Special Referance to Geojit BNP Paribas Financial Service Ltd, Coimbatore", *IRACST- International Journal Research In Management & Technology (IJRMT)*, ISSN: 2249 9563 Vol. 2 No.2
58. Baba Shiv, G. L. "Investment Behaviour and the Negative Side of Emotion" *American Psychological Society*, 16, 435- 439
59. Barber, B M & Odean, T (2001), 'Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment', *The Quarterly Journal of Economics*, Vol.116, No.1
60. Shlomo Benartzi and Thaler (March 2013), "Behavioural Economics Aand the Retirement Savings Crisis", *Policy Forum*, Vol. 339
61. Gervais And Odean (2008), "All the Glitters, the Effect Attention and News on the Buying Behaviour of Individual and Institutional Investors", *The Review of Financial Studies*, Vol. 21, No.2
62. Daniel and Huberman, "Familiarity Breeds Investment" *The Review of Financial Studies*, Vol. 14, No.3, 659-680."
63. Pasewark, W. R., & Riley, M. E. "It's A Matter of Principle: The Role of Personal Values in Investment Decisions", *Journal of Business Ethics*, 237-253, 2009
64. Sharon Collard (January 2009), *Personal Finance Research Centre, University Bristol*, "Individual Investment Behaviour: A Brief Review of Research", Final Report,
65. Fischer, Rene, and Ralf Gerhardt (2007), "Investment Mistakes of Individual Investors and the Impact of Financial Advice", *European Business School Working Paper*
66. Brown, G.W. and Michael T. Cliff (2004), "Investors Sentiment and the Near-Term Stock Market", *Journal of Empirical Finance*, Vol. 11, Pp. 1-27
67. Heena Kothari, "Individual Investors Behaviour towards Financial Decision Making: A Conceptual Model", *Altius Shodh ISSN 2348 – 8891*
68. Sumathi.S, Thirumagal Vijaya .M January (2015), "A Study on Investment Behaviour of Women Employees in Coimbatore City", *Excel International Journal of Multidisciplinary Management Studies*, Vol.5 (1), Pp.82-89
69. Ramanujam, V., & Ramkumar, G. (2012), "An Empirical Analysis On Preferred Investment Avenues Among Young and Experienced Women Investors with referrence to Coimbatore". *International Journal of Business and General Management*, PP 3-11
70. Juwairiya.P.P (July 2014), " Financial Literacy and Investment Pattern of Working Women in Kerala", *International Journal of Marketing, Financial Services & Management Research*, *IJMFSMR*, Vol.3 (7), Pp. 24-33
71. Diana Fletschner And Lisa Kenney, "Rural Women's Access to Financial Services- Credit, Savings and Insurance"



# FAITH-BASED INTERVENTIONS IN THE REINTEGRATION OF DISPLACED BOKO HARAM VICTIMS INTO THE SOCIETY: A REVIEW OF SELECTED LITERATURE

Adebayo Ola Afolaranmi  
PhD Student  
Peace and Conflict Studies  
Lead City University Ibadan, Nigeria

Article DOI: <https://doi.org/10.36713/epra4986>

*This article is an excerpt from my dissertation titled "Faith-Based Responses to Displaced Boko Haram Victims: A Case Study of Baptist Churches in Ogbomoso Land, Nigeria" (MPhil diss., Irish School of Ecumenics, Trinity College Dublin, 2016).*

## ABSTRACT

*Boko Haram insurgency has affected many people in the northeastern part of Nigeria. Many of these victims have migrated to other parts of the country. While some of these people become internally displaced persons (IDPs) in IDP centres or camps, some prefer to migrate to, and live among their ancestral relatives. The latter are referred to as migrated displaced persons. Many faith-based organizations especially churches of the Nigerian Baptist Convention have been making efforts to transform the lives of these displaced people and reintegrate them into the society. The paper reviews some related themes such as terrorism and religious violence, Boko Haram insurgency in Nigeria, jihad, trauma, internally displaced persons, Christian theological bases for humanitarianism, Baptist policy/theological stands on humanitarianism, and religious responses to crisis in transforming lives of displaced people from conflict-affected areas. The paper ends with some recommendations for faith-based organizations and the Nigerian government.*

**KEYWORDS:** *Boko Haram, terrorism, conflict transformation, internally displaced persons, migrated displaced persons, faith-based organizations, Nigerian Baptist Convention, Nigeria*

## INTRODUCTION

The world is full of crisis, conflicts and wars.<sup>1</sup> These conflicts arise because of various political, economic, religious and other reasons. Some of these conflicts (like the ones cause by Boko Haram, a terrorist group in the northeast Nigeria) have caused many people to become refugees in other countries, while many others have become internally displaced

in their countries.<sup>2</sup> They are often camped in internally displaced persons' (IDPs) camps or centers where governments, Non-Governmental Organizations (NGOs), faith-based and other humanitarian organizations care for them. There is a unique set of people that have migrated back to their ancestral home in Ogbomoso land in southwestern part of Nigeria. The churches of the Nigerian Baptist Convention, a faith-based organization, are making efforts to transform the lives of these displaced people and reintegrate them into the society. Nonetheless, the Convention and researchers that are members of its churches have not deemed it fit to really study and document the roles of the

<sup>1</sup> *Conflict Barometer 2015*, a publication of The Heidelberg Institute for International Conflict Research (HIIC) at the Department of Political Science, University of Heidelberg (Accessed 23 June 2016).

[http://www.hiik.de/de/konfliktbarometer/pdf/Conflict\\_Barometer\\_2015.pdf](http://www.hiik.de/de/konfliktbarometer/pdf/Conflict_Barometer_2015.pdf)) analysed disputes, non-violent crises, violent crises, limited wars, and wars in the world in the year 2015.

<sup>2</sup> Branis Knezevic and Seth Olson. "Counseling People Displaced by War: Experiences of Refugees from the Former Yugoslavia." *Professional Counselor*. Vol. 4, No. 4, 2014.



Convention and its churches in responding to transforming the lives of the displaced persons. This paper aims at reviewing selected literature on related themes such as: terrorism and religious violence, Boko Haram insurgency in Nigeria, jihad, trauma, internally displaced persons, Christian theological bases for humanitarianism, Baptist policy/theological stand on humanitarianism, and religious responses to crisis in transforming lives of displaced people from conflict-affected areas.

## TERRORISM AND RELIGIOUS VIOLENCE

Scholars do not agree on the definition of terrorism. Nevertheless, terrorism has been described as “the premeditated use or threat to use violence by individuals or subnational groups to obtain a political or social objective through the intimidation of a large audience beyond that of the immediate noncombatant victims.”<sup>3</sup> Historically, the word terrorism was first used during the French Revolution (1789-1799) when it was used to portray the government. Nonetheless, by 1848, people used the word to describe vicious rebels. The connotation of terrorism changed to depict the forceful acts of some organized sets of people, like labor associations, revolutionaries, nationalistic groups, and ultra-nationalistic political organizations between the end of the 1800’s and early 1900’s. Finally, nationalism became the major cause for exploits of terrorism. Although, lately, a clear change has already begun as religion becomes the main motive of terroristic thinking.<sup>4</sup>

Terrorism has been categorised into different forms that “serve to differentiate terrorist organizations according to specific criteria, which are usually related to the field or specialty of whoever is selecting the categories.”<sup>5</sup> These include: separatist, ethnocentric, nationalistic, revolutionary, political, religious, social, domestic (home-grown), and international or transnational terrorism.<sup>6</sup> However, terrorism has also been classified into three forms. These are demonstrative terrorism that seeks to be known publicly; destructive terrorism, the kind of terrorism that uses threat, harm and death to mobilize support for their course; and suicide terrorism, the

form of terrorism where the attackers kill themselves with others.<sup>7</sup>

It is unfortunate that “terrorism in the name of religion has become the predominant model for political violence in the modern world.”<sup>8</sup> This kind of terrorism is a political violence that is inspired by a total belief that a strange supernatural has authorized terrorist violence for the better exaltation of the belief. It is believed that acts committed because of the belief will be forgiven by the strange force and possibly be rewarded hereafter.<sup>9</sup> This explains why terrorist attacks are usually linked to one religion or the other.<sup>10</sup> This has formed part of what is referred to as religious violence – the occurrences where religion is either the purpose or the receiver of violent behaviors. Historically, the world has experienced a great deal of religious violence.<sup>11</sup> These include; the Judeo-Christian Antiquity as referenced in the Bible, Christian Crusades during the Middle Ages, The Order of Assassins in Persia in 11th century, A Secret Cult of Murder in India between the 13th and 19th centuries, modern Arab Islamist extremism in the Arab world that passed through several important political phases during the 20th century, mysticism and rebellion in Uganda that had two phases (the Holy Spirit Mobile Force and the Lord’s Resistance Army) in 1987, and the Protocols of the Learned Elders of Zion that started in czarist Russia.<sup>12</sup> Recently, there are ongoing conflicts that involve religious terrorism such as,

conflicts between Jews and Muslims in the Middle East, Hindus and Muslims in India, Catholics and Protestants in Ireland, and Christians and Muslims in the former Yugoslavia, East Timor, Lebanon, Russia, and many countries in Africa [particularly Boko Haram insurgency in] Nigeria; and the killing of physicians and nurses by Christian antiabortion groups.... [Worthy of

<sup>3</sup> Todd Sandler. “Terrorism and Counterterrorism: An Overview.” *Oxford Economic Papers*, 2014. Accessed 23 June 2016. <http://oexfordjournals.org/content/early/2014/11/05/oeqpu039.full.pdf+html>, 1.

<sup>4</sup> C. C. Rausch. “Fundamentalism and Terrorism.” *Journal of Terrorism Research*, Volume 6, Issue 2–May 2015. <http://doi.org/10.15664/jtr.1153>, 29.

<sup>5</sup> “Categories of Terrorist Groups.” Accessed 15 June 2020. <http://www.terrorism-research.com/groups/categories.php>

<sup>6</sup> “Categories of Terrorist Groups.”

<sup>7</sup> Ibrahim Suberu. “Martyrs or Terrorists: Suicide Bombing in Islamic Hermeneutics.” *Ilorin Journal of Religious Studies*. Vol. 5 No. 1. 2015, 121.

<sup>8</sup> Gus Martin. *Essentials of Terrorism: Concepts and Controversies. Second Edition* (Thousands Oaks, Sage Publications, Inc., 2011), 130.

<sup>9</sup> Ibid.

<sup>10</sup> Israella Silberman. “Religious Violence, Terrorism, and Peace: A Meaning-System Analysis.” In Raymond F. Paloutzian and Crystal L. Park (eds.), *Handbook of the Psychology of Religion and Spirituality* (New York: The Guilford Press, 2005), 529.

<sup>11</sup> James Wellman and Kyoko Tokuno. “Is Religious Violence Inevitable?”. *Journal for the Scientific Study of Religion*. 43 (3). Accessed 15 June 2020. <https://doi.org/10.1111/j.1468-5906.2004.00234.x>, 291.

<sup>12</sup> Martin, *Essentials of Terrorism*, 131-138.



note are] the 1995 nerve gas attack on the Tokyo subway by Japanese followers of Shoko Asahara in the Aum Shinrikyo sect who were trying to hasten a new millennium, the September 11th, 2001, attacks on the United States in which thousands of civilians were killed by members of the Al-Qaeda organization, and a wave of bombings of civilian buses and public gathering places in Israel by the Islamic Hamas terrorists.<sup>13</sup>

As indicated from examples provided above, terrorism is a global phenomenon. Nevertheless, a report attributed more than 80 per cent of people that lost their lives to terrorist happenings in 2013 happened in only five countries namely, Iraq, Afghanistan, Pakistan, Nigeria and Syria.<sup>14</sup>

Apparently, religion in itself is not the problem of terrorism. This writer agrees with Hill and Kimney that opined that the overzealous adherents of religion are the problem.<sup>15</sup> All the terrorist acts in the name of religion can be curtailed if every adherent of religion can be tolerant of people of other faiths and be ready to live peacefully with other people regardless of their religious background. One of the most dreaded terrorist groups is the Boko Haram insurgency in the northeastern Nigeria.

## BOKO HARAM INSURGENCY IN NIGERIA

### Boko Haram

The name *Boko Haram*, according to Adesoji, is derived from a blending of the Hausa word *boko* 'book' and the Arabic word *haram* 'something forbidden, ungodly, sinful' together. Plainly, it means 'book is sinful', but its profound meaning is that Western education is sinful, heretical, or ungodly and should therefore be outlawed.<sup>16</sup> Although, the real name of the sect is disputed, it is commonly used to refer to a radical Islamist sect in northeastern

Nigeria.<sup>17</sup> In spite of the fact that Azumah agreed that 'Boko Haram' means "Western education is forbidden or sinful" and that the group is "opposed to aspects of Western education because [it believes that Western education] is sinful and religiously forbidden"<sup>18</sup>. The group had rejected the name for itself as cited in a YouTube video released sometime in 2014.<sup>19</sup> In support of this, Cook cited an ideological statement issued in 2009 by Sani Umar who was then a temporary leader of the sect:

Boko Haram does not in any way mean "Western Education is a sin" as the infidel media continue to portray us. Boko Haram actually means "Western Civilization" is forbidden. The difference is that while the first gives the impression that we are opposed to formal education coming from the West, that is Europe, which is not true, the second affirms our belief in the supremacy of Islamic culture (not education), for culture is broader, it includes education but not determined by Western Education.<sup>20</sup>

The official name of the sect is *Jama'atu Ahlis Sunna Lidda'awata Wal-Jihad*, which means "Association of Sunnis for the Propagation of Islam and Jihad"<sup>21</sup> or "People Committed to the Propagation of the Prophet's Teachings and Jihad".<sup>22</sup> The sect is referred to as "al-Qaeda's African 'monsters'".<sup>23</sup> Specifically, the sect "has ties to northwest Africa-based al-Qaeda in the Islamic Maghreb, Somalia's al-Shabab, and al-Qaeda in the Arabian Peninsula."<sup>24</sup> Apart from linking itself with

<sup>13</sup> Silberman. "Religious Violence, Terrorism, and Peace," 529.

<sup>14</sup> The Institute for Economics and Peace. *Global Terrorism Index Report 2014: Measuring and Understanding the Impact of Terrorism*. Accessed June 23, 2016 from [http://www.visionofhumanity.org/sites/default/files/Global%20Terrorism%20Index%20Report%202014\\_0.pdf](http://www.visionofhumanity.org/sites/default/files/Global%20Terrorism%20Index%20Report%202014_0.pdf), 2.

<sup>15</sup> Jessie Hill and Adam F. Kimney. *Sacred Violence: Religion and Terrorism* (Cleveland, Ohio: Case Western Reserve University, 2008). Accessed June 23, 2016 from <http://scholarlycommons.law.case.edu/cgi/viewcontent.cgi?article=1316&context=jil>

<sup>16</sup> Abimbola O. Adesoji. "Between Maitatsine and Boko Haram: Islamic Fundamentalism and the Response of the Nigerian State." *Africa Today*, Vol. 57, No. 4 (Summer 2011), 106.

<sup>17</sup> B. Maiangwa, et al. "Baptism by Fire": Boko Haram and the Reign of Terror in Nigeria." *Africa Today*, Vol. 59, No. 2 (Winter 2012), 45.

<sup>18</sup> John Azumah. "Boko Haram' in Retrospect." *Journal of African Christian Thought*. Vol. 17, No. 1, June 2014, 57.

<sup>19</sup> Ibid.

<sup>20</sup> David Cook. *Boko Haram: A Prognosis* (The James A. Baker III Institute for Public Policy of Rice University, 2011), 12-13.

<sup>21</sup> Femi Owolade. "Boko Haram: How a Militant Islamist Group Emerged in Nigeria." Accessed 15 June 2020.

<http://www.gatestoneinstitute.org/4232/boko-haram-nigeria>

<sup>22</sup> SO Oladimeji. *Faith, Stewardship and Security: Christians Collaborating with God to Handle Security Matters* (Ibadan, Nigerian Baptist Convention, 2013), 4.

<sup>23</sup> Chris Uchenna Agbedo, et al. "Socio-psychological deconstruction of fear of Boko Haram in Nigeria: The Nigerian media perspective." *New Media and Mass Communication*. Vol.16, 2013, 60.

<sup>24</sup> Mohammed Aly Sergie and Toni Johnson. "Nigeria's Boko Haram and Ansaru. Council on



“Islamic State in Iraq and Syria (ISIS), the leadership of Boko Haram claims today that it wants to be known as the Islamic State West Africa Branch (ISWAB).”<sup>25</sup>

### Composition of Boko Haram

Members of Boko Haram, also called *Yusuffiya*, according to Sergie and Johnson, “consist largely of impoverished northern Islamic students and clerics, as well as professionals, many of whom are unemployed.”<sup>26</sup> Eniola added that they “comprise university lecturers, bankers, political elites, drug addicts, unemployed graduates, *almajiris* and migrants from neighbouring countries like Chad and Niger. Majority of them are the Kanuris from the northeastern region [of Nigeria].”<sup>27</sup> Furthermore, the sect is not a uniform body that has a cohesive purpose because there are many separate groups within the sect that do not agree with strategies that the sect is using, and these factions also compete for attention and followers.<sup>28</sup> Conversely, this assertion of division in the sect may not be accurate.<sup>29</sup> Although, this sect is mainly active in the northern Nigeria, its activities are noticeable also in other geographically bordering countries that include Cameroun, Chad and Niger.<sup>30</sup> It has not less than 1.5 million followers in different Nigerian northern states.<sup>31</sup> It also has “a hierarchical organization that enables them to effectively plan, command and coordinate operations, gather intelligence, maintain

security, train and ensure logistics and financial support without being noticed.”<sup>32</sup> The sect may not be united in its operations because, in the views of this researcher, it serves the interests of many people and/or organizations in the region. Each person and/or organization wants to use the sect to outwit the other people and/or organizations.

### Emergence of Boko Haram

There are many conflicting reports about the emergence of Boko Haram in Nigeria. While many believe that one Mohammed Yusuf started Boko Haram in 2002, which became prominent in 2009 after his extra-judicial killing,<sup>33</sup> others argue that “the sect had been in [Nigeria] since the 1970s following the killing of its spiritual leader in Egypt in 1970 by President Gammal Abdel Naseer.”<sup>34</sup> Ibrahim noted that the sect was a not political miscreant created by some political leaders, but an ideological group who hate western democracy. According to Azumah, Boko Haram’s origins can be traced “back to the mid 1990s, to a youth group...in Maiduguri...under the leadership of one Mallam Lawal. Mohammad Yusuf assumed the leadership after Lawal left for studies in Saudi Arabia.”<sup>35</sup>

Boko Haram has grown into a conflagration that has spread into different parts of northern states of Nigeria and it is “perhaps one of the most well-coordinated mass-destruction religious violence in Nigeria in recent times.”<sup>36</sup> Terwase et al were of the opinion that the inability of the northern part of Nigeria to complete its eight years of ruling Nigeria as a result of the demise of the then President Umaru Yar’Adua and the ambition of Goodluck Jonathan

Foreign Relations.” Accessed June 9, 2016. <http://www.cfr.org/nigeria/boko-haram/p25739>

<sup>25</sup> Virginia Comolli. “Book Haram: Nigeria’s Islamist Insurgency.” In *Christian Century* March 2, 2016. Accessed May 4, 2016. <http://web.a.ebscohost.com/ehost/pdfviewer/pdfviewer?sid=19bcaba2-66e7-4962-a81b-70dfb0a983c2%40sessionmgr4005&vid=1&hid=411>

<sup>26</sup> Mohammed Aly Sergie and Toni Johnson. “Nigeria’s Boko Haram and Ansaru. Council on Foreign Relations.” Accessed June 9, 2016. <http://www.cfr.org/nigeria/boko-haram/p25739>

<sup>27</sup> Titi Eniola. “Social Impact on Victims of Terrorist Attack: Nigerian Girl Education.” A paper presented at a conference organized by Omoniyi Ogodo Bach at Saarbrücken-Am Staden, Germany on October 8, 2015, 11.

<sup>28</sup> Ibid, 11-12.

<sup>29</sup> Cook. *Boko Haram: A Prognosis*, 23

<sup>30</sup> Osaretin Idahosa. “Boko Haram and the Nigerian State: A Different Perspective.” *Glocalism: Journal of Culture, Politics and Innovation*. 2015, 3, DOI: 10.12893/gjcp.2015.3.5, 4.

<sup>31</sup> Philip Oluwole Ukanah. *In God’s Name: The Story of Nigeria’s Religious War and Its Brutal Killings* (Ibadan, Divine Press, 2011), 249.

<sup>32</sup> Maiwa’azi Dandaura Samu. “Boko Haram Conflict Research/Analysis & Management Preventive Counterterrorism And Sustainable Peacebuilding: Nigeria And Boko Haram Case Study.” Center for Justice and Peacebuilding, Eastern Mennonite University, USA. Accessed 15 June 2020. [https://www.academia.edu/6777526/BOKO\\_HARAM\\_CONFLICT\\_RESEARCH\\_ANALYSIS\\_and\\_MANAGEMENT\\_PREVENTIVE\\_COUNTERTERRORISM\\_AND\\_SUSTAINABLE\\_PCEACEBUILDING\\_NIGERIA\\_AND\\_BOKO\\_HARAM\\_CASE\\_STUDY](https://www.academia.edu/6777526/BOKO_HARAM_CONFLICT_RESEARCH_ANALYSIS_and_MANAGEMENT_PREVENTIVE_COUNTERTERRORISM_AND_SUSTAINABLE_PCEACEBUILDING_NIGERIA_AND_BOKO_HARAM_CASE_STUDY), 25.

<sup>33</sup> Oren Dorrell. “Boko Haram: Facts, History, Leaders, and Origins of the Terrorist Group.” Accessed 15 June 2020. [http://www.huffingtonpost.com/2014/05/09/boko-haram-facts-history\\_n\\_5295563.html](http://www.huffingtonpost.com/2014/05/09/boko-haram-facts-history_n_5295563.html)

<sup>34</sup> Omololu Ogunmade. “How Boko Haram Entered Nigeria.” Accessed 27 February 2016. <http://www.thisdaylive.com/articles/how-boko-haram-entered-nigeria/216981/>

<sup>35</sup> Azumah. ““Boko Haram” in Retrospect.” 55.

<sup>36</sup> Ukanah. *In God’s Name*, 249.



from the southern part who succeeded him empowered the Boko Haram sect to become a veritable tool to fight the government of Jonathan and the people of Nigeria.<sup>37</sup> This opinion was originally posited by the Late General Andrew Azazi as cited by Liman and corroborated by Sergie and Johnson.<sup>38</sup> According to Idahosa, it is the belief of many people that,

Boko Haram is leading an armed insurgency against corruption, abusive security forces and economic disparity in northern Nigeria security forces and economic disparity in northern Nigeria and feeding off tension that have existed between Muslim dominated north and Christian dominated south of Nigeria.<sup>39</sup>

Whichever was the correct account of its emergence, Boko Haram has become one of the most feared terrorist sects in the world. Akande argued that, "The Boko Haram insurgence has been described either as a political or religious problem. The fact that the sect itself claims [to] belong to a particular religion, Islam, and often times attacks Christians makes it more religious than political..."<sup>40</sup> It is the view of this researcher that it is difficult to specifically say what the sect stands for because of the incoherency in its operation.

As a religious faction, its "combination of a sectarian agenda with violence is distinctive.... [and] its goal [according to the movement's rhetoric] is to create God's kingdom on earth through justice for the poor achieved by the rigid application of Islamic law, or sharia."<sup>41</sup> As a political movement, it was initially

backed by some dissatisfied northern politicians that wanted to use it as influence to perpetuate themselves in power or gain power. It was even alleged that some northern governors made periodic payments to the sect, though it is not clear whether these politicians were in support of the sect or the sect imposed itself on them.<sup>42</sup>

### Ideology of Boko Haram

Boko Haram is seen today as a terrorist group. A Sunni Islamic fundamentalist group that wants to encourage strict system of Sharia law founded.<sup>43</sup> It is a fanatic Islamic sect whose fundamental beliefs are different from those held by the majority of conventional Muslims in Nigeria.<sup>44</sup> Superficially, this sect is Islamic, but, operationally, it is criminal and does not have any form of religiousness. It transformed into a *Salafist-Jihadist* group in 2009. Adherents of the sect believe that their understanding of the Quran is the 'true' Islam. They are of the opinion that this 'true' Islam is all-inclusive and comprises of all facets of the life of a Muslim in readiness for life after death.<sup>45</sup> They reject Western civilization and its products like education, culture, and modern science.<sup>46</sup>

Among other things, Boko Haram claims to be fighting against:

Western ways of life which include: constitutional provision as it relates to, for instance the rights and privileges of women, the idea of homosexuality [sic], lesbianism, sanctions in cases of terrible crimes like drug trafficking, rape of infants, multi-party democracy in an overwhelmingly Islamic country like Nigeria, blue films, prostitution, drinking beer and alcohol and many others that are opposed to Islamic civilization.<sup>47</sup>

### Some Terrorist Activities of Boko Haram

Since the demise of its first known leader, Mohammed Yusuf, the sect has killed over 4000 people.<sup>48</sup> It has bombed notable places like Nigeria's

<sup>37</sup> Isaac Terungwa Terwase, et al. "The Psychological Trauma on Boko Haram Victims in Nigeria: Conflict Resolution Perspective." *Mediterranean Journal of Social Sciences*. Vol 6 No 6 S4 MCSER Publishing, Rome-Italy December 2015, 522.

<sup>38</sup> A. Liman. "Boko Haram: Why the Northerners Believe Jonathan is Guilty." Accessed 8 June 2016, from <http://leadershing/features/396929/boko-haram-northerners-believe-jonathan-guilty>. See also Mohammed Aly Sergie and Toni Johnson. "Nigeria's Boko Haram and Ansaru. Council on Foreign Relations." Accessed June 9, 2016. <http://www.cfr.org/nigeria/boko-haram/p25739>.

<sup>39</sup> Idahosa. "Boko Haram and the Nigerian State," 6.

<sup>40</sup> Isaac Babarinde Akande. "Church Response to Religious Violence in Borno Baptist Association of Maiduguri Metropolitan Area." A Master of Arts in Theological Studies thesis submitted to the Nigerian Baptist Theological Seminary, Ogbomoso, June 2015, 2.

<sup>41</sup> John Campbell. "Boko Haram: origins, challenges and responses." Accessed 15 June 2020. <https://www.ciaonet.org/attachments/27796/uploads>

<sup>42</sup> "Anatomy of African Terrorism: Boko Haram: Nigeria's Homegrown Terror Network". *World Policy Journal*, Vol. 29, No. 4 (Winter 2012 / 2013), 16.

<sup>43</sup> Idahosa. "Boko Haram and the Nigerian State," 12.

<sup>44</sup> Adesoji. "Between Maitatsine and Boko Haram," 108.

<sup>45</sup> Idahosa. "Boko Haram and the Nigerian State," 12.

<sup>46</sup> Adesoji. "Between Maitatsine and Boko Haram," 106, 108.

<sup>47</sup> Cook. *Boko Haram: A Prognosis*, 14.

<sup>48</sup> Oren Dorrell. "Boko Haram: Facts, History, Leaders, and Origins of the Terrorist Group." Accessed 15 June 2020. [http://www.huffingtonpost.com/2014/05/09/boko-haram-facts-history\\_n\\_5295563.html](http://www.huffingtonpost.com/2014/05/09/boko-haram-facts-history_n_5295563.html).



police headquarters on June 7, 2011, the building of the United Nations in Abuja, Nigeria on August 16, 2011, and many churches and villages mostly in the northeastern part of Nigeria.<sup>49</sup> According to Agbedo, et al, “since 2011, Boko Haram had launched its deadliest attacks with such meteoric velocity and clinical efficiency that not only overwhelmed the nation’s security agencies but numbed their response instincts and reduced their alert level to near zero.”<sup>50</sup> Sewakpo highlighted some of the activities and attacks of Boko Haram from June 2009 to January 2012.<sup>51</sup> The kidnap of over 200 schoolgirls in 2014 made the sect gain wider notoriety in the western world.<sup>52</sup> Bombing of villages and sporadic killings of villagers by Boko Haram have displaced many people in the northern part of Nigeria while most of them are camped in internally displaced persons’ centers located in various places in the north.

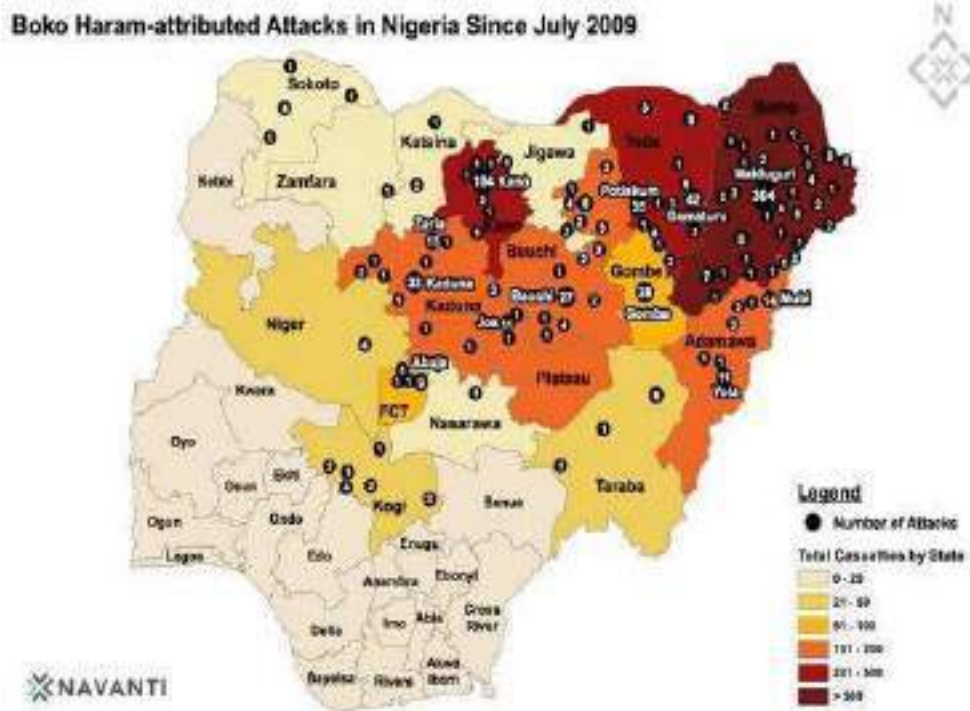
---

<sup>49</sup> Femi Owolade. “Boko Haram: How a Militant Islamist Group Emerged in Nigeria.” Accessed 15 June 2020.  
<http://www.gatestoneinstitute.org/4232/boko-haram-nigeria>.

<sup>50</sup> Agbedo, et al. “Socio-psychological deconstruction,” 68.

<sup>51</sup> H. M. Sewakpo. “The Relationship Between the Pre-Conversion Character of Paul in Acts 8-9 and the Nigerian *Boko Haram* Insurgence: Implications for Peaceful Coexistence in Nigeria.” In Ayantayo, Jacob K. and Samuel Adetunji Fatokun (eds.) (2015). *Religion and Security Issues: Proceedings of 2013 Biennial International Religious Studies Conference*. Religious Studies Series, Volume 5. Ibadan, Department of Religious Studies, University of Ibadan, Ibadan, 216-217.

<sup>52</sup> John Campbell. “Boko Haram: origins, challenges and responses.” Accessed 15 June 2020.  
<https://www.ciaonet.org/attachments/27796/uploads>.



**Figure 1: Map of Nigeria Showing Boko Haram Attacks Since July 2009<sup>53</sup>**

In Ukanah's words, one of the effects of religious conflicts in the northern part of Nigeria which Boko Haram has become a major one "is mass movement of people from the affected areas to other areas, states or in the case of the non-indigenes [to] their home-towns."<sup>54</sup> A report confirms that, "over a million Christians in Northern Nigeria have become internally displaced or have settled in other areas of Nigeria in search for safety and security."<sup>55</sup> Many of these people have come back to Ogbomoso town and vicinity. In fact, "the shock of 'Boko Haram' attacks and fear of the group has paralysed parts of north-eastern Nigeria, from ordinary citizens to politicians, the security forces, local journalists, religious leaders and scholars. Many people in northern Nigeria are fearful even to mention the name 'Boko Haram.'"<sup>56</sup> Since members of Boko Haram sect claim to be

propagating *Jihad*, it is necessary to know more about this concept.

### JIHAD

A common definition of the word *jihad* is "to struggle or strive [in the way or sake of Allah]" or, as erroneously defined by many people, "a holy war undertaken by Muslims against non-believers".<sup>57</sup> Boer argued that "the meaning of *jihad* varies greatly among Muslims; it can be violent or peaceful, communal or personal, political or spiritual."<sup>58</sup> Malik opined that the primary meaning of *Jihad* "is investing effort (in the sense of energy) in order to achieve a particular aim, or to endure an effort (in the sense of a difficulty) caused by carrying out an action or putting a message into practice."<sup>59</sup>

<sup>53</sup> "The crisis in Nigeria, in 11 maps and charts – Vox." Accessed 15 June 2020. <http://www.vox.com/2014/5/13/5710484/boko-haram-maps-charts-nigeria>.

<sup>54</sup> Ukanah. *In God's Name*, 351.

<sup>55</sup> Arne Mulders. *Summary of the Research Report 'Crushed But Not Defeated, the Impact of Persistent Violence on the Church in Northern Nigeria'*. Open Doors International, February 2016, 4.

<sup>56</sup> Azumah. "'Boko Haram' in Retrospect," 50.

<sup>57</sup> "The True Meaning of Jihad." Accessed 10 June 2016.

[http://www.justislam.co.uk/product.php?products\\_id=2](http://www.justislam.co.uk/product.php?products_id=2)

<sup>58</sup> Jan H. Boer. *Christians and Muslims: Parameters for Living Together. Studies in Christian-Muslim Relations*. Volume 8, Part 2. Belleville, Essence Publishing, 2009), 323.

<sup>59</sup> Ibrahim Malik. "Jihad - Its Development and Relevance." *The Palestine-Israel Journal*. Vol.1 No.2 1994 / Religion and Politics. Accessed 15 June 2020. <http://www.pij.org/details.php?id=741>





Having corrected the erroneous belief that jihad is an armed conflict or fanatical holy war, it is worth noting that there are two kinds of jihad – the greater jihad and the lesser jihad. The former is the internal struggle that each person has in order to do what is right and good, while the latter has to do with the outward (which includes military) defense of Islam when the Islamic community is under attack.<sup>60</sup> It has to be noted also that everything boils down to interpretation and application of the Quran by Islamic clerics. The reason is that there are parts of the Quran that give room for such fierce interpretations.

Nevertheless, various terrorist groups (Boko Haram inclusive) have portrayed jihad as a 'holy war' they are fighting in the cause of Allah. In contrast, many Muslim scholars have dissociated Islam from such activities. Quoting severally from *Hadith*<sup>61</sup>, Suberu asserted, "Islam has made it forbidden for a Muslim to kill another Muslim or to kill another person unlawfully."<sup>62</sup> In fact, Ahmad emphatically declared: "as far as Islam is concerned, it categorically rejects and condemns every form of terrorism. It does not provide any cover or justification for any act of violence, be it committed by an individual, a group or a government"<sup>63</sup> Therefore, it can be concluded that all terrorist groups claiming to be fighting a holy war of *jihad* to propagate Islam are doing so erroneously or with other ulterior motives. Such terrorist actions have caused many people to have one kind of trauma or the other.

## TRAUMA

Simply, trauma is a deeply distressing or disturbing experience. Among other things, what can result to trauma include: physical and sexual abuse, neglect, bullying, community-based violence, disaster, terrorism, war and the likes.<sup>64</sup> While other injuries can be less evident, but have equally disheartening consequences, seeing dreadful violence and witnessing the bloody outcome can lead to emotional trauma and impact damagingly on psychosocial welfare.<sup>65</sup> Post-traumatic stress disorder (PTSD) has been identified as the most frequently reported consequence of war exposure.<sup>66</sup>

<sup>60</sup> Martin, *Essentials of Terrorism*, 142.

<sup>61</sup> *Hadith* is a collection of traditions containing sayings of the Prophet Muhammad.

<sup>62</sup> Suberu. "Martyrs or Terrorists," 133.

<sup>63</sup> Hazrat Mirza Tahir Ahmad. *Murder in the Name of Allah* (Amritsar: Printwell, 1990), 116.

<sup>64</sup> "Trauma and Violence." Accessed 15 June 2020. <http://www.samhsa.gov/trauma-violence/types>

<sup>65</sup> The Institute for Economics and Peace, 71.

<sup>66</sup> Branis Knezevic and Seth Olson. "Counseling People Displaced by War: Experiences of Refugees

There are three categories of people that are affected by trauma as a result of terrorism. These categories of people are:

- Survivors of past traumatic events (e.g., refugees of wars, terrorism or torture, and survivors of domestic violence, child abuse or street crime). These individuals may have a heightened sense of vulnerability.
- People who personally witnessed or were victims of the terrorist attack.
- People who experience traumatization from learning of relatives, friends and acquaintances who were subject to the violence, or from exposure to repeated media accounts of the trauma.<sup>67</sup>

While there are many instances of terrorist attacks that have led to trauma both to people that are directly affected and people who are indirectly affected.<sup>68</sup> Boko Haram terrorism has affected many people, and this has led to psychological trauma.<sup>69</sup> A good example of the victims of the Boko Haram terrorism that were emotionally affected were the parents of the Chibok girls who were abducted from school by boko haram terrorists.<sup>70</sup> Unfortunately, there is lack of proper mental health support from the government and other organizations for the affected people in dealing with psychological and physical trauma associated with these Boko Haram insurgents.<sup>71</sup> In the view of this researcher, the government is just playing a lip service to the transformation of the people that are affected by the insurgency, and this has turned many of the affected people to internally displaced people.

## INTERNALLY DISPLACED PERSONS

In spite of many debates about who internally displaced persons (IDPs) are, they could be referred to as;

---

from the Former Yugoslavia." *Professional Counselor*. Vol. 4, No. 4, 2014.

<sup>67</sup> American Psychological Association. "Managing traumatic stress: Coping with terrorism." Accessed 23 June 2016.

<http://www.apa.org/helpcenter/terrorism.aspx>

<sup>68</sup> See the activities of the Boko Haram insurgency above.

<sup>69</sup> Terwase, et al. "The Psychological Trauma on Boko Haram Victims in Nigeria," 522-524.

<sup>70</sup> "Boko Haram insurgents abducted these girls on the 14th April 2014 in their secondary school in Chibok, a town in northeastern part of Nigeria."

<sup>71</sup> Jocelynn Ramiah. "The Boko Haram Insurgency and The Hardships Faced by Its Victims." *Ifriqiya - Africa Research and Analysis*. Volume 1, Number 8 October 20, 2015, 4.



persons or group of persons who have been forced to leave their homes or places of habitual residence as a result of, or in order to avoid, in particular, the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized state border.<sup>72</sup>

By the end of 2014, there was a record of 38 million people around the world that have been forced to abandon their homes and become displaced within the borders of their own countries.<sup>73</sup> Out of these people 2.4 million live in Nigeria.<sup>74</sup> As of 31 December 2015, there was an estimate by the Internal Displacement Monitoring Centre “that there are almost 2,152,000 internally displaced people (IDPs) in Nigeria.”<sup>75</sup> These people are displaced mostly by conflicts among various ethnic groups or between governments and minorities of various race, language, culture, or religion.<sup>76</sup> Cordell and Wolff identified and explained these four causes or theories “on the different conceptual tools scholars employ in their efforts to explain”: insecurity, ‘greed’, social-psychological motivations and the international dimension of ethnic conflict.<sup>77</sup> In the case under study, the root cause of the displacement may seem to be mainly religious<sup>78</sup>, but there are also political, economic, cultural, historical and other strategic

motivations to the cause.<sup>79</sup> In fact, an international delegation of Muslims and Christians that visited Nigeria between 22nd and 26th May 2012 subdivided the causes of conflicts in Nigeria into; “religious, political, economic, social/ethnic and legal”.<sup>80</sup> Furthermore, additional view of Oduwole and Fadeyi that “Nigeria regularly experiences displacement as a consequence of natural disasters such as flooding or soil erosion”<sup>81</sup> cannot be overlooked here. Many people have been displaced by these natural disasters almost on yearly basis.

Many documents have been produced as guidelines for the protection of internally displaced persons. One of such documents is the *Handbook for the Protection of Internally Displaced Persons*.<sup>82</sup> The aims of that document are to:

- ensure staff members are familiar with the core concepts, principles and international legal standards that form the framework for protection work;
- assist staff in operationalizing these concepts, principles and legal standards and in carrying out their protection responsibilities;
- improve understanding of the particular protection risks faced by internally displaced women, men, boys and girls of various backgrounds;
- provide guidance on how to prevent and respond to the protection risks faced by IDPs through a range of different activities; enhance staff skills for carrying out protection work; and
- promote a consistent and well-coordinated protection response in different operations.<sup>83</sup>

“The Guiding Principles Of Internal Displacement” was also published.<sup>84</sup> These principles

<sup>72</sup> Janie Hampton (ed.). *Internally Displaced People: A Global Survey* (London, Earthscan Publications Ltd, 1998), xvi.

<sup>73</sup> “Global Overview 2015: People internally displaced by conflict and violence.” Accessed 27 February 2016, from <http://www.internal-displacement.org/assets/library/Media/201505-Global-Overview-2015/20150506-global-overview-2015-en.pdf>, 7.

<sup>74</sup> *Conflict Barometer 2015*, 13.

<sup>75</sup> “IDMC Nigeria IDP Figures Analysis.” Accessed 15 July 2016. <http://www.internal-displacement.org/sub-saharan-africa/nigeria/figures-analysis>

<sup>76</sup> Roberta Cohen and Francis M. Deng (eds.). *The Forsaken People: Case Studies of the Internally Displaced* (Washington DC, The Brookings Institution, 1998), 3.

<sup>77</sup> Karl Cordell and Stefan Wolff. *Ethnic Conflict: Causes - Consequences - Responses* (Cambridge, Polity Press, 2010), 26-43.

<sup>78</sup> In 2011, Israel Adelani Akanji has submitted PhD dissertation to the University of Edinburgh titled TOWARDS A THEOLOGY OF CONFLICT TRANSFORMATION: A STUDY OF RELIGIOUS CONFLICT IN CONTEMPORARY NIGERIAN SOCIETY.

<sup>79</sup> Samu. “BOKO HARAM CONFLICT RESEARCH,” 9.

<sup>80</sup> “REPORT ON THE INTER-RELIGIOUS TENSIONS AND CRISIS IN NIGERIA.” Accessed 15 June 2020. [https://www.oikoumene.org/en/folder/documents-pdf/Report\\_of\\_Nigeria\\_delegation.pdf](https://www.oikoumene.org/en/folder/documents-pdf/Report_of_Nigeria_delegation.pdf), 9.

<sup>81</sup> Tajudeen A. Oduwole and Adebayo O. Fadeyi. “Issues of Refugees and Displaced Persons in Nigeria.” *Journal of Sociological Research*. ISSN 1948-5468 2013, Vol. 4, No. 1, 2.

<sup>82</sup> UN High Commissioner for Refugees. *Handbook for the Protection of Internally Displaced Persons*. Accessed 15 June 2020. <http://www.unhcr.org/4c2355229.pdf>.

<sup>83</sup> *Handbook for the Protection of Internally Displaced Persons*, 2.

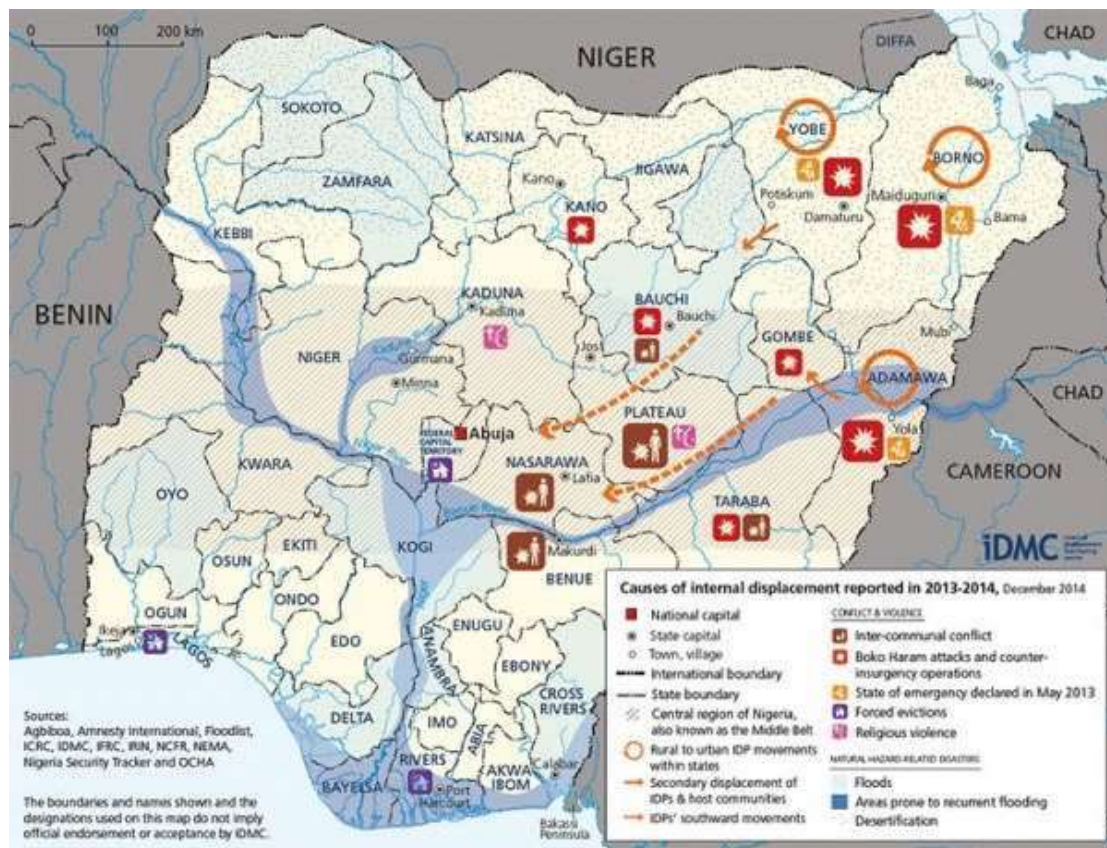


as highlighted by Oduwole and Fadeyi are: the rights of IDPs and the responsibilities of national authorities; the issue of protection from displacement and the right not to be arbitrarily displaced; the full range of civil, political, economic, social and cultural rights that all persons (including the displaced people) should enjoy, and that special attention should be given to the prevention of contagious and infectious diseases; the issue of humanitarian assistance and services from international organization; and the importance of providing the displaced people with long-term options of voluntary return in safety and dignity to their original place of abode or resettlement in another part of the country, equal access to public services, and assistance to recover the property and possessions the displaced people lost upon displacement or assistance to get compensation or other forms of just reparation.<sup>85</sup>

---

<sup>84</sup> F.M. Deng. “Internally Displaced Persons: An interim report of the UN Secretary General on protection and Assistance, New York: UN Dept. for Humanitarian Affairs, Washington, D.C., U.S.A; Francis M. Deng (1999). Guiding Principles on Internal Displacement.” *The International Migration Review*, Vol. 33, No. 2 (Summer, 1999); Roberta Cohen. “The Guiding Principles on Internal Displacement: An Innovation in International Standard Setting.” *Global Governance*, Vol. 10, No. 4 (Oct.–Dec. 2004); Walter Kälin. “Guiding Principles on Internal Displacement: The Way Ahead.” *Proceedings of the Annual Meeting (American Society of International Law)*, Vol. 102 (APRIL 9-12, 2008).

<sup>85</sup> Oduwole and Fadeyi. “Issues of Refugees,” 7-10. .



**Figure 2: Map of Nigeria showing the Movement of Internally Displaced Persons<sup>86</sup>**

### CHRISTIAN THEOLOGICAL BASIS FOR HUMANITARIANISM

To be humanitarian is to have concern for or help to improve the welfare and happiness of fellow human beings. The Holy Bible states, "God created man in His own image" (Genesis 1:27).<sup>87</sup> With this assertion, every human being is to be treated with dignity irrespective of the situation he/she finds him/herself. This is the foundation of every other teaching of the Bible about how to relate with or treat other human beings. As a matter of fact, the Bible affirms that whatever a man does to his fellow human being (especially the less-privileged), he does it to his Creator. The writer of the book of Proverbs stated: "He who oppresses the poor reproaches his Maker"

<sup>86</sup> "IDMC: Nigeria Internal Displacement as of December 2014." Accessed 23 June 2016. <http://www.internal-displacement.org/sub-saharan-africa/nigeria/2014/nigeria-internal-displacement-as-of-december-2014>

<sup>87</sup> Bible verses used in this dissertation (unless marked otherwise) are taken from the New King James Version®. Copyright © 1982 by Thomas Nelson. Used by permission. All rights reserved.

and "He who has pity on the poor lends to the Lord" (14:31; 19:17). Jesus Christ reiterated this in His Parable of the Sheep and the Goats in Matthew 25:31-46: "assuredly, I say to you, inasmuch as you did it to one of the least of these My brethren, you did it to Me.... Assuredly, I say to you, inasmuch as you did not do it to one of the least of these, you did not do it to Me" (verses 40, 45).

The exodus of the people of Israel from Egypt and later exile in foreign lands are good examples of migrated displaced persons (see Exodus 13ff and 2 Kings 24:10-16). The people were cared for on their journey to the land of Canaan, and countries that refused to care for them were punished (see 1 Samuel 15:2). Because of these experiences, God instructed the people of Israel not to discriminate against the less privileged and strangers (including those who are temporarily displaced, internally displaced, or forced out of their homeland to become refugees in other countries), rather the people of Israel should take care of, and respond with love and justice to the plight of displaced persons.<sup>88</sup> The writers of New Testament

<sup>88</sup> Exodus 22:21; Leviticus 19:10, 34; 25:35; Deuteronomy 10:19; 27:19.



also re-echoed this.<sup>89</sup> Taking care of people in needs is even considered the pure religion!<sup>90</sup>

This statement from a Roman Catholic publication summarizes the Christian theological basis for humanitarianism:

...the Church's commitment to migrants and refugees can be attributed to the love and compassion of Jesus.... By responding to the divine commandment and attending to the spiritual and pastoral needs of them, the Church not only promotes the human dignity of each human person [made in the image of God], but also proclaims the Gospel of love and peace in situations of forced migration.<sup>91</sup>

Helping other people is, therefore, considered by Christians as a very vital aspect of their religious obligations.

### **BAPTIST POLICY/THEOLOGICAL STAND ON HUMANITARIANISM**

Against the backdrop of the efforts of the churches of the Nigerian Baptist Convention in transforming the lives of the migrated displaced Boko Haram victims in Ogbomoso land, they will be singled out here. The Nigerian Baptists in particular and other Baptists throughout the world believe wholly in the Holy Bible.<sup>92</sup> Therefore, the Baptists generally believe everything the Holy Bible teaches about humanitarianism. There are some specific efforts of the Baptists in general and the Nigerian Baptists in particular that express their policy and theological stand on humanitarianism, especially in reaction to the issue of internally displaced persons.

<sup>89</sup> Romans 12:13; 1 Thessalonians 4:12; Hebrews 13:1-3.

<sup>90</sup> Micah 6:8 and James 1:27.

<sup>91</sup> "WELCOMING CHRIST IN REFUGEES AND FORCIBLY DISPLACED PERSONS: Pastoral Guidelines." Accessed 15 June 2020.

[http://www.vatican.va/roman\\_curia/pontifical\\_councils/corunum/corunum\\_en/pubblicazioni\\_en/Rifugiati-2013-INGL.pdf](http://www.vatican.va/roman_curia/pontifical_councils/corunum/corunum_en/pubblicazioni_en/Rifugiati-2013-INGL.pdf), 3.

<sup>92</sup> "Statements of Faith of the Nigerian Baptist Convention." Accessed 15 June 2020.

<https://www.nigerianbaptist.org/about-us/statements-of-faith/>; "What Does a Baptist Believe?" Accessed February 27, 2016, from

<http://www.baptistbasics.org/baptists/b003.php>; "Southern Baptist Convention Basic Beliefs." Accessed 15 June 2020.

<http://www.sbc.net/aboutus/basicbeliefs.asp>; "What Makes a Baptist a Baptist: Beliefs, polity, ministries, practices, organizations, and heritage of Baptists." Accessed 15 June 2020.

<https://www.baptistdistinctives.org/resources/articles/what-makes-a-baptist-a-baptist/>

In the annual gathering held between 4th and 9th July 2016 in Vancouver, Canada, the Baptist World Alliance (BWA)<sup>93</sup> encouraged "Christian believers to personally engage with all refugees and displaced persons, generously showing God's love and care as we demonstrate the sufficiency of God made known through Jesus Christ."<sup>94</sup> The body has earlier adopted some resolutions in one of its councils in 2013.<sup>95</sup> One of the resolutions is about internally displaced persons. Having remembered, recalled and affirmed some of the theological basis for caring for displaced people as enumerated above, the alliance, encourages Baptists to uphold the human rights of all people at all times, including the rights of displaced persons, asylum seekers and refugees; it calls upon governments to uphold universal human rights and develop just and compassionate policies with provisions for:

- access to the protections afforded to displaced persons in the international law including non-discrimination with respect to religious and ethnic identity;
- access to adequate psychological, social, and medical care;
- ensuring that displaced persons whose claim for refugee status has been denied are treated fairly while awaiting repatriation;

Urges governments to use peaceful means to address human rights violations in countries of origin and to pursue policies to strengthen regional cooperation and expand protection of displaced persons;

Encourages political leaders to demonstrate ethical and non-partisan leadership in policy debates on immigration and the global movement of displaced persons; and

<sup>93</sup> The Baptist World Alliance is a global movement of Baptists sharing a common confession of faith in Jesus Christ bonded together by God's love to support, encourage and strengthen one another while proclaiming and living the Gospel of Jesus Christ in the power of the Holy Spirit before a lost and hurting world. (See "Baptist World Alliance - Affirmations." Accessed 15 June 2020. <http://bwanet.org/about-us2/affirmations>.) The Nigerian Baptist Convention is affiliated to the global body.

<sup>94</sup> "Baptist World Alliance - News Releases." Accessed 9 July 2016, from

<http://bwanet.org/news/news-releases>

<sup>95</sup> "Baptist World Alliance - 2013 Resolutions." Accessed 27 February 2016, from

<https://www.bwanet.org/resources/recent-resolutions>.



Encourages Baptists to act as advocates for displaced persons and to develop plans to respond with compassion and hospitality to the needs of displaced persons.<sup>96</sup>

As good as this resolution is, there is no qualitative means to know how member bodies of this global alliance are implementing the resolution. Sequel to the prevalent issue of the internally displaced persons in Nigeria, the Nigerian Baptist Convention also as part of the resolutions adopted in its annual session held in Ilorin, Nigeria between 16th and 21st April 2016 called on the government of Nigeria to take some palpable measures to alleviate the plights of the internally displaced persons.<sup>97</sup> Unfortunately, such calls have not yielded good result as the government does not see the need to come to the aid of these displaced people. When palliative measures were taken, they usually have political undertone.

### RESPONSE OF RELIGIOUS BODIES TO INTERNALLY DISPLACED PERSONS' CRISIS AROUND THE WORLD

In spite of the fact that religion has sometimes been seen as “a source of great conflict and is popularly presented as a negative social force,”<sup>98</sup> and “caution is required at the very beginning of any discussion of religion as a resource... for the resolution of conflicts,”<sup>99</sup> many religious bodies have made, and are still making, attempts to respond to conflicts and people affected by conflicts throughout the world and in Nigeria in particular. In a research carried out in a southeastern state of Nigeria, many internally displaced persons that were interviewed “affirmed that most of the services were received from the religious groups and good samaritans, not from the government.”<sup>100</sup> There is a situation update in the northeastern part of Nigeria that “the displaced

people live in churches, mosques”<sup>101</sup> Unfortunately, many of such responses, especially from churches in the southwestern part of Nigeria, are not documented for review.

The World Council of Churches that is considered to be “the broadest and most inclusive among the many organized expressions of the modern ecumenical movement”<sup>102</sup> in the world is in the forefront in the efforts to transform the lives of displaced persons from conflict-affected areas. During the council’s Executive Committee meeting held between 7th and 12th February 2014, it issued a statement on rights of internally displaced persons.<sup>103</sup> This comprehensive statement has become a blueprint for many churches as they respond to transforming the lives of displaced people from conflict-affected areas. Later that same year, between 20th and 26th November, the council’s Executive Committee issued another statement urging the protection of refugees and displaced persons from the Middle East.<sup>104</sup> Earlier, between 22nd and 26th May 2012, the World Council of Churches with The Royal Aal al-Bayt Institute for Islamic Thought<sup>105</sup> jointly sponsored an international delegation of Muslims and Christians to visit Nigeria. The visit was “in reaction to the numerous incidents of fierce intercommunal strife which has affected the lives of Nigerians

<sup>96</sup>“Baptist World Alliance - 2013 Resolutions.”

<sup>97</sup> “Report of the Resolution Committee of the Nigerian Baptist Convention-In-Session held at Convention Ground, Ganmo, Ilorin, Kwara State, Nigeria between April 16-21, 2016” (Unpublished)

<sup>98</sup> John D. Brewer. *Peace Process: A Sociological Approach* (Cambridge, Polity Press, 2010), 56.

<sup>99</sup> Raymond G. Helmick, S.J. “Does Religion Fuel or Heal in Conflicts?” In Helmick, S.J., Raymond G. and Rodney L. Petersen (eds.). *Forgiveness and Reconciliation: Religion, Public Policy & Conflict Transformation* (Radnor, Templeton Foundation Press, 2001), 81.

<sup>100</sup> EE Enwereji. “Assessing interventions available to internally displaced persons in Abia state, Nigeria.” DOI: 10.4176/ 080725, 25.

<sup>101</sup> “2015 Humanitarian Needs Overview. Nigeria.”

Accessed 15 June 2020.

<http://reliefweb.int/sites/reliefweb.int/files/resources/HNO%20Nigeria%20-%20Final%20version%2015March%202015.pdf>, 11.

See also page 13.

<sup>102</sup> “What is the World Council of Churches?”

Accessed 15 June 2020.

<https://www.oikoumene.org/en/about-us>

<sup>103</sup> “Statement on rights of internally displaced persons — World Council of Churches.” Accessed 15 June 2020.

<https://www.oikoumene.org/en/resources/documents/executive-committee/geneva-february-2014/statement-on-rights-of-internally-displaced-persons>

<sup>104</sup> “WCC urges protection of refugees and displaced people from the Middle East — World Council of Churches.” Accessed 15 June 2020.

<https://www.oikoumene.org/en/press-centre/news/wcc-urges-protection-of-refugees-and-displaced-people-from-the-middle-east>

<sup>105</sup> The Royal Aal al-Bayt Institute for Islamic

Thought is an international Islamic non-governmental, independent institute headquartered in Amman, the capital of the Hashemite Kingdom of Jordan. (See “The Royal Aal al-Bayt Institute for Islamic Thought.” Accessed 15 June 2020.

<http://aalalbayt.org/en/index.html>.)



between 2000 and 2012.”<sup>106</sup> The two bodies later promised to contribute their quotas to peacebuilding in Nigeria.<sup>107</sup>

The Roman Catholic Church, another big Christian body has also responded in many ways to transforming the lives of displaced persons from conflict-affected areas. One of the ways the church has done this is by releasing a document<sup>108</sup> on refugees and forcibly displaced persons in 2013. The purpose of the document is “to direct and raise renewed awareness to the various forms of forced migration and the challenges as a community in welcoming them, showing compassion, treating them fairly which are just a few simple steps to take, yet offer them hope for the future.”<sup>109</sup> This document reiterates the beliefs of the Roman Catholic Church in the theology of charity; the concepts of refugees and internally displaced persons; the rights of refugees and internally displaced persons, and the responsibilities of governments, non-governmental organizations and international bodies to these people; and specific pastoral care to refugees and internally displaced persons. Indeed, this document is timely and germane, not only to Roman Catholics but every Christian and other persons who care about the transformation of the lives of displaced persons from conflict-affected areas. A practical example of church’s response to transforming the lives of displaced persons from conflict-affected areas is what the church in Colombia is doing.<sup>110</sup> According to the report, the Episcopal Church “provides temporary housing, food, medicine and clothing with financial [assistance]” for the displaced persons.

There are many practical ways in which churches in Nigeria have responded to transforming the lives of displaced persons from conflict-affected areas. Gish In 2014, members of *Ekklesiyar Yan’uwa a Nigeria* (EYN),<sup>111</sup> in Jos, north central Nigeria

helped the displaced Boko Haram victims with rented accommodations and food provisions.<sup>112</sup> Apart from this, EYN, which is a faith-based organization is building new houses in safer areas of northeastern Nigeria for families of displaced persons that are not able to go back to their home communities. Such buildings are sited in Masaka, Gurku, Yola, Jalingo, Chinka in northeastern Nigeria and two other locations in Jos. The church provided roofing materials, household supplies, seeds for planting and fertilizer for displaced people that can return to their homes. The church also supports the displaced people with finance to start up micro businesses, skills acquisition and provision of equipment and tools to start up their businesses.<sup>113</sup>

Furthermore, in collaboration with the Nigeria Crisis Response and the Mennonite Central Committee (MCC), the *Ekklesiyar Yan’uwa a Nigeria* held trauma awareness workshops. They also trained additional facilitators to reach more people in their own places. In terms of education of the displaced children, the church runs temporary schools where trained teachers that are also displaced are employed temporarily to teach the children. EYN also supported displaced orphans in their education, and it provides school fees for children in other places where it does not have its self-managed schools. The church also provides medical care in temporary IDP camps, churches, at new relocation centres, and at existing clinics.<sup>114</sup> Undoubtedly, this church has contributed a lot to transforming the lives of displaced people from conflict-affected areas in the northeastern part of Nigeria.

Oduah gave another report of how nearly 2,700 internally displaced persons left government-operated IDP camps in Adamawa State in the northeastern Nigeria because of food shortages and overcrowding and came to St. Theresa Roman Catholic Church, Yola, the state capital, where there was shelter for both Christians and Muslims.<sup>115</sup>

Christian Aid is a faith-based organization that is providing vital, practical and efficient assistance

<sup>106</sup> “REPORT ON THE INTER-RELIGIOUS TENSIONS AND CRISIS IN NIGERIA.” Accessed 15 June 2020.

[https://www.oikoumene.org/en/folder/documents-pdf/Report\\_of\\_Nigeria\\_delegation.pdf](https://www.oikoumene.org/en/folder/documents-pdf/Report_of_Nigeria_delegation.pdf), 2.

<sup>107</sup> “REPORT ON THE INTER-RELIGIOUS TENSIONS AND CRISIS IN NIGERIA”, 12-13.

<sup>108</sup> “WELCOMING CHRIST IN REFUGEES AND FORCIBLY DISPLACED PERSONS.” The document is actually an update to an earlier publication of the 1992 titled “*Refugees, A Challenge to Solidarity*”.

<sup>109</sup> Ibid.,5.

<sup>110</sup> Lynette Wilson. “Colombia Church stands with internally displaced people Episcopal Church.” Accessed 15 June 2020.

<http://www.episcopalchurch.org/library/article/colombia-church-stands-internally-displaced-people>

<sup>111</sup> That is, Church of the Brethren in Nigeria.

<sup>112</sup> Peggy Gish. “NIGERIA: Church of the Brethren family cares for fifty-two people displaced by Boko Haram.” Accessed 15 June 2020.

<http://www.cpt.org/cptnet/2015/05/27/nigeria-church-brethren-family-cares-fifty-two-people-displaced-boko-haram>

<sup>113</sup> “Responding to the Crisis.” Accessed 10 June 2016, from

<http://www.brethren.org/nigeriacrisis/response.html>

<sup>114</sup> “Responding to the Crisis.”

<sup>115</sup> Chika Oduah. “A holy burden: Nigerian religious groups aid Boko Haram victims.” Accessed 15 June 2020.

<http://america.aljazeera.com/articles/2015/2/26/carrying-a-holy-burden-in-nigeria.html>



where demand is huge, and confronting the consequences of poverty as well as its foundational causes.<sup>116</sup> Its first humanitarian project in response to the conflict in Benue State in north central part of Nigeria, where it worked with its partners, the Jireh Doo Foundation (JDF) and Anglican Diocesan Development Service (ADDS) Makurdi in responding to the plights of internally displaced persons in the area, is documented in a report it published in July 2015.<sup>117</sup>

The Nigerian Baptist Convention is also responding to transforming the lives of displaced persons from conflict-affected areas. The Convention has a department that coordinates its social ministry in general.<sup>118</sup> This department is a replica of an international agency of the Baptist World Alliance (called BWAid) that has been providing relief worldwide “for all who are in need, regardless of race or religion.”<sup>119</sup> As part of the alliance’s objectives to equip churches for humanitarian services, the alliance produced a directory that contains “a listing of human rights organizations in various countries and territories, regional human rights organizations and international human rights bodies.”<sup>120</sup>

## CONCLUSION

Boko Haram insurgency is still ongoing mostly in the northeastern part of Nigeria in spite of the purported claims by the Nigerian government that the insurgency has been decimated.<sup>121</sup> The incessant

insurgency is rendering more and more people homeless. This has caused a hike in the number of internally displaced persons. Many of such people migrate to safer places. As observed in the review above, faith-based organizations are making efforts to transform the lives of these migrated displaced people in the society. While it is recommended that faith-based organizations should continue in their efforts to transform the lives of the displaced people and reintegrate them into the society, the Nigerian government should put in more efforts to safeguard the lives and properties of the citizens so that they, the people, will no longer become internally displaced persons or migrated displaced persons. There is need for further study on finding out more how faith-based organizations are responding to the plights of the people that are affected by conflicts and terrorism especially with documentary evidences.

## BIBLIOGRAPHY

1. “2015 Humanitarian Needs Overview. Nigeria.” Accessed 15 June 2020. <http://reliefweb.int/sites/reliefweb.int/files/resources/HNO%20Nigeria%20-%20Final%20version%2015March%202015.pdf>.
2. “Anatomy of African Terrorism: Boko Haram: Nigeria’s Homegrown Terror Network”. *World Policy Journal*, Vol. 29, No. 4 (Winter 2012 / 2013).
3. “Baptist World Aid.” Accessed June 10, 2016. <https://www.bwanet.org/programs/baptist-world-aid>
4. “Baptist World Alliance - Affirmations.” Accessed 15 June 2020. <http://bwanet.org/about-us2/affirmations>.
5. “Boko Haram is ‘defeated,’ Nigeria insists, blaming international jihadists for ongoing insurgency” *The Defense Post*. July 31, 2019.
6. “Categories of Terrorist Groups.” Accessed 15 June 2020. <http://www.terrorism-research.com/groups/categories.php>
7. “Displaced Nigerians ‘not alone,’ Bapt. exec says.” Accessed 15 June 2020. <http://www.bnnews.net/44395/displaced-nigerians-not-alone-bapt-exec-says>.
8. “Global Overview 2015: People internally displaced by conflict and violence.” Accessed 27 February 2016, from <http://www.internal-displacement.org/assets/library/Media/201505-Global-Overview-2015/20150506-global-overview-2015-en.pdf>.
9. “IDMC Nigeria IDP Figures Analysis.” Accessed 15 July 2016. <http://www.internal-displacement.org/sub-saharan-africa/nigeria/figures-analysis>
10. “IDMC: Nigeria Internal Displacement as of December 2014.” Accessed 23 June 2016. <http://www.internal-displacement.org/sub-saharan-africa/nigeria/2014/nigeria-internal-displacement-as-of-december-2014>.

<sup>116</sup> Christian Aid Nigeria. “Reaching out: Emergency Humanitarian Relief Assistance project, Benue, Nigeria.” Accessed 10 June 2016. <http://www.christianaid.org.uk/Images/Reaching-out-humanitarian-report-July-2015.pdf>, 2.

<sup>117</sup> Christian Aid Nigeria. “Reaching out”.

<sup>118</sup> “Nigerian Baptist Convention Social Ministry” <https://www.nigerianbaptist.org/departments/social-ministries-department/>

<sup>119</sup> “Baptist World Aid.” Accessed June 10, 2016. <https://www.bwanet.org/programs/baptist-world-aid>

<sup>120</sup> Division on Freedom and Justice of the Baptist World Alliance. *Global Human Rights Contacts*. Accessed 15 June 2020. <http://www.bwanet.org/images/pdf/hr-organizations.pdf>, 2.

<sup>121</sup> Nathaniel Allen. “How Boko Haram has Regained the Initiative and What Nigeria Should Do to Stop It.” Accessed 15 June 2020, from <https://warontherocks.com/2019/12/how-boko-haram-has-regained-the-initiative-and-what-nigeria-should-do-to-stop-it/> and “Boko Haram is ‘defeated,’ Nigeria insists, blaming international jihadists for ongoing insurgency” *The Defense Post*. July 31, 2019.

<https://www.thedefensepost.com/2019/07/31/nigeria-boko-haram-defeated-iswap/>





11. "Nigerian Baptist Convention Social Ministry" <https://www.nigerianbaptist.org/departments/social-ministries-department/>
12. "Nigerian Baptist leader castigates international community for ignoring terrorism in Nigeria." Accessed 15 June 2020. <https://www.bwanet.org/news/news-releases/452-nigeria-terrorism>.
13. "Report of the Resolution Committee of the Nigerian Baptist Convention-In-Session Held at Convention Ground, Ganmo, Ilorin, Kwara State, Nigeria between April 16-21, 2016" (Unpublished)
14. "Report on the Inter-Religious Tensions and Crisis in Nigeria." Accessed 15 June 2020. [https://www.oikoumene.org/en/folder/documents-pdf/Report\\_of\\_Nigeria\\_delegation.pdf](https://www.oikoumene.org/en/folder/documents-pdf/Report_of_Nigeria_delegation.pdf).
15. "Report on the Inter-Religious Tensions and Crisis in Nigeria." Accessed 15 June 2020. [https://www.oikoumene.org/en/folder/documents-pdf/Report\\_of\\_Nigeria\\_delegation.pdf](https://www.oikoumene.org/en/folder/documents-pdf/Report_of_Nigeria_delegation.pdf).
16. "Responding to the Crisis." Accessed 10 June 2016, from <http://www.brethren.org/nigeriacrisis/response.html>
17. "Southern Baptist Convention Basic Beliefs." Accessed 15 June 2020. <http://www.sbc.net/aboutus/basicbeliefs.asp>.
18. "Statement on rights of internally displaced persons — World Council of Churches." Accessed 15 June 2020. <https://www.oikoumene.org/en/resources/documents/executive-committee/geneva-february-2014/statement-on-rights-of-internally-displaced-persons>.
19. "Statements of Faith of the Nigerian Baptist Convention." Accessed 15 June 2020. <https://www.nigerianbaptist.org/about-us/statements-of-faith/>.
20. "The crisis in Nigeria, in 11 maps and charts – Vox." Accessed 15 June 2020. <http://www.vox.com/2014/5/13/5710484/boko-haram-maps-charts-nigeria>
21. "The Royal Aal al-Bayt Institute for Islamic Thought." Accessed 15 June 2020. <http://aalalbayt.org/en/index.html>.
22. "The True Meaning of Jihad." Accessed 10 June 2016. [http://www.justislam.co.uk/product.php?products\\_id=2](http://www.justislam.co.uk/product.php?products_id=2)
23. "Trauma and Violence." Accessed 15 June 2020. <http://www.samhsa.gov/trauma-violence/types>
24. "WCC urges protection of refugees and displaced people from the Middle East — World Council of Churches." Accessed 15 June 2020. <https://www.oikoumene.org/en/press-centre/news/wcc-urges-protection-of-refugees-and-displaced-people-from-the-middle-east>.
25. "Welcoming Christ in Refugees and Forcibly Displaced Persons: Pastoral Guidelines." Accessed 15 June 2020. [http://www.vatican.va/roman\\_curia/pontifical\\_councils/corunum/corunum\\_en/pubblicazioni\\_en/Ri-fugiati-2013-INGL.pdf](http://www.vatican.va/roman_curia/pontifical_councils/corunum/corunum_en/pubblicazioni_en/Ri-fugiati-2013-INGL.pdf).
26. "What is the World Council of Churches?" Accessed 15 June 2020. <https://www.oikoumene.org/en/about-us>.
27. "What Makes a Baptist a Baptist: Beliefs, polity, ministries, practices, organizations, and heritage of Baptists." Accessed 15 June 2020. <https://www.baptistdistinctives.org/resources/articles/what-makes-a-baptist-a-baptist/>.
28. Adesoji, Abimbola O. "Between Maitatsine and Boko Haram: Islamic Fundamentalism and the Response of the Nigerian State." *Africa Today*, Vol. 57, No. 4 (Summer 2011).
29. Agbedo, Chris Uchenna, et al. "Socio-psychological deconstruction of fear of Boko Haram in Nigeria: The Nigerian media perspective." *New Media and Mass Communication*. Vol.16, 2013.
30. Ahmad, Hazrat Mirza Tahir. *Murder in the Name of Allah*. Amritsar: Printwell, 1990.
31. Akande Isaac, Babarinde. "Church Response to Religious Violence in Borno Baptist Association of Maiduguri Metropolitan Area." A Master of Arts in Theological Studies thesis submitted to the Nigerian Baptist Theological Seminary, Ogbomoso, June 2015.
32. Akanji, Israel Adelani. *Towards A Theology Of Conflict Transformation: A Study Of Religious Conflict In Contemporary Nigerian Society*. A PhD dissertation submitted to the University of Edinburgh in 2011.
33. Allen, Nathaniel. "How Boko Haram has Regained the Initiative and What Nigeria Should Do to Stop It." Accessed 15 June 2020, from <https://warontherocks.com/2019/12/how-boko-haram-has-regained-the-initiative-and-what-nigeria-should-do-to-stop-it/>.
34. American Psychological Association. "Managing traumatic stress: Coping with terrorism." Accessed 23 June 2016. <http://www.apa.org/helpcenter/terrorism.aspx>
35. Azumah, John. "Boko Haram' in Retrospect." *Journal of African Christian Thought*. Vol. 17, No. 1, June 2014.
36. Boer, Jan H. *Christians and Muslims: Parameters for Living Together*. Studies in Christian-Muslim Relations. Volume 8, Part 2. Belleville, Essence Publishing, 2009.
37. Brewer, John D. *Peace Process: A Sociological Approach*. Cambridge, Polity Press, 2010.
38. Campbell, John. "Boko Haram: origins, challenges and responses." Accessed 15 June 2020. <https://www.ciaonet.org/attachments/27796/uploads>
39. Christian Aid Nigeria. "Reaching out: Emergency Humanitarian Relief Assistance project, Benue, Nigeria." Accessed 10 June 2016. <http://www.christianaid.org.uk/Images/Reaching-out-humanitarian-report-July-2015.pdf>.
40. Cohen, Roberta and Francis M. Deng (eds.). *The Forsaken People: Case Studies of the*



- Internally Displaced*. Washington DC, The Brookings Institution, 1998.
41. Cohen, Roberta. "The Guiding Principles on Internal Displacement: An Innovation in International Standard Setting." *Global Governance*, Vol. 10, No. 4 (Oct.–Dec. 2004).
  42. Comolli, Virginia. "Book Haram: Nigeria's Islamist Insurgency." In *Christian Century* March 2, 2016.
  43. Conflict Barometer 2015. The Heidelberg Institute for International Conflict Research (HIK) at the Department of Political Science, University of Heidelberg. Accessed 23 June 2016.  
[http://www.hiik.de/de/konfliktbarometer/pdf/ConflictBarometer\\_2015.pdf](http://www.hiik.de/de/konfliktbarometer/pdf/ConflictBarometer_2015.pdf)
  44. Cook, David. *Boko Haram: A Prognosis* (The James A. Baker III Institute for Public Policy of Rice University, 2011). Accessed 15 June 2020.  
<https://www.bakerinstitute.org/media/files/Research/535dcd14/REL-pub-CookBokoHaram-121611.pdf>
  45. Cordell, Karl and Stefan Wolff. *Ethnic Conflict: Causes - Consequences – Responses*. Cambridge, Polity Press, 2010.
  46. Danielsén, Gert. "Meeting Human Needs, Preventing Violence: Applying Human Needs Theory to the Conflict in Sri Lanka." *USAL*, September 2005. .
  47. Deng, F.M. "Internally Displaced Persons: An interim report of the UN Secretary General on protection and Assistance, New York: UN Dept. for Humanitarian Affairs, Washington, D.C., U.S.A; Francis M. Deng (1999). *Guiding Principles on Internal Displacement*." *The International Migration Review*, Vol. 33, No. 2 (Summer, 1999).
  48. Division on Freedom and Justice of the Baptist World Alliance. *Global Human Rights Contacts*. Accessed 15 June 2020.  
<http://www.bwanet.org/images/pdf/hr-organizations.pdf>
  49. Dorrell, Oren. "Boko Haram: Facts, History, Leaders, and Origins of the Terrorist Group." Accessed 15 June 2020.  
[http://www.huffingtonpost.com/2014/05/09/boko-haram-facts-history\\_n\\_5295563.html](http://www.huffingtonpost.com/2014/05/09/boko-haram-facts-history_n_5295563.html)
  50. Eniola, Titi. "Social Impact on Victims of Terrorist Attack: Nigerian Girl Education." A paper presented at a conference organized by Omoniyi Ogodo Bach at Saarbrücken-Am Staden, Germany on October 8, 2015.
  51. Enwereji, E.E. Assessing interventions available to internally displaced persons in Abia state, Nigeria, *Libyan Journal of Medicine*, 4:1, 23-24. 2008. Accessed 15 June 2020.  
<https://doi.org/10.3402/ljm.v4i1.4800>
  52. Gish, Peggy. "NIGERIA: Church of the Brethren family cares for fifty-two people displaced by Boko Haram." Accessed 15 June 2020.  
<http://www.cpt.org/cptmet/2015/05/27/nigeria-church-brethren-family-cares-fifty-two-people-displaced-boko-haram>
  53. Hampton, Janie (ed.). *Internally Displaced People: A Global Survey*. London, Earthscan Publications Ltd, 1998.
  54. Helmick, S.J, Raymond G. "Does Religion Fuel or Heal in Conflicts?" In Helmick, S.J., Raymond G. and Rodney L. Petersen (eds.). *Forgiveness and Reconciliation: Religion, Public Policy & Conflict Transformation*. Radnor, Templeton Foundation Press, 2001.
  55. Hill, Jessie and Adam F. Kimney. *Sacred Violence: Religion and Terrorism*. Cleveland, Ohio: Case Western Reserve University, 2008. Accessed June 23, 2016.  
<http://scholarlycommons.law.case.edu/cgi/viewcontent.cgi?article=1316&context=jl>
  56. Idahosa, Osaretin. "Boko Haram and the Nigerian State: A Different Perspective." *Glocalism: Journal of Culture, Politics and Innovation*. 2015, 3, DOI: 10.12893/gjpci.2015.3.5.
  57. Kälin, Walter. "Guiding Principles on Internal Displacement: The Way Ahead." *Proceedings of the Annual Meeting (American Society of International Law)*, Vol. 102 (APRIL 9-12, 2008).
  58. Knezevic, Branis and Seth Olson. *Counseling People Displaced by War: Experiences of Refugees from the Former Yugoslavia*. Professional Counselor. Vol. 4, No. 4, 2014.
  59. Liman, A. "Boko Haram: Why the Northerners Believe Jonathan is Guilty." Accessed 8 June 2016, from  
<http://leadershing/features/396929/boko-haram-northerners-believe-jonathan-guilty>
  60. Maiangwa, B., et al. "'Baptism by Fire': Boko Haram and the Reign of Terror in Nigeria." *Africa Today*, Vol. 59, No. 2 (Winter 2012).
  61. Malik, Ibrahim. "Jihad - Its Development and Relevance." *The Palestine-Israel Journal*. Vol.1 No.2 1994 / Religion and Politics. Accessed 15 June 2020.  
<http://www.pij.org/details.php?id=741>
  62. Martin, Gus. *Essentials of Terrorism: Concepts and Controversies*. Second Edition. Thousands Oaks, Sage Publications, Inc., 2011.
  63. Mulders, Arne. *Summary of the Research Report 'Crushed But Not Defeated, the Impact of Persistent Violence on the Church in Northern Nigeria'*. Open Doors International, February 2016.
  64. Oduah, Chika. "A holy burden: Nigerian religious groups aid Boko Haram victims." Accessed 15 June 2020.  
<http://america.aljazeera.com/articles/2015/2/26/arriving-a-holy-burden-in-nigeria.html>
  65. Oduwole, Tajudeen A. and Adebayo O. Fadeyi. "Issues of Refugees and Displaced Persons in Nigeria." *Journal of Sociological Research*. ISSN 1948-5468 2013, Vol. 4, No. 1.
  66. Ogunmade, Omololu. "How Boko Haram Entered Nigeria." Accessed 27 February 2016.  
<http://www.thisdaylive.com/articles/how-boko-haram-entered-nigeria/216981/>



67. Oladimeji, SO. *Faith, Stewardship and Security: Christians Collaborating with God to Handle Security Matters*. Ibadan, Nigerian Baptist Convention, 2013.
68. Owolade, Femi. "Boko Haram: How a Militant Islamism Group Emerged in Nigeria." Accessed 15 June 2020. <http://www.gatestoneinstitute.org/4232/boko-haram-nigeria>
69. Ramiah, Jocelynn. "The Boko Haram Insurgency and The Hardships Faced by Its Victims." *Ifriqiya - Africa Research and Analysis*. Volume 1, Number 8 October 20, 2015.
70. Rausch, C. C. "Fundamentalism and Terrorism." *Journal of Terrorism Research*, Volume 6, Issue 2–May 2015.
71. Samu, Maiwa'azi Dandaura. "Boko Haram Conflict Research/Analysis & Management Preventive Counterterrorism and Sustainable Peacebuilding: Nigeria and Boko Haram Case Study." Center for Justice and Peacebuilding, Eastern Mennonite University, USA. Accessed 15 June 2020. [https://www.academia.edu/6777526/BOKO\\_HARAM\\_CONFLICT\\_RESEARCH\\_ANALYSIS\\_and\\_MANAGEMENT\\_PREVENTIVE\\_COUNTERTERRORISM\\_AND\\_SUSTAINABLE\\_PEACEBUILDING\\_NIGERIA\\_AND\\_BOKO\\_HARAM\\_CASE\\_STUDY](https://www.academia.edu/6777526/BOKO_HARAM_CONFLICT_RESEARCH_ANALYSIS_and_MANAGEMENT_PREVENTIVE_COUNTERTERRORISM_AND_SUSTAINABLE_PEACEBUILDING_NIGERIA_AND_BOKO_HARAM_CASE_STUDY)
72. Sandler, Todd. "Terrorism and Counterterrorism: An Overview." *Oxford Economic Papers*, 2014. Accessed 23 June 2016. <http://oexfordjournals.org/content/early/2014/11/05/oeqpu039.full.pdf+html>
73. Sergie, Mohammed Aly and Toni Johnson. "Nigeria's Boko Haram and Ansaru. Council on Foreign Relations." Accessed June 9, 2016. <http://www.cfr.org/nigeria/boko-haram/p25739>
74. Sewakpo, H. M. "The Relationship Between the Pre-Conversion Character of Paul in Acts 8-9 and the Nigerian Boko Haram Insurgency: Implications for Peaceful Coexistence in Nigeria." In Ayantayo, Jacob K. and Samuel Adetunji Fatokun (eds.) (2015). *Religion and Security Issues: Proceedings of 2013 Biennial International Religious Studies Conference*. Religious Studies Series, Volume 5. Ibadan, Department of Religious Studies, University of Ibadan, Ibadan.
75. Silberman, Israella. "Religious Violence, Terrorism, and Peace: A Meaning-System Analysis." In Raymond F. Paloutzian and Crystal L. Park (eds.). *Handbook of the Psychology of Religion and Spirituality*. New York: The Guilford Press, 2005
76. Suberu, Ibrahim. "Martyrs or Terrorists: Suicide Bombing in Islamic Hermeneutics. *Ilorin Journal of Religious Studies*. Vol. 5 No. 1. 2015.
77. Terwase, Isaac Terungwa, et al. "The Psychological Trauma on Boko Haram Victims in Nigeria: Conflict Resolution Perspective." *Mediterranean Journal of Social Sciences*. Vol 6 No 6 S4 MCSER Publishing, Rome-Italy December 2015.
78. The Institute for Economics and Peace. *Global Terrorism Index Report 2014: Measuring and Understanding the Impact of Terrorism*. Accessed June 23, 2016 from [http://www.visionofhumanity.org/sites/default/files/Global%20Terrorism%20Index%20Report%202014\\_0.pdf](http://www.visionofhumanity.org/sites/default/files/Global%20Terrorism%20Index%20Report%202014_0.pdf).
79. Ukanah, Philip Oluwole. *In God's Name: The Story of Nigeria's Religious War and Its Brutal Killings*. Ibadan, Divine Press, 2011.
80. UN High Commissioner for Refugees. *Handbook for the Protection of Internally Displaced Persons*. Accessed 15 June 2020. <http://www.unhcr.org/4c2355229.pdf>
81. Wellman, James and Kyoko Tokuno. "Is Religious Violence Inevitable?". *Journal for the Scientific Study of Religion*. 43 (3). Accessed 15 June 2020. <https://doi.org/10.1111/j.1468-5906.2004.00234.x>
82. Wilson, Lynette. "Colombia Church stands with internally displaced people Episcopal Church." Accessed 15 June 2020. <http://www.episcopalchurch.org/library/article/colombia-church-stands-internally-displaced-people>



# THE USE OF FORUM THEATRE AS CREATIVE PEDAGOGY IN TEACHING AND LEARNING OF MORAL EDUCATION IN SECONDARY SCHOOLS IN MALAYSIA

**Nadarajan Thambu<sup>1</sup>, PhD**  
Associate Professor,  
Sultan Idris Education University  
Malaysia

**Ganesan Shanmugavelu<sup>2</sup>, PhD**  
Senior Lecturer,  
Institute of Teacher Education Ipoh Campus,  
Malaysia

**Zulkufli Mahayudin<sup>3</sup>**  
Senior Lecturer,  
Institute of Teacher Education Ipoh Campus,  
Malaysia

Article DOI: <https://doi.org/10.36713/epra4961>

## ABSTRACT

*Implementing teaching and learning, to raise the dimension of moral reasoning among students, is still a major challenge to secondary school teachers. Pedagogy and classroom teaching strategies is important to stimulate students to think critically and pro-active in addressing a moral and social conflict. Furthermore, one of the aspirations of Malaysian Education Blueprint 2013-2025 is to produce a creative, innovative and critical thinking society in Malaysia. Conventional classroom teaching seems difficult to attract secondary school students to engage physically and mentally in moral learning process. In this regard, the use of pedagogical strategies and innovative teaching techniques can stimulate students' cognitive skills to current demands. Therefore, this article discusses the use of Forum Theatre as a creative pedagogical strategies in teaching and learning of moral education in secondary school. Creative teaching strategies that are able to develop reasonable thought and justification, is essential for the development of human capital in the era of globalization.*

**KEYWORDS** : Pedagogy, Creativity, Moral Education, Technique, Strategies, Teaching, Learning

## 1. INTRODUCTION

Moral Education (ME) is a core subject in primary and secondary education system in Malaysia. This subject is compulsory for all non-Muslim students in government and private schools (standard 1 to form 5). This subject focuses on the effort to instill spiritual and moral strength through experiential and daily virtues of Malaysian society that are found in religion, traditions, and cultural rites. A moral person, as defined in the (ME) program is one who abides by the *Rukun Negara* (National Ideology), is virtuous, responsible, and able to contribute towards the harmony and stability of the country and global community

(Malaysia Ministry of Education, Moral Education Syllabus for Secondary School, 2000, p.v).

One of the objectives of Malaysian Education Blueprint 2013-2025 is to produce Malaysian citizens who appreciate the moral values. In this regard, the process of teaching and learning that occurs in the classroom, as catalyst to produce a holistic generation in terms of intellectual, spiritual, emotional and physical development (Ministry of Education Malaysia, Moral Education Syllabus for Secondary School, 2000). Research by Narvaez and Lapsley (2008) and Thambu, Naidu and Othman (2018) states that there is



an intimate relationship between teaching practices and student character development.

The curriculum for Moral Education in Malaysia emphasizes the holistic view of students' development. Malaysian National Education Philosophy (FPK), illustrated that:

*Education in Malaysia is an effort towards developing the individual's potential as a whole to foster individuals who are balanced and harmonious, intellectually, spiritually, emotionally and physically, based in belief and obeying God. This is a continuous effort to produce Malaysian citizen who are knowledgeable, dynamic, virtuous, responsible and capable of achieving self-fulfillment as well as providing their service towards the harmony and peace of the family, community and country.* (Vishalache & Claiborne, pp.226).

In fulfilling these national educational aims, Moral Education should be concerned with educating pupils to understand, know and have the dispositions to act on values, and have the capacity to function as moral agents in the moral sphere (Chang, 2007). Morality or moral behavior is an attitude of mind occurring within a framework of beliefs and commitments. A person's duty to God, country, family or social group is the essential elements in moral behavior (Thambu & Shanmugavelu, 2016).

Teachers need to perform teaching duties effectively in a classroom environment that is arguably complex and fluid (Cohen & Geier, 2010). Classrooms are said to have complex environments due to factors such as students, teachers and physical conditions affecting the student's learning process. The classroom environment is fluid because all the events happening inside or outside of the classroom will have an impact on the students. In this situation the teacher must play a role in implementing good teaching techniques designed to maintain student interest. Students should be given enough skills training and moral experience in the classroom, so they can learn the value and internalize it as their self habits (Vishalache, 2011). According to Lickona (1996),

*“to develop good character they need many and varied opportunities to apply values such as responsibility and fairness in everyday interactions and discussions,..through repeated moral experiences, students can also develop and practice the moral skills and behavioural habits that make up the action side of character”* (pp.96-97).

## 2. PROBLEM STATEMENT

Appropriate teaching techniques are important in the classroom because satisfaction and enjoyment in teaching depend on leading students to cooperate.

Besides providing a safe and comfortable learning environment, teaching techniques can also build self esteem and motivation (Hess, 2009). The role of teachers as transmitters of values and moral content and students as passive receptors has been a teaching pedagogy of Moral Education in Malaysia. One way method of teaching and exam oriented pedagogy (Liau et al., 2003) makes the subject boring for students. Students are not interested in attending the Moral Education class. Lack of interest in this subject contributes to the unwanted behavior among school children (Ibrahim Bajunid, 2012). There is a gap between the moral syllabus and how the students approach moral conflict in their daily lives (Vishalache, 2011).

In this context, the ability to communicate is an essential component for successful teaching. Research by Robinson and Lai (2006) showed a normal means of communication, cannot attract the student attention to focus on learning in the classroom. Conventional technique of teaching is unable to inspire them to get involved in the process of teaching and learning in the classroom. Teaching is essentially a performance (Alam Sher Malik, 2012). A performer needs to be familiar with different ways of presenting ideas and have the skill to implement them creatively. Creativity in teaching is a capacity for producing imaginative, original products or ways of solving problems (Torrance, 1983). In order to enhance this intuitive ability, teachers should explore artistic approaches, that is, approaches which focus on the facial expressions, vocal characteristic, gestures and body movements. Artistic fields of study in education such as theatre normally produce the desired response from students (Nadarajan Thambu, & Muhammad Hasbi Abdul Rahman, 2017).

Meanwhile, with globalization, Malaysian youth are faced with increasing challenges in resolving social problems. One way of working creatively to enhance learning in the Moral Education classroom is through a technique called Forum Theatre. Forum Theatre techniques have features such as active learning and providing direct experience to students and it is a student-centered learning approach (Osburn, 2010). Artistic approaches to teaching such as Forum Theatre help students become more intuitive and adaptive in their learning (McClimens & Scott, 2007). In this study, Forum Theatre has been used as creative teaching and learning technique that requires students to participate actively in the process of developing a script, memorizing, engaging in forums, acting and expressing ideas. It allows students to appreciate values and think about what they are doing.

### 3. WHY FORUM THEATRE?

Forum Theatre techniques are capable of delivering directly a series of training and moral experience in the classroom. If we go by the active learning principle, which Figure 1.1 proves that students tend to remember 90% of what is done and see if they are doing the real thing. In this approach, students was appreciated as a human being who have full awareness and consciousness to evolve in terms of

thoughts, feelings and actions (Gourd & Gourd, 2011). The purpose of teaching in Forum Theatre is not to guide students to memorise facts and moral content mechanically but to make them involve in the process of inquiry, dialogue, the reality of real life, knowledge, creativity, consciousness and transformation in behaviour (Kincheloe, 2008).

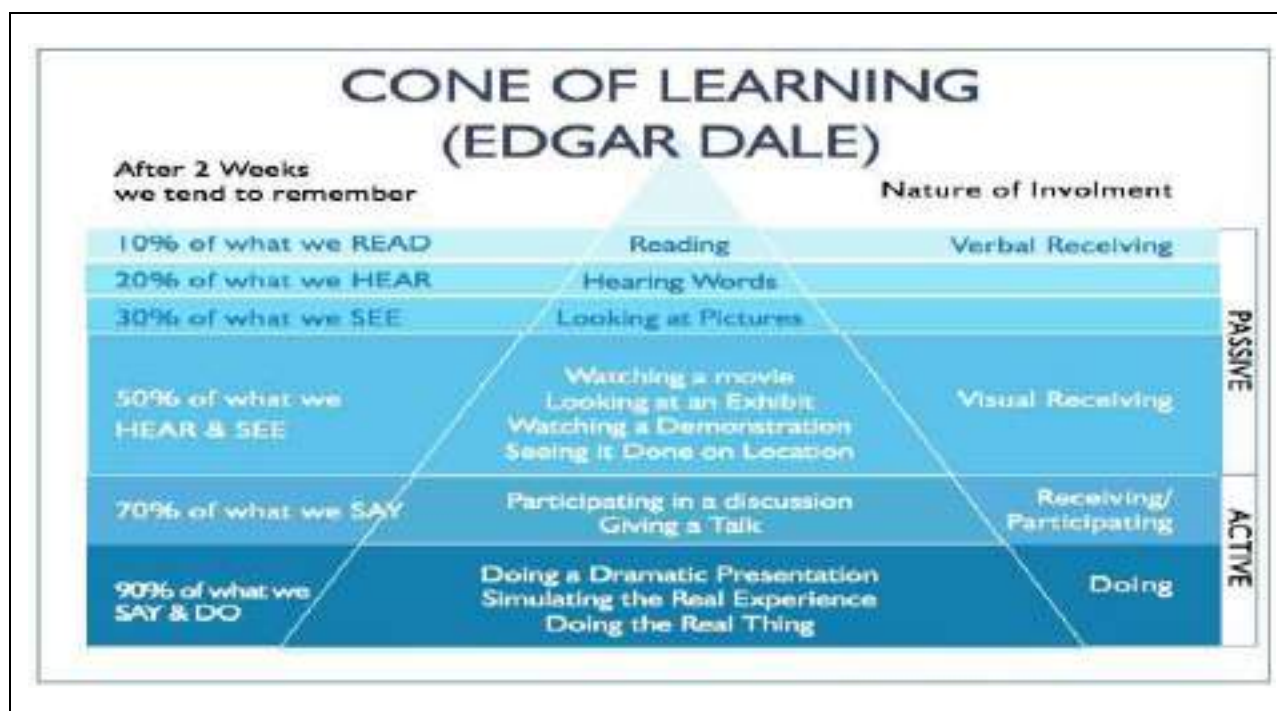


Figure: 1.1. Cone of Learning, Dale (1969).

Pedagogy is a science and art of teaching. How we teach must reflect how our students learn. It must also reflect the world our students will move into. This is a world which is rapidly changing, connected, adapting and evolving. Our style and approach to teaching must emphasize the learning in the 21st century. Even if we have a 21st Century classroom (flexible and adaptable), a 21st Century teacher (an adaptor, a communicator, a leader and a learner, a visionary and a model, a collaborator and risk taker) and our curriculum reflects the new paradigm and we have the facilities and resources that could enable 21st century learning; We will only be a 21st century teacher if we teach changes as well (Spring, 2006). Our pedagogy must also

change. The key features of 21st Century Pedagogy are:

- Making use of project based learning
- Using problem solving as a teaching tool
- Using 21st C assessments with timely, appropriate and detailed feedback and reflection
- It is collaborative in nature and uses enabling and empowering technologies
- It fosters Contextual learning bridging the disciplines and curriculum areas
- Building technological, information and media fluencies
- Developing thinking skills (Refer Figure 1.2)

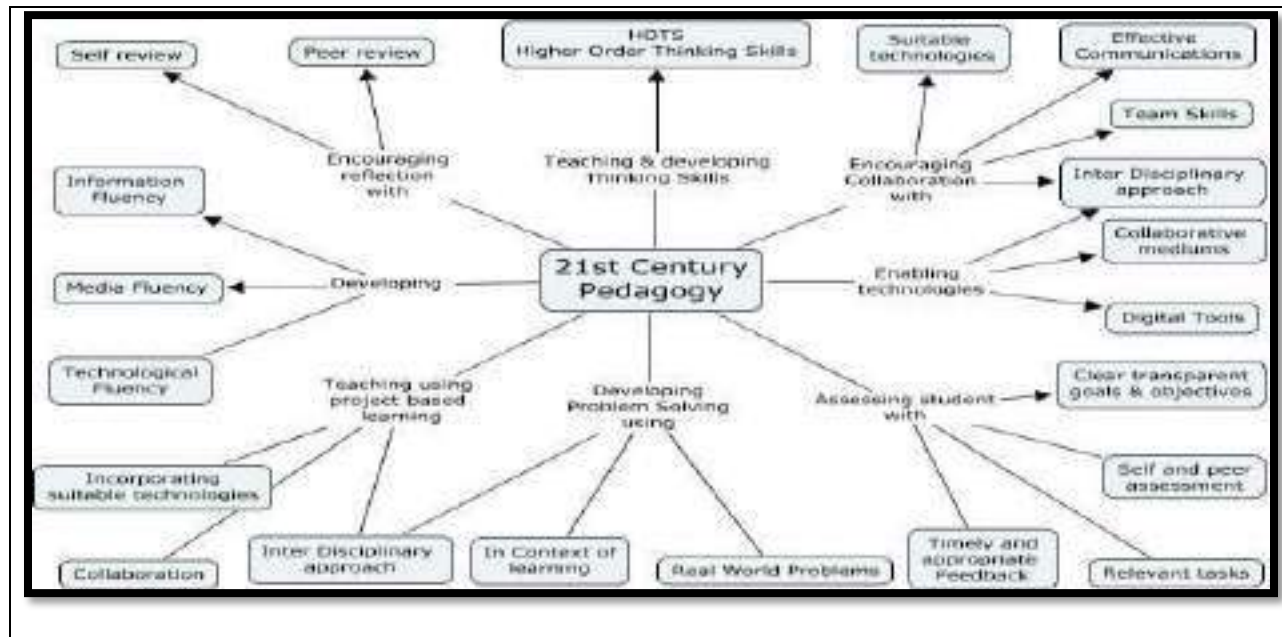


Figure 1.2: 21st Century Pedagogy. (<http://www.teachthought.com>).

Meanwhile, Forum Theater also meets the characteristics of 21st century pedagogy (Figure 1.2). Elements in Forum Theater such as 'develop a script' able to develop thinking skills and contextual knowledge. This steps also develop problem solving skills among students, because they use a real-world problems. While the 'anti-model play' also encourage students to work as a team, and collaborate each other. The 'forum' sessions also encourage reflection aspects such as self review and peer review. Besides that, an 'intervention play' also able to develop information fluency, and team skills. Last but not least, the use of Forum Theater in teaching moral education will merge the moral discipline and theater discipline. It has realized the concept of inter-disciplinary approach in 21st century pedagogy.

## 4. METHODOLOGY

### 4.1 Research Design

This study was conducted using qualitative sampling (Creswell, 2012). A purposive approach to sampling was undertaken (Richards & Morse, 2007). Form Four science students (18 male and female students of Indian and Chinese ethnicity) from three schools were selected for data collection purposes.

### 4.2 Data Collection

As a form of data triangulation, this study used multiple ways of obtaining qualitative data (Bogdan & Biklen, 2007). The main method was focus group interviews, in which the selected group of students were interviewed. All interview sessions were

recorded, transcribed and data were coded for analysis purposes. All transcribed verbatim reports were returned to the interviewees for them to check the accuracy of what they had said. Apart from that, students' journals were used for analysis from the students' perspectives about the teaching technique and their involvement in Forum Theatre. Other sources of data such as classroom observation to investigate teachers' performance were also used.

### 4.3 Instrument

Instruments such as classroom observation protocol, interview protocol and journal writing method were used to collect relevant data. The content validity of the instruments was assured through comments and criticism from experts in Moral Education and Theatre Education.

#### 4.3.1 Focus Group Interviews

Focus group interview protocol, as proposed by Creswell (2012), was used in this study to help the researchers explore, and record the data and information widely about the Forum Theatre usage in developing moral behavior. Information about the ability of Forum Theatre to develop moral practice was also collected. Focus group interviews provide an opportunity for researchers to meet face to face with their study participants, to verify the information collected through observation, and journal entries. The Interview protocol was used by the researchers to focus more on asking questions that could answer the research questions. Interviews also allow researchers to collect opinions, thoughts, insights and experiences of



the study participants in the study area. In addition, the interview provided an opportunity for researchers to understand what had happened and to access thoughts by study participants about moral practice.

#### 4.3.2 Observations

Observation is a process of collecting information openly to get a true picture of the phenomena that occurs at the site of the study (Merriam 2009). Observation is the best way to collect data, about participants' behavior and is capable of collecting non-verbal data (thoughts or ideas) of participants (Creswell, 2012). Observation methods also allow researchers to move away from the perception-based data to data collected directly at the site (Lim, 2007). In this study, researchers used a classroom observation protocol by Seale (1999). Observations to use Forum Theatre through teaching segments that focus on the potential of this technique in developing aspects of moral practices or moral behavior have been implemented.

#### 4.3.3 Journal Writing

Two forms of journal, researcher's reflective journal and student's journal, were used to obtain data. A researcher's reflection journal (Bogdan & Biklen, 2007) was used as a written record of the observations and to express feelings, practice, experience and atmosphere experienced by the researchers in the Forum Theatre technique. The student journal (Piantanida & Garman, 1999) was used to collect data about how their participation in Forum Theatre influenced their attitude and behavior. Journal supply data in the form of language and words (ideas recorder journal), became a rich source of information, for qualitative approach, and available for analysis without requiring any transcription (Marohaini, 2001). Participants were also asked to record the date, events, locations and teaching sessions every time they wrote a journal entry to facilitate cross-referencing for the researcher during data analysis.

#### 4.4 Data Analysis

The thematic approach introduced by Braun and Clarke (2006) was used for data analysis. With the thematic approach, the coding scheme was initially guided by the research questions which provided the main themes and key coding. However, the possibilities of other emerging themes that might emerge from the data were also accepted. Data from various sources and transcription codify into concepts, sub-themes and themes. Data were compiled according to the order based on the breakdown of data into simple categories. Coding in qualitative research such as open coding, axial coding and selective coding is the process of identifying correlates of data into an idea, theme or category (Boeije, 2010). The inductive-deductive cycle

of thinking constantly happened in our data analysis process in order to derive at the most valid codes and concepts to answer the research questions. Findings were categorized according to several themes.

### 5. FORUM THEATRE

Forum Theatre is formed from two words namely 'Forum' and 'Theatre'. Forum is derived from the Greek term, meaning an open discussion field. Theatre means a genre of art or a form of communication. The goal of the Forum Theatre is to give the opportunity to the actors and the audience, to express publicly and receive views on the issues presented. This interactive theatre developed by Augusto Boal of Brazil (2008). In the Forum Theatre, the actors will dramatize social problems, or "oppression" that occurs in the community, for the community's views (Babbage, 2004). Forum Theatre will end with an unresolved problem. Then, the audience (spectators) are given the opportunity to stage to explore solutions to the above problems through play. Forum Theatre is widely used in schools to address the issue of racism, sexual prejudice, violence, and bullying (Day, 2002).

Forum Theatre is a creative type of role play developed by a Brazilian dramatist, Boal (Rae, 2013). Forum Theatre is a form of theatre where audiences have the power to suggest and make changes to events on stage. Members of the audience are encouraged to join the action on stage, and to become co-constructors and co-actors. Viewers are given the opportunity to intervene directly in the action and to try to bring the play to a different conclusion. The role of the audience (spectators) is transformed into "spect-actors" in the Forum Theatre. Boal (2006), designated the audience-actor as "spect-actors". He further argues that the theatre is the art of looking at ourselves because all men are actors.

According to Augusto Boal (2006), Forum Theatre is not in accordance with the classical notion of theatre, a form of performance "spectacle" alone. Forum Theatre involve "dialogue" with the audience and not a "one-way conversation", as is the case in conventional theatre, where intransitive relationships take over. In conventional theatre, everything moved from the stage to the auditorium. Emotions, ideas, and issues of morality and moved in that direction, none of which move toward opposite (Boal, 2006). Instead, the Forum Theatre actors not only deliver their speech, but the audience also have to answer what is seen and heard. Actually, Forum Theatre is a creation of a discussion forum or space to analyze, discuss, and explore group solutions against injustice (Boal, 2008).





In Forum Theatre, gap between actors and audience have been eliminated. Audience (spectators) will change roles to become an actor (spect-actors). Spect-actors are given the opportunity to change the scene presented by assuming the role of a character is acting to bring about a change in the outcome of the story. Spect-actors will make a difference in the outcome of the story through improvisation with the ideas of other members of society. The goal of Forum Theatre is explore clearer understanding of a social conflict that exists. In addition, the Forum Theatre also supports the goal of empowering community members to intervene in order to change the social conflicts plaguing their society (Boal, 2006).

Forum Theatre became a social therapy, in which the audience is not just watching the play, but even participated in the staging. Viewers can comment on the action, to intervene directly, participate as a character in the show, and try to bring the play to a different conclusion. As it turns out, the audience is no longer passive recipients. They are active audience (spect-actor) who bring their own experience and suggestions to the problems presented in the theatre. According to Augusto Boal (2008), one of the Forum Theatre motives is each person is responsible for their own actions and, when there is a problem, everyone should be involved in finding ways to solve problems.

## 6. FORUM THEATRE AS TEACHING TECHNIQUE

Students were involved in four steps of Forum Theatre as recommended by Boal (2008). These four steps are (a) develop a script (b) *anti-model* play (c) forum, and (d) intervention play. The following is a discussion of how the student used them and how it worked out in the Moral Education classroom to develop students' cognitive, affective and psychomotor aspect.

### 6.1 Develop a Script

In this step, students are asked to develop a script based on their own experiences of daily life. The objective of this task is to train participants to develop a script based on their own experience. In this study, the participants collaborated in developing a script about their shared challenges. In this context the focus was "moral conflict" and the scenario could be almost any topic which resonated with "oppression". Participants wrote three scripts to demonstrate the problems causing the oppressive situation. Script A related to conflicts between road users and police officers, script B involved a conflict between students and teachers in the school premises and script C was about conflict between children and parents in the family.

### 6.2 Anti-Model Play

After composing the script, students had to act out the script developed earlier. The developed script was acted out by the students for class viewing. Their moral conflict scene was performed as an anti-model play. Although Boal (2008), gave the terms of an 'anti-model' play, we followed a different one as it was not a model we could relate to and therefore we changed it. It is compulsory for the scene (anti-model play) performed to display oppression or pressure situations, where a character being victimized fails to overcome the persecution. Thus, the issues were clarified and the students appeared to empathize with what they experienced. The original performance always ends in an unsolved form, with an undesirable challenge for the victimized character.

### 6.3 The Forum

After the anti-model play is completed, another step is immediately conducted by the "Joker". In Forum Theatre, the facilitator of the action is the Joker. The Joker takes responsibility for the logistics of the process and functions as a neutral link between the actors and the audience. The Joker discusses with the audience the problems that appear in the presentation and possible solutions are proposed to overcome the above problems. The Joker then asks the audience to figure out the right solution or idea that can be implemented to resolve the conflict experienced by the oppressed characters in the play. Discussion, improvisation and audience participation is known as "forum", in Forum Theatre. In our case, the appropriate solutions were discussed in a forum session by the participants.

### 6.4 Intervention Play

During intervention steps, the anti-model play was presented for a second time. This time the audience members have the opportunity to intervene and bring the play to a different and improved end. An audience member took the place of an actor to demonstrate his or her ideas for resolving a problem. They can do so by taking on the role of a specified victimized character from the anti-model play. When an audience member feels he or she could play the role of this character more effectively, then they shout "stop", at which point the scene of the play freezes and this audience member takes on the role, trying out alternative and desirable behavior. After that, the Joker will make sure that, the solutions are explored adequately by the audience members and that they are to some extent possible in real life. Boal (2006) wanted the audience to be active members of society, to cooperate in tackling existing conflicts in society.



## 7. FINDINGS AND DISCUSSION

### 7.1 Conducive Environment for Learning

Forum Theatre was able to create a highly interactive learning environment. It succeeded in creating a classroom environment that supports student learning. Students involved in four steps of Forum Theatre showed a high degree of group trust and willingness to take risks. They are engaged in learning in the classroom physically and mentally through Forum Theatre. Outcomes following interview data indicate that student participation in the conducive classroom environment.

Participant 2: In Moral we can see that we can use Forum Theatre techniques. We already see the fun antics of our friends acting ... it caught our attention. This balance varies with the normal way of teaching. In a typical drama viewer cannot give the idea in Forum Theatre we can give ideas ... and act out ideas through forums and intervention sessions. This collaboration created group cooperation. [SMKSuria/inter/5.2.18] (Author's translation).

The following is a journal entry of participants:

"All members of the group are very cooperative when it comes to training, some brought the play's prop, some are willing to buy props like a police hat and if problems arise we together solve the problem. All team members have the attitude and determination to write the script and acting in unity" [SMKSinar/Jour/27.2.18] (Author's translation). Classroom observation shows participants are also having fun. They focus and concentrate while performing activities such as discussion (forums) for developing a script, writing a script, participating in an anti-model play and intervention play.

In the meantime, some of the participants commented that the Forum Theatre:

Participant 3: "It's ... it ... stimulate students enjoy ... easy ... but we must have a lot of guts ... and creative .... Teacher must give a lot of time for us to be ready ... then... ok ... if all of us work together then easy for us to create a play. Acting is interesting... and we quickly understand what is shown. We'll really see and hear, the anti-model play takes place in front of our eyes the acting is lively so we can understand better"[SMKCahaya/inter/22.2.18] (translated version).

In the journal entry, participants noted that:

"It is fun. We are not stress ... no tension now .... if not before ..... many say Moral is boring subjects ... as we always write notes .. notes.. and memorize the values ... if students do not memorize the moral standing to class exhausted ... for

shame ... that's why many of us skip Moral Education class. Now when there are activities such as anti- model play, intervention and theater games, it's more fun, reduce stress" [SMKSinar/jour/7.3.18] (Author's translation).

### 7.2 Facilitates Experiential Learning

Forum Theatre is also able to facilitate experience based or active learning. This finding is consistent with previous studies that indicate the effectiveness and value of involving students in their learning experience through experience and simulation (Boggs, Mickel, & Holtom, 2007). Chickering and Gamson (1987) described experiential learning as a best practice for students. They emphasized the process which makes learning is meaningful. According to Chickering and Gamson (1987), "*learning is not a spectator sport... (students) must talk about what they are learning, write about it, relate it to past experiences, and apply it to their daily lives*"(p. iii). Our key teachings in moral education required attitude shifts of our students. Direct experience and first hand exploration which students gain from Forum Theatre activity seemed to be the best way to get there.

Participants declare in a journal entry that:

"We get experience in acting ... and the experience of being in a situation that we are playing ...and this facilitates quickly makes us recalls all the values that we played .....

We have the experience to find the values that correspond to the situation.... and try out in the intervention play.... We belief we can use the same method to solve problems in real life" [SMKSinar/jour/7.3.18] (Author's translation).

Classroom observation shows that among the key aspects identified through experiential learning is an aspect of creativity and leadership among students. Students are very creative in writing stories together. They are able to write creatively daily experiences encountered by them in the form of an interesting acting script. In one scenario (script B), for example, students are able to show the conflict faced by students and teachers in the school premises well. Conflicts such as one involving a sports teacher who is unaware of student problems, attitudes that do not comply with the classroom rules, the teacher's negligence while on duty and the problems in friendship can be described by the anti-model play for the students [SMKSinar/obser/26.2.18].

Participants were also creative in describing the atmosphere of tension existing between the students and teachers at the school field and in the counseling room well. Researchers felt that the class was energized



by the experience and the creative product were “owned” by all the participants.

Participant5: “Forum Theatre makes us think ... think out of the box ...and be creative. Students show creativity as we write scripts, write dialogue ... we also have to have the imagination to pretend to be the teacher counselor, teacher ... Man ... and other characters. .... And ... We also need to be creative while acting in intervention play to find an idea, create a role-playing situation, to resolve existing problems and to draw the attention of the audience “[SMKCahaya/inter/12.4.18] (Author’s translation).

### 7.3 Forum Theatre Stimulates Co-Learning

Forum Theatre activity stimulates co-learning among participants. Students greatly enjoyed the activities and researchers noted a very high level of participation from all the students in the classroom. The process of acting in an anti-model play or an intervention play prompted laughter and some competition among students. This element of Forum Theatre stimulated participation from all class members. Group members helped each other to solve the problem addressed by the other group through anti-model play. Each group of students generated rich and significant content about their own experiences to create a solution for the problem through intervention play. A deeper understanding of course material was achieved, along with a wealth of connections such as students to material and students to each other [SMKCahaya/obser/8.3.18].

This is evidenced by the following interview:

Participant 5: “If you use Forum Theatre in the Moral Education subject is good.. more

nice, because there is no stress. It will create a 'critical thinking' ... students can cooperate .... and the relationship between teacher and pupil better .... because there is cooperation...and studying is fun” [SMKCahaya/inter/12.4.18].

Researcher: How Forum Theatre create critical thinking?

Participant 6: “When we compose the script .. we compose it creatively.. ... while acting in anti-model play..we ... also include a ' sense of humor' ... think of how we can get students' attention ... well ... how to act...” [SMKSinar/inter/24.1.18] (Author’s translation).

This conclusion is supported by the following excerpts:

Participant 1: “Every group member give in the ideas... All of us discuss together before create the script...the script is our own self-authored script ... We prepare the props ourselves “.

Participant2: “Acting.... even our own ... we train on our own after school hours ... 20 minutes every day... usually we use school hall for training every day ... Sometimes we like to watch a YouTube to find a way to act” [SMKSuria/inter/9.4.18] (Author’s translation).

Participant journal entries show that Forum Theatre helps them speak in a more bold and confident way:

“Yes, ..confident.. use expressions like .... well .. let say if we attend our scholarship interview..we have to speak with confidence and courage ... we need to use good expression...acting” [SMKSuria/jour/9.4.18] (Author’s translation).

Mutual help or aid was clearly seen in how the participants carried out the process of composing and typing scripts, preparing costumes and lending equipment such as laptop computers, finding the props, providing a scenario, correcting the style of acting partners as required fictional character, making-up and helping a friend in dressing. Participants preferred the interest of the group (team-work) to achieve planned goals in the classroom.

Refer to the following interview:

Participant3: “More fun to learn moral in this way...we now ... more than happy with moral are activities that involve all of us, it’s more interesting and fun ... Other than that, now we are on good terms with all our classmates.. we respect each other ... we also respect the self-esteem of our friends ...we will not fight and hurt our friends feeling” [SMKSinar/inter/28.2.18] (Author’s translation).

### 7.4 Skills in resolving conflicts rationally

According to observers, practices such as trying hard and not easily giving up hope are, shown by participants. Participants said they were willing to act together with their friends even though many could not easily lead the character given to them. While many still relied on the scripts written down (rather than memorizing the script) they still acted with confidence and kept acting in the anti-model play to the end. Their attitude and their confidence levels were also good and they were not even bothered with cheers and shouts of the spectator. Participants were confident in the ability of themselves. [Surya/Obr/yoka/26.2.18]

Meantime, observations also show that the group has been criticized by the actors (spect-actors) for not enact anti-model play very well. However, according to observers participants can show a good performance and to convince the audience in the intervention play. Participants have a strong self-



endurance to continue a difficult task. [Sinar/Inter/Ros/5.3.18]

Analysis of observation findings are supported by interviews with participants. Participants believe an attitude of trust motivated them to act or do a job or an assignment.

Participant 2: After teacher demonstrated to us how to be in the theatre and the way the play must perform, we bit confident. We believe and can act well. We realize if we do not believe in making this, we must not be made ... today we all believe in acting. [Sinar/Inter/009/28. 2.18]

Participant 4: Forum Theatre makes us more rational and give us problem-solving skills. Various events such as writing the script and acting actually increase our self-confidence to do the work. We believe in acting and we act in front of the class. We realize everyone else can act in front of the class. [Suria /Inter/010/12. 3.18]

The journal entries indicate the success of their roles and their first attempt has reinforced the confidence of participants. They did not give up hope. Failure to do the first turn was regarded as the driving force to continue to work harder to solve a given problem. Furthermore, participants' journal entries also confirmed their competent practice. They acknowledged that the positive praise also create confidence in the abilities of the participants themselves. They could carry out their assignment without any fear.

After our success of group was praised by friends and teacher Nada, I believe in acting of intervention play once again. I'm more confident when teacher Nada supported us with playing a brother character in our play. [Sinar/Jur/ R3/ 6.3.18]

I can do the best with the confidence because there is a motivation from teacher Nada. I have tried to act with courage and confidence. [Suria/Jur/R4/ 9.4.18]

I'm satisfied with my casting in intervention play. Before the play I'm confident that I can do well and I believe that I can do, to make sure our success. [Cahaya /Jur /R5/ 4/11/18]

Analysis of the source of findings showed that all participants believed in their own ability. In addition, moral support from friends and teachers also encouraged good practice. Self-confidence in the ability to solve problems was also obvious amongst them.

## 8. CONCLUSION

In this article, the authors provided readers with some framework for the principles and practices of

Forum Theatre in a Moral Education classroom setting. Forum Theatre greatly enhanced students' classroom experience in learning. In particular, its value in creating an environment conducive to learning, experiential learning, moral reasoning, creativity, empathy, leadership, co-learning and moral behavior enhanced the amount of exchange and exploration that took place. Indeed, the researchers have no doubt that engaging with Forum Theatre as a classroom tool has a very positive impact for Moral Education students.

## REFERENCES

1. Alam Sher Malik. (2012, May 27). *Teaching is a performing art: Enliven the lesson at all its stages.* *New Sunday Times*, p. 25.
2. Babbage, F. (2004). *Augusto Boal.* New York, NY: Routledge.
3. Boal, A. (2006). *The aesthetics of the oppressed.* Oxford: Routledge.
4. Boal, A. (2008). *Theatre of the oppressed (new edition).* London, UK: Pluto Press.
5. Boeije, H. (2010). *Analysis in qualitative research.* Thousand Oaks, CA: Sage.
6. Bogdan, R. C., & Biklen, S. K. (2007). *Qualitative research for education: An introduction to theories and methods.* New York, NY: Pearson.
7. Boggs, J. G., Mickel, A. E., & Holtom, B. C. (2007). *Experiential learning through interactive drama: An alternative to student role-plays.* *Journal of Management Education*, 31(6), 832-858.
8. Braun, V., & Clarke, V. (2006). *Using thematic analysis in psychology.* *Qualitative Research psychology*, 3(2), 77-101.
9. Chang, L. H. (June, 2007). *Moral reasoning of Malaysian adolescents. Paper presented at the International Conference on Learning, Johannesburg, South Africa.*
10. Chickering, A., & Gamson, Z. (1987). *Seven principles for good practice in undergraduate education.* *Wingspread Journal.* Winona, MN: Winona State University.
11. Cohen, J., & Geier, V. (2010). *School climate research summary.* *School Climate Brief, 1.* New York, NY: National School Climate Centre. Retrieved from [www.schoolclimate.org/climate/research.php](http://www.schoolclimate.org/climate/research.php)
12. Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluation quantitative and qualitative research (4th ed.).* Englewood Cliffs, NJ: Pearson.
13. Dale, E. (1969). *Audio-Visual methods in teaching (3rd ed.).* New York, NY: Holt, Rinehart & Winston.
14. Day, L. (2002). *Putting yourself in other people's shoes: The use of forum theatre to explore refugee and homeless issues in schools.* *Journal of Moral Education*, 31(1), 21-34.
15. Gourd, K. M., & Gourd, T. Y. (2011). *Enacting democracy: Using Forum Theatre to confront*



- bullying. *Equity & Excellence in Education*, 44(3), 403-419.
16. Hess, D. E. (2009). *Controversy in the classroom: The democratic power of discussion*. New York, NY: Routledge.
  17. Ibrahim Bajumid. (2012, June 22). *Education reforms that are ideal: Matters that need attention: Consensus building crucial to charting our future*. *New Straits Times*, p. 18.
  18. Kincheloe, J. (2008). *Knowledge and critical pedagogy: An introduction*. Amsterdam, The Netherlands: Springer.
  19. Liau, A. K., Liau, A. W. L., Teoh, G. B. S., & Liau, M. T. L. (2003). *The case for emotional literacy: The influence of emotional intelligence on problem behaviours in Malaysian secondary school students*. *Journal of Moral Education*, 32(1), 51-66.
  20. Lickona, T. (1996). *Eleven principles of effective character education*. *Journal of Education*, 25(1), 93-100.
  21. Lim, C. H. (2007). *Penyelidikan pendidikan: Pendekatan kuantitatif dan kualitatif*. Shah Alam: McGraw-Hill.
  22. Malaysia Ministry of Education (MOE). (2000). *Moral Education Syllabus for secondary school Malaysia*. Kuala Lumpur: Curriculum Development Centre.
  23. Marohaini Yusoff. (2001). *Penyelidikan kualitatif: Pengalaman kerja lapangan kajian*. Kuala Lumpur: Penerbit Universiti Malaya.
  24. McClimens, A., & Scott, R. (2007). *Lights, camera, education! The potentials of forum theatre in a learning disability nursing program*. *Nurse Education Today*, 27(3), 203-209.
  25. Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. San Francisco: Jossey-Bass.
  26. Nadarajan Thambu, & Muhammad Hasbi Abdul Rahman. (2017). *Forum Theatre as a behavior change strategy: Qualitative findings from Moral Education class*. *SEARCH: The Journal of The South East Asia Research Centre for Communications and Humanities*, 9(1), 25-46.
  27. Narvaez, D., & Lapsley, D. K. (eds). (2008). *Moral Personality, Identity, and Character: An Interdisciplinary Future*. Cambridge, UK: Cambridge University Press.
  28. Osburn, K. M. (2010). *Forum Theatre Empowering Students to speak, Act and Know*. Unpublished Bachelor's Dissertations, Western Kentucky University. Retrieved from [http://digitalcommons.wku.edu/stu\\_hon\\_theses/245](http://digitalcommons.wku.edu/stu_hon_theses/245)
  29. Piantanida, M., & Garman, N. B. (1999). *A qualitative dissertation: A guide for students and faculty*. Thousand Oaks: Sage.
  30. Rae, J. (2013). *Facilitating learning spaces in forum theatre*. *European Journal of Training and Development*, 37(2), 220-236.
  31. Richards, L., & Morse, J. M. (2007). *Readme first for a user's guide to qualitative methods*. London: Sage.
  32. Robinson, V. M., & Lai, M. K. (2006). *Practitioner research for educators: A guide to improving classroom and schools*. Thousand Oaks, CA: Corwin Press.
  33. Spring, J. (2006). *Pedagogies of globalization: The rise of the educational security state*. Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers.
  34. Thambu, N., Naidu, N. B. M., & Othman, M. A. (2018). *Pemerkasaan pedagogi kritis untuk menjana Kemahiran Berfikir Aras Tinggi (KBAT) melalui teknik Teater Forum dalam kalangan murid Pendidikan Moral di sekolah menengah*. Unpublished monograf, Universiti Pendidikan Sultan Idris, Perak.
  35. Thambu, N., & Shanmugavelu, G. (2016). *Element of Moral Intent in Theatre Forum: An Action Research in a Moral Education Class*. *Asian Education Action Research Journal (AEARJ)*, 5, 1-14.
  36. Torrance, E. P. (1983). *Creativity in the classroom*. Washington, DC: Library of Congress.
  37. Vishalache Balakrishnan. (2011). *Real-life dilemmas in moral education*. Kuala Lumpur: University of Malaya Press.
  38. Vishalache, B., & Claiborne, L.B. (2012). *Vygotsky from ZPD to ZCD in moral education: reshaping Western theory and practices in local context*. *Journal of Moral Education*, 41(2), 225-243.



# ENQUIRING THE NATURE OF PELASGIC LANGUAGE(S) VIA INFORMATION SYSTEMS MODELLING

**Evangelos C. Papakitsos**

Academic staff,  
Department of Industrial Design & Production Engineering,  
University of West Attica,  
Egaleo Athens,  
Greece

## ABSTRACT

*The term “Pelagic” refers herein to the language(s) spoken by the Pelagian people, who were considered by ancient Greek scholars as indigenous inhabitants of the prehistoric Aegean region and Greece. Both the existence of a single Pelagian nation and the very language itself has been disputed. The relevant argumentation for and against includes diverse evidences from archaeology, anthropology, ethnography and linguistics. In order to facilitate the classification, interconnection and interpretation of so diverse relevant tokens for enquiring the nature of Pelagic language(s), the application of Information Systems modelling in Humanities is demonstrated in this paper. The implementation of the preferred modelling method, named OMAS-III, denotes that Pelagic exists as an Indo-European language that most probably belongs to the Anatolian family, something that will potentially require the internal revision of the linguistic taxonomy of the latter. This implementation also indicates, with caution, that remnants of Pelagic have survived in a small fraction of the Albanian vocabulary that practically coincides with the endangered dialect of the Arvanitan Greeks (which is called Arvanitics herein), still spoken by elders at southern Greece.*

**KEYWORDS:** *Pelagic, Pelagian, Information Systems modelling, Anatolian languages, OMAS-III, Albanian, Arvanitan Greeks, Arvanitics.*

## 1. INTRODUCTION

The term “Pelagic” language refers herein to the one or more languages spoken by the controversial people, called Pelagians, considered by many scholars as the indigenous inhabitants of prehistoric Greece and the Aegean region, before the arrival of the Proto-Greeks [1]. Ever since the dawn of the Classical Era (6<sup>th</sup> century BCE, onwards), the ancient Greek scholars had either contradictory or obscure opinion about the Pelagians [2]. In fact, everything about them is controversial: the nature of their ethnicity, the places of their inhabitation, their language and the etymology of their name. Each case will be briefly summarized in the following subsections, respectively.

### 1.1 Ethnicity

It is not clear whether Pelagians had been a single ethnos (i.e., ethnic entity) or merely a characterization of prehistoric non-Greeks, in general. The ancient Greek scholars refer many ethnonyms, besides Pelagians (e.g., Kadmeians, Pelopans, Danaans, ...). According to Hecataeus of Miletus, they were not Greeks, originally. According to Homer (*Iliad*), in the Trojan War, some of them had been allied to Greeks and others to Trojans. According to Dionysius of Halicarnassus, they were a

Greek tribe, while according to Herodotus, the Aeolians, Achaeans, Ionians and Dorians (the four historical groups of Ancient Greeks) had been originally branches of them. Seemingly after the Trojan War, most of them joined the Greek ethnos, the Trojan War being very beneficial, according to Isocrates, because it united the Greeks. Among those Pelagians were the Ancient Athenians (Ionians), who, according to Plato, regarded themselves as genuine Greeks, compared to others. One is certain, that they were an autochthonous population [2] of Late Neolithic and Bronze Age Greece.

### 1.2 Inhabitation

Once again, the ancient Greek scholars located the Pelagians here and there, all over Greece and the Aegean region, something understandable since they were referred as nomads, while Herodotus refers that the previous name of Greece had been “Pelagia” [2].

### 1.3 Language

The language of Pelagians, as an Indo-European one or not (henceforth, IE), is mainly based on linguistic evidence, regarding toponyms of similar linguistic form to ones in Minor Asia or other words. These scholars that argue for the IE linguistic origins attribute to them: (1.3.i) an identity akin to Greek [3];



Anatolian [4]; Thracian [5]; Old/Proto-Albanian (originally proposed in 1854 by J.G. von Hahn) [6]; an unknown, although IE, identity [7]. The scholars that have argued against the IE origins attribute: (1.3.ii) an Ibero-Caucasian linguistic identity [8], an unknown non-IE one, based on religious/mythological customs [9] and the so-called “Old European” [10].

#### 1.4 Etymology

According to the Ancient Greek mythology, the Pelasgians were named after Pelasgos, son of Zeus and Niobe (Apollodorus) and first autochthonous king of Peloponnese (Pausanias) [2]. Even so, the problem of the etymology is transferred to Pelasgos. According to Sakellariou [11], 15 different etymologies have been proposed in the last 200 years, although most of them being “fanciful”. The most linguistically sound is the one originally proposed by Murray [12], meaning “neighboring land”. In particular [13], the name “Pelas-g-os” looks like a purely Greek word, derived from the usual expression “hoi pelas”, meaning “the neighboring people”, and this -g- that can be easily explained either from the stem of “gaea” (land) or from the IE root that is also found in English “go”. Therefore, their name must have meant “those who occupy lands neighboring to us” or “those who have come to our vicinity”, both fitting perfectly to the contemporary archaeological context.

## 2. METHODOLOGY

In order to reveal the nature of the Pelasgic language (henceforth, simply Pelasgic), after so much controversy involved, a holistic approach was deemed appropriate. For this purpose, a systemic model has been applied that originates from the Information Systems’ repertoire. Namely, OMAS-III (Organizational Method for Analyzing Systems) is the specific modelling tool/technique [14] that has been successfully applied to the study of various phenomena in Humanities, including education [15-23] and training [24-26], career counseling [27-30], and, especially regarding the herein interest, applied linguistics [31-34] and archaeology [35, 36].

More specifically, according to OMAS-III, all the elements that are required for the thorough study of an issue can be classified in seven categories: (2.i) the causal, (2.ii) the ruling, (2.iii) the factual (input), (2.iv) the resulting (output), (2.v) the human, (2.vi) the spatial and (2.vii) the temporal ones. After being gathered and classified, the interconnections between them are enquired. Depending on the nature of the issue, one of these categories contain the elements that represent either the solution to the studied problem or the results of the inquiry. The order of study also depends on the nature of the issue. In this particular inquiry, the result sought (2.iv) was the discovering of the nature of Pelasgic. Therefore, all

the available tokens have been classified in the remaining six categories.

## 3. APPLICATION

The present inquiry will initiate with the ruling elements (2.ii), because they set the criteria for accepting or rejecting hypotheses and proposals. In addition, the spatial (2.vi) and temporal elements (2.vii) have been already well defined. The former are focused on Greece and the Aegean region (subsection 1.2), while the latter regard directly the ages until the end of the 2<sup>nd</sup> millennium BCE and indirectly the end of the 1<sup>st</sup> millennium BCE.

### 3.1 Ruling elements

The ruling elements herein define the guidelines for collecting, organizing, analyzing and interpreting the related data and tokens. They can be roughly characterized to consider the usage of definitions, the selection of related data and the manner of processing them. These elements are presented as enumerated (in parentheses) and commented rules below, in terms of either what to do or avoid:

(3.1.i). The definition of “ethnos” refers to people who consciously share a common culture (language, religion and customs, in an undetermined mixture of importance) [37]; it is neither about genetic/anthropological relationship nor about common citizenship.

(3.1.ii). The ideologically focused or guided research, as observed elsewhere [38], causes the selective exploitation of sources and the convenient or biased interpretation of evidence (arguments for the aim), as well as the aposiopsis of the (known) inconvenient ones (arguments against the aim).

(3.1.iii). The interpretation of social events (in History or Prehistory) in a linear manner, neglects the phenomenon of acme and decline of human societies; societies exhibit a circular/periodical behavior [38].

(3.1.iv). The lack of multidisciplinary inevitably causes hasty, extempore, inaccurate and/or exaggerated hypotheses/theories; the system(at)ic approach [35, 36] serves ideally the multidisciplinary study of human phenomena.

(3.1.v). The direct connection of remote in time evidence with others, without having intermediate tokens, should be avoided.

(3.1.vi). “... there are no generally recognized linguistic criteria on the basis of which the time of mutual separation between two related languages can be assessed ...” [39].

The following set of rules should be especially applied in cases of deciphering ancient scripts [40]:

(3.1.vii). The deciphering text should be in its established form, not a “corrected” one convenient to the aspiring decipherer (see also 3.1.ii).

(3.1.viii). The direction of writing should be carefully considered.



(3.1.ix). The class of script must be established; namely, is it phonographic, pictographic or mixed, with or without diacritical marks (?).

(3.1.x). Sound techniques should be used for the decipherment (acrophony, rebus, comparison with other related scripts).

(3.1.xi). The hypothetical languages should be reasonably chosen.

(3.1.xii). The decipherment should be internally coherent, with few irregularities, and making plausible sense.

(3.1.xiii). The text must be long enough to support a decipherment; this rule is closely associated with the *unicity distance* in cryptography that estimates the minimum required length (L) of a text (total number of its signs) in order to achieve a decipherment [41], and with the demonstrable formula of Mackay [42] that estimates the approximate number of unique signs ( $S_s$ ) in any given sample of a text (L), namely, the number of different signs of an alphabet, syllabary or another writing system that this text is written with.

Therefore, in a given text of an unknown writing system/language that has a total number of signs {L} and a number of different signs { $S_L$ } there ( $S_L \leq S_s$ ,  $S_L \leq L$ ):  $S_s = (L^2 / (L - S_L)) - L$ . The Mackay's formula, when was applied to the classical Cypriot syllabary of 56 signs, calculated an estimation of 51 signs [40]. To account for this deviation of 5 signs, the following correction is suggested herein:

(3.1.xiv).  $S_c = 1.1 \times S_s$  (since  $56/51 = 1.098$ ).

### 3.2 Causal elements

The scientific interest about Pelasgic has been quite long, considering that, although all of the ancient Greek scholars mentioned Pelasgians, nothing much had been specifically written about their language(s). Therefore, the very existence of Pelasgic has been questioned, although it seems prematurely [13]. Besides that, the proposals of the linguistic affinity of Pelasgic include directly or indirectly many languages that have been already mentioned (see subsection 1.3). These proposals that can be specific enough (in terms of linguistic, archaeological, historical, ethnographic and geographical evidence) to be commented herein, raising also other than linguistic issues (hence being causal in their nature), are the following:

(3.2.i). The IE group of Anatolian languages [43] that include Hittite, Palaic, Lydian, Luwian, Lycian, Milyan, Carian, Sidetic, Pisidian [44] and Tyrrhenian/Etruscan; those of the languages that had been spoken in the Aegean Sea's region were Lydian, Luwian, Lycian, Milyan, Carian and Tyrrhenian (alias Tyrsenian [45]).

(3.2.ii). The IE Phrygian, a language closely related to Greek but not to Anatolian ones (see 3.2.i) [46]; the Phrygian/Vrygian/Brygian people had been an ethnos of Balkanic origin (Macedonian-Thracian),

also attested to Southern Greece and Minor Asia, according to ancient Greek scholars [47].

(3.2.iii). The so-called Old-European, a language of non/pre-IE origin [48], hypothetically spoken in Europe before the arrival of Indo-Europeans from the Pontic-Caspian steppes (the Kurgan hypothesis); this notion is very speculative in most aspects of its conception (see [39]).

(3.2.iv). The identification of Albanian with Pelasgic has become a target for the Albanian nationalism that aim at establishing the autochthonous of the Albanians in the region, despite the scientific/linguistic rejection of this affinity [49]; the readers herein may be amused by the following masterpiece of Albanian chauvinism (enclosed in quotation marks), based on the similarity in form and meaning of initially 60 Albanian words to Hittite [50] (the author's comments follow the semicolon):

- "Based upon the language that Hittites have spoken, a dialect of Pelasgian-Albanian language ..."; the reverse cannot be considered as a potential option.
- "Therefore the ancient Sumerian language constitutes a dialect of Pelasgian language and has much similarity with today's Albanian language ..."; based on the convenient identification of Pelasgian with Albanian (rule 3.1.ii).
- "Later on these regions, ... became part of the Empire of Alexander the Great, the great Albanian, who with 25 thousand Albanians conquered Persian Empire ..."; Alexander the Great had his paternal grandmother (Eurydice) and his mother (Olympias) princesses of Epirotan (Greek) origin [51] that (according to Peza & Peza [50]) they fully identified with Albanian ethnos, as well as the rest of the Macedonian (Greek) soldiers, regardless of the characterization of ancient Macedonian as the most conservative Greek dialect, closest than any other to the Proto-IE roots [13].
- "Albanian language, as a special sub branch [of the IE Family], branches circa the year 6900 B.C. and they think that its age dates circa the year 600 B.C."; see rule 3.1.vi, among others to follow next.

Obviously, rules 3.1.i-ii are absolutely violated.

### 3.3 Human elements

The human elements (2.v) herein include the anthropological, ethnographic and archaeological evidence of the studied region (2.vi), since antiquity (2.vii). They are factual in nature (2.iii), but they are classified separately herein, to have the importance of human factor emphasized. Their consideration will commence with the claims of the Albanian nationalism (3.2.iv).





(3.3.i). Although Albanian folklore and mythology are of pagan origin (“Paleo-Balkan”) [52], the anthropological studies show that the Albanian genetic ancestry does not differ from other European peoples and especially these of the Balkans [53]. Therefore, the debate about the origin of the Albanian ethnos is mainly based on linguistics (rule 3.1.i), while even if a regional population continuity could be proven, this does not infer linguistic or especially ethnic continuity [54]. The Albanian language, which has been affirmatively documented just since 1462 CE [55], exhibits an inflectional concatenative morphology that is typical of Southern and Eastern European languages. In terms of vocabulary, “Albanian seems to have lost more than 90 per cent of its original vocabulary in favour of loans from Latin, Greek, Hungarian, Slavonic, Italian and Turkish.” [56], the former (i.e., Latin) accounting for 60% of the total [57]. Regarding this very high percentage of Latin vocabulary in Albanian, Kargakos [97] states that the etymology of the name “Albanian” originates from the Albanum mountain, about 20 km from Rome. In its foothills Alba Longa was built, the original cradle of the Romans, which was destroyed by the eruption of a volcano in the years of Tylos Ostylios. Soldiers from this area, who were called Albani, guarded the famous Egnatia Road during the Roman rule, which started from Durres and reached as far as Byzantium. Even if this huge percentage (90%) is somewhat overestimated, the remaining 10+% is too low to justify any ancestry of Albanian to Pelasgian (“its original vocabulary”), as the Albanian circles wishfully like to claim [58]. This part as well can be a loan, since an extremely non-conservative language is demonstrated here. In fact, there are a few words of this original vocabulary, like “hekur” (iron) or “zemër” (heart), that have an unknown etymology, regarding either Proto-IE or any other known regional language [59]. Along with this unknown etymology, the most recent categorization of IE languages classifies Albanian to the Daco-Albanian group, in contrast to the Anatolian and Graeco-Phrygian ones [60]. This classification argues for those scholars who had suggested that between the 3rd and 6th centuries CE the Albanians migrated southwards, initially to Romania and then further southwest to the present-day Albania [61-66]. Even for those numerous scholars that argue for the Illyrian origin of Albanian (e.g., see [67]), Thucydides reported that when the Greeks colonized the coasts of present-day Albania, in the 7<sup>th</sup> century BCE, they found only Vrygians (3.2.ii) there [47]; the first Illyrians (“Taulantians”) migrated there about a century later [68]. This event excludes any direct connection of Albanian to Pelasgian, other than loanwords passed on by previous inhabitants. Thus, the related to Hittite (or another Anatolian language) vocabulary of Albanian [69] is indeed invaluable for the identification of Pelasgian (as it will be

mentioned herein, later on), but not for the purposes of the Albanian nationalism, namely, to confirm the existence of a Proto-Albanian ethnos at southern Balkans prior to the Medieval Ages.

(3.3.ii). According to the hypothesis of Old-European (3.2.iii), some non-IE languages had been spoken in Neolithic Europe (7000-1700 BCE), until they were gradually replaced by the migrating Indo-Europeans, coming from the steppes of the Pontic-Caspian region [70]. The notion of Old-European is linked to the civilization of the Danube valley (5000-3500 BCE) and its associated but undeciphered script [71], as well as to Basque, Etruscan [72] and Pelasgic [58], being non-IE languages. In the case of Basque, for example, the hypothesis that they were an indigenous population (and language), being gradually isolated by the IE migration, is preferred to the reverse option of having been a migrating population from the steppes to an IE Iberia, as well. So, to begin with this notion and until now, genetics provide tenable argumentation: The Balkans at the beginning of the 3<sup>rd</sup> millennium BCE (i.e., 3000 BCE) had been already inhabited for 3,500 years by a mixed population that originated from Anatolia and locals, “with intermittent genetic contact with steppe populations occurring up to 2,000 years earlier than the migrations from the steppe that ultimately replaced much of the population of northern Europe” [73]. The latter migration, since 2900 BCE, is attributed to the Yamnaya (or Yamna) steppe pastoralists [74] that had reached Britain by 2400 BCE, through Central Europe [75]. Yet, there are no genetic traces of them in Anatolia (e.g., among the IE Hittites), putting the theory for the spread of Proto-IE from the Pontic-Caspian region at risk [76]. Nevertheless, the Yamnaya people had also a genetic ancestry from a population of Near East [77] (which is reminding of rules 3.1.i and 3.1.iii). The above evidences lead to the other theory of Proto-IE spread from Anatolia instead [78], based on the “archaic” linguistic features of the Anatolian languages, compared to the rest of the IE ones. The Anatolian languages are attested since the 2<sup>nd</sup> millennium BCE and their projection much further in the past tends to violate rules 3.1.i and 3.1.v, although not impossible. Yet, even in this case, at the time of interest regarding Pelasgic (2<sup>nd</sup> millennium BCE), the IE languages (and populations) were dominant in eastern Mediterranean [39] and the identification of Pelasgic with an Old-European language of non-IE origin should be rather excluded (even the nature of the alleged Old-European cannot be determined, unless the Danube scripts are deciphered, according to rules 3.1.vii-xiv).

(3.3.iii). Regarding the identification of Pelasgic with the IE Phrygian/Vrygian/Brygian (3.2.ii), it should be initially noted that the ancient Greek scholars referred to Phrygians as a distinct ethnos, considered by Herodotus of speaking the most ancient of



languages [47]. The Phrygian language is so much related to Greek as to form a common group of IE languages, the Graeco-Phrygian one [60]. It has been estimated that between 2300-2000 BCE the Phrygians had inhabited Thrace, Macedonia, parts of Thessaly, they had scattered communities in the rest of southern mainland Greece [79], by the end of the 2<sup>nd</sup> millennium BCE northwestern Anatolia [80] and the southern present-day Albania [47]. With the reservation of rule 3.1.i, the linguistic affinity and the geographical vicinity between Phrygian and Greek leads to the assumption that there is also a common anthropological ancestry. The genomic composition of the Mycenaean Greek and Minoan Crete populations revealed that they were genetically similar, having 75% of their ancestry from the first Neolithic farmers of western Anatolia and the Aegean, with the remainder from ancient populations related to those of Iran and the Caucasus; in addition, “the Mycenaeans differed ... in deriving additional ancestry from an ultimate source related to the hunter-gatherers of eastern Europe and Siberia, introduced via a proximal source related to the inhabitants of either the Eurasian steppe or Armenia” [81]. This genomic composition has been attested to Modern Greeks, as well, with a statistically insignificant percentage of Asian haplogroups and none from Africa [82]. This composition may justify a moderate ethnic diversity of strictly IE origin in southern mainland Greece of the 2<sup>nd</sup> millennium BCE [83]. Moreover, a broader genetic homogeneity has been recorded by Cavalli-Sforza [85], regarding the “Mediterranean” genotype, that includes the populations of western Anatolia, of Balkans roughly north of the Jireček Line [84] and of southern Italy (“Magna Grecia”). Haarmann [70] attempted to dispute Cavalli-Sforza, regarding the extent of this region, by stating that Greek populations did never settle, e.g., as far as central Anatolia etc. Haarmann confuses the ethnic identity with the anthropological one (rule 3.1.i). The anthropological homogeneity of the periphery of the Aegean Sea has been attested as such even before the Early Neolithic era, having eventually (i.e., since Bronze Age) two subtypes: the continental (main/highlanders) and the Aegean one (coast/islanders) [86]. In this respect, a genetic difference between Phrygian and Greek speaking populations cannot be anthropologically traceable, while the hypothesis that they both migrated in the region from far north by the late 3<sup>rd</sup> millennium BCE is not anthropologically verified. Subsequently, the suggestions about the autochthonous of the Greek language [87], at least since the 3<sup>rd</sup> millennium BCE [88], are valid. In conclusion, at the middle 1<sup>st</sup> millennium BCE that the ancient Greek scholars wrote about the obscure Pelasgians, the Phrygians were well-known to them as a distinct ethnos. If their languages (i.e., Pelasgic and Phrygian) had anything in common, then the ancient Greek scholars should

have mentioned something about it. Therefore, any affinity of Pelasgic with Phrygian should be limited. (3.3.iv). Finally, considering the potential affinity of Pelasgic with the Anatolian languages (3.2.i), the anthropological and ethnographical context of the 2<sup>nd</sup> millennium BCE will be outlined first. Regarding anthropological evidence, as presented previously (3.3.iii), no significant differentiation is attested between the populations of western Anatolia and southern Balkans. It could be claimed that the populations of southwestern Anatolia belong to the Aegean subtype of the Mediterranean genotype. It is especially reminded that they lack any genetic ancestry with the Yamnaya pastoralists (3.3.i). It is also noted that there is not a single case in the European history where a pastoral population (e.g., Ostrogoths, Visigoths or Franks), migrating or invading to agricultural/urbanized regions/societies (i.e., Italy, Spain or France respectively), being a minority (just like the genomic evidence denote in southern Balkans), managed to impose their language to the locals; on the contrary. Even the Romanians, situated at the very geographical corridor of migrations/invasions from the steppes to Balkans, remarkably managed to retain their Romance language. The eastern Balkans of mid-3<sup>rd</sup> millennium BCE had been such a place; it was not a land of savages, as demonstrated by the ornate artefacts from various metals [89]; that civilization is manifested 1,000 years earlier than the known long-distance commercial networks of the Mycenaeans towards Scandinavia [90] and the Levant [91]. Otherwise, the afore-mentioned context in Anatolia can be assessed both directly and indirectly. In the cultural zones of western Anatolia, the inner one (i.e., the relatively eastern that can be extended to the central Anatolian plateau) was dominated by the Luwian culture, which generally exhibited indirectly a certain influential contact with the early Greek world [92, 93]. The most influential zones of Anatolia had been the coastal one, in conjunction with the neighboring Aegean islands, inhabited by Lydians, Carians and Lycians (in a North to South order, respectively). The Lydian contact has been attested since the 1<sup>st</sup> millennium BCE [94], but a projection to the late 2<sup>nd</sup> millennium BCE is mainly from Greek mythology. The Carians had been an ethnos frequently mentioned by the ancient Greek scholars (e.g., by Homer in Iliad). They believed that they were related to Lydians and Mysians, as well as having a myth claiming a common ancestry with the Greeks, living in a close symbiosis, for more than a millennium, initially with the Mycenaeans and then with the Ionian Greeks. Since the 5<sup>th</sup> century BCE, the Carians gradually gave up their ethnic identity, culture, language and script, in favor of the Ionian Greek ones [95]. Their voluntary assimilation exhibits the same pattern as the one of Pelasgians (see section 1.1). Finally, the Lycians are the last population speaking



an Anatolian language to be mentioned. They were known by the Ancient Egyptians as allies of the Hittites, since the mid-2<sup>nd</sup> millennium BCE, and part of the Sea People (“Lukka”) [96]. Like their neighboring Carians before them, the Lycians had been voluntarily Hellenized after the campaign of Alexander the Great (ca. 300 BCE).

### 3.4 Factual elements

Given the scope of this study to determine the nature of Pelasgic, the factual elements herein are solely linguistic. Therefore, summarizing the presented argumentation so far, the ancient Greeks (since the 1<sup>st</sup> millennium BCE, onwards) had a vague idea about the nature of Pelasgic, in comparison to their knowledge about all the other neighboring languages (and nations) that included Thracians, Phrygians (3.3.iii) and the then existing Anatolian ones (3.3.iv). The cultural, anthropological and ethnographical evidence (see section 3.3) demonstrate that by the 2<sup>nd</sup> millennium BCE (at least [98]) there were only IE languages spoken at Greece, with the exception of Crete [13, 99]. In addition, the geographical disperse of the Pelasgian settlements, according to the ancient Greek historical sources [79], and the ethnographical patterns exhibited by Carians and Lycians that are identical to the mentioned for the Pelasgians ones (3.3.iv) directed this research towards an inquiry for a language (i.e., Pelasgic) related to other Anatolian ones, although without excluding a-priori other regional influences. In this respect and according to Finkelberg [39]: “there is reason to suppose that the languages that once were thought to constitute the so-called ‘pre-Hellenic substratum’ belong to the Anatolian group of the Indo-European languages.” Consequently, an overview of the Anatolian languages is initially considered necessary.

(3.4.i). The Anatolian languages constitute an extinct branch of IE, comprising Hittite, Palaic, the Luvic sub-branch [98] and Lydian [100]. There is a considerable confusion of terminology with the Luvic (or Luwic) sub-branch, which is often called just “Luwian languages” (confused so with original Luwian) or “Neo-Luwian languages”, the latter implying that they separated from the original Luwian. Considering rule 3.1.vi, a relative chronology in the development of languages (e.g., see [98]) is preferred herein instead of an absolute one (e.g., see [74]). Therefore, the term “Luvic (/Luwic)” [101] will be used herein to denote this language family that consists of Carian, Luwian, Lycian, Milyan, Pisidian and Sidetic. Recently Woudhuizen convincingly argued for the characterization of Etruscan as a “Colonial Luwian” language [102]. Yet, the inclusion of Etruscan in the Tyrsenian (or Tyrrhenian) family of languages [103] may require a revision of the Anatolian taxonomy. The Tyrsenian family include Etruscan, Rhaetic, probably Camunic (as arguably related to Rhaetic) and the so-called Lemnian from the Aegean island of

Lemnos, where it has been found on two inscriptions and a small number of other extremely fragmentary material [104]. The consequent question is whether to classify Tyrsenian as a sub-branch of the Luvic family or as a branch of the generic Anatolian. In the latter case and depending on a potential relation of Lydian with Etruscan [105] or Lemnian, Lydian could be either included in the Tyrsenian family or remain a distinct language of the Anatolian IE-family.

(3.4.ii). The connection of Anatolian languages with Greek are well attested, including Hittite, Luwian, Carian, Lydian, (pre-)Lycian and, especially for the herein inquiry, an unidentified Luvic language arguably of northwestern Anatolia [106], which, by the way, is opposite to the islands of Lemnos and Imbros. These two islands had been inhabited by Pelasgian settlers, according to Strabo, and especially Lemnos by those Pelasgians expelled from Attica, according to Herodotus [72]. Thus, in the 1<sup>st</sup> millennium BCE, three islands were considered by the ancient Greeks to be still inhabited by Pelasgians: Lemnos, Imbros and Crete [13]. Herodotus, half Carian himself, referred about Pelasgians “that he cannot be certain about the language they spoke, but judging from some remnants of Pelasgian speaking people and various place-names left in Greece, he concludes that they spoke a barbarian (i.e., non-Greek) language” [13]. Presumably, this language (i.e., Pelasgic) could not have been either the known Thracian/Phrygian (3.3.iii) or Carian, although both Finkelberg [39] and Woudhuizen [79] suspect that it is highly likely to be Anatolian, especially a western one. In 2008, B.Z. Szalek published a long catalogue of common or similar words between Eteocretan, Linear A, Etruscan, Lemnian, Carian and Eteocypriot [107], demonstrating so the relevant linguistic influences. In 1912, I. Thomopoulos published a monumental work that presented a meaningful decipherment of the Lemnian inscriptions (3.4.i), along with the supposed Eteocretan inscriptions of Crete (i.e., Pelasgic), by using the “original vocabulary” of Albanian (3.3.i), considering it Pelasgic. He had also demonstrated the linguistic affinity of the “original vocabulary” to Lycian, Carian, Etruscan and Hittite, among others. That work was republished commented in 1994 [108]. Unfortunately, written in Greek, it passed unnoticed by the international archaeolinguistic community, while in Greece it was largely (and rather deliberately) ignored, trapped in the expediencies of regional nationalisms (i.e., Albanian and Greek), because Thomopoulos was neither a linguist nor a philologist [109]. Despite its inevitable inaccuracies and exaggerations, if the essential part of Thomopoulos’ work [108] will be linguistically verified, then it will result in the definite classification of Pelasgic as an Anatolian language; specifically, either the language of the Luvic family



spoken in Greece, different from Luwian because of their vocalism [110] or, alternatively, a language of the Tyrsenian family (3.4.i). Finally, it will identify the “original vocabulary” of Albanian with Pelasgic, leading so to the last linguistic/ethnic dispute below. (3.4.iii). The Albanian language comprises two main dialects, the northern Gheg and the southern Tosk. Both consist of several dialects, where among those of the Tosk one is Arvanitics, the dialect of the bilingual Arvanitan Greeks, who mainly live in Attica and the surrounding regions (southern Greece) [111]. Arvanitics is an endangered language, because it has been rarely written, along with several other reasons combined [112]. It has been cut off by the rest of the Albanian dialects since the 13<sup>th</sup> century CE and, being very conservative, it has retained the medieval linguistic elements of Albanian [111], having increased Greek elements [113] because of the bilingualism. Due to these peculiarities, Arvanitics are of great interest for the study of Greek-Albanian linguistic relations [114]. Alas, Arvanitics and Arvanitan Greeks are a target of the Albanian nationalism for their whatever purposes (3.3.i), while many Arvanitan Greek publicists react by rejecting the identification of “their” language (actually, the “original vocabulary”: 3.4.ii) to Albanian, claiming it to be an extremely archaic Greek language [115]. Regardless of the tenability of this dispute that refers to the “original vocabulary”, which is beyond the scope of this study, the Arvanitic vocabulary [116] is an additional valuable source for the attestation of Pelasgic in Thomopoulos’ work [108], being medieval in origin and thus of the oldest possible linguistic tools available for this purpose.

#### 4. CONCLUSIONS

Even if it seems that the ancient Greeks had used the term “Pelasgians” as a generic one to denote ancient populations of the Aegean periphery (i.e., Greece and western Anatolian coasts), nowadays this term and the corresponding language (i.e., Pelasgic) is not necessary to be so vague. In the 2<sup>nd</sup> millennium BCE, this broader region had been inhabited by populations that ethnographically can be denoted as Pelasgians, Anatolians (Lycians, Carians, etc.), Greeks and Thracian/Phrygians, the latter three indisputably speaking IE languages. The anthropological evidences (see subsection 3.3) do not infer any major differentiation, unless the existence of two sub-types, a more “mainlander” and a more “islander” one (3.3.iii). In this respect, mostly the Anatolian languages could be reasonably linked to “islanders” (3.3.iv). In addition, the ancient Greek sources located the Pelasgians to the same, more or less, coastal areas or islands inhabited once by Anatolian speaking populations [79]. One of those islands had been Lemnos (the other important one being Crete), which plays a key-role in the identification of Pelasgic (3.4.ii). According to the

ancient Greeks, Lemnos had been affirmatively inhabited by Pelasgians (“Tyrsenian” Pelasgians), who left there a few inscriptions; although undeciphered, these inscriptions have been designated as written in the so-called Lemnian language, which in turn is classified in the same linguistic family with Etruscan; the Etruscan have been recently characterized as an Anatolian language (3.4.i). Therefore, the Pelasgians of Lemnos spoke a language potentially related both to Etruscan and to the Anatolian linguistic family (3.4.i). By this inference, Pelasgic can be initially affiliated with the IE branch of Anatolian languages.

In 1994, the unnoticed and neglected work of Thomopoulos [108] had been republished, where, meaningful decipherments of the Lemnian (and some Cretan) inscriptions are presented (3.4.ii). These, unverified yet, proposals were achieved by using the so-called “original vocabulary” of Albanian, which practically coincides with the Arvanitic dialect of the Arvanitan Greeks of southern Greece (3.4.iii), indisputably of IE origin. Moreover, this “original vocabulary” has been connected with other Anatolian languages, including Etruscan. If it will be proved correct, this attempt will definitely classify Pelasgic as an IE language of the Anatolian family, whose remnants have survived in Albanian and/or Arvanitics. It will also cause a revision of the content and taxonomy of the Anatolian, as a family of IE languages. Finally, regarding the birthplace of the Proto-IE language, the overall content of this study indicates that the neglected third hypothesis, besides the Pontic and the Anatolian one (3.3.ii), that of Balkans [117], cannot become obsolescent yet; moreover, a fourth unifying one has emerged, proposing the Proto-IE as a coastal koine of the Black Sea, developed because of the intense trading networks in the Late Chalcolithic and Early Bronze Ages, all around Black Sea [118]. For this inquiry, the application of Information Systems modelling in Humanities, especially via OMAS-III (see section 2), constitutes a comprehensive conceptual method for the classification, interconnection and interpretation of the diverse relevant tokens, as it has been demonstrated herein.

#### REFERENCES

1. Abel V., Snyder L. (1966). “Fifth Century B.C. Concepts of the Pelasgians.” Stanford, CA: Stanford University.
2. Krasanakis A.G (1977). “The World Writing (1st Edition).” Athens: Athina Publications (in Greek).
3. Harrison T. (1998). “Herodotus’ Conception of Foreign Languages.” *Histos*, 2: 1–45.
4. Finkelberg M. (2006). “Greeks and Pre-Greeks: Aegean Prehistory and Greek Heroic Tradition.” Cambridge: Cambridge University Press.



5. Georgiev V.I. (1977). "Trakite I tehniyat ezik." Sofia, Bulgaria: Bulgarian Academy of Sciences (in Bulgarian).
6. Hahn J.G. von (1854). "Albanesische Studien." Jena: F. Mauko (in German).
7. Van Windekens A.J. (1960). "Études Pélasgiques." Louvain-la-Neuve, Belgium: Université de Louvain, Institut Orientalistique (in French).
8. Gordeziani R. (1985). "Pre-Grecian and Georgian." Tbilisi, Georgia.
9. Graves R. (1990). "The Greek Myths." London: Penguin Books.
10. Haarmann H. (1995). "Early Civilization and Literacy in Europe: An Inquiry into Cultural Continuity in the Mediterranean World." Berlin & New York: Mouton de Gruyter.
11. Sakellariou M.B. (1977). "Peuples Préhelléniques d'Origine Indo-Européenne." Athens, Greece: Ekdotiki Athinon (in French).
12. Murray G. (1960). "The Rise of the Greek Epic." New York, NY, and Oxford, United Kingdom: Oxford University Press.
13. Kenanidis I.K., Papakitsos E.C. (2020). "The Eteocretan Substratum in Late Ancient Greek Nomenclature." *Global Academic Journal of Humanities and Social Sciences*, 2(3): 44-55.
14. Papakitsos E. (2013). "The Systemic Modeling via Military Practice at the Service of any Operational Planning." *International Journal of Academic Research in Business and Social Science*, 3(9): 176-190.
15. Papakitsos E.C. (2016). "The Application of Systems Methodology to Curriculum Development in Higher Education." *Higher Education Research*, 1(1): 1-9.
16. Papakitsos E.C., Chatzistratidi F., Makrygiannis P.S., Kardara M. (2016). "The Application of Communicational Criteria in Designing Educational Websites." *Proceedings of the 8th Conference on Informatics in Education (CIE2016)*, pp. 392-401, University of Piraeus, 14th-16th of October 2016 (in Greek).
17. Papakitsos E.C., Karakiozis K., Foulidi X. (2017). "Systemic methodology for inclusive education policies in areas with acute social problems." *European Journal of Alternative Education Studies*, 2(1): 32-47.
18. Foulidi X., Papakitsos E.C. (2018). "An application of Systems Inquiry for preventing dropout in a particular context of adult education." *Educational Journal of the University of Patras UNESCO Chair*, 5(1): 17-26.
19. Foulidi X., Papakitsos E.C., Karakiozis K. (2019). "An application of systems science for the improvement of the pedagogical climate of a school." In N. Kalava-Mylona, O. Kalouri, F. Katsabouri, A. Botou, E. Katsigianni, I. Kontzinou & N. Tsergas (eds.), "Thoughts, opinions and reflections on issues of Counseling and Vocational Guidance: Tribute Volume to the Memory of Spyros Krivas" (pp. 283-299). Athens: ELESYP & Pedio (in Greek).
20. Mavrakis A., Papakitsos E.C., Papapanousi C. (2019). "Systemic improvement of the organization of the environmental education centers." In N. Kalava-Mylona, O. Kalouri, F. Katsabouri, A. Botou, E. Katsigianni, I. Kontzinou & N. Tsergas (eds.), "Thoughts, opinions and reflections on issues of Counseling and Vocational Guidance: Tribute Volume to the Memory of Spyros Krivas" (pp. 185-203). Athens: ELESYP & Pedio (in Greek).
21. Mavrakis A., Papakitsos E.C., Papapanousi C., Papavasileiou C. (2019). "An Application of Systems Science for the Usage of Web-tools in Environmental Education: The Case of Western Attica, Greece." *Journal of Research Initiatives*, 4(2): Article 4.
22. Papakitsos E.C., Theologis E., Makrygiannis P.S. (2020). "The Challenges of Work-Based Learning via Systemic Modelling in the European Union: The Potential Failure of Dual Education Due to Social Expectations in Greece." In Okolie U.C. (ed.), "Socio-Economic Perspectives on Vocational Skill Development: Emerging Research and Opportunities" (pp. 188-228). Hershey, PA: IGI Global
23. Papakitsos E.C., Korakidi G., Vamvakeros X., Papavasileiou C., Giannopoulos S., Mavrakis A. (2020). "A Systemic Intervention of Traffic Education Focused on Road Safety." *International Journal of Education Humanities and Social Science*, 3(2): 182-194.
24. Papakitsos E.C., Katsigiannis S.V. (2015). "An Application of Systems Theory to the Perception of Combat in Martial Arts." *International Journal of Martial Arts*, 1 (Article 2): 25-34.
25. Papakitsos E.C., Foulidi X., Vartelatou S., Karakiozis K. (2017). "The contribution of Systems Science to planning in local educational administration." *European Journal of Education Studies*, 3(3): 1-11.
26. Papakitsos E.C. (2019). "A Method of Systems Science for Planning Martial Training." *International Journal of Martial Arts*, 5 (Article 8): 1-17.
27. Papakitsos E.C., Makrygiannis P.S., Tseles D.I. (2015). "Modelling the application of Blended-Learning in Career Guidance projects of the Hellenic Secondary Education." *International Scientific Conference eRA-10: The SynEnergy Forum, Piraeus University of Applied Sciences, Aigaleo, Greece, 23rd-25th of September 2015*.
28. Papakitsos E.C. (2018). "The systemic relation between education and labour-market in the contemporary Greek economy." *Review of Counselling and Guidance*, 111-112: 106-118 (in Greek).
29. Paschaliori V., Papakitsos E.C. (2018). "The conceptual mapping of Systems Methodology in Career Counseling." In *Proceedings of the PESYP Scientific Conference: "Counselling & Vocational Guidance in the Education of the 21st Century"* (pp. 340-350), ASPETE, Iraklio Attikis, Greece, 19th-20th of October 2018 (in Greek).
30. Papakitsos E.C., Monastiroglou A., Ntourou E., Syrma K., Tzoutzouli M. (2020). "An application



- of systems inquiry in the evaluation of School Vocational Guidance websites." *e-Journal of Science & Technology*, 15(1): 21-39 (in Greek).
31. Makrygiannis P.S., Papakitsos E.C. (2015). "Writing or programming an essay? An interdisciplinary systemic experiment in language teaching." *Journal of Global Research in Education and Social Science*, 4(1): 16-24.
32. Papakitsos E., Makrygiannis P., Foulidi X. (2016). "The teaching of writing production with the contribution of computational linguistics." *Journal of Applied Linguistics*, 31: 70-83 (in Greek).
33. Giachos I., Papakitsos E.C., Chorozioglou G. (2017). "Exploring natural language understanding in robotic interfaces." *International Journal of Advances in Intelligent Informatics*, 3(1): 10-19.
34. Giachos I., Papakitsos E.C., Makrygiannis P.S. (2017). "An Experiment of Language Communication Learning in a Robotic System." *Proceedings of the 9th Conference on Informatics in Education (CIE2017)*, pp. 46-56, University of Piraeus, 13th-15th of October 2017 (in Greek).
35. Papakitsos E.C. (2019). "An Application of Systems Science in Humanities: Investigating the Origins of the Minoan Civilization." *Sumerian Journal of Social Science*, 2(4): 33-44.
36. Papakitsos E.C. (2020). "Inquiring into the Origin of the Minoan Civilization via Information Systems Modelling in Humanities." *GPH - International Journal of Social Science & Humanities Research*, 3(5): 40-58.
37. Theodorakatos D. (Ed.) (1983). "New Dictionary of C. Giovanis – Thesaurus of the whole Hellenic language." Athens, Greece: C. Giovanis (in Greek).
38. Konidaris D. (2020). "The history of Mathematics and Exact Sciences in antiquity: Discrimination and aposiopesis." Athens: Kindle Edition.
39. Finkelberg M. (1997). "Anatolian Languages and Indo-European Migrations to Greece." *The Classical World*, 91(1): 3-20.
40. Duhoux, Y. (2000). "How Not to Decipher the Phaistos Disc: A Review Article." *American Journal of Archaeology*, 104(3): 597-600.
41. Menezes A.J., van Oorschot P.C., Vanstone S.A. (1996). "Handbook of Applied Cryptography." Boca Raton, FL: CRC Press.
42. Mackay A. (1965). "On the Type-Fount of the Phaistos Disc." *Statistical Methods in Linguistics*, 4: 15-25.
43. Finkelberg M. (2013). "Pre-Greek Languages." *Encyclopedia of Ancient Greek Language and Linguistics*. Leiden, The Netherlands: Brill.
44. Melchert H.C. (2012). "The Position of Anatolian." Los Angeles, CA: The University of California, Los Angeles (UCLA).
45. Rix H. (2008). "Etruscan." In Woodard, R.D. (ed.), "The Ancient Languages of Europe" (pp. 141–164). Cambridge: Cambridge University Press.
46. Thonemann P. (ed.) (2013). "Roman Phrygia: culture and society." Cambridge: Cambridge University Press.
47. Lekakis G. (2017). "The 'golden' myth of Midas, the Macedonian-Thracian Phrygians, Gordion, Gordian and the Gordian knot." Lecture given to the Society for the Study of Ancient Greek Mythology (EMAEM), at the National Research Foundation, on 2.2.2017 (in Greek).
48. Gimbutas M. (2007). "The Goddesses and Gods of Old Europe: Myths and Cult Images." Berkeley & Los Angeles: University of California Press.
49. Schwandner-Sievers S., Fischer B.J. (eds.) (2002). "Albanian Identities: Myth and History." Bloomington, IN: Indiana University Press.
50. Peza L., Peza L. (2014). "Hitite Language is a Dialect of Pelasgian/Albanian Language." *Dodona*, 1: 40-43.
51. Hammond N.G.L. (2001). "Collected Studies: Further Studies on Various Topics." Amsterdam, The Netherlands: Hakkert.
52. Bonefoy Y. (1993). "American, African, and Old European mythologies." Chicago, IL: University of Chicago Press.
53. Ralph P., Coop G. (2013). "The Geography of Recent Genetic Ancestry across Europe." *PLOS Biology*, 11(5): e1001555.
54. Jones S. (2002). "The Archaeology of Ethnicity: Constructing Identities in the Past and Present." England: Routledge.
55. Millakui S. (2018). "The Role and the Operation of Albanian Language in Balkans." *European Journal of Literature, Language and Linguistics Studies*, 2(2): 22-34.
56. McColl Millar R., Trask L. (2015). "Trask's Historical Linguistics." England: Routledge.
57. Sawicka I. (2013). "A Crossroad Between West, East and Orient - The Case of Albanian Culture." *Colloquia Humanistica*, No. 2, Instytut Slawistyki Polskiej Akademii Nauk.
58. Imholz K. (2018). SUPPER, ANGER, EARTH: Exploring the Mysteries of Albanian Culture and Civilization." *The Journal of Archaeomythology*, 8: 125-145.
59. Matasovic R. (2019). "A Grammatical Sketch of Albanian for students of Indo-European." Zagreb: <http://mudrac.ffzg.unizg.hr/~rmatasov/Albanian.pdf>
60. Kortlandt F. (2017). "The disintegration of the Indo-European language family." In F. Blažek, "Etymologus" (pp. 267-276). Hamburg: Baar.
61. Hamp E.P. (1963). "The Position of Albanian, Ancient IE dialects." In H. Birnbaum & J. Puhvel (eds.), *Proceedings of the Conference on IE linguistics held at the University of California, Los Angeles, April 25–27, 1963*.
62. Orel V. (1988). "Albanian Etymological Dictionary." Leiden: Brill.
63. Russu I.I. (1995). "Obârșia tragică a românilor și albanezilor. Clarificări comparativ-istorice și etimologice. Der thrakische Ursprung der Rumänen und Albanesen. Komparativ-historische



- und ethnologische Klärungen." Cluj-Napoca: Dacia.
64. Schramm G. (1994). "Anfänge des albanischen Christentums: Die frühe Bekehrung der Bessen und ihre langen." Folgen: Rombach.
65. Madgearu A., Gordon M. (2008). "The Wars of the Balkan Peninsula: Their Medieval Origins." Scarecrow Press.
66. Malcolm N. (1998). "Kosovo, a short history." London: Macmillan.
67. Fine J. Van A. (1991). "The Early Medieval Balkans: A Critical Survey from the Sixth to the Late Twelfth Century." University of Michigan Press.
68. Ashley J.R. (2004). "The Macedonian Empire." Jefferson, NC: McFarland.
69. Peza L., Peza L. (2015). "New Knowledges on the Hittite Language and its Relations with Proto-Indo-European One." In the conference "Hrozný and Hittite: The First Hundred Years", Charles University, Prague, 12-14 November 2015.
70. Haarmann H. (2007). "Indo-Europeanization – the seven dimensions in the study of a never-ending process." *Documenta Praehistorica*, XXXIV: 155-175.
71. Merlini M. (2009). "Neo-Eneolithic Literacy in Southeastern Europe: an Inquiry into the Danube." *Biblioteca Brukenthal XXXIII*, Ministry of Culture of Romania and Brukenthal National Museum, Editura Altip, Alba Iulia.
72. Perono Cacciafoco F. (2013). "Indo-European Origins: The problem of Basque and Etruscan." Singapore: Nanyang Technological University (NTU).
73. Mathieson I. et al. (116) (2018). "The genomic history of southeastern Europe." *Nature*, 555(7695): 197-203.
74. Quiles C., López-Menchero F. (2017). "North-West Indo-European." Badajoz, Spain: Academia Prisca. DOI: 10.13140/RG.2.2.28327.65445
75. Olalde I., Brace S., Reich D. et al. (100) (2018). "The Beaker phenomenon and the genomic transformation of northwest Europe." *Nature*, 555: 190–196. <https://doi.org/10.1038/nature25738>
76. Price M. (2018). "These Asian hunter-gatherers may have been the first people to domesticate horses." *Science*, May 9: doi:10.1126/science.aau1284
77. Haak W., Lazaridis I. et al. (37) (2015). "Massive migration from the steppe was a source for Indo-European languages in Europe." *Nature*, 522(7555): 207–211.
78. Renfrew C. (2003). "Time Depth, Convergence Theory, and Innovation in Proto-Indo-European: 'Old Europe' as a PIE Linguistic Area." In A. Bammesberger & T. Vennemann (eds.), "Languages in Prehistoric Europe" (pp. 17–48). Heidelberg: Universitätsverlag Winter GmbH.
79. Woudhuizen F.C. (2018). "Indo-Europeanization in the Mediterranean" (Papers in Intercultural Philosophy and Transcontinental Comparative Studies – No. 16). Hoofddorp, The Netherlands: Shikanda Press.
80. Woudhuizen F. (2018). "Recurrent Indo-European Ethnonyms." In Pius Mosima (ed.), "A Transcontinental Career, Essays in honour of Wim van Binsbergen." Hoofddorp, The Netherlands: Shikanda Press.
81. Lazaridis I., Reich D., Krause J., Stamatoyannopoulos G. (Corresponding authors) et al. (30) (2017). "Genetic origins of the Minoans and Mycenaeans." *Nature*, 548: 214-218.
82. Triantafyllidis K. (2017). "The genetic origin of Greeks." In Proceedings of the International Conference by S.A. Paipetis (Ed.), "Ancient Greece and the Modern World" (pp. 285-298). Ancient Olympia, Greece, 28-31 August 2016 (in Greek).
83. Woudhuizen F.C. (2013). "Traces of ethnic diversity in Mycenaean Greece." In *Études* (tome LVII, pp. 5-21). Bucarest: Dacia N.S.
84. Jireček K. (1911). "Geschichte der Serben." Gotha: Friedrich Andreas Perthes.
85. Cavalli-Sforza L.L. (1996). "The spread of agriculture and nomadic pastoralism: insights from genetics, linguistics and archaeology." In D.R. Harris (ed.), "The Origins and Spread of Agriculture and Pastoralism in Eurasia" (pp. 51-69). London: UCL Press.
86. Poulianos A.N. (2014). "The Origin of Greeks." Athens, Greece: <http://www.pare-dose.net/5070> (in Greek).
87. Renfrew C. (1995). "'Ever in process of becoming': the autochthony of the Greeks." In J.A. Koumoulides (ed.), "The Good Idea: Democracy and Ancient Greece" (pp. 7–28). New Rochelle, NY: A.D. Caratzas.
88. Georgiev V.I. (1981). "Introduction to the History of the Indo-European Languages." Sofia: Bulgarian Academy of Sciences.
89. Alexandrov S. (2018). "The Early and Middle Bronze Age in Bulgaria: Chronology, Periodization, Cultural Contacts and Precious Metal Finds." In S. Alexandrov, Y. Dimitrova, H. Popov, B. Horejs, K. Chukalev (eds.), "Gold & Bronze: Metals, Technologies and Interregional Contacts in the Eastern Balkans during the Bronze Age" (pp. 85-95). Sofia, Bulgaria: National Archaeological Institute with Museum; Bulgarian Academy of Sciences.
90. Suchowska-Ducke P. (2016). "The Mycenaeans and Europe: Long-distance networks and cross-cultural communication." In O.C. Aslaksen (ed.), "Local and Global Perspectives on Mobility in the Eastern Mediterranean. Papers and Monographs from the Norwegian Institute at Athens" (vol. 5, pp. 63-81). Athens: The Norwegian Institute at Athens.
91. Pieniżek M., Pavúk P., Kozal E. (2018). "The Troad, South Aegean, and the Eastern Mediterranean: Long-Distance Connections during the Middle and Late Bronze Age." In B. Nessel, D. Neumann & M. Bartelheim (eds.), "Bronzezeitlicher Transport: Akteure, Mittel und



- Wege" (pp. 375-410). Tübingen: Tübingen University Press.
92. Pavúk P. (2015). "Between the Aegeans and the Hittites: Western Anatolia in the 2nd Millennium BC." In N.C. Stampolidis, Ç. Maner, K. Kopanias (eds.), "Nostoi: indigenous culture, migration + integration in the Aegean Islands + Western Anatolia during the late bronze +early iron ages" (pp. 81-113). Istanbul: Koç University Press.
93. Bachhuber C. (2013). "James Mellaart and the Luwians: A Culture-(Pre)history." In A. Mouton, I. Rutherford & I. Yakubovich (eds.), "Luwian Identities: Culture, Language and Religion Between Anatolia and the Aegean" (pp. 279-304). Leiden & Boston: Brill.
94. Ricl M. (2014). "Continuity and Change in Anatolian Cults: The Case of Lydian Confession-Inscriptions." *Belgrade Historical Review*, V: 7-21.
95. Herda A. (2013). "Greek (and our) Views on the Karian." In A. Mouton, I. Rutherford & I. Yakubovich (eds.), "Luwian Identities: Culture, Language and Religion Between Anatolia and the Aegean" (pp. 421-506). Leiden & Boston: Brill.
96. Drews R. (1995). "The End of the Bronze Age: Changes in Warfare and the Catastrophe ca. 1200 B.C." Princeton: Princeton University Press.
97. Kargakos S.I. (2000). "Albanians, Arvanitans, Greeks: Studies" (2<sup>nd</sup> edn.). Athens: I. Sideris.
98. Woudhuizen F.C. (2010). "Towards a Chronological Framework for Significant Dialectal Tendencies." *The Journal of Indo-European Studies*, 38(1 & 2): 41-131.
99. Kenanidis I.K., Papakitsos E.C. (2015). "A Comparative Linguistic Study about the Sumerian Influence on the Creation of the Aegean Scripts." *Scholars Journal of Arts, Humanities and Social Sciences*, 3(1E): 332-346.
100. Hajnal I. (2001). "Lydian: Late Hittite or Neo-Luwian?" Innsbruck, Austria: Universität Innsbruck.
101. Yakubovich I. (2011). "Luwian and the Luwians." In S.R. Steadman & J.G. McMahon (eds.), "The Oxford Handbook of Ancient Anatolia" (pp. 534-547). Oxford: Oxford University Press.
102. Woudhuizen F.C. (2019). "Etruscan as a Colonial Luwian Language: The Comprehensive Version." Amsterdam: Dutch Archaeological and Historical Society.
103. Rix H. (2008). "Etruscan." In R.D. Woodard (ed.), "The Ancient Languages of Europe" (pp. 141-164). Cambridge: Cambridge University Press.
104. Marchesini S. (2009). "Le lingue frammentarie dell'Italia antica." Milano: Hoepli Editore (in Italian).
105. Beekes R.S.P. (2002). "The Origin of the Etruscans." *Bibliotheca Orientalis*, 59: 206-242.
106. Simon Z. (2018). "Anatolian influences on Greek." In Ł. Niesiołowski-Spanò & M. Węcowski (eds.), "Change, Continuity, and Connectivity: North-Eastern Mediterranean at the turn of the Bronze Age and in the early Iron Age" (pp. 376-418). Wiesbaden: Harrassowitz Verlag.
107. Szalek B.Z. (2008). "Eteocretan, Linear A, Etruscan, Lemnian, Carianan, Eteocypriot and related problems in the light of heuristics and cryptology." Szczecin, Poland.
108. Thomopoulos I. (1994). "Pelasgics." Thessalonica, Greece: Rigopoulos (in Greek).
109. Andriotis N.P. (1953). "Pre-Greeks." Thessalonica, Greece: Society of Macedonian Studies (in Greek).
110. Finkelberg M. (2000). "The Language of Linear A: Greek, Semitic, or Anatolian?" In R. Drews (eds.), "Greater Anatolia and the Indo-Hittite Language Family: Papers Presented at a Colloquium Hosted by the University of Richmond" (pp. 81-105). Washington, D.C.: Journal of Indo-European Studies, Monograph Series, Number 38.
111. Baltiotis L. (2007). "Identities and Diversities: Linguistic diversity in Greece." Athens: Ministry of Education - University of Athens (in Greek).
112. Kyriazis D.K. (2012). "Geographical distribution of Albanian-Arvanitic elements in Modern Greek idioms." *Modern Greek Dialects and Linguistic Theory*, 5(1): 162-183 (in Greek).
113. Dorian N.C. (ed.) (2001). "Investigating Obsolescence. Studies in Language Contraction and Death." Cambridge: Cambridge University Press.
114. Kyriazis D.K. (2001). "Greek influences in Albanian (I. Phonetic and morphological adaptation of Greek loans: II. Dictionary of Greek loans in Albanian)." Doctoral Thesis, Aristotle University of Thessaloniki, Thessalonica (in Greek).
115. Skliros I. (ca. 2018). "History of the Arvanitans and the Arvanitic language - With a vocabulary table of Arvanitic of Southern Greece." Athens: Archive of Culture (in Greek).
116. Tsopanis K. (2010). "Arvanitic dictionary." Athens: Noon (in Greek).
117. Diakonov I.M. (1985). "On the Original Home of the Speakers of Indo-European." *Journal of Indo-European Studies*, 13: 92-174.
118. Bauer A.A. (2011). "The Near East, Europe, and the 'Routes' of Community in the Early Bronze Age Black Sea." In T.C. Wilkinson, S. Sherratt, J. Bennet (eds.), "Interweaving Worlds: Systemic Interactions in Eurasia, 7<sup>th</sup> to 1<sup>st</sup> Millennia BC" (pp. 175-188). Oxford and Oakville: Oxbow Books.





# INTENSITY OF TECHNOLOGY INTEGRATION IN PRIMARY SCHOOLS IN TANZANIA: THE CASE OF MERU DISTRICT

**Dr. Thadei A. Kiwango**  
Lecturer,  
Department of Informatics,  
Institute of Accountancy Arusha,  
P. O. Box 2798 Arusha,  
Tanzania

Article DOI: <https://doi.org/10.36713/epra3607>

## ABSTRACT

*This study measured the ability of the proposed out-of-school time (OST) learning model to intensify technology integration among primary school learners in Tanzania. The intensity of technology integration was determined by the extent the target users adopted educational technology. A quasi-experiment was deployed, involving experimental and control groups. The main participants of the study were 310 pupils in Meru District, Arusha Region. Additionally, parents and teachers of the experiment group participated as per the requirements of the proposed model. The category of teachers included five (5) mathematics teachers and three (3) head teachers in six primary day schools. The experiment ran for three months and data was recorded using digital Video Disks (DVDs), DVD Players, mobile phones, home works and list of perceived best practices. Pupils in the experimental group were treated under the proposed model while those in the control group were under traditional practices. The extent to which pupils used the technology was determined by the number of questions they attempted by using the technology, and the results compared between them. The t-test indicated a statistically significant improvement in the intensity of use of educational technology by the experiment group as compared to the control group ( $t = 5.62$ ,  $N_1=167$ ,  $N_2=143$ ,  $SD_1=9.28$ ,  $SD_2=12.8$ ,  $p(0) < \alpha(0.05)$ ). These findings suggest the acceptance of the alternative hypothesis at 95% of confidence level and a conclusion that the proposed model improved the intensity of use of educational technology by OST learners in primary schools. This is suggestive of the need for the government to support projects related to integration of educational technology in order to trigger technology integration in Tanzania in general and in particular with regard to OST learning in primary schools. There is also need to investigate the ability of the proposed model to improve the intensity of use of educational technologies in other educational settings.*

## INTRODUCTION

Technology integration entails organization of instructional goals through the use of technology with the aim of making them coordinated and harmonious (Jolene, 1999). According to Ashleigh (2010) and David (2013), educational technology has also been found to be useful for application during out-of-school time learning for students in that it enhances the understanding of the concepts learnt at school, increases parental involvement, reducing costs, cultivating independent learning and building interest in school activities. Kimberly (2017) enumerates five major steps in technology integration, which subsume

definition of the required technology; definition of the vision for technology integration and building a systematic plan for the integration. The other steps include seeking stakeholders' support and implementing and reviewing the effectiveness of the technology integration. Nearly similar steps have also been put forward by John (2013); and the list includes a number of steps that include planning, engagement of stakeholders, mobilization of resources as well as execution and management of technology integration plan. In practice, these steps can be collapsed into common major steps that include identification of the goal and vision of technology integration and



development of an action plan in relation to budget, training needs and implementation strategies. The other steps are mobilization for stakeholders' engagements; implementation of the plan; and evaluation of the achievements of the objectives set forth.

The importance of a step-by-step planning and implementation of technology integration have been found to be imperative and prerequisite for success of technology integration especially in education and training in different parts of the world. For example, Jhurree et al. (2004) reports that the United Republic of Mauritius embarked on School IT Project that introduced ICT as among the subjects in primary schools from 2003. To make the initiative successful and effective, there was need to train teachers who would implement the project in schools. The deployed ICT teachers underwent initial training at the Mauritius Institute of Education and thereafter they were posted to primary schools countrywide. However, the teachers were later discouraged upon learning that the schools in which they were sent to implement the programme did not have the necessary ICT tools and infrastructure, including but not limited to computers, and this translated to disappointment to the whole nation state. In order to rescue the situation, the government decided to enhance the project through a phased-implementation approach and consequently some 50 computer laboratories were made available in 50 primary schools yearly. The phase-implementation approach was thus found to be feasible and realistic for realization of the intended goals. This is suggestive of the fact successful integration of technology in the context of education and training depends heavily on the degree to which the implementing agency and project initiators systematically follow pertinent principles and procedures as a requirement.

In the context of Tanzania, the rate of adoption of ICTs was initially constrained by the decision of the government to sanction the importation of computers in 1974. The situation, which greatly limited importation of computers to the country, seriously and negatively impacted on the use of computers, the situation which continued to the demise of the East African Community (EAC) in 1977. The collapse of EAC consequently necessitated the government of Tanzania to adopt the already computerized systems which were operative during the EAC, and afterwards the country adopted trade liberalization policy in 1980s (Mgaya, 1994). From the time onwards, the political will has been in favour of education as evidenced by approval of relevant policies which encourage the use of technology in education provision in the country, including the ICT Policy for Basic Education (URT, 2014).

Following the structural adjustments that witnessed trade liberalization in the 1980s, some projects which were directed adoption and use of ICTs in the education system have punctuated the scene. For example, the government of Tanzania showed the way by implementing ICT projects in Teachers' Colleges and secondary schools along with incorporation of computer as an independent course of study in the school curriculum. Other initiatives include eSchool Forum, Education Management Information System (EMIS), Tanzania Education Services Website, Computer Procurement and Refurbishment for Schools and Barclays Computer for Schools (Nyirenda, 2013).

The introduction of ICT in secondary school was intended to enhance the use of ICT in all secondary schools by 2015. Likewise, the Computer Procurement and Refurbishment for Schools was a programme that sought to avail used computers to schools after refurbishment before on ward supply to computer laboratories in mostly secondary schools. Moreover, the Tanzania Education Services Web site and EMIS were intended to manage and disseminate educational information whereas Barclays Computer for Schools Project had the intention of availing about 10,000 computers to approximately 500 schools across the country.

Apart from the endeavours championed by the government, local institutions and practitioners have never remained passive. Cases in point include, but not limited to, the Ubongo Kids (Communication Initiative Network, 2014). Indeed, the institution has joined the scene invested in the efforts directed to ICT integration particularly for OST learning. In the views of the Communication Initiative Network (2014), Ubongo Kids is among prominent institutions which produce series of educative cartoons in Tanzania; and it has been very instrumental in supporting children in learning science mathematics through songs, local stories and funs. Ubongo Kids has also successfully offered supplement programmes that have enhanced in-class learning especially with regard to coverage of difficult topics to ensure smooth understanding for pupils in primary schools.

Despite of different initiatives by governmental and non-governmental institutions to cherish integration of technology in education, it has been demonstrated in different studies that actual adoption and use of educational technology in Tanzania particularly as far as OST is concerned, still have a long way to go (Adomi and Kpangban, 2010; Swart and Wachira, 2010). According to Ashleigh (2010) and Surry and Ely (2001), one of the explanations behind the observed inadequacy is lack of strategies and models that entice learners to adopt and use technology



for their educational pursuits. This paper follows a Thesis developed by Kiwango in 2018, which was essentially for award of a doctoral degree in informatics. The Thesis was an attempt to model the hastening of technology integration for OST learning for primary school pupils in Tanzania. The focus of this paper is to evaluate the extent the model was successful in improving the intensity of technology integration.

## METHODOLOGY

The study used a quasi-experiment comprising experimental and control groups where the actual responded that were captured in the same were mainly 310 primary school pupils (167 and 143 from experimental and control groups respectively) drawn from six (6) day primary schools in Meru District, Arusha Region were involved. Additionally, the parents (127) together with teachers (5 mathematics teachers and 3 head teachers) of experimental group were involved as per the requirements of the proposed model to support the pupils in using the educational technology.

Although technologies like radio were also considered for the experiment, the use of DVDs was thought to be most relevant and could better suit the purpose of the experiment. For instance, DVDs could be used offline and conveniently enable pupils to access and use the content at their own convenience. But this technology also requires reliable source of power, and the Tanzania Electricity Supply Company (TANESCO) served as the main power supplier in Meru District. As a result, the sampling of schools and hence respective families considered the availability of power. However, schools which were located far from the Moshi-Arusha highway had limited access to electricity. For that case, the schools located in close proximity with the highway were most preferable. On the other hand, The target was to select schools of which 30 pupils from class five or six had access to televisions at home; and thus, they could use the supplied technological devices such as DVDs during out of school time.

It was also necessary to consider that the experiment would be conducted to schools and families of which their average socio-economic and cultural conditions represent the Tanzanian majority. It was advised by the District Chief School Quality Assurance Officer that; public Kiswahili medium schools were found to meet this requirement as compared to private English medium schools. It was explained by the District Education Office; that private schools, in which English is the medium of instruction, tend to be too expensive for most families to find places for their children. Likewise, the involvement of pupils from

public schools demanded the use of Kiswahili in designing the content of the technology. The content was made more relevant by adopting the syllabus developed by the National Examination Council of Tanzania (NECTA).

In the course of selecting the schools to be involved in the study, the number of Kiswahili-medium day schools was obtained from the District Education Office. The first 18 schools which were located closer to Moshi- Arusha highway were picked for the intended purpose. Then, class six and five pupils were asked to state whether their families own television. The leading six schools with more pupils with television at home were selected. Furthermore, the number of pupils with television at home were higher in class six than class five and hence class six pupils were selected.

In addition to having access to televisions, the degree of supervisory support extended to pupils at home during OST learning was also an important consideration. Thus, pupil were asked to rank the availability of parental supervisory supports at their homes. The ultimate goal was to standardise the supervisory supports among the selected schools. At the bottom line, 12 schools out of 18 had about 30 pupils who had access to television at home. Then, the 12 schools were arranged on the basis of OST learning supervisory support at home. The list was subsequently split into three groups each comprising four (4) schools where two schools at the mid of each category were selected making a sum of 6 schools. One of the selected schools was arbitrarily considered as experimental group and the other as control group. The aim was to see the extent the resultant model would speed up the intensity in the use of the provided educational technology.

The experiment ran for three (3) months during which the experimental group was subjected to the proposed model while the control group maintained traditional practices. DVDs packaged with instructional content based on class six NECTA syllabus were given to pupils in the two groups. To ease the use of the given technology, a list of perceived best practices on the use of the target technology was also availed to the pupils, parents and teachers of only the experimental group. The included best practices included the roles of pupils, parents and teachers in enabling efficient use of the given technology, and these features distinguished the two groups involved in the experiment.

The experimented questions and corresponding marking schedules were developed and evaluated by an independent panel consisting of two mathematics teachers from a school different from the two involved in the experiment. The examining panel was availed



with the DVDs for them to familiarize with the content and presentation of the same before carrying out their tasks. The DVDs comprised questions for different topics designed in a way that required a learner to view the technology content in order to respond to the tasks accordingly. In this context, the number of questions answered by a pupil was reasonably considered to relate to the intensity the pupil used the technology. After the tasks, the answer booklets were taken to the subject teachers for marking and rating, based on the marking schedule determined by the examining panel. The number of questions responded by each pupil was recorded as a base to determine the intensity of technology use.

Data was analyzed with the aid of the Statistical Package for Social Sciences (SPSS), and the resultant quantitative data was presented in percentages, mean and t-test and the results were compared across the two involved groups. T-test was deployed to check for any statistically significant improvement in the intensity of using the educational technology between the two groups.

## FINDINGS

A total of 167 pupils constituted the experimental and another 143 represented the control, where 165 questions were to be answered by the participating pupils. On one hand, the sum of questions responded by the experimental group was 11,022; making the mean of 66 (i.e.  $11022/167$ ) out of 165 questions. On the other hand, a sum of 4,004 questions with a mean of 28 (i.e.  $4004/143$ ) out of 165 questions were answered by pupils in control group. Based on the statistics, the mean of the experimental group (66) was twice as much as that of the control group (28). In terms of percentage, the mean of the experimental group accounts for 40% of all the 165 questions as compared to 16% of the control group. Furthermore, the t-test substantiated that the intensity of the use of the target educational technology varied significantly between the two groups such that:  $t = 5.62$ ,  $N_1=167$ ,  $N_2=143$ ,  $SD_1=9.28$ ,  $SD_2=12.8$ ,  $p(0) < \alpha(0.05)$ .

The results are indicative of the existence of substantial difference in the intensity of technology use in favour of the experimental group, demanding the acceptance of the alternative hypothesis at 95% confidence. On the basis of the results, therefore, deployment of the proposed model for integration of OST technology is likely to enhance the intensity of use of educational technology especially among primary school pupils during OST learning.

## DISCUSSION

The analysis of the findings in this paper reveals that although the use of educational technology enhances the intensity of use, the intensity of use of similar technologies among primary school pupils is not adequate. This trend is somewhat similar to the situation in-school situations because the two environments interact and influence one another to a great extent. Several studies have found the low usage of educational technology in Tanzania. For instance, Nihuka and Peter (2014) which found that only 11.4% of Tanzanian primary school pupils could use simple computer programmes. Moreover, some pupils less than 21.7% could use the internet to send and read e-mails. It was claimed that low ICT literacy could be explained by lacking accessibility of modern technological devices especially computers and smart phones. It was shown in the study that only 11.3% of primary school pupils had access to computers. Similarly, only 1.9% of pupils had access to the internet.

Kiwango (2020), established that the use of computers was still inadequate because of limited awareness, accessibility and the ability to use technological devices among pupils in Tanzanian primary schools. Specifically, the study unveiled that only 18.8% of primary school pupils in Tanzania knew the usefulness of computers while only 9.6% of pupils lived in families which owned computers. Given the small number of pupils who had access to computers, the implication is that most students were not even likely to learn how to use computers. It is also shown in the same study that only 16.6% of primary school pupils in Tanzania could use computers without the support of an expert. Therefore, the lacking awareness, accessibility and ability to use computers is likely to translate in low intensity of use of educational technology by pupils for OST learning.

Other previous studies have also found low intensity in the use of educational technology among school children. Among the factors attributed to the situation include low intensity of use of educational technology in schools, which is likely to have also affected its use in OST environments.

On the other hand, the low intensity in educational technology usage is attributed by the low intensity of educational technology use in schools, which may have probably adversely affected its use in OST environments. The UNESCO (2009) observes that the proportion of teaching staff adapting their skills to an ICT-enabled instruction model is small in developing countries and the nature and intensity of ICT use in schools is very low. Nevertheless, studies have revealed that primary schools' pupils are capable



of using the non-educational technology like television in OST contexts. For instance, Kiwango (2018) found that more than 50% of pupils in primary schools could use televisions at home; which implies that educational technology can also be exploited successfully if it is made available. However, availability of technology should also be accompanied by due guidance on the use of technology, and this is a necessary condition for enhanced intensity of use of technology for improved educational output. According to Kiwango (2018), a scientific model is necessary to entice the educational technology usage by primary school pupils in OST contexts.

## CONCLUSION AND RECOMMENDATIONS

It has been demonstrated in this paper that the intensity of use of educational technology in primary schools in the context of OST learning can be enhanced and guided by the use of a scientific model. It can be observed that the low intensity of use of educational technology in schools could have resulted from lack of awareness, accessibility and ability to use educational technology. Based on these observations, it is proposed that educational stakeholders, including parents, teachers, the government and the community as a whole should work together for the purpose of enhancing the intensity of using technology both in school and during out-of-school learning. One of the advantages expected to accrue from this partnership is that the persistent shortage of teaching and learning resources can be checked to a great extent leading subsequently to improved academic achievements among pupils. Some of the areas on which the partnership could focus include raising the awareness and improving accessibility of the available technological resources for possible integration into the education system for use both during school and out-of-school learning. Further studies that explore the interventions to raise the awareness and accessibility of educational technology resources and successfully integrated in educational systems in both school and out-of-school contexts are useful to improve the intensity of educational technology integration by OST primary school pupils in Tanzania.

## REFERENCES

1. Adomi, E. & Kpangban, E. (2010), *Application of ICT in Nigerian Secondary Schools*, Delta State University, Asaba.
2. Ashleigh, C. (2010), "Incorporating Technology in out-of-school time programs: Benefits, Challenges and Strategies", [[https://www.childtrends.org/wp-content/uploads/2010/03/child\\_trends-2010\\_03\\_01\\_rb\\_technologyost.pdf](https://www.childtrends.org/wp-content/uploads/2010/03/child_trends-2010_03_01_rb_technologyost.pdf)], site visited on 12/01/2015.
3. Ayoub K. et al. (2015), *ICT Use in Science and Mathematics Teacher Education in Tanzania*:
4. *Developing Technological Pedagogical Content Knowledge*, Australasian Journal of Educational Technology, Vol 31(4)
5. *Communication Initiative Network* (2014), "Ubongo Kids Cartoon Series", [<https://www.comminit.com/africa>], site visited on 4/5/2017.
6. David, A. (2013), "iPads in the Classroom: Embedding Technology in the Primary Curriculum", [<https://www.theguardian.com/teacher-network/teacher-blog/2013/mar/06/ipad-ipod-technology-primary-curriculum>], site visited on 13/03/2015.
8. George Lucas Educational Foundation (2007), "What Is Successful Technology Integration?", [<https://www.edutopia.org/technology-integration-guide-description>], site visited on 18/6/2017.
9. Jhurree, V. et al., (2004), "Student Teachers' Perceptions of Pedagogical Choices in a Pre-Service ICT Teacher Education Course": *MIE Journal of Education*, Vol. No. 3, 79-96.
10. John, D. (2013), "Diffusion of Innovations Relating to Educational Technology", [<https://meltingiceburgs.wordpress.com/2013/08/19/diffusion-of-innovations-relating-to-educational-technology/>], site visited on 20/3/2017.
11. Khasawneh, M. et al. (2012), "A Model for Adoption of ICT in Jordanian Higher Education Institutions". [<https://www.ibimapublishing.com/journals/jelhe/2012/.../877178.pdf>], site visited on 27/03/2015.
12. Kimberly, B. (2017), "The top 5 Steps for Successful Technology Integration", [<https://www.dentaleconomics.com/articles/print/volume-107/issue-4/practice/the-top-5-steps-for-successful-technology-integration.html>], visited on 4/4/2017.
13. Kiwango, T. A. (2018), *A model to hasten technology integration for out-of-school time primary school learning (Doctoral thesis)*. Tanzania: The University of Dodoma.
14. Kiwango (2020), "Accessibility, awareness and ability to use computers by primary school pupils" *EPRA International Journal of Research and Development*, Vol. 5, No. 5, 552-557.
15. Mgaya, K. (1994), "Development of Information Technology in Tanzania", [<https://www.tanzaniagateway.org>], site visited on 22/05/2015.
17. Nyirenda, M. (2013), "Planning for ICT Literacy in Public Schools in Tanzania", [<https://www.ippmedia.com/frontend/?i=62206>], site visited on 16/03/2015.
18. Safia, B., et al. (2004), "How a Web-based Course Facilitates Acquisition of English for academic



- purposes". *Language Learning & Technology*, Vol. 8, No.2, 33-49.
19. Swart P. and Wachira E. (2010), *Tanzania: ICT in Education Situational Analysis*,
  20. [[https://www.gesci.org/assets/files/Knowledge%20Centre/Situational%20Analysis\\_Tanzania.pdf](https://www.gesci.org/assets/files/Knowledge%20Centre/Situational%20Analysis_Tanzania.pdf)], site visited on 16/03/2015.
  21. *The International Society for Technology in Education (2004)*, "National Education Technology Standards (NETS) for teachers, students, and administrators", [<https://online.tarleton.edu>], site visited on 13/5/2017.
  22. UNESCO (2009), *Guide to Measuring Communication Technologies (ICT) in Education*. UNESCO Institute for Statistics. Montreal, Canada.
  23. Usluel, Y et al. (2008), "A Structural Equation Model for ICT Usage in Higher Education", *Educational Technology & Society*, Vol. 11, No. 2, 262-273.
  24. URT (2014), "ICT Policy for Basic Education", [[moe.go.tz](http://moe.go.tz)], site.



# PARENTAL RESPONSIBILITIES TOWARDS TECHNOLOGY INTEGRATION FOR OUT-OF-SCHOOL TIME LEARNING

**Dr. Thadei A. Kiwango**  
Lecturer,  
Department of Informatics,  
Institute of Accountancy Arusha,  
P. O. Box 2798 Arusha,  
Tanzania.

Article DOI: <https://doi.org/10.36713/epra3591>

## ABSTRACT

*This paper is an assessment of parental responsibilities in relation to supporting integration of technology in the context of out-of-school time (OST) learning. The assessment involved 78 parents from Arusha, Dar es Salaam and Mwanza regions in Tanzania. The aim was to discover the practices among parents in supporting their children to use educational technology in the home context. Criterion sampling applied and 11 best schools were picked from 11 divisions based on the 2015 NECTA Primary School Leaving Examination (PSLE) results. It is shown that parents have the potential to support the use of educational technology among children through procurement of educational technology, guiding material on the use of educational technology and giving instructions on the use of educational technology. Parents can also guide pupils on best to write summaries of key concepts, and also give questions on learned concepts. Moreover, parents are also potential for identifying useful programmes for use with educational technology thereby making children use technology for educational pursuits and avoid technology abuse and thus enhance their academic performance. The findings suggest the need for the schools to cooperate with parents and communities with a view to fostering the parental roles in the utilization of educational technology for OST learning. Further studies on how to improve the parental support towards the educational technology use by OST learners is inevitable in this digital world.*

## INTRODUCTION

The Indianapolis Afterschool Coalition (2002) views out-of-school time (OST) as comprising a variety of instructional activities before and after school, on weekends and during the vacations. This is a form of learning that complements the conventional classroom learning, and therefore, it can be improved through integration of educational technology. The efforts for the integration of educational technology in the educational system has been taken at global, regional and national settings. The World Summit on the Information Society (WSIS) (2003) requires nations to ensure that information and communication technology (ICT) is integrated into their educational systems. In response to this call, the African Ministerial Forum on ICT Integration in Education and Training instructed

all African nations to adopt policies which favour integration of educational technology into their education systems (Association for the Development of Education in Africa, 2013). Technology integration for African countries in particular is important as it helps them to avoid marginalization in the context of the ever-increasing global competitive environment (Kiwango, 2004).

ICT is accommodated in the Tanzania Vision 2025 as key towards social and economic advancement and poverty reduction; and this demands the use of ICT in all sectors of the economy and national life. In education and training, adequate investment in ICT is imperative if the quality of education is to be improved from the lowest levels. In the same veins, the Tanzanian National ICT Policy of 2016 aims at



improving human capital to enhance its capacity to ICT and consequently create a knowledge-based society. To this end, the Government of Tanzania encourages sustainable learning and use of ICT; which also entails effective application of ICT in the teaching and learning process. The Policy also demands that the Government enhance participation and understanding of its population on the usefulness of ICT to realize the goal of becoming a knowledge-based society.

Although concerted efforts have been made to integrate technology in education in various countries, the OST environment does not seem to be sufficiently considered. Consequently, even when technology procured, OST learners have been found to continuously abuse such an important window. For example, the UNICEF (2011) found that only 13.5% of learners used ICT to do their school assignments while 30% of learners spent most of their time chatting on social networks and 16% of them watched non-academic television programmes and movies. Moreover, hanging out with friends occupied 12% of the learners and 4% played computer games.

Similar findings reverberate in Terzian, Giesen, and Mbwana (2009) who found that access to learning technology does not necessarily translate to enhanced academic achievements; instead, access to educational technology needs to be backed up by pertinent strategies that can inspire learners perceive technology positively and consequently put to use. Terzian, et al. (2009) join Davis (1986) and Rogers (2003) and testify that technology adoption is equally cherished by psychological orientation and persuasion. In the same veins, Kiwango (2006) unveiled that Tanzania's efforts towards effective exploitation and nurturing of the ICT industry are significantly sanctioned by inadequate availability and applications of contextual frameworks for ICT integration particularly in OST settings. This research paper is an attempt to determining the responsibilities of parents in supporting pupils at home to efficiently use technology to enhance learning.

Parents are thus taken as important stakeholders in the education of their children, since they are also part and parcel of the community in which they live. This fact also aligns with the Epstein's Theory as it acknowledges parents as among the most important actors in the welfare and lives of children (Zedan, 2011). In the views of Epstein (2002), who is also the founder of this theory, involvement of parents in nurturing and guiding children to a great extent affects achievements in learning as it can be evident in six areas. The first evidence pertains to parenting; whereby parents are involved in all activities which are intended to raise children who are committed to learning activities. This is followed by communication as the second proof as parents are expected to supply teachers

with information regarding their children's educational practices.

Volunteering constitutes the third area of Epstein view as parents tend to volunteer in such school related matters as fund raising events and tutoring as well. The fourth area pertains to learning at home, and here parents are involved in children's academic pursuits in home settings; for instance, helping and guiding children on how to work on home assignments given at school. The fifth area is decision making; parents are expected to work with school on issues like leadership and participation in parents' committees and dissemination of information to other parents. Collaboration with the community is yet another area of parental involvement; and this constitutes the sixth area according to Epstein (2002).

Accordingly, parents collaborate with the community in identifying resources and services from the community and consequently enhance school programmes. Therefore, parental involvement should be one of key issues for effective technology integration in the context of OST. According to Catsambis and Garland (1997), Davidson (2017), Henning (2009) and Jonston (1996), the importance of parental involvement is evident in the creation of an enabling and supportive environment that inspires OST learners to engage in learning activities. This fact is also acknowledged by some influential scholars (U.S. Department of Education, 2005; Lyness, 2014; Morin, 2018; O' Hehir and Savelsberg, 2014).

## METHODOLOGY

### Research design and Location

The data for this paper was collected from a multiple case study which involved three regions of Tanzania, namely Arusha, Dar es Salaam and Mwanza. These regions were preferred because they represent the largest urban centres in the country while their populations were believed to be better served with technological services and devices (Lamudi, 2015; TCRA, 2013). These features and practical realities made the researcher believe that residents in the selected urban centres were more informed of educational technology and that they would be more likely to use the available technology for educational and other pursuits (Kelly, 2013). The study regions were further narrowed down such that Meru District Council (Arusha), Kinondoni Rural (Dar es Salaam) and Misungwi District Council (Mwanza) were investigated as peri-urban districts. The three districts were believed to represent moderate socio-cultural and economic features characterising majority of Tanzanians as compared to typical rural or urban settings.





### The preliminary study

The actual investigation was preceded by a preliminary study which sought to discover actual practices on how parents supported pupils who used educational technology in the home setting. It was also necessary to pick a school in which educational technology was actually used in teaching and learning, and one such a school was found in Arusha Region. The aim was to take the advantage of the respondents' experiences regarding actual use of educational technology. The researcher also thought that the use of educational technology in the classroom would inspire OST learners to also use technology during OST learning; and the practice could also win the support and involvement of parents as they use educational technology during OST learning.

A sum of 22 parents of best pupils in classes 4, 5 and 6 (based on previous examination results) were involved such that parents of three (3) best learners from three classes and three streams for each class were the target. As the involvement of parents was intended to identify the parental best perceived best practices of educational technology from successful stakeholders, parents of best performing pupils were the most relevant. It was rationally thought the best performing pupils would be more likely to learn before and after school and thus could also use educational technology as compared to their counterparts. Parents of class 7 learners were spared as their children had already graduated. Unstructured questionnaire was sent to parents through their children for them to indicate practices they considered the best as they guided pupils on the use of educational technology.

The perceived best practices identified by at least 50% of the respondents were incorporated in the list of the best practiced perceived by parents; and the list was verified by experts' opinions and literature review, subsequently leading to a structured questionnaire for respondents of the three research regions to rank their consensus with respect to the proposed practices. The questionnaires used the Likert scale traditions whereby respondents were to rank their perceptions in relation to each practice. In order to ensure clarity, the researcher had to familiarise pupils with the parents' questionnaires so that pupils could help parents by clarifying issues to their parents when needs arose. In case serious difficulty, parents could directly consult the researcher through the contacts given through pupils.

### Selection of the Research Districts and Divisions

As explained earlier, Misungwi, Meru and Kinondoni Rural districts were involved in the study. All the administrative divisions in the districts were

involved and the best school in each division was selected. As for Kinondoni Rural District, it was designed by the National Examinations Council of Tanzania (NECTA), and with the assistance of Office of the District Chief School Quality Assurance; the area was slotted into 4 approximately equal research units. This was intended to locate at most four (4) best schools in Kinondoni Rural so as to maintain a reasonable representation of the responses across the three regions.

### Primary schools as main participants

The UNICEF (2011) has identified primary school pupils as among the highly vulnerable to technology abuse, given their comparatively low reasoning and cognitive abilities. Therefore, the researcher thought that the study could help to address the challenge. The selection of primary school pupils was also motivated by the need to inculcate in them positive attitudes towards the use of technology while they are still young. This could in turn inspire them to embrace educational technology as they grow. Moreover, the researcher believed that appropriate use of the research results in primary schools would help them to deal with the challenge of inadequate instructional resources.

Purposive sampling was used to select a total of 11 schools from 11 divisions in the research regions. (i.e. 1 school x 11 divisions = 11 schools). The 2015 NECTA Primary School Leaving Examination (PSLE) results were used to select the best schools in the divisions. The purpose was to spread the selection over the districts to reflect the socio-cultural diversity of the regions. The assumption was that pupils in best schools were more likely to have engaged in OST learning more than pupils in poor schools; and thus, the probability of having engaged their parents was correspondingly higher. Similarly, parents were expected to have translated their traditional learning experiences into digital world. In total, some 78 parents filled out the questionnaire; and the Statistical Package for Social Sciences (SPSS) was deployed for data analysis.

### FINDINGS

This paper attempted to explore the best practices among parents as they support primary school pupils to appropriately use the educational technology in home settings. Parents were required to indicate the degree of agreement with perceived best practices based the Likert scale with five degrees of agreement (Strongly Disagree (SD), Disagreed (D), Neutral (N), Agreed (A), and Strongly Agreed (SA)). The results are shown in the following subsections.



### **Buying educational technology for children's use**

The results suggest that among the best practices among parents is the tendency of parents availing pupils with educational technology. This was confirmed by the number of parents who strongly agreed with the best practice in the three research regions whereby 46.2% of them were in Mwanza, 43.5% were in Dar es Salaam and 41.2% were in Arusha. The findings showed further that none of the parents in Arusha or Dar es Salaam strongly disagreed with the practice, while also none of them in Mwanza was neutral about the practice of availing necessary educational technology to children for use during OST learning. Based on the findings, therefore, it is logical to draw the conclusion that majority of parents are ready and determined to avail educational technology to their children, suggesting that they have realised the merits associated with the use of educational technology probably in relation to improvement of academic performance of their children in school and out of school as well.

### **Provision of guiding material on how to use the educational technology**

The questionnaire required parents to also indicate the level of their disagreement with the idea of providing guiding materials on how to use educational technology. The results unveiled that most parents were in strong agreement, as indicated by 47% of parents in Arusha, (34.6%) in Mwanza and 43.5% in Dar es Salaam. On the other hand, some parents indicated some disagreement or neutrality about the idea. This is indicative of the predictions that the majority of parents are informed of the fact that their children can learn independently, if they have necessary materials, especially guiding materials on how to use educational technology for learning.

### **Teaching children how to use educational technology**

As regards the need to instruct their children on the use of educational technology, between 34.6% and 39.1% of parents in the three regions were in strong agreement with the practice. Specifically, 39.1% of parents in Dar es Salaam, 35.3% in Arusha and 34.6% in Mwanza strongly supported the practice. Conversely, between 3.8% and 11.8% of the parents in the three study regions were strongly objected to the practice. In particular, 3.8% of parents in Mwanza, 4.3% in Dar es Salaam and 11.8% in Arusha strongly disagreed with the practice of teaching children how to use educational technology. This implies that most of the parents found it worth teaching their children how to use the educational technologies seemingly due to the awareness that teaching children how to use technology

would foster learning through technology and consequently enhance understanding of the subject matter for improved academic performance.

### **Instruction on writing the summary of learned concepts**

With regard to the practice of giving instructions to children on how to write down the summary of the learned content as best practice, the practice generally strongly substantiated by 52.9% of parents in Arusha, 50% in Mwanza and 39.1% in Dar es Salaam. It was also found that some parents constituting the minority of parents were opposed to the practice of instructing children on how to summarise the learned content. These included 5.9% of parents in Arusha and 4.3% in Dar es Salaam, who strongly disagreed, while none of the parents in Mwanza was neutral about instructing children on how to summarise the learned content. The findings are suggestive of the parents' commitment to instructing children on how they can write useful summaries of the content they learn and thus enhance the learning process. It could be the case that parents are informed of the advantages associated with the use of summary writing as a useful learning technique.

### **Questioning children on learned concepts**

Among the best practices on the questionnaire was the need to find out about what children learn. Parents were thus required to state the degree of their agreement with the practice of questioning children on learned contents. The findings unveiled that the most parents strongly agreed with the practice. This is attested in 35.3% of parents in Arusha; 42% in Mwanza and 43.5% in Dar es Salaam agreed with the practice. However, the minority disagreed as shown by 5.9% of parents in Arusha who disagreed with the practice while none of parents in Mwanza or Dar es Salaam was neutral or strongly disagreed about the practice. It could be concluded then that most parents find it worth questioning children to see what they have learnt. This also suggests that parents are interested in the assessment of the degree of children's understanding of instructional contents especially those delivered through educational technology.

### **Giving children a list of educational technology programmes**

The findings showed that between 38.5% and 30.4% of parents were in strong agreement with idea of giving pupils a list showing all digital educational programmes available for them to use in learning out of school. In contrast, some 5.9% of parents in Arusha were opposed to the idea while 7.7% of them in Mwanza were neutral about the proposal. The situation in Dar es Salaam was different as none of the parents disagreed with the proposal. Therefore, the findings



generally suggest that most of the parents find it useful to give pupils the lists of the programmes and encourage them to use the programme in learning especially in the OST contexts.

## DISCUSSION

This paper has shown that parents are important agency for successful use of educational technology by pupils especially after school time. This observation is in line with some previous studies as expounded in the literature. For example, Scott (2013), Villarruel and Lerner (1994) and Wertsch (1991) are of the view that if the OST environment is sufficiently supervised and accompanied by relevant learning activities, educational technology can strongly enhance students' academic performance. This is also in agreement with the socio-cultural theory that calls for active engagement of parents for effective use of educational technology during OST. This suggests that parents are among the key champions of in pupils' learning especially as far as OST learning is concerned.

It has also been found that parents are also important as they ensure the availability of a variety of educational materials to reinforce the use of technologies in OST learning; and by so doing they cherish social development in children (Henderson and Berla, 1994). It has also been found that most parents buy educational technologies for their children. For instance, the Project Tomorrow (2015) unveiled that 41% of parents were willing to buy their children educational technology for use in school especially when the school so recommended. The study also discovered that 64% of the parents were willing to contribute for technology costs annually. This suggests that parents are highly committed to buy educational technology for their children and, most importantly, parents are ready to guide children on how to better exploit educational technology by supporting a variety of learning activities (Bakker and Denessen 2007).

It is important to underscore the fact that teaching children how to use the educational technology requires a lot of time such that it could prove difficult to some parents. As demonstrated by Naumanen and Tukiainen (2007), learners with less ICT experience required more time to follow instructions and eventually use educational technology appropriately. As a result, parents can use alternative mechanisms, including buying materials which can be used by children to learn to operate and use the intended educational technology. Peter (2009) is of the view that parents should also teach children the best learning practices such as summary making and asking questions to monitor learning. Pertaining to the practice of guiding children on the use of educational technology in the contexts of OST learning, studies

show that the practice is positively correlated with enhanced school attendance, higher aspirations for college and positive attitudes towards school work (Clark, 1988; Hamilton and Klein, 1998; Huang *et al*, 2000; McLaughlin, 2000).

## CONCLUSIONS AND RECOMMENDATIONS

This paper has dwelt on the perceived best practices which parents can exploit to enhance the use of educational technology among school children for learning during OST. In particular, parents can encourage pupils to use educational technology in different ways. For example, they can buy them educational technologies; provide them with guiding material on the use of technology and teaching them how to use technology. Moreover, parents could give children instructions on summary writing and ask them questions to check the understanding of the learned concepts. Finally, parents could as well supply children with a list of useful programmes to be learned through educational technology.

Based on the observed findings, it is recommended in this paper that school administration should forge partnership with parents and the community as a whole, with a view to cherishing the parental roles with respect to the use of educational technology in OST learning. Partnership is necessary as it makes a way for establishment of community centres where the community can share their resources, experiences and knowledge with regard to the use of educational technology for OST learning. Similarly, government should mount different intervention strategies that can hasten integration technology for OST learning. The strategies could include sensitization and awareness campaigns to equip parents with necessary knowledge and skills pertaining to proper use of educational technology by school children during and after school learning time. It is equally important to examine practices in schools; to this end, the government in collaboration with key stakeholders should work together and improve support towards the use of educational technology by OST learners. This partnership may constitute part of solutions to the persistent shortages of teaching and learning resources particularly in primary schools in the country. Further studies on how the schools, government and other educational stakeholders would join hand in improving the parental support towards the educational technology use by OST learners is inevitable in this 21<sup>st</sup> technological oriented century.



## REFERENCES

1. Association for the Development of Education in Africa. (2013). African ministerial forum on ICT integration in education and training. Retrieved from <https://www.adeanet.org>.
2. Bakker, J. & Denessen, E. (2007). The concept of parent involvement. Some theoretical and empirical considerations. *International Journal about Parents in Education*, 2(2), 188-199.
3. Catsambis, S., & Garland, J. E. (1997). Potential involvement student' education during middle school and high school. U. S Department of education: Center for Research on the Education of Students Placed at Risk (CRESPAR).
4. Clark, R. (1988), *Critical Factors in Why Disadvantaged Children Succeed or Fail in School*, Academy for Educational Development, New York.
5. Davis, F. (1986). *A Technology acceptance model for empirically testing external factors new end user information systems: Theory and results*, Cambridge, Pegaus Elliot Mackenzie Publishers Ltd.
6. Davidson, J. (2017). How to discipline a teen for getting bad grades. Retrieved from <https://www.livestrong.com/article/72340-discipline-teen-bad-grades/>.
7. Epstein, J. (2002). *School, family, and community partnerships: Preparing educators and improving schools*. Boulder, CO: Westview Press.
8. Hamilton, L. & Klein, S. (1998), *Achievement Test score Gains Among Participants in the Foundation's School-age Enrichment Program*, CA: Rand Corporation, Santa Monica.
9. Henning, K. J. (2009). *Attitude and achievement: a study of parent and student attitudes towards education and their effects on achievement*. Retrieved from [https://soar.wichita.edu/bitstream/handle/10057/10634/t13086\\_Henning.pdf?sequence=1](https://soar.wichita.edu/bitstream/handle/10057/10634/t13086_Henning.pdf?sequence=1).
10. Huang, D. et al., (2000), *A Decade of Results: The Impact of LA's BEST Afterschool Enrichment Initiative on Subsequent Student 20 Achievement and Performance*, University of California, California.
11. Indianapolis Afterschool Coalition (2002), "After School Programs: Basic Standards", [<https://www.afterschoolcoalition.org>], site visited on 23/05/2015.
12. Jonston, J. (1996). *Parents facilitating educational development in the primary child: Current practice and future development*. Retrieved from <http://www.leeds.ac.uk/educol/documents/000000317.htm>.
13. Kelly, A. (2013). *Technology can empower children in developing countries - if it's done right*. USA: Atlantic University.
14. Kiwango, T. (2006). *E-commerce development and SMEs performance in Tanzania. The accountancy and business review*, 3 (2), 29-41.
15. Kiwango, T. (2004). *ICT revolution and economic globalization: A challenge or opportunity? The accountancy and business review*, 1 (2), 29-32.
16. Kiwango, T. A. (2018), *A model to hasten technology integration for out-of-school time primary school learning (Doctoral thesis)*. Tanzania: The University of Dodoma. 28
17. Lamudi, A. (2015). *Which Areas Have The Best Internet Connection In Tanzania?* Retrieved from <https://www.lamudi.co.tz/journal/which-areas-have-the-best-internet-connection-in-tanzania>.
18. Lyness, D. (2014). *10 Ways to help your children succeed in elementary school*. Retrieved from <https://kidshealth.org/en/parents/school-help-elementary.html>
19. McLaughlin, M. (2000), *Community Counts: How Youth Organizations Matter for Youth Development*, Public Education Network, Washington, DC.
20. NECTA. (2014). *PSLE-2014 Examination results*. Retrieved from [https://necta.go.tz/psle2014/results/distr\\_0105.htm](https://necta.go.tz/psle2014/results/distr_0105.htm).
21. Naumanen, N. & Tukiainen M. (2007). *Taught and learnt international conference on cognition and exploratory learning in digital generation*. Retrieved from <https://www.cs.joensuu.fi/pages/int/pub/naumanen07b.pdf>.
22. Peter, P. (2009). *How to teach summarizing: A critical learning skill for students*. Retrieved from <https://peterpappas.com/2009/11/how-teach-summarizing-essential-critical-learning-skill-students.html>.
23. Project Tomorrow. (2015). *What do parents really think about digital learning?* Retrieved from <https://www.tomorrow.org/speakup/speakup-2015-10-things-parents-think-about-digital-learning.html>.
24. Rogers, E. (2003), *Diffusion of Innovations (5th ed.)*. The Free Press, New York.
25. Scott, S. (2013). *Sociocultural theory*. Retrieved from <https://www.education.com/reference/article/sociocultural-theory/>.
26. TCRA (2013). "Assessment Report on Migration from Analogue to Digital Broadcasting and Analogue Switch-off Processes in Tanzania". Retrieved from <http://www.tcra.go.tz/index.php/publication-and-statistics/reports>.
27. Terzian, M., Giesen, L., & Mbwana, K. (2009). *Why teens are not involved in out-of-school programs, the youth perspectives*. Retrieved from <https://www.childtrends.org/wp-content/uploads/2013/04/6.pdf>.
28. UNICEF. (2011). *Cities and Children: The Challenge of Urbanization in Tanzania*. Retrieved from [https://www.childwatch.uio.no/news/2012/cities-and-children\\_tanzania.pdf](https://www.childwatch.uio.no/news/2012/cities-and-children_tanzania.pdf)



29. U.S. Department of Education (2005). *Helping Your Child Succeed in School*. Washington, DC.
30. Villarruel, F. & Lerner, R. (1994). *Development and Context and the Contexts of Learning*. San Francisco, Jossey-Bass.
31. Wertsch, J. (1991). *Voices of the mind: A Socio-Cultural Approach to Mediated Action*. UK, Harvard University Press.
32. WSIS. (2003). *Basic information about WSIS*. Retrieved from <https://www.itu.int/wsis/basic/about.html>
33. Zedan, R., F. (2011). *Parental involvement according to education level, socio-economic situation, and number of family members*. *Journal of educational enquiry*, 11(1), 13-28.



# PSYCHOLOGICAL ANALYSIS OF THE COMPLEXITIES OF LEARNING FOREIGN LANGUAGES

**Ismailov Akmal Rustamovich**

Independent Postgraduate,  
Samarkand State Institute of Foreign Languages,  
Uzbekistan.

An active member of Alberta Teachers of  
English as a Second Language (ATESL),  
Canada.

---

## ANNOTATION

*The article discusses various psychological difficulties learners face while acquiring foreign languages. Also, the article deals with the nature of such complexities and provides some practical recommendations that can be used to reduce the psychological difficulties learners face while learning foreign languages. The recommendations described in this article may be helpful not only for language learners but also for teachers of foreign languages.*

**KEYWORDS:** *Learners, subjects, temperament, reading, speaking, language, conscious, perception.*

---

## DISCUSSION

In the XXI century, when the world progresses and develops so rapidly, psychology interconnects with all branches of science, school subjects, etc. In connection with the rapid development of society in recent years, there has been an increasing interest in foreign languages.

The issues related to difficulties in learning foreign languages has already been studied by many psycholinguists and methodologists. Unfortunately, the desire of schoolchildren and students to speak and know a foreign language does not always coincide with their abilities to do so. Language is easy for some, difficult for others. Some of the students quickly memorize words, someone learns to read faster, someone is easier to imitate a foreign speech. With the help of psychology, it has become easier to explain some of the difficulties that arise in the process of teaching and learning foreign languages. There is a connection between the student's temperament, the peculiarities of his perception, attention and memory, and the difficulties he or she faces while learning a foreign language. It is assumed that students with phlegmatic and melancholic temperaments have the greatest difficulty in learning a foreign language. A

foreign language, as an academic discipline, is very different in comparison with other subjects of the school curriculum, and thus, obviously, students have some difficulties in acquiring one.

A foreign language is characterized by a number of distinctive features from the native language. It differs in the direction of the path of mastery, the inclusion of language in the subject-communicative activity of a person, a set of functions that need to be implemented into the speech process, the assimilation of a language, etc. A child learns his native language unconsciously and unintentionally, whereas a foreign language is learnt with awareness and intention. At school, the child only communicates with the help of a language, not using it in his direct objective activity. This leads to the fact that, for example, the word of a foreign language lives in the linguistic consciousness of a child only in its abstract-logical, conceptual side. Objects denoted by the word of a foreign language are devoid of characteristics of smell, colour, shape, size. This may be one of the reasons for the fragility of preserving words in a foreign language in memory. Mastering a native language is a spontaneous process that a person masters



not because of his conscious desire to know the language, but because of the development of thinking.

Learning a foreign language does not give a person direct knowledge of reality (unlike mathematics, history, geography, biology, chemistry, physics), he is only a carrier of this information, a form of its existence in the individual and public consciousness.

Mastering a foreign language requires hard work – disciplined and systematic. It requires work that is motivated. The student must know why he is learning a foreign language, and have a clearly defined specific goal for doing it effectively.

The main reason for the difficulties in learning foreign languages is the difference in their linguistic structures. The perception of a foreign speech by ear is accompanied by a number of difficulties, partly depending on the sound characteristics of each language, but more characteristic of the auditory perception of speech in any language.

A common difficulty is the lack of a clear boundary between sounds in a word and between words in a sentence. Usually, it seems that foreigners speak very quickly, while the same tempo of a compatriot's speech seems perfectly normal. This happens because we do not have time to articulate what we hear.

Overcoming difficulties associated with the perception of speech in a foreign language is associated with the development of sensations. The high culture of our sensations is not innate, it should be intentionally developed, and when mastering a foreign language, this has to be done almost anew, since speech in a foreign language sometimes requires such skills that did not play an essential role in mastering the native language. Another difficulty is the child's fear of communicating with foreigners in general. He is afraid that he will not understand them, and if he does, he will not be able to answer or will answer incorrectly.

The role of temperament in the learning process is noticeable. Temperament is a set of mental properties of a human personality and intended to characterize the degree of excitability and one's attitude to the surrounding reality. Temperament translated from Latin means "mixture, proportion." This term is usually used to characterize the innate features of a person that determine the nature of his psyche - the degree of balance, emotional mobility. Temperament should not be confused with character, which is a combination of the most stable, essential personality traits. Character is based on temperament.

The properties of temperament, determining the dynamic side of the personality, are the most stable and constant in comparison with other mental characteristics of a person. The main components of temperament are general psychological activity and

emotionality, the rate of occurrence of mental processes and their stability, pace and rhythm of activity and behaviour, and the intensity of mental processes. Temperament leaves an imprint on other features of the psyche.

The properties of temperament, like the properties of the nervous system, are not completely unchanged. The properties of temperament do not manifest themselves from the moment of birth and not all at once at a certain age, but develop in a certain sequence. Features of temperament vary from the purpose and performance of the personality and character features. Temperament differs from capabilities. Consequently, the temperament involves, first of all, inherent and distinctive cognitive features. This explains why some people are, for example, extremely calm, balanced, and slow while others are very active, restless, noisy, always lively.

But the dynamics of mental activity also depends on other conditions such as motives and mental states. If a person is interested in work, then regardless of the characteristics of his temperament, he will do it more energetically and faster. The features of temperament are the most balanced and fixed in comparison with other cognitive features of an individual. A special aspect of temperament is that the different peculiarities of a given person's temperament are not unintentionally mixed with each other, but are commonly interrelated, creating a particular structure that characterizes the class of temperament.

By the type of temperament, it is customary to understand the totality of mental properties that naturally and necessarily combine with each other in a certain group of people and are common to them. A certain relationship of properties characterizes the type of temperament. The degree of manifestation of different properties of temperament in different people of the same type of temperament may be different, but their ratio remains constant. There are four types of temperament: choleric, sanguine, phlegmatic, melancholic.

In the context of specialized training, temperament plays a leading role. The process of assimilating knowledge can be influenced by such properties as the speed of perception, duration of concentration of attention, mental tempo, and rhythm. An equally important role can also be played by the orientation of mental activity, for example, an extrovert striving for new contacts to communicate with people, and the emotional colouring of speech, for example, the expression of emotions during communication.

In the process of mastering a foreign language, attention is of great importance. It is important for the student to be focused, to correctly



highlight words and to isolate grammatical structures, to be able to switch his attention from one type of activity to another. It can be noted that in the acquisition of a foreign language, such characteristics of perception as selectivity (especially manifested in speaking and listening), structure (speaking, reading), and integrity (in listening) play a significant role.

In the process of learning a foreign language, memory plays an important role. Such types of memory as figurative memory, verbal and logical memory, involuntary and voluntary memory are of great importance in mastering a foreign language and should be developed in all types of speech activity.

According to this information, students with a choleric temperament have increased extraversion, emotional excitability, and reaction rate, in contrast to students with a phlegmatic type of temperament.

Students with a choleric and sanguine temperament are more successful in their studies and have more excellent grades than students with a phlegmatic and melancholic temperament.

Cognitive processes such as attention, perception, and memory play an important role in learning a foreign language. Choleric and sanguine people develop such cognitive processes as attention, perception, memory more efficiently than phlegmatic and melancholic people. Choleric people show high productivity of verbal memory as well as a high level of involuntary memory. In general, these students keep up with the average rate of information delivery, the reception of information is effective, and they memorize words better without setting rather than with setting. Phlegmatic persons have a low level of productivity of verbal memory as well as the medium and low volume of short-term memory.

Individual psychological characteristics of students (temperament) play an important role in the process of mastering a foreign language in an educational institution. Such features of psychological activity as the rate of assimilation of knowledge, perception of foreign speech, plasticity and flexibility in its processing, and others, become the determining factors in the acquisition of a foreign language in the proposed volume.

Extroversion also stimulates the development of speech skills for the perception of external foreign language speech, while introversion, on the contrary, blocks this process. Also, anxiety can prevent the student from coming into contact, causing fear. As a result, the success of speech acquisition may be lower. Obviously, this can explain the lower results of mastering a foreign language by students with a phlegmatic and melancholic temperament.

It is well known that some subjects, even those taught in a native language, are far from being accessible and interesting to the listener. To put it more precisely, the topics that children study are not always interesting to them. Therefore, it is recommended to choose topics that are accessible and interesting for the student in the process of teaching a foreign language. As noted, the rate of speech of a native speaker tends to seem too fast. Therefore, in order to grade the difficulties, one should start learning with the presentation of texts at a naturally slow pace. However, this pace is often too fast for a beginner. In this case, without slowing down the rate of speech, you should lengthen the pauses between phrases. This will allow the student to eliminate the lag in internal speech. It should be emphasized that the main way to overcome the difficulties associated with the characteristics of the listener's activity is constant, regular, and purposeful training of all components of this activity (auditory perception, short-term memory, inner speech, probabilistic forecasting) by performing the appropriate exercises.

In order to overcome the difficulties associated with understanding the speech of native speakers, it is necessary to listen to their speech from the beginning of the training, gradually reducing the number of texts presented by the teacher. The more different announcers (men, women, children) the learner will listen to, the easier it will be to adapt to the individual manner of speech.

To acquire background knowledge, the student must receive the necessary information about the country of the target language and its people. It is known that modern foreign textbooks contain information of this kind. However, in some textbooks that are allowed for teaching in general education institutions throughout the world, such information is clearly insufficient. Therefore, the teacher should communicate them, first of all, in texts for reading and listening, as well as with the help of films. Taking into account the peculiarities of the students' temperament, it should be noted that entertaining texts would be more suitable for children with all types of temperament, but in this case, it is preferable to give different tasks.

The main recommendation to overcome difficulties in speaking may be to conduct lessons in the form of game situations, where students, performing different social functions, use both dialogue and monologue. But it must be borne in mind that choleric and sanguine people, as a rule, speak with pleasure, and phlegmatic and melancholic people find it more difficult to do this. Therefore, you also need to vary the tasks, suggest interesting situations and call phlegmatic and melancholic people into a conversation.





With regard to reading, from a psychological point of view, it is very important to think about the need to grade the material according to difficulty, gradually increasing the number of difficult-to-read words. The readability of the text is of utmost importance at the initial stage. The font at this stage should be large enough and clear. Teachers of foreign languages should appropriately select the material for reading, develop the accuracy of guesses, and encourage reading out loud.

## REFERENCES

1. Belyaev B.V. *Essays on the psychology of teaching a foreign language. M.: Education.*
2. Derkach A.A., Shcherbak S.F. *Pedagogical heuristics: the art of mastering a foreign language. M.; Pedagogy, 1991.*
3. Elukhina N.V. *Overcoming the main difficulties of understanding a foreign language by ear as a condition for the formation of the ability to communicate orally, // IYaSh, 1996, №4.*
4. Zimnyaya I.A. *Psychology of teaching a foreign language at school. M.: Education, 1991.*



# A STUDY ON RECRUITMENT AND SELECTION PROCESS WITH REFERENCE TO E-PUBLISHING INDUSTRY, COIMBATORE

**Dr. V. Vanaja**

<sup>1</sup>Associate professor, Department of management studies, Sri Ramakrishna Engineering College, Coimbatore.

**Poornima Chandrasekar**

<sup>2</sup>Student, Department of management studies, Sri Ramakrishna Engineering College, Coimbatore

## ABSTRACT

*The paper aims to analyze the study of recruitment and selection process in genies it & services private limited, Coimbatore. The article explores the role of recruitment and selection process in the organization. Percentage analysis and chi-square test methods are used in this study with the sample size of 55 employees in the organization. The main objective is to understand the different recruitment and selection activities, and to analyze the satisfactory level of employees with regard to Recruitment and Selection Process. The data was collected through well-structured questionnaires.*

**KEYWORDS:** Organization culture, recruitment and selection

## I. INTRODUCTION

Human resource management is a function in organizations designed to maximize employee performance in service of employer's strategic objectives. HR is primarily concerned with how people are managed within organizations, focusing on policies and systems. HR departments and units in organizations are typically responsible for a number of activities, including employee recruitment, training and development, performance appraisal, and rewarding. HR is also concerned with industrial relations, that is, balancing of organizational practices with regulations arising from collective bargaining and governmental laws. In startup companies, HR's duties may be performed by trained professionals. In current global work environment, most companies focus on lowering employee turnover and retaining talent and knowledge held by its workforce. New hiring not only entails a high cost but also increases risk of newcomer not being able to replace person who was working in that position before. HR departments also strive to offer benefits that will appeal to workers, thus reducing risk of losing knowledge.

## THEORETICAL BACKGROUND OF STUDY

HR planning indicates need for additional labor, organizations have a number of choices to make. This may be first step in a full-scale recruitment and selection process, but sometimes hiring additional employees is not best method to obtain additional labor.

The recruitment practices have changed over the years. Internal source of recruitment means looking for suitable candidates from among the current employee, in an organization. Job postings, Succession Planning, Employee Referrals, and Hiring Employees, Advertising, Employment Exchanges, Private Consultants, Temporary agencies, Alternative staffing, Executive recruiters or headhunters, Campus recruiting, Internet recruiting are some of the external sources of recruitment.

## II. REVIEW OF LITRATURE

Neha Nazneen Siddiqui (2016), conducted a study on Recruitment & Selection Process of a Leading Telecom Company. This Study presents the detailed analysis of recruitment and selection of a leading telecom company. Main Objective is To study the Recruitment and Selection procedure of Bharti Airtel Services Ltd. To abstraction that



whether Recruitment & Selection is bare in organizations. To what measurement Recruitment & Selection should be done and how can it fabricated be able to access the abundance of advisers in Bharti Airtel.

**Susairaj and Laura Jenifer** (2018), conducted a study on employee challenges towards recruitment and selection process. The aim of the study is to understand the different types of selection procedure followed by mri seed syngenta and to analyze the performance of recruitment and selection procedure adopted by mri seed syngenta. Also to measure challenges faced by mri seed syngenta related to recruitment and selection.

**Neeraj Kumari** (2012) conducted a study on Recruitment and Selection process: SMC Global Better recruitment and selection strategies result in improved organizational outcomes. With reference to this context, the research paper entitled Recruitment and Selection has been prepared to put a light on Recruitment and Selection process.

**Syamala Devi Bhoganadam and Dasaraju Srinivasa Rao** (2014) conducted a study on Recruitment and Selection process of Sai Global Yartex (India) Private Limited. The aim of the paper is to study the recruitment and selection process followed at Sai Global Yartex Private Limited. The best human capital availability in organizations makes them competitive advantage and as well as they become the real life blood of the organizations.

**Tamanna Parvin Eva** (2018) has conducted a study on Recruitment and Selection Strategies and Practices in the Private Sector Commercial Banks of Bangladesh: Evidence from Human Resource Practitioners. The aim of the study is to fill the gap with identifying mostly used recruiting sources, selection methods, developing a selection model for the entry-level position along with identifying perceived major barriers and strategies for maintaining the effectiveness of recruitment and selection practices.

### III. SCOPE OF THE STUDY

- This study helps to make decision in selecting the right candidates for the right job.
- This study helps the organization to study the area of problem and suggest ways to improve the recruitment and selection process.
- This study focus on understanding recruitment and selection process.
- 

### IV. OBJECTIVES OF THE STUDY

- To understand different recruitment and selection activities adopted by Geniies IT and services private limited.
- To analyze the satisfactory level of the employees with regard to Recruitment and Selection process.

### V. RESEARCH METHODOLOGY

Methodology of research used is descriptive study. This method was suitable for the study because of the voluminous of data available and suits the title of the study. Questionnaires were administered for the respondents, tabulated and analyzed.

### VI. RESEARCH DESIGN

Out of the total availability of the employees, a sample size based on randomness and convenience is chosen. For this study a stratified random sampling is used for 55 respondents.

### VII. METHODS USED FOR DATA

#### ANALYSIS:

The tools used for data collection are:

- Percentage Analysis
- Chi-square Test

### VIII. LIMITATIONS OF THE STUDY

The limitations of the study are given below,

- The study was need based and suitable for today's context only
- The response may be biased.
- Interviews were held only with respondents who were ready to spare time for it.
- Time is main limiting factor.

### IX. STATEMENT OF PROBLEM

Employee recruitment and selection levels differs as per their expectations so in order to study the organizational objectives are met, in addition the value added selection process been studied in this research, Therefore this study is initiated. It is a difficult task for organizations to search, recruit, and select talented people in today's tight labor market. As there are fewer qualified talents available, the competition is intensifying. This shortage leads to absolutely essential for organizations to conduct effective recruitment, selection, and retain quality

talents. What is more is that acquiring the right talent is becoming an increasingly complex and challenging activity. Recruiting staff is a very costly practice. It is also a mandatory part of any business to conduct this practice in order to survive in the marketplace. The cost of simply finding the right person to hire can be hefty. Human Resources share this commitment and work with the hiring supervisor to facilitate an efficient and effective process. With a pool of applicants, the next step is to select the best candidates for the job. This usually means whittling down the applicant pool by using the screening tools such as tests, assessment centers and background & reference checks.

**X. DATA ANALYSIS AND DISCUSSION**

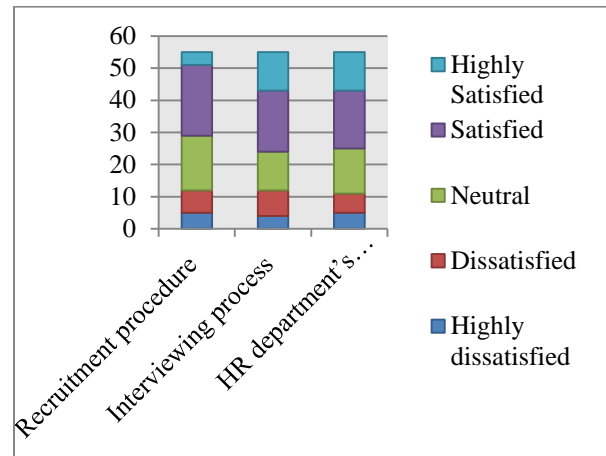
**Table: 1 Demographic profile of the respondent**

Demographic profile		%
Gender	Male	55
	Female	45
Age	Below 30 years	71
	31-40 years	16
	41-50 years	6
	Above 50 years	7
Monthly income (in Rs.)	Below 10000	22
	10001 – 20000	18
	20001-30000	42
	30001- 40000	9
	Above 40000	9
Work experience	0-5 years	52
	5-10 years	33
	10-15 years	9
	More than 15 years	6

**Table: 2 Satisfaction with regard to recruitment procedures**

(HDS – Highly Satisfied; DS – Dissatisfied; N – Neutral; S- Satisfied; HS – Highly Satisfied)

Source	HDS	DS	N	S	HS	%
Recruitment procedure	5	7	17	22	4	40%
Interviewing process	4	8	12	19	12	33%
HR department performance	5	6	14	18	12	33%



**Chart:1 Satisfaction with regard to recruitment procedure**

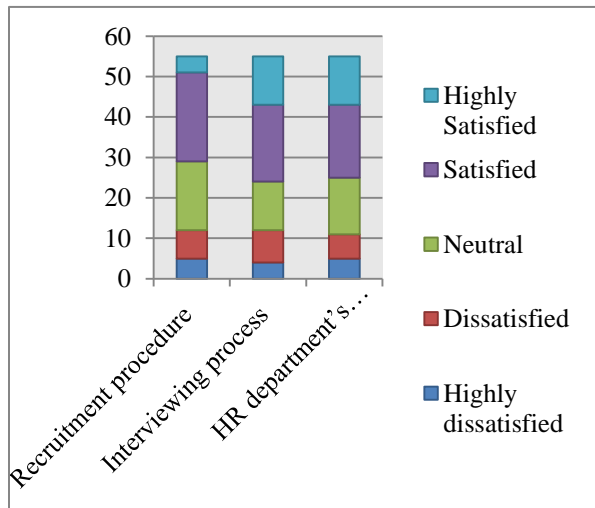
It is understood from the above table that:

- Most (40%) of the respondents are satisfied with the recruitment procedure in the organization.
- Most (33%) of the respondents are satisfied with the interviewing process and other selection instruments such as testing
- Most (33%) of the respondents are satisfied with the HR department's performance in recruitment and selection.

**Table : 3 Satisfaction with regard to recruitment process**

(HDS – Highly Satisfied; DS – Dissatisfied; N – Neutral; S- Satisfied; HS – Highly Satisfied)

Source	HDS	DS	N	S	HS	%
Identification of good candidates	10	3	14	22	10	40%
Time taken to respond	4	8	20	19	4	37%
Time taken to send offer letters	6	4	16	16	13	30%



**Chart: 2 Satisfaction with regard to recruitment process**

It is understood from the above table that:

- Most (40%) of the respondents are satisfied with the identification of good candidates from non-traditional sources when necessary
- Most (37%) of the respondents remain neutral with regard to their opinion about the time taken to respond to the application.
- Most (30%) of the respondents are satisfied with the time taken to send offer letters to the candidates

## XI. RESULTS AND FINDINGS

- Majority of the respondents (67%) expressed that the personal interview as the selection procedure and method followed in Geniies IT solution.
- Most of the respondents (45%) have accepted the offer for the reason of growth opportunity in the organization.
- Most of respondents (44%) mentioned job portals as a source for recruitment.
- Most of the respondents (43%) have expressed that the company takes less than 5-10 days to respond application.
- Most of the respondents stated that the HR department takes one week's time to send offer letters.
- Most (40%) of the respondents are satisfied with the identification of good candidates from non-traditional sources when necessary
- Most (48%) of the respondents remains neutral with regard to their opinion about that the

induction programme is properly implemented after the selection process.

### The chi-square analysis highlights the following findings

**H0<sub>1</sub> : There is no significant relationship between the age of the respondents and their opinion about the recruitment and selection process.**

The calculated Chi square value is more than the table value at 0.05% confidence level, therefore the null hypothesis is rejected. Therefore, it is understood that there is significant relationship between the age of the respondents and their level of satisfaction with regard to their opinion that the organizations clearly define the details in the recruitment process, HR provides an adequate pool of quality applicants, training to employees in hiring job to make the best hiring decisions, HR department has efficient selection policy of the employees, Innovative techniques should be adopted in the selection process, Internal hiring helps in motivating the employees, employees are aware of man power planning procedure in organization and induction programme is properly implemented after the selection process.

The calculated Chi square value is less than the table value at 0.05% confidence level; therefore the null hypothesis can be accepted. It can be concluded that there is no significant relationship between age of the respondents and their level of satisfaction with regard to their opinion that the organization is using satisfactory methods of interview, facility for absorbing the trainees in the organization, provision of educational assistance, induction and orientation programme and satisfaction with the recruitment and selection process in organization.

**H0<sub>2</sub> : There is no significant relationship between the gender of the respondents and their opinion about the recruitment and selection process.**

The calculated Chi square value is more than the table value at 0.05% confidence level, therefore the null hypothesis is rejected. It can be understood from the above table that there is no relationship between gender of the respondents and their opinion about the recruitment and selection process.

**H0<sub>3</sub> : There is no significant relationship between the work experience of the respondents and their opinion about the recruitment and selection process.**

The calculated Chi square value is more than the table value at 0.05% confidence level, therefore the null hypothesis is rejected. Therefore, it can be concluded that there is significant relationship between the



experience of the respondent and their level of satisfaction with regard to opinion about satisfactory methods of interview in organization, clear definition of the position objectives, requirements and candidate specifications in the recruitment process, efficient selection policy of the employees, E-Recruitment is a must to survive in the competitive market, facility for absorbing the trainees in the organization, provision of educational assistance, induction programme is properly implemented after the selection process and satisfaction with the recruitment and selection process in your organization.

The calculated Chi square value is less than the table value at 0.05% confidence level; therefore the null hypothesis can be accepted. It can be understood from the above table that there is no significant relationship between experience of the respondents and their level of satisfaction with regard to opinion about provision of adequate pool of quality applicants, provision of training to employees in hiring job to make the best hiring decisions, innovative techniques (like stress level & psychometric test) should be adopted in the selection process, internal hiring helps in motivating the employees and employees are aware of manpower planning procedure in the organization and their level of satisfaction with regard to the induction and orientation programme.

**H0<sub>4</sub> : There is no significant relationship between the monthly income of the respondents and their opinion about the recruitment and selection process.**

The calculated Chi square value is more than the table value at 0.05% confidence level and the null hypothesis is rejected. Therefore, it can be concluded that there is significant relationship between the salary of the respondent and their level of satisfaction with regard to their opinion about organization is using satisfactory methods of interview, organizations clearly define the position objectives, requirements and candidate specifications in the recruitment process, HR provides an adequate pool of quality applicants, HR provides training to employees in hiring job to make the best hiring decisions, HR department has efficient selection policy of the employees, internal hiring helps in motivating the employees, enough facility for absorbing the trainees in your organization, provision of educational assistance, employees are aware of manpower planning procedure in the organization, induction programme is properly implemented after the selection process and satisfaction with the induction and orientation programme.

The calculated Chi square value is less than the table value at 0.05% confidence level and therefore the null hypothesis can be accepted. It can be concluded that there is no relationship between salary of the respondents and their level of satisfaction with regard to their opinion that E-Recruitment is a must to survive in the competitive market, innovative techniques (like stress level & psychometric test) should be adopted in the selection process and satisfaction with the recruitment & selection process in your organization.

## XII. CONCLUSION

The study was conducted among the workers of the Genies covering 55 respondents. The data was collected by means of questionnaire and the data. From the analysis, it has been found that the most of the employees in the company were satisfied but changes are required according to the changing scenario of recruitment process that has a great impact on working of the company as a fresh blood, new idea enters in the company. The company's recruitment department is doing well in placing the candidates and filling the job vacancies for all levels of positions. Some of the suggestions were mentioned to enhance the organizational policies, strategies, procedures and process.

## REFERENCES

1. Asif Kamran, Jawad Dawood and Saad Bin Hilal (May 2015) *analysis of recruitment and selection process, Vol.2, Issue.22, May 2015.*
2. Elearn (2015), " *Recruitment and Selection Revised Edition*", Elsevier Publishers, Volume 9.
3. Gareth Robert (2017), " *Recruitment and Selection*", Jaico publishing house.
4. <https://smallbusiness.chron.com> › *Managing Employees* › *Recruitment & Selection.*
5. <https://businesscasestudies.co.uk/business-theory/.../recruitment-and-selection.html>
6. <https://en.wikipedia.org/wiki/Recruitment>
7. [https://www.tutorialspoint.com/recruitment\\_and\\_selection/what\\_is\\_selection.html](https://www.tutorialspoint.com/recruitment_and_selection/what_is_selection.html).
8. <https://www.slideshare.net/umerkhalidhabib/recruitment-and-selection-24053999>.
9. Neeraj Kumari (2012) *Conducted a study on Recruitment and Selection process: SMC.Global private limited, Vol. 2. No.1.*



# LIQUIDITY MANAGEMENT AND PERFORMANCE OF DEPOSIT MONEY BANKS IN NIGERIA

**Eze Emmanuel<sup>1</sup>**

<sup>1</sup>Department of Accounting,  
Rhema University,  
Aba,  
Nigeria

**Agu Stephen<sup>2</sup>**

<sup>2</sup>Department of Accounting,  
Institute of Management and Technology,  
Enugu,  
Nigeria.

Article DOI: <https://doi.org/10.36713/epra3138>

## ABSTRACT

*This study was carried out on liquidity management and performance of deposit money banks in Nigeria using six banks with international affiliation. In particular, the paper established the relationship between the variable of bank performance and those of liquidity management using capital adequacy, liquidity ratio, and current ratio as indicators and bank size as a control variable. Data were extracted from annual reports from the banks' websites for a period spanning seven years (2013 – 2019). Descriptive statistics and regression analysis were performed using the E-View 10.0 as instrument for the analysis. Findings indicate a strong positive relationship between capital adequacy and return on equity while liquidity and current ratio showed statistical insignificant negative relationship with return on equity. Bank size showed a strong positive relationship with return on equity. It was recommended that the regulatory body should ensure that deposit money banks in Nigeria are adequately capitalised to guarantee system stability while the bank managers should adhere to reserve requirements from the Central Bank so as to absorb financial shocks and operate profitably.*

**KEY WORDS:** *performance, liquidity, capital adequacy, current ratio,*

## INTRODUCTION

Financial intermediation is considered a major function of deposit money banks in Nigeria. By the execution of this function, funds are collected from the surplus units of the society which can be withdrawn on demand or channeled to the investment units who are in need of such fund. Thus, there is a gap of filling the demands of the depositors of the fund and lending to the deficit economic units and these must be matched in a manner that no financial shocks will be created in the system. In the opinion of scholars, such as

Otekunrin, Nwanji, Agba, Olowooker, Fakile, Lawal, Ajayi and Falaye (2018), a bank's capability of meeting customers' withdrawal needs and other cash flows is an indication of her liquidity management. Drawing from this statement and in accordance to Bhattacharyya and Sahoo (2011), liquidity management encompasses maintenance of enough cash balance and its equivalent balances to satisfy the needs of the customers at any point in time as well as ensuring that money is also available to execute the daily operations of the bank. In the process of performing these functions, the banks



should be able to make profit for her major and other stakeholders who are very essential for its continued existence and operations. However, achieving profitability demands striking a balance between liquidity and how it is managed. Liquidity is analogous to the circulation of blood in the human system; lack of blood weakens the system but the system would be sound where the blood is at the optimum level. Consequent to this, Akinwumi, Essien and Adebogoyega (2017) alluded liquidity and profitability to two centrifugal forces operating at the opposite continuum which put the bank at a risky position. A trade-off should be maintained between inadequate liquidity and excess liquidity as each of these has profound effect on the banks performance in terms of profitability (Padache, 2006).

The importance of liquidity management cannot be overemphasized and this is the reason behind the Central Bank's various reforms which are intended to ensure system stability and the restoration of confidence in the Nigerian financial system. Much as profit is very essential for the going concern of banks, liquidity management remains a sine qua non for the attainment of profitability. This study was empirically conducted to examine the relationship between liquidity management and performance of deposit money banks and to determine the nature of relationship in existence with a focus on six of the banks with international affiliation, whose annual reports were available at the time of the study. Liquidity management as the independent variable consists of capital adequacy ratio, liquidity ratio, current ratio and bank size as control variable while performance is the dependent variable proxied by return on equity.

### 1.2 Statement of problem

Banks are established like any other businesses for profit making for the major and other stakeholders. The achievement of the profit depends on the financial health status of the banks which is primarily determined by the ability of the banks to hold sufficient liquid assets in the right proportion so that all regulatory requirements would be complied by while at the same time continuing the normal operations of paying their depositors on demand and making investment that will also shore up her profit objective. Much as lack of liquidity portends risks to the banks, excess liquidity is also at a peril to the banks. Risks are associated with losses or inability to generate profit with the negative attendant effect on the going concern status of the firms. It is therefore pertinent that deposit money banks should manage their liquidity in such a manner that a trade off would be struck between liquidity and investment such that sudden shocks that

may bring the corporate life of the organizations to an end would be avoided. Liquidity management has been identified in this paper to be associated with the maintenance of capital adequacy ratio, liquidity ratio, cash ratio while log of total assets was introduced as a control variable.

Several studies have been carried out by scholars with mixed results; some hold that liquidity management and performance are positively related while others found negative association between liquidity management and performance. A good number of the works conducted in this area lacks currency. This study was therefore carried out to provide further verification on the relationship between liquidity management and performance of deposit money banks in Nigeria.

### 1.3 Objective of the study

The major objective of this study is to investigate the relationship between liquidity management and performance of deposit money banks in Nigeria between 2013 and 2019. In particular, the study was intended to:

- (i) Examine the relationship between liquidity management and performance of deposit money banks
- (ii) Establish the relationship between capital adequacy and performance of deposit money banks.
- (iii) Establish the relationship between cash ratio and performance of deposit money banks.

### 1.4 Research Hypotheses

The following testable propositions are stated in the null form:

Ho<sub>1</sub>: There is no significant relationship between liquidity management and performance of deposit money banks.

Ho<sub>2</sub>: There is no significant relationship between capital adequacy and performance of deposit money banks.

Ho<sub>3</sub>: There is no significant relationship between cash ratio and performance of deposit money banks.

## 2.0 REVIEW OF RELATED LITERATURE

### 2.1 Concept of Liquidity and Liquidity Management

The academic hall is replete with avalanche of perceptions from researchers on the subject matter of liquidity. It is pertinent to state that there is no universally acceptable concept of liquidity because of the eclectic nature of the concept which results from various economic viewpoints (Ibe, 2012). However, the meaning of liquidity revolves around marketability of security and funding ability of banks (Basel Committee





on Banking Supervision, 2008). This understanding was shared by Marozva (2015) and Shafique, Faheem and Abdullah, (2012) who defined marketability of security from the purview of the ease of trading such instrument while funding ability is the easiness of converting security to cash. This view was corroborated by Olagunju, Adeyanju and Olabode (2011), conceiving liquidity as the ability of a concern to meet its short term obligations or the conversion of its assets into cash. Scholars such as Amengor's (2010) and Alshatti (2015) strongly advocate that liquidity is the ability of banks to meet the financial needs of their increased assets and meeting liabilities as and when they fall due without the incidence of unexpected losses. Different scholars use different financial ratios to measure liquidity such as Ilhomovich (2009), who employed cash to deposit ratio but this work used loans and advances to total assets.

Drawing from the above, it can be gleaned that the scopes of liquidity is based on the timing required in converting assets of banks into monetary asset or cash. Koranteng (2016) attributes a bank's liquidity to its ability to acquire cash through deposits and finally, its ability to reinvest as and when needed. In the opinion of Bhunia and Khan (2011), profitability of deposit money banks is tied to efficient management of liquidity and Olatunde (2015), observed that the improvement and maintenance of liquidity coverage ratio by the regulators is in tandem with increase in business growth and performance. The significance of liquidity demands that the regulators should ensure compliance while management of the banks should observe to comply with the maintenance of minimum liquidity requirement and invest available resources in profitable window. Among the ratios used as proxy for liquidity management in this study is capital ratio which indicates the effectiveness and soundness of the system. Moreover, researchers like Devinaga and Tan (2010), as well as Vong (2005) have observed that capital ratio is instrumental to profitability and performance of deposit money banks. Cash ratio is another variable used for liquidity management in this work and is of interest to creditors who are attracted by the ability of a concern to settle her maturing obligations as at when due and maintains a level of cash to take advantage of other investment activities. However, the level of cash should be maintained through appropriate trade-off so that profit should be generated by investing any excess cash to earn returns and identify when the cash level is low so as not to experience financial shock that may lead to losses.

## 2.2 Theoretical Review

Extant literature on liquidity and performance of deposit money banks are inundated with several theories but the ones that underpin this study are but not limited to Liquidity-Profitability trade-off theory and Self-Liquidating Paper Theory as briefly discussed below.

### 2.2.1 Liquidity-Profitability trade-off theory

The emphasis of this theory is the synchronization of liquidity and maturity which ensures that a mismatch capable of causing financial shock and runs in the bank does not occur. The theory maintains that a bank can be vulnerable if a skewed relationship occurs between the two. Regulatory authorities are mindful of the importance of safety and soundness in the system thereby setting required maintainable ratios that position banks to easily discharge their liabilities without compromising investible funds that would yield returns. Researchers agree that liquidity is as important as capital to the banks for the maintenance of stability. Bagyenda, Brownbridge and Kasekende (2011) concluded from their study that banks with high liquidity and superior capital are not likely to experience failure at a time of financial crisis. This theory is adopted from the work of Akinwumi et al (2017) primarily for taking into consideration, the financial performance of banks and liquidity cash ratio variable which measures the short term liquidity positions of banks as modeled in this paper.

### 2.2.2 Self-Liquidating Paper Theory

This theory, referred to as the Commercial Loan theory discourages banks from extending long term lending. In other words, these are the most liquid loan the banks can give and is widely accepted as a means of sustaining liquidity of banks. Drawing from the view of Leonard (2011), the theory anchors on the short term loan or lending which the bank extends to finance saleable goods from the producer to the consumer. The loans are self-liquidating in the sense that products are produced and evolved through transportation, manufacturing, storage and distribution channels (Ibe, 2013). Self-liquidating loan ensures that short-term profit motive should be matched with short-term obligations by making depositors' funds available when needed. Onoh (2002) points out that for liquidity management to be effective in this direction, the tenor of funds from depositors and other sources must be matched with that of assets (loans and advances). Self-liquidating loan is a source of current working capital to firms and originates from trade transactions secured by physical goods, repayable out of the price obtained by their sales (Shekhar & Shekhar, 2005; Gomez, 2008). However, the side effect attributed to this theory



by Gomez (2008), is that it reduces the purchasing power of borrowers which is evident during depression period when traders or borrowers experience trade hiccups, resulting to losses and delay in meeting up with bills on maturity.

### 2.3 Review of Empirical Studies

The aim of this review is to investigate published works, periodicals and books that discuss theory and observed results relevant to the topic at hand (Zikmund, Babin, Carr & Griffin, 2010).

Bassey and Moses (2015) carried out a study on the relationship between bank performance and liquidity management using a target population of fifteen banks. The secondary data for the study were obtained from published reports and the ordinary least square method was employed in analyzing the data. Findings revealed an adverse correlation between liquid money ratio and equity returns whereas an ideal positive correlation existed among loans, asset ratio, loans and equity returns. They recommended that banks should not only centre on the focal point of profit maximization but maintain a balance of customer satisfaction through the application of liquidity management approaches.

Another country specific study was conducted by Daniel (2017), who surveyed management of liquidity and its impact on the efficiency of banks. This was based on a study period of 25 years (1986–2011) with a target population of 24 banks. Data for the research were obtained from secondary sources and analyzed using the SPSS package. The results of this study indicated that liquidity management positively influences the operations of deposit money banks. The researcher also explained the data using correlation analysis and found that equity returns and cash liquidity reserve ratio are positively related, while equity returns and deposit loan ratio are negatively related. He further recommends that banks should adopt optimum liquidity strategies

for the smooth running of the business. Other scholars whose works resulted to a positive significant relationship between liquidity and profitability of deposit money banks were Khan and Ali (2016); Abubakar (2015); Osuji (2013); Olagunju, David, and Samuel, (2012) and Kosmidou, (2008). However, some researchers conducted studies on the same subject matter but reported a negative significant relationship between liquidity and profitability of deposit money banks (Marozva, 2015; Raheman & Nasr, 2007) while other studies reported no significant impact of liquidity on profitability of deposit money banks (Abdullah & Johan, 2014; Lartey, Antwi, & Boadi, 2013; Shen, Docquier, & Rapoport, 2010).

Naceur and Kandil (2009) carried out investigate on the effects of capital regulations on cost of intermediation and profitability in Egyptian commercial banks. Findings revealed that higher capital adequacy increases the interest of shareholders in managing banks' portfolios and other factors such as higher capital requirements, reduction in indirect cost, and enhanced management efficiency have contributed positively to banks' profitability in the post-regulation period while the reduction in economic activity has side effects on profitability.

Larty et al (2013) conducted a study to find out the existing relationship between liquidity and profitability among banks quoted in Ghanaian Stock Exchange for the period 2005 – 2010. The study employed panel data from secondary sources and made use of descriptive statistics and regression analysis. Findings showed a very weak relationship between liquidity and profitability.

Ogonna and Ikechukwu (2016) assessed the effects of liquidity management on the performance of deposit money banks in Nigeria covering sixteen years (2000 – 2015). Data for the study were gathered from the CBN and NDIC annual publications for the stated period. Using the regression statistical analysis with the aid of E-View 8.0, the result revealed a negative and significant relationship between liquidity and profitability of deposit money banks in Nigeria. Also, a positive and significant relationship was identified between cash to deposit ratio and profitability.

Charlmer et al (2018), examined the level of bank liquidity, the trend of bank liquidity and the impact on the profitability of commercial banks in Ghana. The study involved twenty one banks for a period of ten years (2007-2016). Secondary data in form of a panel were analysed employing descriptive statistics, correlation and regression analysis. The results showed a positive relationship between returns on assets and liquidity but a weak positive relationship between returns on equity and liquidity. However, a negative relationship was observed between return on equity and liquid assets to total interest bearing liabilities while bank size, capital adequacy among others showed a positive association.

In Kenya, Sile, Olweny and Sakwa (2019) carried out a study on liquidity as a determinant of banks financial performance using all the forty three commercial banks for the study period (2012-2016). The study made use of secondary data collected from audited financial statements of the banks. Descriptive statistics and regression analysis employed showed a negative relationship between financial performance and liquidity management.



### 3.0 RESEARCH METHODOLOGY

This desk study adopted the descriptive research design in line with Bassegy and Moses (2015) and Ramadan, Kilani, and Kaddumi (2011) as contained in Otekunrin, Fagboro, Nwanji, Asamu, Ajiboye and Falaye (2019). The sample size of the research work was six out of eight deposit money banks with international affiliation and the period was 2013 – 2019, constituting a forty two firm year. The choice of the banks and the study period was based on the availability of current annual reports from the banks' website as at the time of the study. The simple random technique was adopted in the selection of the sample because every element stands the chance of being selected in the survey exercise. This further reduces prejudice and facilitates the analysis of the results. The analysis carried out to determine the type of relationship existing between liquidity management and performance of deposit money banks in Nigeria with international affiliation employed the ordinary least square technique.

#### 3.1 Empirical Model Estimation

##### 3.1.1 Dependent Variable

In this study, performance is employed as the dependent variable of the model. There are various measures of performance each of which revolves around profitability. However, profitability could be in terms of prior or post tax. Previous studies used measures of profitability such as return on asset, return on equity, firm margin etc., (Charmler, Musah, Akomeah & Gakpetor, 2018). This study adopted return on equity as a proxy for performance.

##### 3.1.2 Independent Variables

Liquidity management is measured by three variables in this work: capital adequacy which is expressed as total equity to total assets in percentage; Liquidity ratio, measured as loans and advances to total

assets and current ratio, measured as the ratio of cash and cash equivalent to current liabilities.

##### 3.1.3 Control Variable

The control variable for the study is size which is described as one of the major determinants of bank profitability (Musah, 2017; Musah, Anokye, & Gakpetor, 2018). Studies have shown that profitability is relative to the size of banks which implies that bigger banks are more profitable because they have more financial clout to invest in bigger projects to earn higher returns. Notwithstanding, previous works have equally revealed that smaller banks are expected to be more technologically inventive and profit driven. Size is measured by the natural logarithm of total assets which applies to the deposit money banks used in this study.

#### 3.2 Model Specification

This paper adopted the regression method for panel study employed by Kuznetsov and Muravyev (2001) with the general form given as  $Y_{it} = \alpha + \beta X_{it} + \epsilon_{it}$

Where:  $i$  = the individual cross-sectional dimension (i.e. Banks), and  $t$  = the time dimension (i.e. 2013-2019);

$\alpha$  = constant/intercept;  $\beta$  = the coefficients;

$Y_{it}$  = dependent variables/Profitability measure (which is a measure of return on equity);

$X_{it}$  = the independent variables of the model (capital adequacy, liquidity ratio, current ratio and size as control variable);

$\epsilon_{it}$  = the residual error of bank  $i$  at time,  $t$ .

$$ROE_{it} = \beta_0 + \beta_1 CADQ1_{it} + \beta_2 LIQDT2_{it} + \beta_3 CR_{it} + \beta_4 SIZE_{it} + \epsilon_{it}$$

### 3.3 Variable Definition and Measurement

Variable	Acronym	Measurement
Return on Equity	ROE	Profit before tax divided by total equity.
Capital Adequacy	CADQ	Total Equity divided by Total Assets
Liquidity	LIQDTR	Loans and Advances divided by Total Assets
Current Ratio	CR	Cash and Cash Equivalents divided by Current Liability
Bank Size	SIZE	Natural Logarithm of Total Assets.



#### 4.0 PRESENTATION AND INTERPRETATION OF DATA

**Table 4.1: Descriptive Statistics**

	ROE	CADQ	LIQDT	CR	SIZE
Mean	18.89829	13.72268	0.498859	0.356388	6.400785
Median	19.88000	14.19000	0.469400	0.347800	6.422000
Maximum	37.41000	18.48000	0.945100	0.785300	6.854100
Minimum	4.780000	8.540000	0.306100	0.145400	6.003600
Std. Dev.	8.309932	2.403716	0.144411	0.155894	0.244300
Skewness	0.223553	-0.274491	1.522348	0.511346	-0.035053
Kurtosis	2.448496	2.661724	4.882522	2.636384	1.872366
Jarque-Bera Probability	0.861104	0.710346	21.89069	2.012616	2.180643
	0.650150	0.701052	0.000018	0.365566	0.336108
Sum	774.8300	562.6300	20.45320	14.61190	262.4322
Sum Sq. Dev.	2762.199	231.1140	0.834183	0.972113	2.387307
Observations	41	41	41	41	41

*Source: Researcher's EView 10.0 Output.*

The summary of the statistical properties of the variables used in this empirical study as shown above in table 4.1 presented the average value of the Return on Equity (ROE), a performance proxy of the selected Nigerian banks as 189% approximately (18.89829), this implies sample selected banks on average earned a net income of 189% of total asset with a maximum and minimum value of 37.41000 and 4.780000. The standard deviation is 8.309932.

On the other hand, the average value of the sampled banks 'liquidity management is 137 percent (13.72268) which was measured by Capital Adequacy (CADQ), this reflects that these banks operate with 137 percent level of total equity to total asset and the maximum and minimum value of 18.48000 and 8.540000 respectively. It deviates by 2.403716 from the mean value of the sampled selected Nigerian banks.

The liquidity management of the sample banks has on average 50% appropriately (mean= 0.498859) as measured by Liquidity ratio (LIQDT). The maximum value of Liquidity ratio among the sample banks is 0.945100 and the minimum value is 0.306100. It shows a standard deviation of 0.144411 from the mean value.

Again, the liquidity management of the sample banks surrogated by current ratio (CR) has on average 36% appropriately (0.356388) with a maximum and

minimum value of 0.785300 and 0.145400. The standard deviation is 0.155894.

Finally, a supporting variable, bank size has on average up to 640% (i.e., 6.400785) of the sampled banks with the maximum and minimum value of 6.854100 and 6.003600 respectively. It deviates by 0.244300 from the mean value of the sample of selected Nigerian banks.

In this case, Skewness coefficient shows that all the variables under study have values less than 1 and this indicates that their frequency distribution is normal. Kurtosis coefficient support the result of Skewness as it relates to return on equity (ROE), Capital Adequacy (CADQ), current ratio (CR) and bank size (SIZE) as their coefficient is less than 3, except for Liquidity ratio (LIQDT) which has value greater than 3 indicate that they are not normally distributed. Jarque – Bera statistic show that the return on equity (ROE), Capital Adequacy (CADQ), current ratio (CR) and bank size (SIZE) have p-value greater than 0.05 which show that they are not significant and it implies that they are normally distributed supporting the result of Kurtosis.



**Table 4.2: Panel Least Squares**

Dependent Variable: ROE  
 Method: Panel Least Squares  
 Date: 07/13/20 Time: 04:42  
 Sample: 2013 2019  
 Periods included: 7  
 Cross-sections included: 6  
 Total panel (unbalanced) observations: 41

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CADQ	1.502700	0.394738	3.806830	0.0005
LIQDT	-4.673370	6.358688	-0.734958	0.4671
CR	-5.140108	5.854585	-0.877963	0.3858
SIZE	26.33957	3.695169	7.128111	0.0000
C	-166.1535	24.67346	-6.734100	0.0000
R-squared	0.621518	Mean dependent var		18.89829
Adjusted R-squared	0.579464	S.D. dependent var		8.309932
S.E. of regression	5.388886	Akaike info criterion		6.320404
Sum squared resid	1045.443	Schwarz criterion		6.529376
Log likelihood	-124.5683	Hannan-Quinn criter.		6.396500
F-statistic	14.77919	Durbin-Watson stat		0.982797
Prob(F-statistic)	0.000000			

Source: Researcher's EView 10.0 Output

From the regression analysis, Table 4.2 indicates that there is a positive (t-statistics, 3.806830) and significant (p-value, 0.0005) association between Capital Adequacy (CADQ) and Return on Equity (ROE) of the sampled banks. This positive effect implies that a 1% increase in Capital Adequacy (CADQ) will tend to increase the level of Return on Equity (ROE) by 1.502700. By this, Capital Adequacy (CADQ) has positive significant effect on the Return on Equity (ROE) of the selected banks. The same table above also showed that the supporting variable, Bank size has a positive significant effect on the Return on Equity (ROE) of the selected banks with t-statistics of 7.128111 and p-value of 0.0000. This implies a 1% increase in the Size of the banks will tend to increase the level of Return on Equity (ROE) by 26.33957.

In contrary, Liquidity of the banks has a negative (t-statistics, -0.734958) and insignificant (p-value, 0.4671) effect on Return on Equity (ROE) of the sampled banks. This negative effect implies that a 1% increase in Liquidity (LIQDT) will tend to decrease the level of Return on Equity (ROE) by -4.673370. This is in consonance with Marozva (2015) research report. In same vein, Current ratio (CR) resulted to a negative (t-statistics, -0.877963) and insignificant (p-value, 0.3858) effect on Return on Equity (ROE) of the sampled Nigerian banks. The negative effect indicates

an inverse relationship between current ratio and Return on Equity (ROE) of the selected banks.

R<sup>2</sup> measures the percentage of Return on Equity that could be explained by changes in independent variables, Capital Adequacy (CADQ), Liquidity (LIQDT), Bank size (SIZE) and Current ratio (CR). Here, R<sup>2</sup> adjusted is 0.579464 (58%) which implies that 58% of variation in return on equity could be explained by the effect of independent variables while about 42% could be attributed to other factors capable of effecting changes in return on equity of Nigerian banks. Here also, the Durbin-Watson statistic is 0.982797. This indicates the absence of autocorrelation in the data series.

## 5.0 FINDINGS, CONCLUSION AND RECOMMENDATIONS

### 5.1 Findings

The following findings were made concerning the interplay between Liquidity Management and Performance of Deposit Money Banks in Nigeria.

- There is statistical positive and significant relationship between Capital Adequacy (CADQ) and Return on Equity (ROE) of the Deposit Money Banks in Nigeria.



- b. There is statistical negative and insignificant relationship between Liquidity (LIQDT) and Return on Equity of the Deposit Money Banks in Nigeria.
- c. Current ratio (CR) has statistical insignificant negative correlation with Return on Equity of the Deposit Money Banks in Nigeria.
- d. There is statistical positive and significant relationship between Bank size (SIZE) and Return on Equity (ROE) of the Deposit Money Banks in Nigeria.

## 5.2 Conclusion

Referring to the analysis and findings as shown above, profitability and capital adequacy of deposit money banks in Nigeria have a positive relationship. This entails that an increase in capital leads to an increase in profitability of the banks and vice versa. This finding agrees with the works of scholars such as Kosmidou (2008); and Molyneux (1993) in Charmler et al (2018). Naceur and Kandil (2009) in their opinion concluded that banks with higher level of equity operate at reduced cost of capital and can as well invest part of their capital in the interbank market and other investment window to increase profitability. Besides, deposit money banks with strong capital base have the clout and capacity to absorb financial shocks and invest in portfolios considered risky but with higher returns which shore up profitability.

Size as a control variable in the model showed a significant and positive relationship with return on equity, the performance proxy. This aligns with the findings of Amidu (2007) and Musah (2017), an indication that larger banks operate at economies of scale and diversification status which tend to increase profitability with favourable influence on risk and product portfolio.

The p-value of the F-statistics at 5% level explains that the null hypothesis should be rejected and that the independent variables significantly link with the dependent variable.

The study result showed a negative relationship between liquidity and return on equity. This means that as liquidity increases, the return on equity decreases. This agrees with (Marozva, 2015; Raheman & Nasr, 2007; Liu et al (2010); Ogonna & Ikechukwu (2016).

However, findings from scholars like Rachi (2013), Larty et al (2013), Sile et al (2019) and Daniel (2017) revealed a positive relationship, thus an interplay exists between excess liquidity and profitability on the opposite continuum. It requires that banks should maintain a balance between the two because excessive liquidity stifles profitability as excessive profitability is vulnerable to banks' insolvency (Flannery & Rangan, 2008).

Further finding from the analysis revealed an existence of a negative and insignificant effect between return on equity and current ratio. The result indicates that returns on equity has a negative association with current ratio, an affirmation that excess cash do not significantly determine returns on assets or equity. The result however, conflicts with the finding in the study carried out by Otekunrin et al (2019). The p-value of the F-statistics at 5% level explains that the null hypotheses should be accepted and that the independent variables insignificantly link with the dependent variable

Also, the Durbin-Watson result shows the absence of autocorrelation in the data series and confirms the statistical reliability of the model which shows that there is a significant relationship between return on equity as a proxy for performance and liquidity management.

## 5.3 Recommendations

Flowing from the conclusion, liquidity management proxied by capital adequacy, liquidity ratio, current ratio and bank size as a control variable are related with performance proxied by return on equity. On the strength of the above outcome, the following recommendations are made:

The central bank of Nigeria as the regulator of the banking industry should ensure that banks are adequately capitalized to maintain system stability and ensure a level of progress in the industry.

Efficient liquidity is a pronouncement to profitability and solvency which calls for the maintenance of the required ratios as would periodically be demanded by the apex banks.

Bank managers should be aware of the dangers imminent from holding excess cash or lack of cash and avoid any of this. Excess cash should be invested in short term instrument to earn and shore up profit for the stakeholders while a watchful eye should be kept to discern when the cash level falls below the required so as to avoid customers' ill-will and a consequent bank run that can lead to a technical insolvency. Essentially, deposit money banks in Nigeria are required to strike a balance between liquidity and profitability for system stability to hold.

## REFERENCES

1. Abdullah, M. N., & Jahan, N. (2014). *The impact of liquidity on profitability in banking sector of Bangladesh: a case of Chittagong stock exchange. International journal of Economic and business review*, 2(10), 17-22.
2. Adebayo, O. Adeyemi O. and Olabode, O. (2011): *Liquidity Management and Commercial Banks Profitability in Nigeria. Research Journal of Finance and Accounting* 2(7/8), 24.



3. Akinwumi et al (2017). *Liquidity Management and Bank Performance in Nigeria. Issues in Business Management and Economics*, 5 (6) 88-98
4. Akinwumi I.A., Essien, J.M., & Adeegboyege, R., (2017). *Liquidity Management and Bank Performance in Nigeria. Issues in Business Management and Economics*, 5(6) 88-98.
5. Alshatti, A. S. (2015). *The effect of credit risk management on financial performance of the Jordanian commercial banks. Investment Management and Financial Innovations*, 12(1), 338-345.
6. Amengor, E. C. (2010). *Importance of liquidity and capital adequacy to commercial banks. A Paper Presented at Induction Ceremony of ACCE, UCC Campus.*
7. Ariffin, N. M. (2012). *Liquidity risk management and financial performance in Malaysia:*
8. Bagyenda J, Brownbridge M, Kasekende L (2011). *Basel III and the global reform of financial regulation: how should Africa respond? A regulator's perspective. New Rules for Global Finance. Washington D.C.*
9. *Basel Committee on Banking Supervision (2008), "Principles for Sound Liquidity Risk"*
10. Bassey, G. E., & Moses, C. E. (2015). *Bank profitability and liquidity management: A case of selected Nigerian deposit money banks. International Journal of Economics, Commerce and Management*, 3(4), 1-24.
11. Bhattacharyya, I., & Sahoo, S. (2011). *Comparative Statistics of Central Bank liquidity Management. Economic Research International Journal*, 11(20), 39-45.
12. Bhunia, A., & Khan, I. U. (2011). *Liquidity management efficiency case study of Cadbury, Nestle and Federal Inland Revenue Service. Proceedings of the 32nd International Business Information Management Association Conference (pp. 7483-7398).*
13. Charmler, R., Musah, A., Akomeah, E., & Gakpetor, E. (2018). *The Impact of Liquidity on Performance of Commercial Banks in Ghana. Academic Journal of Economic Studies*, 4(4), 78-90. *Commercial Banks in Malaysia. European Journal of Economics, Finance and Administrative Sciences*, 23(1), 149-160.
14. Daniel, B. E. (2017). *Liquidity management and performance of deposit money banks in Nigeria*
15. Devinaga, R., & Tan, T. M. (2010). *Theoretical Framework of Profitability as Applied to empirical evidence from Islamic banks. Aceh International Journal of Social Sciences* 1(2): 68–
16. Flannery MJ, Regan P (2008). *What Caused the Bank Capital Build-up of the 1990s? Review of Finance* 12.
17. Gomez, C. (2008). *Financial markets, institutions and services. New Delhi, India: Prentice Hall.*
18. Ibe, S.O. (2013). *The Impact of Liquidity Management on the Profitability of Banks in Nigeria. Journal of Finance and Bank Management*, 1(1), 37-48.
19. Khan, R. A., & Ali, M. (2016). *Impact of Liquidity on Profitability of Commercial Banks in Pakistan: An Analysis on Banking Sector in Pakistan. Global Journal of Management and Business Research*, 16(1)
20. Koranteng, E. (2016). *Determinants of liquidity of banks listed on the Ghana Stock Exchange (Doctoral dissertation)*
21. Kosmidou, K. (2008). *The determinants of banks' profits in Greece during the period of EU financial integration. Managerial Finance*, 34(3), 146-159.
22. Kuznetsov, P., & Muravyev, A. (2001). *Ownership concentration and firm performance in Russia: the case of blue chips of the stock market. Acta Oeconomica*, 51(4), 469-488.
23. Lartey, V. C., Antwi, S., & Boadi, E. K. (2013). *The relationship between liquidity and profitability of listed banks in Ghana. International Journal of Business and Social Science*, 4(3).
24. Liu H, Wilson JO (2010). *The profitability of banks in Japan. Applied Financial Economics* 20(24). 1851–1866.
25. Marozva, G. (2015). *Liquidity and bank performance. The International Business & Economics Research Journal (Online)*, 14(3), 453.
26. Musah, A. (2017). *The Impact of Capital Structure on Profitability of Commercial Banks in Ghana. Asian Journal of Economic Modelling*, 6(1), 21-36.
27. Musah, A., Anokye, F. K., & Gakpetor, E. D. *The Impact of Interest Rate Spread On Bank Profitability In Ghana. European Journal of Business, Economics and Accountancy*, 6(1), 27-39.
28. Naceur, S. B.; Kandil, M. (2009), *The impact of capital requirements on banks' cost of of Indian Steel Companies (a Case Study). Far East Journal of Psychology and Business*, 3(3), 313.
29. Ogonna, O.S.; Ikechukwu, N. C. N. (2016), *Effects of Liquidity Management on the Performance of Deposit Money Banks in Nigeria. Journal of Policy and Development Studies*, 10(3), 156-169.
30. Olagunju, A., David, A. O., & Samuel, O. O. (2012). *Liquidity management and commercial banks' profitability in Nigeria. Research Journal of Finance and Accounting*, 2(7-8), 24- 38.
31. Olatunde, S. (2015). *Basel II and Financial Performance of Deposit Money Banks in Nigeria*
32. Onoh, J.K. (2002). *Dynamics of Money. Banking and Finance in Nigeria: An emerging market, Aba Astra Meridian Publishers.*
33. Otekunrin A.O., Fagboro G.D., Nwanji T.I., Asamu F.F., Ajiboye B.O., & Falaye A.J. (2019). *Performance of deposit money banks and liquidity management in Nigeria. Banks and Bank Systems*, 14(3), 152-161.
34. Otekunrin, A. O., Nwanji, T. I., Agba, D. Z., Olowookere, J. K., Fakile, S. A., Lawal, S.



35. Padachi, K. (2006). *Trends in Working Capital Management and Its Impact on Firms' Performance: An Analysis of Mauritian Small Manufacturing Firms*. *International Review of Business Research Papers*, 2(2), 45-58.
36. Raheman, A., & Nasr, M. (2007). *Working capital management and profitability—case of Pakistani firms*. *International review of business research papers*, 3(1), 279-300.
37. Ramadan, I. Z., Kilani, Q. A., & Kaddumi, T. A. (2011). *Determinants of Bank Profitability: Evidence from Jordan*. *International Journal of Academic Research*, 3(4), 180-191
38. Rasiah, D., & Ming, T. T. (2010). *A Theoretical Review of Improving Self Service Effectiveness Using Customer Feedback at Commercial Banks*. *European Journal of Economics, Finance and Administrative Sciences*, 23(1), 149-160.
39. Shekhar, K. C., & Shekhar, L. (2005). *Banking theory and practice (19th ed.)*. New Delhi, India: Kay Kay Printers.
40. Shen, I. L., Docquier, F., & Rapoport, H. (2010). *Remittances and inequality: a dynamic migration model*. *The Journal of economic inequality*, 8(2), 197-220.
41. Vong, L. K. (2005). *Loans and Profitability of Banks in Macao*. *AMCM Quarterly Bulletin*, 15, 91-107.
42. Zikmund, G. W., Babin, B. J., Carr, C. J., & Griffin, M. (2010). *Business Research Methods 8th ed*. South-Western: Cengage Learning.
43. Marietta, U. dan Djoko Sampurno. (2013). *Analisis Pengaruh, Cash Ratio, Return on Assets, Growth, Firm Size, Debt to Equity Ratio terhadap Dividend Payout Ratio*. *Diponegoro Journal of Management*, 2 (3), 1-11.
44. Affandi, F.; Sunarko, B.; & Yunanto, A. (2018). *The Impact of Cash Ratio, Debt To Equity Ratio, Receivables Turnover, Net Profit Margin, Return On Equity, and Institutional Ownership To Dividend Payout Ratio*. *Journal of Research in Management*, 1(4), 1-11.
45. Sile, N.; Oolweny, T.; & Sakwa, M. (2019). *Liquidity as a Determinant of Commercial Banks' Financial Performance in Kenya*. *International Journal of Economics, Commerce and Management* 7(1), 1-11.





# IMPLICATIONS OF COVID-19 POLICY RESPONSE ON ECONOMIC SUSTAINABILITY IN NIGERIA

Egiyi, Modesta Amaka  
Godfrey Okoye University,  
Enugu

## ABSTRACT

*Nigeria has been facing a serious economic crisis since the decline in oil prices. The situation was worsened by the appearance of the COVID-19 pandemic in Nigeria. Since the virus was reported in Nigeria, several policy measures have been put in place to cushion the effect of the pandemic both on public health, and on the economy in general. This paper reviews the effectiveness of these policies in combatting the pandemic, and their sustainability on the economic situation of Nigeria.*

**KEYWORDS:** *Public Health; Economic Sustainability; Coronavirus; COVID-19*

## 1. INTRODUCTION

Following the outbreak of the COVID-19 pandemic, the government put in place a lot of measures to control the spread of the virus in the country. Top on the list of policy measures adopted was the social distancing and lockdown of cities where the virus had the most impact. From the 30th of March 2020, Nigeria has officially been on lockdown. The lockdown originally started in Lagos – the country's commercial capital; Abuja-the country's capital; and Ogun state – because of its proximity to Lagos. The outbreak had begun in the country's commercial city, Lagos, thus, bringing a halt to a lot of informal economic activities that contribute immensely to the nation's overall GDP. The center for the studies of the economies of Africa stated that besides the obvious health challenges of the pandemic and its effects on humans, the economic interruptions and fears brought about by the virus would take its toll on the world economy.

Economic consultants, finance agencies, and even most central banks admit that though the virus would affect the economy negatively, the effects would be brief. This belief is related to the global economic crisis of 2007, but on a closer look, it would be discovered that the 2007 meltdown had its roots in the united states' mortgage crisis which was mainly an economic crisis whose ripple effects spread to other economies. In comparison with the COVID-19 virus, the 2007 economic crisis seems insignificant and containable ( cseaafrica.org, 2020). From all indications, this virus is exerting intense pressure on the global economy thus, the challenge facing every economy is how to achieve a sustainable economy given the situation at hand. A country's

economic, social, and political policies' sustainability has a great impact on its development. Consequently, emergent social, economic, and political responses to similar needs could only be addressed with reforms and policy reviews. Nevertheless, the achievement of sustainability in a country remains an exclusive duty of its leaders, and policymakers as this allow for strong and sustained growth and development in the economy ( Azubuike & Ebere, 2019).

Every political leader, business owner, and, indeed every human desire a sustainable economy because sustainability gives rise to growth. In Nigeria, however, the achievement of sustainability has been almost impossible due to the heavy incidence of corruption and political instability ( Ogbo, Eneh, Agbaeze, Chukwu, & Isijola, 2017). Sustainability as a concept has been in existence for a long time but it was seen mainly as a concern of factories and companies who needed to reduce the impact of their production activities on the environment and lower waste (Yvon, Jib, & Rick, 2011). From experiences over the years, people have realized that a sustainable economy is an economy that can preserve its wealth and bounty for coming generations and not just that which thrives for a while. In its real sense, sustainability translates into satisfying our present wants without hampering the ability of the next generation to satisfy theirs (Kuhlman and Farrington, 2010).

### 1.1 Statement of Problem

The world has been faced with a one-of-its-kind health emergency with the appearance and fast-spread of COVID-19. The virus, which is said to have its origin from bats, was transferred to humans through a yet-to-be-named intermediary – an animal,



in China's Hubei province, Wuhan in December 2019 (Singhal, 2020). The coronavirus COVID-19 pandemic is leading as a modern-day health crisis and man's biggest challenge since the second world war. The virus has spread to every continent except Antarctica since its appearance in Asia, last year; and every day in Europe and America, new cases arise (undp.org, 2020). The transmission of the virus occurs when contaminated air from the sneeze and cough of a carrier is inhaled. Similarly, transmission occurs when humans touch their mouth, nose, and eyes with hands that have had contact with contaminated surfaces or infected hands ( (afriacdc.org, 2020). Details regarding the virus are sketchy, including the health conditions it would trigger but beyond the effects on human beings, and the health conditions that would result, the virus brings with it some sort economic of disruption and uncertainty that affects every economy of the world. Nigeria generates 87% of her foreign exchange and earns more than half of her revenue from oil exports. Therefore, the fall in oil prices to less than \$30 per barrel from the beginning of the year has resulted in a fall in government revenue. The fall in the demand for oil is calculated to exceed the loss of almost one million barrels daily as was discovered during the recession of 2007- 2008. Coincidentally, this is happening at the same period that the OPEC and Russia -two key players in the world oil market are in a tussle over cutting output. The effects of this price war between these two may affect the already declining oil prices adversely (cseaafrica.org, 2020). To combat the virus, and to cushion its effects on human health, Nigeria's government put in place some policy measures and even though the measures are for good, they come with some hitches. The lockdown, for instance, poses a lot of economic hurdles and is taking a toll on the demand for oil.

### 1.2 Objectives of The Study

The main objectives of this study are:

1. To examine government and fiscal policy responses to COVID\_19 in Nigeria.
2. To determine the extent to which these government and fiscal policies will affect economic sustainability in Nigeria.

### Social Distancing and Lockdown

The world health organization and leaders all over the world advised the people to observe social distancing and this resulted in a standstill in economic activities due to the massive self-isolation. All non-essential workers were ordered to remain indoors because having few people walking the streets could help reduce the spread of the virus and possibly reduce the mortality rate. However, the majority of Nigerians earn their living from the informal economy; if they do not go out for a day, that invariably implies staying hungry for that day. In order words, staying indoors would guarantee reduced exposure to the virus and more exposure to

hunger. Moreover, a large number of Nigerians do not have adequate shelters so they are stuck up in a shack with no electricity, water supply, and in the case of any health emergency, the hospitals lack the necessary facilities with which to cater to them. An initial two-week lockdown was imposed on Lagos, Abuja, and Ogun states on the 30th of March 2020 by the federal government. The lockdown was extended to another two weeks on the 13<sup>th</sup> of April. Nonetheless, the lockdown came with specific rules. They include:

1. Confining everyone to his residence except those who provide essential services, those seeking medical care, or those who seek an essential commodity.
2. Restriction of movement between and within the affected states except for individuals who deliver essential goods, and services.
3. Closure of malls and retail shops except for such places where essential commodities are sold. The shops must identify the staff on duty and enforce hygiene measures and social distancing policies in line with the guidelines issued.
4. Suspension of inter-state commuter services including bus services, passenger rail services, air passenger transport, maritime, e-hailing services for the lockdown period.
5. Limited transport services for the movement of services, workers, and goods in response to COVID-19 and to seek medical attention or provision of essential services. Transport services existing during the lockdown must enforce social distancing and hygiene measures (statehouse.gov.ng, 2020).

### Policy Measures by the Central Bank Of Nigeria

In response to the pandemic and the dive in oil prices, the Central Bank of Nigeria, in a memo released on 16th March 2020 with the reference FPR/DIR/GEN/CIR/07/049, outlined certain policy measures that would help stabilize Nigeria's financial market. The circular which was titled, "CBN Policy Measures in response to COVID-19 Outbreak and Spillovers", mentioned the following:

#### 1. Extension of the moratorium for all CBN intervention facilities

As a result of the weakness in private sector savings, making loans with low-interest rates available at longer periods is important to put the economy in the path of sustainability. The CBN, in an attempt to promote sustainability in the economy, granted an extra one-year grace on principal repayments to all its debtors beginning from March 1, 2020. In this regard, every financial institution involved has been



mandated to draw up new repayment schedules for all loan recipients.

### **2. Reduction in the applicable interest rates on all CBN intervention facilities –**

Interest rates make the flow of funds easy, and also enables financial entities to effectively perform their intermediary roles. For this reason, the central bank of Nigeria reduced interest rates on all its interventions from 9%-5%. This reduction takes effect from March 1, 2020.

### **3. Creation of a N50 Billion Targeted Credit Facility**

Because of the low-capacity of savings of the small and medium scale enterprises, they are easily affected by economic shocks especially one posed by the pandemic. The CBN, thus, created a fifty-billion Naira credit targeted at the small, and medium scale enterprises, and households who have been affected by the pandemic.

### **4. Credit Support for the Healthcare Industry**

The healthcare sector has been put under intense pressure because of the outbreak; for this reason, the central bank has mapped-out a hundred million Naira intervention scheme. This intervention is made available to hospitals, pharmaceuticals, and other healthcare providers who wish to either expand their scale or build new drug manufacturing centers or construct new hospitals.

### **5. Regulatory forbearance**

Deposit Money Banks (DMBs) now have the permission to extend the duration of credits given to households and businesses that were affected by the pandemic. It is expected of deposit money banks to temporarily restructure loans especially those offered to businesses in the manufacturing, agriculture, and oil and gas sectors.

### **6. Strengthening of the CBN Loan/Deposit Ratio (LDR)**

In an attempt to maintain the existing LDR policy in the face of the outbreak, the central bank has decided to increase support to deposit money banks by providing funds to them. This helps improve the capacity of DMBs to provide loans and credit to businesses and households. (Central Bank of Nigeria, 2020).

### **Implications of these Policy Measures**

**Unemployment:** the pandemic would be a major reason for unemployment in the country. This unemployment would be more evident in the informal sector because a large number of Nigerians earn their living by working menial jobs. The lockdown would, thus, leave a lot of people without jobs. The cleaner who cleans the office complex, the

vulcanizer in the road corner, the driver, and so on are equally affected. Furthermore, to cut costs and adapt to the changing times, some companies would disengage a lot of people thereby making more people unemployed. This loss of employment would also be felt in the tourism and leisure sector. Hotels and restaurants are all under lock and key meaning that all those who work in such places would be left idle. Other sectors would be adversely affected, for example, Nigeria's film industry, known otherwise as Nollywood, would be badly hit. This sector, which has been named the second largest employer in the country; employs over a million people and churns out more than a thousand movies yearly. However, every activity related to movie production has come to a halt because its production center, Lagos, is on lockdown. Consequently, people who initially earned a living from movie making would be left jobless (Aref-Adib, 2020).

**Decreased export earnings:** the closure of borders and the constraint on the movement of people foretell a fall in exports. The global export chain has been interrupted by the closure of borders around the world except for non-essential services. And even while the products of countries that devalue their currency due to a decrease in price like Nigeria does might seem inexpensive, the restrictions on nonessentials does not allow for any favorable effect on net exports (Ekeruche, 2020). Moreover, favorable export earnings result in high employment, economic growth, and so on (Pettinger, 2017)

**Inflation:** keeping prices of goods and services stable is one of the major objectives of a present-day economic system. The achievement of this goal is very essential because a failure to do so comes with a lot of negative consequences (Asekunowo, 2016). Because of the pandemic, a lot of manufacturing businesses have been put on hold making it impossible for new products to enter the market. As a result, the existing goods in the market would become a lot more expensive than it used to be. Furthermore, a lot of people are buying out of panic because they are uncertain when the lockdown would be lifted and when the virus would be properly contained, this attitude raises demand without a corresponding increase in supply which results in an unhealthy increase in price.

**Decline in consumption:** if constant investments are made in the economy, there is an increase in employment levels and high economic activity. Consequently, national income increases (Rafiy, Adam, Bachmid, & Saenong, 2018). There would be a reduction in household demands and consumption in Nigeria as a result of the COVID pandemic. This is because there would be corrosion of wealth resulting from the fall in the value of stocks and shares. Furthermore, the restrictions on movement and production would induce people to spend only on essential commodities. Similarly, the unemployment



faced by the people in the informal economy makes for low-income expectations thus, resulting in limited consumption. This reduction in consumption will result in low economic activity and low national income.

**Low Investments:** because of the inadequate knowledge regarding the virus, and its duration, a lot of individuals would hold back on investments. Firms will only invest if they are confident about future costs, demand, and economic prospects. If there is uncertainty (e.g. political turmoil) then firms may cut back on investment decisions as they wait to see how event unfold (Petinger, 2019). Negative investor-confidence, doubts about the efficacy of government policies regarding the virus, and general public reaction also contribute to lower investments (Onyekwena & Ekeruche, 2020). However, some technology companies like Apple, Facebook, Amazon, Google, and Microsoft giants are taking advantage of the pandemic. Their stocks are said to have outdone others since COVID-19 was declared as a pandemic (CBInsights, 2020).

**Increased Government Spending:** in an attempt to counter the decline in consumer demands and spending, the government increases its spending. The government, therefore, finds itself trying to make the economy work by increasing spending (Naufal, 2018). This increase in government spending, even though they are for good, can also be detrimental to the economy. Increased government spending helps increase cost-effectiveness for firms and induce the private sector to invest thereby bringing about growth in the economy. expenditure contributes positively to economic growth. On the contrary, certain academics believe that an increase in government expenditure slows the economy down. They posit that in the government's quest to raise expenditure, it might charge higher taxes and increase borrowing which reduces aggregate demand by way of dissuading people to work. Similarly, production costs are raised, and investors discouraged from investing when income tax is high. Likewise, government borrowing has a crowding-out effect on the private sector resulting in a fall in private investments. (Olulu, Erhieyovwe, & Andrew, 2014). Countless papers have attempted to use the disparities in government expenditure in various regions to categorize the effects of fiscal policy. These studies leveraged on the federal government's habit of allocating funds to states for non-economic needs; like the allocation of federal road allowances based on the outline of the highway interstate system. Variations like these are a pointer to how government spending affects the local economy (WILSON, 2012)

## CONCLUSION

This paper assessed the Nigerian economy at the time of the coronavirus pandemic. It considered government and fiscal policies that were put in place

to cushion the overall effects of the pandemic and their implications on the Nigerian economy. The policies even though they are for good, pose some problems. It is important that while the government tries to ease the pressure imposed by the virus on the economy, they should consider their implications so that they do not create more problems while trying to solve one.

## Recommendations

It is obvious that increased government expenditures make for increased investment both in the private, and public sectors, better standard of living, and economic growth and development. So, to achieve sustainability, the government has to increase its spending. Furthermore, Nigerians must focus on producing their products. The healthcare sector is another sector that would benefit immensely from the COVID 19 pandemic if policymakers decide to pay attention to the shortcomings highlighted by the pandemic. A whole lot of policymakers and other wealthy citizens travel abroad for medical checkups neglecting the local health sector but the COVID-19 pandemic made it impossible to travel abroad for medical treatment. The government must make a committed effort in developing Nigeria's healthcare sector. More health facilities with the necessary equipment should be constructed. More importantly, policymakers should look for alternative ways to generate revenue other than oil. Individuals are also advised to take better care of themselves by eating healthy foods and exercising regularly.

## BIBLIOGRAPHY

1. *africacdc.org*. (2020, may 26). *Coronavirus Disease 2019 (COVID-19)*. Retrieved from *africacdc.org*: <https://africacdc.org/covid-19>
2. Aref-Adib, C. (2020). *when a failure to diversify meets covid-19: implications for nigeria*. Retrieved from *theigc.org*.
3. Asekunowo, V. O. (2016). *The causes of persistent inflation in Nigeria*. *CBN Journal of Applied Statistics*, 49-75.
4. Azubuike, C. R., & Ebere, U. S. (2019). *Strategies for Achieving Sustainable Development in Nigeria: Conceptual and Empirical Approach*. *International Journal of Sustainable Development*, 77 – 100.
5. *CBInsights*. (2020, May 7). *All Of Big Tech's Investments Since The Covid-19 Outbreak*. Retrieved from *CBInsights*: <https://www.cbinsights.com/research/famga-investment-covid-19/>
6. *Central Bank of Nigeria*. (2020, march 16). *circular to deposit money banks and the general public on: CBN policy measures in response to COVID-19 outbreak and spillovers*. Retrieved from *cbn.gov.ng*: <https://www.cbn.gov.ng/>
7. *cseaafrica.org*. (2020, april 13). *the implication of Covid-19 pandemic on Nigerian economy*. Retrieved from *cseaafrica.org*.



8. Ekeruche, C. O. (2020, April 8). *Understanding the impact of the COVID-19 outbreak on the Nigerian economy*. Retrieved from [www.brookings.edu](http://www.brookings.edu).
9. Kazeem, Y. (2020, april 24). *Ordinary Nigerians are filling the country's major social welfare gaps amid coronavirus*. Retrieved from [qz.com](http://qz.com).
10. Kuhlman, T., & Farrington, J. (2010). *What is Sustainability?* *J. Sustain*, 3436-3448.
11. Naufal, A. A.-A. (2018). *The Impact of Government Spending on GDP in a remitting country*. *IZA – Institute of Labor Economics*, 2-17.
12. Nnanna, j. (2020, april 20). *an overview of the economic impact of covid-19 in nigeria*. Retrieved from [businessday.ng: features/article/an-overview-of-the-economic-impact-of-covid-19-pandemic-on-nigeria/](http://businessday.ng/features/article/an-overview-of-the-economic-impact-of-covid-19-pandemic-on-nigeria/)
13. Ogbo, A. I., Eneh, N. C., K, A. E., Chukwu, B. I., & Isijola, D. O. (2017). *Strategies for achieving sustainable economy in Nigeria taking into consideration the acceptable stakeholders*. *African Journal of Business Management*, 582-589.
14. oguntuase, s. b. (2020, april 6). *policy and regulatory measures against the corona pandemic in Nigeria*. Retrieved from [lexology.com](http://lexology.com).
15. Olulu, R. M., Erhieyovwe, E. K., & Andrew, U. (2014). *Government Expenditures and Economic Growth: The Nigerian Experience*. *Mediterranean Journal of Social Sciences*, 89-95.
16. Onyekwena, C., & Ekeruche, M. A. (2020, April 18). *Understanding the impact of the COVID-19 outbreak on the Nigerian economy*. Retrieved from [Brookings: https://www.brookings.edu/blog/africa-in-focus/2020/04/08/understanding-the-impact-of-the-covid-19-outbreak-on-the-nigerian-economy](https://www.brookings.edu/blog/africa-in-focus/2020/04/08/understanding-the-impact-of-the-covid-19-outbreak-on-the-nigerian-economy)
17. Petinger, T. (2019, June 5). *factors affecting investment*. Retrieved from [economicshelp: https://www.economicshelp.org/blog/136672/economics/factors-affecting-investment/](https://www.economicshelp.org/blog/136672/economics/factors-affecting-investment/)
18. Pettinger, T. (2017, July 15). *importance of exports to the economy*. Retrieved from [economicshelp: https://www.economicshelp.org/blog/7164/trade/importance-of-exports](https://www.economicshelp.org/blog/7164/trade/importance-of-exports)
19. Rafiy, M., Adam, P., Bachmid, G., & Saenong, Z. (2018). *An Analysis of the Effect of Consumption on Indonesia's economic growth*. *Iranian Economic Review*, 753-766.
20. Singhal, T. (2020). *A Review of Coronavirus Disease-2019 (COVID-19)*. *Indian Journal of Pediatrics*, 281-286.
21. [statehouse.gov.ng](http://statehouse.gov.ng). (2020, march). *implementation guidelines for lockdown policy*. Retrieved from [statehouse.gov.ng](http://statehouse.gov.ng).
22. [undp.org](http://undp.org). (2020). *COVID-19 pandemic: Humanity needs leadership and solidarity to defeat the coronavirus*. Retrieved from [www.undp.org](http://www.undp.org).
23. WILSON, D. J. (2012). *Government Spending: An Economic Boost?* *FRBSF ECONOMIC LETTER*, 2-5.
24. Yvon, C., Jib, E., & Rick, R. (2011). *The Sustainable Economy*. *Havard Business Review*, 1-12.



## THE ISSUE OF THE USE AND TREATMENT OF THE SLAVES IN THE KHIVA KHANATE

**Tojieva Feruza**

Research Investigator at  
Khorezm Academy of Mamun,  
Khiva, Uzbekistan.

### ABSTRACT

*The issue of slavery in the Khiva khanate is one of the least studied pages not only in Khorezm, but also in the history of Uzbekistan. There is no definitive research on this topic. From this point of view, the issue of studying and researching this topic is of great importance in the science of history today. This article on the basis of written sources analyzes the use slaves and treatment attitude to them in the Khiva khanate. The essence of slavery and its role in the socio-economic life of the Khiva khanate were scientifically analyzed and conclusions were made by analyzing the spheres in which the power of slaves was used and the attitude to them. At the same time, based on the content of the article, the issue of the role of slaves and slavery in the political, socio-economic life of the Khiva khanate was scientifically analyzed. The article analyzes the basics of slavery in the Khiva khanate from an economic point of view for the first time.*

**KEYWORDS:** *Slavery, the use of the slave forces, the attitude towards the slaves, Sharia, Sunnis sect, Shiites sect, fatwas, Andrei Borodin, Peter Maslov, M. Ivanin, P. Ivanov, N. Mikhailov, farming, A. McGaxan, X. Vamberi, G. Danilevskiy, Valentina Petrova, G. Zelenin, Akulina Stepanova, Russian slaves, Iranian slaves*

### DISCUSSION

According to historical sources, slave labor was used in various fields in the Khiva khanate. However, the slaves' force was primarily used in agriculture. It has been used in small quantities in other fields, including the military and handicrafts. The reason for it was that agriculture, which operated in a out-of-date farming style, required a lot of labor. The general question of why the power of slaves should be used in general can be answered by the fact that human trafficking is a lucrative business, like a criminal chain between the Yavmud tribes and the khan officials who support them.

It is known that agriculture in Khorezm was based on man-made irrigation, and the fate of the country and agriculture depended on it totally. That situation required the cleaning of the large canals, which was very laborious. The digging of canals and ditches, their annual cleaning were included into the main responsibility of the the population of the Khiva khanate. It is certain that the slaves were also involved in that work. Some Russian captives held in the prisons of the Khiva khanate were also involved in digging the canals. In particular, Andrei Borodin, a Cossack from the Urals who was captured during the Bekovich-Cherkassky expedition in 1717, noted that

the slaves were driven to clean the canals in the Khiva khanate every year in spring.[12]

Pyotr Maslov, a Russian citizen held captive in the Khiva khanate in the 1830s, also mentioned that he was involved in cleaning job in the Polvon and Shohabad canals.[6]

The newspaper 'Russkiy Invalid' reported that 100,000 people were mobilized in the khanate in the early spring to clean the canals flowing from the Amudarya, including Russian and Persian slaves.[11]

O. Shkapsky wrote the followings about this in his book "Amu-darinskije ocherki": "Until 1873, the landowners in the khanate ruled the farms with large areas of land with the help of slave forces" [15].

McGahan, on the other hand, noted that Matmurad Devonbegi, who had innumerable lands on both banks of the river, had about 400 slaves.[9]

Ilya Ilichkov, a Ural Cossack who was enslaved in the khanate in 1870-73, told of his experiences as he and three other Russian captives worked in the khan's Gandimiyon garden during the winter and summer, digging from morning till night and carrying humus to the garden in a cart.[13]

There are various sources on the attitude towards the slaves in the khanate. This is natural and certain that the very existence of slavery is a



disgusting state at all forms, and the slaves themselves, surely, would never evaluate their situation positively, even if they were provided with very good conditions. However, according to many sources, household affairs or farming in the Khiva khanate was not carried out only by slave forces. For example, Andrei Nikitin, a captive in the Khiva khanate, emphasizes the role of slavery in the khanate as in followings:

‘The Khiva people themselves never do heavy work such as land, field or garden work, which has always been considered the work of slaves. If it weren't for the Russian or Iranian and Kalmyk slaves, I don't know what it would be like to fertilize the extremely labor-intensive fields, to water the fields frequently, to create gardens by watering and irrigating, to plant crops: in a word, the Khiva people live at the expense of slaves’ [1]. It is a great historical mistake to come to such a conclusion basing on the opinion of a person who did not know the socio-economic life of the khanate.

The Russian ambassador to the khanate in 1858, N.P. Ignatev also said that "all the income in this country, all the wealth of landowners, especially influential officials, is formed due to the steadfast work of Iranian slaves." In a country based solely on agriculture, slaves are the only farmers.”[4]

At this point, P.P. Ivanov in his work "Excerpts from the history of Central Asia" according to Vamberi, the famous Hungarian orientalist, he said: "In Bukhara, especially in Khiva, only slaves are engaged in agriculture, and in the Khiva khanate alone they are more than 80,000. The rudeness of the native people made the sword their necessary weapon, and they considered the hoe as an unworthy weapon and handed it over to their slaves.”[7] However, here if N.P. Ignatev and A. Vamberis even considering that they had been to Central Asia, we cannot make conclusion that their opinion is correct. The reason is that history has shown that almost 90% of the social structure of the population of the Khiva khanate consists of peasants, and a large part of the material wealth of the society created in the khanate was created not by slave labor, but by the labor of native people.

It should be noted that the sources also contain different information about the treatment and attitude to the slaves. In particular, some slave owners did not see their slaves as human beings and kept them in very predicament conditions. But while some of the captives lived in better conditions, they tried to escape anyway. Some refugee slaves (including Tikhon Ryazanov) even returned to Khiva.[2] It was natural that the slaves who tried to escape were severely punished. [8]

In general, the information about the plight of slaves mentioned in the memoirs of many Russian captives is not always true when compared with information from other sources. In particular, the

archival documents of the Khiva khanate contain a lot of accurate information about how slaves should work and how they were paid in time to eat and drink as well as their clothings. [5]. In addition, there is information from other Russian slaves, which contradicts the above information about Russian slaves, that their treatment of slaves was not always bad or negative. Many slaves, especially those enslaved in the military, were married to either their own countrymen or Khiva women (including captured Iranian General Ismail Mirpanji married to a native khivian girl), Dementiy Ivanov, the head watchman of Allakulikhan's stable, was married to a Kyrgyzian slave woman; There are many such examples of the lives of Russian prisoners of war who were let and helped to get married. Especially in the memoirs of Russian slaves, it is often mentioned that they were encouraged to convert to Islam. However, according to most of them, the conversion of Russians to Islam in the khanate was not a very strict requirement or a very strict obligation to convert to Islam. They continued to believe in their Christian religion. It's hard to say anything about Iranian slaves alone. Due to the Sunni belief of the time, the conversion of Iranian slaves from Shia to Sunni sect of the religion was both a great blessing and a firm obligation.

M. Ivanin writes that the Russian slaves were treated very well by the Sarts. Only Uzbeks, especially Turkmen, treated Russian slaves badly.[6]

If we pay attention to the content of the conversations with several former Russian slaves mentioned in Russian sources of this period, we can see that the vast majority of them were treated well. Including, N. Mikhailov's article in 'Niva' magazine, 'Khiva asirlarining sadosi' (The Voice of the Khiva Prisoners), provides information about the Russian captive and the attitude towards the slaves in Khiva khanate. According to this source, "The people of Khiva are compassionate and kind to hard-working, diligent and trustworthy captives, and appreciated their hard work and services. They are not discriminated against, no matter what their beliefs are. The Turkmen, on the other hand, treated me very badly: when I was taken to prison, the Turkmen tore off the Christian cross around my neck and threw it away. The people of Khiva do not insult our religion and do not forbid our prayers . [10]

In general, slaves were also given the opportunity to demonstrate their mental and physical abilities. Talented and zealous slaves were able to gain freedom and accumulate enough wealth, and some even achieved a certain career or rank. For example, the khan mahrams of the mid-19th century, Matmurad and Khojali mahrams, were once slaves.[5] Even Shirinbika, the most beloved wife of Khiva khan Feruzkhan, was brought from Iran by the Yavmuds in her youth and sold to the harem in the slave market in Khiva. In addition, there were Shari'a



rules under which a slave woman's child could not have any restrictions. In particular, Matniyaz Devonbegi's mother was a Russian slave. [6]

Russian slaves were mainly tasked with teaching local warriors how to use modern cannons and weapons needed by the khan's army because they knew military equipment and martial arts; or with training the Khiva army to the rules of modern martial arts. For example, in 1838, Vasily Lavrentev served as the khan's artillery chief.[3]

It is mentioned in the information about P.G.Danilevsky's mission that Sergey Oga (dialect word means *big brother*) was Khiva khan's most beloved personnel "Minister of Artillery" came to Khiva in 1842, and he led the artillery of the khan's warriors during khan Allakulikhan's march to Bukhara in 1842.[14]

The slaves belonging to the khan were fed in time for their good work, and were constantly supervised, taking care of the lands belonging to the khan, and mainly the gardens in his field yard. Between 1847 and 1850, 41 to 53 slaves worked in the single Ropanic courtyard, looking after 31 horses and 30 oxen at their disposal. In the yard of Gullanbog, 8-10 slaves worked in those years, they looked after 7 horses and 7 oxen. About 20 slaves worked in the courtyard of Oqmachit.[5]

Similarly, many slaves served at the disposal of princes, officials, merchants and priests, and 400 wealthy people in the khanate used the services of slaves in the middle of the 19th century.[5]

The slaves would only do what was ordered, and if a more profitable initiative came out of them, the owner would do it. Female slaves usually did housework. Male slaves were involved in farming. According to archival data, in the 1849-1850 economic year, 6,000 botmons of wheat were harvested from farms looked after the slaves in the Kyzyltakir district. In the same year, the slaves harvested 400 batman of rice, 40 batman of cotton, 30 batman of oats, and 150 batman of green-bean from the lands of Kilich Niyazboy district.[5]

Naturally, the landowner, who had so much produce, would give something to his slaves in addition to the food he used. He also gave money to the slave for clothes. Only Hasan devonbegi, according to archival data, he allocated 104 coins to 52 slaves to buy clothes and outfit. Other documents also state that in 1866-67, "5 slaves were given 5 coins to buy clothes and outfit." Or in the archives of the Khiva khans, it is recorded that the same year Otajon Tora gave 16 batmans of wheat to two slaves who were in service from the month of Muharram to the month of Jumadil-Awwal, and 2 gold coins were spent to dress a slave newly bought in Ramadan. [5]

In general, in the Khiva khanate the labor force of slaves was used in almost all spheres of socio-economic life. However, the slaves' force was widely used, mainly in agriculture. The issue of the

attitude towards the slaves is a relatively complex one, as the written sources present contradicting facts on it.

## REFERENCES

1. Dal V.I. *The story of a slave, a native of Khiva, Andrei Nikitin. 1830 //in Russian. Utrennaya zarya: Almanac for 1838. Ed. V. Vladislavlev. - SPb. : Military. type., 1838. Pp. 188-211*
2. Dal V. I. *The story of the Astrakhan tradesman Tikhon Ivanov Ryazanov who came out of the Khiva captivity / V. I. Dal // Morning Dawn: Almanac for 1839 / Ed. V. Vladislavlev. - SPb., 1839. Pp. 74-92*
3. Dal V.I. *The story of a Russian prisoner from Khiva, Yakov Zinoviev. 1838 / V.I.Dal // St. Petersburg Bulletin. - SPb., 1839. - No. 22. - January 27. Pp. 97-98; No.23 of 28 Jan. Pp. 100-102; No.24 of January 29. Pp.106-108*
4. Zalesov N.G. *Embassy in Khiva and Bukhara of Colonel Ignatiev // Rus. vestn. 1871. No. 3. P. 47*
5. Yuldashev M. I. *Feudal land ownership and state structure in the Khiva khanate. - Tashkent: O'zDavnashr, 1959. p. 363*
6. Ivanin M. *Khiva and the Amu-Darya River (in Uzbek), Turkestan Collection; T.050, St. Petersburg: Marine collection. Pp. 269-319*
7. Ivanov P. P. *Essays on the history of Central Asia (16th - mid-19th century) (in Russian), Moscow, Leningrad: Vostochnaya Literatura (Eastern Literature) Publishing House. 1958. Pp. 164. (p.249)*
8. Infanyteyev P. *Tamyr. A story from Life among the Turkmen and Khivans(in Russian), Saint Petersburg, Bookstore Publishing named after P.V. Lukovnikov. Typo lithography "Energia", 1912. P.49 (Pdf). P.19*
9. Mac Gahan A.Ya. *Military operations on the Oxus and the fall of Khiva (translated from English into Russian). - M., 1875. P. 304 (226-228 (266))*
10. Mikhailov N. *Voice of Khiva prisoners(in Russian) // Niva, 1873, No. 30. Pp. 465-470*
11. *Essays on the Khiva Khanate.(in Russian) // Russian disabled. No. 76-77. Turkestan collection. No. 72. St. Petersburg. 1873 Pp. 004a-005g*
12. *A trip from Orsk to Khiva and back, made in 1740-1741 by Gladyshev and Muravin. ,(in Russian) // Published with the introduction of a modern map of Millerov's route from Orsk to Zyungor possessions and back by Ya. V. Khanykov. - SPb. : Printing house of the Ministry of Internal Affairs. 1851. -- 85 p., 2 p. kart.*
13. *Stories of prisoners from Khiva. ,(in Russian) // Turkestan Collection. T.046. - St. Petersburg: Stock Exchange. 1873. Pp. 264-268*
14. *Russia: A complete geographical description of our fatherland. Handbook and road book: [In 11 T.] / Ed. V.P. Semenov-Tyanshansky; Under total. hands. V.P. Semenov-Tyanshansky and V.I. Lamansky. - SPb. : Ed. A.F. Devriena, 1899-1914. T. 19: Turkestan Territory / (in Russian) Comp. Prince V.I. Masalsky; [Preface: V. Semenov-tyan-shanskiy and L. Berg]. - 1913. - X, p. 861, [7] p. maps. : ill, p. 385*
15. Shkapsky O. *Amu-Darya sketches. On the Agricultural Issues on the Lower Amu Darya,(in Russian) Moscow, 1900, p. 153*





## THE ISSUE OF THE NUMBER OF “INTEGER TRIANGLES”

<sup>1</sup>**Sardor Bazarbayev**

<sup>1</sup>Leading Specialist of the Department of Working with Talented Students on Science Olympiads of the Ministry of Public Education of the Republic of Uzbekistan, Master Student of the Faculty of Mathematics, National University of Uzbekistan, Tashkent, Uzbekistan

<sup>2</sup>**Davrbek Oltiboyev**

<sup>2</sup>Student of the Faculty of Mathematics, National University of Uzbekistan, Winner of the Republican Olympiad, Tashkent, Uzbekistan

### ABSTRACT

*This article highlights one of the most pressing problems in the combination of geometry and number theory, the problem of the number of "integer triangles" and some interesting lemmas.*

**KEYWORDS:** *integer, triangle, lemma, theorem, number, side, inequality, set, even, odd, perimeter, formula.*

### DISCUSSION

An integer triangle is a triangle whose sides are integers. Let the problem be: Find the number of triangles whose perimeter is 10 and whose sides are integers. It can be easily determined that such triangles may be (2, 4, 4) and (3, 3, 4). However, as the perimeter value increases, the problem becomes more complicated and it leads our likelihood of making a mistake in problem solving to increase. Therefore, we present the proof of the following theorem.

Before giving the theorem, let us enter the following definitions.

(1)  $\lfloor x \rfloor - x$  The largest integer smaller than or equal to  $x$ .

$\lceil x \rceil - x$  The smallest integer greater than or equal to  $x$ .

(2) (i) If  $x$  is integer, here  $\lfloor x \rfloor = \lceil x \rceil = x$ .

(ii) If  $x$  is not integer,  $\lceil x \rceil = \lfloor x \rfloor + 1 \Rightarrow \lceil -x \rceil + \lfloor x \rfloor = 0$ , i.e,  $\lceil x + n \rceil = \lceil x \rceil + n$  and  $\lfloor x + n \rfloor = \lfloor x \rfloor + n$ , here  $n \in \mathbb{Z}$ .

(3)  $\tau(x) - x$  is the closest number to the integer. For example,  $\tau(2,1) = 2, \tau(2,6) = 3$  and etc.

(This function is defined continuously for  $x - \lfloor x \rfloor \neq \frac{1}{2}$ ).

Now we present the main theorem in the article with full proof.

**Theorem:** The number of triangles, whose sides are natural numbers and whose perimeter is  $n$  that equal to a given number:



$$T(n) = \begin{cases} \tau\left(\frac{n^2}{48}\right), & \text{if, } n - \text{even} \\ \tau\left(\frac{(n+3)^2}{48}\right), & \text{if, } n - \text{odd} \end{cases}$$

**Proof:** Let the sides of a triangle be  $a, b, c$ , here we determine  $a \geq b \geq c$  without limiting the generality. We obtain the relation  $b + c > a \geq b \geq c$  (1) using the triangle inequality, and the fulfillment of this inequality is also a sufficient condition for the existence of a triangle whose sides are equal  $a, b, c$  in length. Let's take a collection as follows  $A_n = \{(a, b, c) \mid a + b + c = n; b + c > a \geq b \geq c\}$ :

In that case, the number of elements in the set  $A_n$  is equal to the number of triangles we need, i.e.  $|A_n| = T(n)$

We must first limit  $a$ : from the relation (1),  $b + c > a$  or  $n - a > a$ , in that case  $n > 2a$  or  $n - 1 \geq 2a$ , i.e.  $a \leq \left\lfloor \frac{n-1}{2} \right\rfloor$ .

Moreover, according to the relation (1)  $n = a + b + c \leq 3a$  or  $\left\lceil \frac{n}{3} \right\rceil \leq a$ , that is  $\left\lceil \frac{n}{3} \right\rceil \leq a \leq \left\lfloor \frac{n-1}{2} \right\rfloor$ .

Now let's limit  $b$  in relation to  $a$ :  $n = a + b + c \leq a + 2b$ , i.e.  $\left\lceil \frac{n-a}{2} \right\rceil \leq b \leq a$ .

Obviously, there is a natural number  $a - \left\lceil \frac{n-a}{2} \right\rceil + 1$  between  $\left\lceil \frac{n-a}{2} \right\rceil$  and  $a$ , so  $b$  can be chosen exactly the same way. We can match exactly one  $c$  for each  $(a, b)$  pair by the formula  $c = n - (a + b)$ , because the above inequalities are directly derived from the triangular inequality. We find that for each  $a$ , there is  $b$ , that has  $a - \left\lceil \frac{n-a}{2} \right\rceil + 1$ , so if we find the number of pairs, we can find  $|A_n|$ .

Thus, it is enough to calculate  $|A_n| = \sum_{a=\left\lceil \frac{n}{3} \right\rceil}^{\left\lfloor \frac{n-1}{2} \right\rfloor} \left( a - \left\lceil \frac{n-a}{2} \right\rceil + 1 \right)$ . Now, to calculate this sum, we

give the following auxiliary lemmas with proof.

**Lemma:** For any natural number  $n$ , the following equation holds:

$$\sum_{k=1}^n \left\lfloor \frac{k}{2} \right\rfloor = \left\lfloor \frac{n^2}{4} \right\rfloor = \frac{1}{4} \left( n^2 - \frac{1 - (-1)^n}{2} \right)$$

**Proof of the lemma:** We prove this in two cases:

**Case 1:** Let  $n = 2m$ . Here,



$$\sum_{k=1}^n \left\lfloor \frac{k}{2} \right\rfloor = \left\lfloor \frac{1}{2} \right\rfloor + \left\lfloor \frac{2}{2} \right\rfloor + \dots + \left\lfloor \frac{2m-1}{2} \right\rfloor + m = 2(1+2+\dots+m-1) + m = m(m-1) + m = m^2 = \left\lfloor \frac{n^2}{4} \right\rfloor$$

Case 2: Let  $n = 2m + 1$ .

$$\sum_{k=1}^n \left\lfloor \frac{k}{2} \right\rfloor = \left\lfloor \frac{1}{2} \right\rfloor + \left\lfloor \frac{2}{2} \right\rfloor + \dots + \left\lfloor \frac{2m}{2} \right\rfloor + \left\lfloor \frac{2m+1}{2} \right\rfloor = 2(1+2+\dots+m) = m(m+1) = n^2 - 1 = \left\lfloor \frac{n^2}{4} \right\rfloor$$

Thus, for any  $n \in \mathbb{N}$ , it holds  $\sum_{k=1}^n \left\lfloor \frac{k}{2} \right\rfloor = \left\lfloor \frac{n^2}{4} \right\rfloor$ .

On the other hand, it is possible to say  $\left\lfloor \frac{n^2}{4} \right\rfloor = \frac{n^2}{4} - \frac{1 - (-1)^n}{8}$ , Because, if  $n$  is even,

$$\left\lfloor \frac{n^2}{4} \right\rfloor = \frac{n^2}{4} - \frac{1-1}{8} = \frac{n^2}{4} \text{ and if } n \text{ is odd, } \left\lfloor \frac{n^2}{4} \right\rfloor = \frac{n^2}{4} - \frac{1+1}{8} = \frac{n^2-1}{4}. \text{ In this case, the}$$

following result can be obtained from the lemma:

$$\sum_{k=m}^n \left\lfloor \frac{k}{2} \right\rfloor = \sum_{k=1}^n \left\lfloor \frac{k}{2} \right\rfloor - \sum_{k=1}^{m-1} \left\lfloor \frac{k}{2} \right\rfloor = \frac{1}{4} \left( n^2 - \frac{1 - (-1)^n}{2} - (m-1)^2 + \frac{1 - (-1)^{m-1}}{2} \right) = \frac{n^2 - (m-1)^2}{4} + \frac{(-1)^n + (-1)^m}{8} \quad (2)$$

By the use of the (2) identity, we calculate  $\sum_{a=\left\lfloor \frac{n}{3} \right\rfloor}^{\left\lfloor \frac{n-1}{2} \right\rfloor} \left( a - \left\lfloor \frac{n-a}{2} \right\rfloor + 1 \right)$ .

For  $LCM(2,3) = 6$ ,  $n$  is determined by  $(\text{mod } 6)$ .

Case 1. Let  $n = 6k$ , thus  $n$  is an even number.

$$\sum_{a=\left\lfloor \frac{n}{3} \right\rfloor}^{\left\lfloor \frac{n-1}{2} \right\rfloor} \left( a - \left\lfloor \frac{n-a}{2} \right\rfloor + 1 \right) = \sum_{a=2k}^{3k-1} \left( a - \left\lfloor 3k - \frac{a}{2} \right\rfloor + 1 \right) = \sum_{a=2k}^{3k-1} \left( a - 3k + 1 - \left\lfloor -\frac{a}{2} \right\rfloor \right) = (ii) = \sum_{a=2k}^{3k-1} \left( a - 3k + 1 + \left\lfloor \frac{a}{2} \right\rfloor \right) = \sum_{a=2k}^{3k-1} \left( a - 3k + 1 \right) + \sum_{a=2k}^{3k-1} \left\lfloor \frac{a}{2} \right\rfloor = \frac{3k(3k-1)}{2} - \frac{2k(2k-1)}{2} - 3k^2 + k + \frac{(3k-1)^2 - (2k-1)^2}{4} + \frac{(-1)^{3k-1} + (-1)^{2k}}{8} = \frac{5k^2 - k}{2} - 3k^2 + k + \frac{5k^2 - 2k}{4} + \frac{(-1)^{3k-1} + 1}{8} =$$

$$\frac{10k^2 - 2k - 12k^2 + 4k + 5k^2 - 2k}{4} + \frac{(-1)^{3k-1} + 1}{8} = \frac{3k^2}{4} + \frac{(-1)^{3k-1} + 1}{8} = \frac{n^2}{48} + \frac{(-1)^{\frac{n-2}{2}} + 1}{8} = \tau \left( \frac{n^2}{48} \right)$$

Case 2. Let  $n = 6k + 1$ , thus  $n$  is an odd number.



$$\sum_{a=\left\lceil \frac{n}{3} \right\rceil}^{\left\lfloor \frac{n-1}{2} \right\rfloor} \left( a - \left\lfloor \frac{n-a}{2} \right\rfloor + 1 \right) = \sum_{a=2k}^{3k} \left( a - 3k - \left\lfloor \frac{1-a}{2} \right\rfloor + 1 \right) = (ii) = \sum_{a=2k+1}^{3k} \left( a - 3k + 1 + \left\lfloor \frac{a-1}{2} \right\rfloor \right) =$$

$$\sum_{a=2k+1}^{3k} (a - 3k + 1) + \sum_{t=2k}^{3k} \left\lfloor \frac{t}{2} \right\rfloor = \frac{3k(3k+1)}{2} - \frac{2k(2k+1)}{2} - 3k^2 + k + \frac{(3k-1)^2 - (2k-1)^2}{4} +$$

$$\frac{(-1)^{3k-1} + (-1)^{2k}}{8} = \frac{5k^2 + k}{2} - 3k^2 + k + \frac{5k^2 - 2k}{4} + \frac{(-1)^{3k-1} + 1}{8} =$$

$$\frac{10k^2 + 2k - 12k^2 + 4k + 5k^2 - 2k}{4} + \frac{(-1)^{3k-1} + 1}{8} = \frac{3k^2 + 4k}{4} + \frac{(-1)^{3k-1} + 1}{8} =$$

$$\frac{(n+3)^2}{48} - \frac{1}{3} + \frac{(-1)^{\frac{n-3}{2}} + 1}{8} = \tau \left( \frac{(n+3)^2}{48} \right).$$

So, in this case the theorem is also correct. The rest of the cases prove the same.

Let us examine the problem we have first posed by this theorem. The problem was: Find the number of triangles whose perimeter is 10 and whose sides are integers. So considering that 10 is even, we have equality

$$\tau \left( \frac{10^2}{48} \right) = \tau(2, 08\dots) = 2. \text{ The answer to our question above was 2. Now, as each student enlarges the}$$

perimeter of the triangle and tries to count the number of triangles using this theorem and some other method, he or she will better understand the significance of the theorem.

## REFERENCES

1. Tom Jenkyns and Eric Muller, *Triangular Triples from Ceilings to Floors, American Mathematical Monthly* 107:7 (August 2000) 634–63
2. Ross Honsberger, *Mathematical Gems III*, pp. 39–37



# ISSUES OF IMPROVEMENT OF LEGAL BASIS OF LIQUIDATION OF NON-GOVERNMENTAL ORGANIZATIONS IN UZBEKISTAN

**Bekzod Narimanov**

Independent researcher at  
Tashkent State University of Law,  
Tashkent,  
Uzbekistan

## ABSTRACT

*The concept, types, purpose of liquidation of NGOs This have been analyzed in this article. Moreover, the problems arising in the practice of law enforcement in connection with the liquidation of non-governmental organizations have been also examined. The scientific views of leading scientists in this field and the experience of foreign countries have been studied.*

**KEYWORDS:** *non-governmental organization, fund, liquidation commission, registration body, balance sheet, voluntary liquidation, compulsory liquidation.*

## INTRODUCTION

Due to the fragmentation of normative and legal acts on the liquidation and suspension of NGOs in Uzbekistan, the need to study this field is even more relevant today due to the many uncertainties in their application.

First of all, we will focus on the research conducted in this field, and on the experience of foreign countries.

According to L.I. Potyagaeva, the classification of liquidation basis of NGOs in the literature is a distinction between voluntary and compulsory methods of liquidation of a legal entity. However, this classification in practice does not help to reveal the legal nature of liquidation basis, nor does it help to understand the essence of liquidation itself [1].

The research conducted by A.M. Kornishina and Yu.A. Kim analyzes the internal mechanisms of liquidation of NGOs, the formation of the liquidation commission, its activities, preparation of the interim liquidation financial report, settlements with employees and creditors, as well as the main shortcomings and mistakes of NGOs in this sphere [2].

The preparation of its accounting report on liquidation of non-governmental organizations and the peculiarities of its financial liquidation was studied by T.I. Malekhina [3], the liquidation of state-owned non-governmental organizations by O.E. Kalinina [4], the issues of civil law regulation of

liquidation of legal entities by A.A. Melnikov [5], and administrative legal aspects of liquidation of legal entities by I.I. Spector [6].

Analyzing the specifics of the liquidation of non-governmental organizations in Azerbaijan, A. Guilyev noted that the charter of non-governmental organizations in Azerbaijan should not specify the procedure for its liquidation and the procedure for disposing of its property in the event of liquidation [7].

According to B.S. Khadivinat, the policy of liquidation and reorganization of unions of legal entities, which the International Monetary Fund pursues with the aim of rationalizing production, leads to an increase in the number of unemployed [8].

In our opinion, when forming unions (associations) of legal entities, it is important to rely not only on the opinion of international organizations, but also on the non-governmental sector and public discussions. In particular, mandatory membership in associations of legal entities initiated by the state undermines healthy market competition mechanisms and hinders the effective functioning of the "third sector".

The principle of freedom of association established in accordance with Article 9 of the German Constitution from foreign states also guarantees the right to voluntarily distribute them [9]. Accordingly, the German Civil Code establishes that the distribution of unions can be carried out by decision of 4/3 of the members of their general meeting. The granting of the authority to the Charter



of the Union to decide on its liquidation to another body other than the general meeting is considered one of the controversial issues[10].

Three grounds for liquidation of non-governmental organizations are provided in the German Constitution. First, it is prohibited if the purpose or activity of a non-governmental organization is contrary to criminal law. Secondly, the activities of a non-governmental organization are prohibited if they are contrary to the constitutional system, which is described in German law as a “free democratic social system”.

When it comes to the constitutional system, such concepts mean, first of all, the observance of human rights enshrined in the Constitution, as well as democratic principles, including the principle of state responsibility, the principle of multi-party system and the formation and functioning of opposition organizations. Thirdly, the activity of a non-governmental organization is prohibited if the purpose or activity of the non-governmental organization is aimed at inciting hatred between peoples.

The decision of the competent authority to liquidate a non-governmental organization is an administrative document, and in accordance with the German law on administrative procedures, this decision must comply with the principle of proportionality. The right to apply to an administrative court for invalidation of an administrative document must also be guaranteed[11].

## MATERIALS AND METHODS

It should be noted that over the past decade in Germany, a number of major studies (B.Adam[12], Schultz C., Hoffmann S., Ferdinand M. [13], Freund S. [14], Schön A. [15], Fischer B. [16], Haas U., Neumayer L. [17], Marx R. [18], İlgün-Birhimeoğlu E. [19]) have been conducted on the activities of NGOs, focusing on improving the German administrative procedures for registering NGOs, and the widespread introduction of ICT in trust management organizations and volunteer organizations and organization of their activities, legal regulation of social partnership between NGOs and the state. We believe that this study will provide an insight into the trends observed in the field of NGOs in Germany today.

Six non-governmental organizations stated on its voluntary liquidation in connection with introduction Institute of “Foreign agent” in the Russian Federation, which creates grounds for the prosecution of leaders of non-governmental organizations[20]. It should be noted that in recent years, many studies (Romanovskaya O. [21], Klimovskikh N.V., Tarek N, Pervyakova R.N. [23], Dmitriev A. [24]) have been conducted in this

country on the pros and cons of this new institution, and changes in this legislation have led to increased state control in this area, which has led to the liquidation of many NGOs.

Although the United States initially refused to liquidate non-governmental organizations, the procedure for liquidating legal entities and their associations was strengthened in the mid-twentieth century in accordance with amendments to the corporations act after scientific discussion[25].

In the United States, the liquidation of a non-governmental organization is carried out in court on the recommendation of the attorney General. Law of United States establishes a number of grounds for liquidation of foreign non-governmental organizations. This includes:

- Non-governmental organization created by providing false information;
- Legal proceedings by deception or violation of the law;
- carrying out activities outside the Charter of a non-governmental organization;
- attempting to violate the constitutional system[26].

The legal basis for the liquidation of non-governmental organizations in the Republic of Uzbekistan is regulated by the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated January 15, 2015 No. 5 “On the approval of the relevant articles of the laws”, “on public associations in the Republic of Uzbekistan”, “On non-governmental organizations” and “On State Funds”, as well as The Law of the Republic of Uzbekistan “On public associations in the Republic of Uzbekistan”.

Now we will try to develop proposals aimed at improving national legislation by directly analyzing the problems and practical problems associated with the liquidation of the activities of NGOs in this legislation.

According to Article 62 of the Constitution of the Republic of Uzbekistan, the liquidation of public associations, the prohibition or restriction of their activities can be carried out only on the basis of a court decision.

In the legislation, especially in the Law “On Non-governmental organizations” of the Republic of Uzbekistan, it is also mentioned about the suspension of the activities of NGOs before the procedure for liquidation of NGOs[27].

Article 34 of the Law of the Republic of Uzbekistan “On non-governmental organizations” stipulates that the activities of non-governmental organizations may be suspended by the court in case of violation of the Constitution and laws of the Republic of Uzbekistan[28].

The consequences of the suspension of a non-governmental organization are not fully explained in the legislation. The consequences of the



suspension of a non-governmental organization, reflected in Article 35 of the Law of the Republic of Uzbekistan "On non-governmental organizations", are abstract and sometimes one claim denies the other.

For example, although the above article of the law prohibits the use of Bank deposits by a suspended non-governmental organization, it states that it excludes expenses for commercial activities, employment contracts, compensation for damage caused by their actions (inaction), and the payment of fines.

This makes it possible in practice to conduct almost all financial activities through a non-governmental organization. In addition, although the requirements of this article prohibit a non-governmental organization from holding mass events, other events are not prohibited. This also means that the liquidation of a non-governmental organization has little effect on the non-governmental organization's performance in practice or on the need to improve certain elements.

In this regard, it is proposed to make the following changes to the legislation related to the liquidation of the activities of a non-governmental organization.

"From the date of entry into force of the court decision on the suspension of the NGOs, their activities, rights as a founder and editor of the media, the goals and objectives of the charter and the implementation of advocacy, organization of events, entrepreneurship, property and the use of funds in bank accounts will be suspended for the period specified in this resolution.

During the suspension of activities of a non-governmental organization, as an exception, the organization retains the average salary of employees (in accordance with labor legislation, local and internal documents), payments related to property protection, and compensation for damage caused by their actions. Refunds, taxes, and other mandatory payments may be incurred."

According to the Article 36 of the Law of the Republic of Uzbekistan "On non-governmental nonprofit organizations" elimination of non-commercial organizations is carried out by decision of its Supreme body or in court[29].

Founders, participants of a non-governmental organization or body that has made a decision to liquidate a non-governmental organization, appoint a liquidation Commission in coordination with the judicial body of state registration.

Resolution No. 5 of the Cabinet of Ministers of the Republic of Uzbekistan dated January 15, 2015 approved the Regulation on the procedure for the liquidation of non-governmental organizations. The legislation does not specify which court has

jurisdiction over the liquidation of a non-governmental organization.

Accordingly, when liquidating the non-governmental organization in court, these tasks are proposed to be carried out by the Supreme Court of the Republic of Uzbekistan, the non-governmental organization registered with the Ministry of Justice of the Republic of Uzbekistan, and the non-governmental organization registered with the territorial administration bodies of the Ministry of Justice of the Republic of Uzbekistan.

At the same time, the court, having made a decision to liquidate the activities of a non-governmental organization and its subdivisions, in practice often appoints employees of state bodies as liquidators. However, it is not the task of any state body to liquidate a legal entity.

In addition, the liquidation process is complicated and often arises due to the dependence of legal entities on founders and managers (lack of seals and stamps on them, lack of information about their property, debtors and creditors, lack of sources of repayment of existing debts, etc.) the scope of work to work with employees of government agencies.

In addition, placing such an obligation on the founders or members of the governing body of non-governmental organizations increases their responsibility when creating a non-governmental organization.

Therefore, it is proposed to make the following amendments to the legislation.

"As a rule, the court that decides to liquidate a non-governmental organization appoints the founders or members of the governing body or the head of a non-governmental organization (other than political parties and trade unions) as liquidators.

When liquidating the divisions of a non-governmental organization registered in the territorial judicial bodies, the head of its division or the head of the main organization or other employees of the main organization are appointed as a liquidator."

It should be noted that the current legislation on the preparation of financial statements and accounting documents related to the liquidation of a non-governmental organization and its divisions also has a number of difficulties and misunderstandings.

In particular, in accordance with paragraphs 17-18 of the Regulation on the procedure for liquidation of public organizations, approved by the Cabinet of Ministers on January 15, 2015 No. 5, the results of inspections conducted by the bodies of the state tax service after the expiration of the deadline for filing claims by creditors, taking into account the register of executive documents, the liquidation Commission drafts an interim liquidation balance sheet.

The balance sheet of the interim liquidation is approved by the supreme body of the non-



governmental organization. Within five working days after the approval of the balance sheet of the interim liquidation, the liquidation commission notifies any creditor in writing of the recognition or rejection of its claims, the amount of the recognized claims, within five working days after the approval of the balance sheet of the interim liquidation, receiving confirmation (stamp of the acceptance date, postal receipt, written or email, etc.).

In addition, in accordance with paragraphs 25-26 of this Regulation, after full satisfaction of creditors' claims, the remaining liquidation is executed after the alienation of the remaining property in accordance with the established procedure. The liquidation balance sheet is approved by the highest body of a non-governmental organization and submitted to the state tax service.

In practice, in case of voluntary liquidation of non-governmental organizations are practically no cases when the liquidation Commission makes intermediate liquidating balance and approved by the highest body of a non-governmental organization.

This is due to the fact that voluntary liquidation of a non-governmental organization occurs when it is practically not necessary. In this process, there is practically no higher NGOs' body. In addition, the legislation does not have a standard form of liquidation balance through special.

The order (registration number 1226, March 20, 2003) of the Minister of Finance of the Republic of Uzbekistan "On approval of the National Accounting Standard (No. 15) "Balance Sheet" of the Republic of Uzbekistan" dated March 12, 003 No 45 approved the National Accounting Standard (No. 15) "Balance Sheet" of the Republic of Uzbekistan.

Also, the form of the balance sheet was approved by the order of the Minister of Finance of the Republic of Uzbekistan dated December 27, 2002 No. 140 (registration number 1209, January 24, 2003).

According to paragraph 4 of this order, financial reporting forms and rules for their completion shall enter into force 10 days after the date of state registration in the Ministry of Justice of the Republic of Uzbekistan for all enterprises, audit organizations and exchanges with foreign investment, effective for other business entities from January 1, 2004, excluding insurance companies and banks. According to the legislation, non-governmental organizations are not included in the structure of business entities.

This form can be used because there is no other form for an interim liquidation balance sheet when a non-governmental organization is liquidated. However, this form of balance sheet mainly reflects the monetary amount of assets and liabilities of the business entity.

Furthermore, the balance sheet form approved by order No. 140 of the Minister of Finance

of the Republic of Uzbekistan dated 27 December 2002 (registration number 1209, 24 January 2003) did not fully take into account the specifics of non-governmental organizations.

In particular, it is unclear how much of the liabilities in the property balance, sponsorship donations received for the Charter purposes for free, will fall. Also, the profit of a non-governmental organization from business activities cannot be directly transferred to the part of retained earnings (8700). This is due to the fact that according to the balance sheet rules, retained earnings must be distributed among the founders or transferred to the authorized capital.

In non-governmental organizations, profit should not be distributed among the founders, and its property should not belong to the founders through the authorized capital.

In addition, not all of the above obligations may be reflected in the 8800-targeted receipts of the passive part of the balance sheet.

Therefore, it is necessary to further improve the passive part of the balance sheet, based on the characteristics of the activities of non-governmental organizations.

In addition, a balance sheet means that this property is recorded as assets and liabilities on a double entry basis. Therefore, in our view, the requirement for NGOs to approve an interim liquidation balance sheet by the highest NGOs' body leads to excessive bureaucracy.

However, since there is no separate standard form for the final balance sheet of a non-governmental organization, the standard form of the balance sheet approved by Order of the Minister of Finance of the Republic of Uzbekistan No. 140 of December 27, 2002 (registration number 1209 of January 24, 2003) is used in practice.

We noted above that the balance sheet of a non-governmental organization means that existing assets are recorded as assets and liabilities based on a double entry.

In accordance with paragraph 24 of the Regulation on the procedure for the liquidation of non-governmental organizations, approved by Cabinet of Ministers Resolution No. 5 of January 15, 2015, the liquidation Commission uses the methods and directions specified in the decision and (or) donated.

If it is impossible to use the excess property for the purposes of a non-governmental organization, it can be transferred to non-governmental organizations that perform functions in areas similar to the main purpose of a non-governmental organization.

In all cases, documents confirming the fact of alienation of property are issued. Distribution of the remaining property between the founders (participants), members of the governing body or





other employees of a non-governmental organization is not allowed.

Therefore, upon completion of the liquidation process of a non-governmental organization, its property will be alienated in accordance with the decision of a higher authority and, of course, its property will not remain. This means that in practice, assets and liabilities in the balance sheet are naturally equal to "0". If the assets and liabilities in the balance sheet are not equal to "0", this means that the liquidation process has not been completed and the liquidation balance sheet does not need to be formalized.

In this regard, it is proposed to remove the requirement for approval of the liquidation balance sheet by the highest body of NGOs from the Regulation on the procedure for liquidation of non-governmental organizations approved by the Cabinet of Ministers resolution No. 5 of January 15, 2015.

It should be noted that in the case of voluntary liquidation of a non-governmental organization, in practice, there is no higher authority approving its liquidation balance sheet. Thus, the requirement to approve the liquidation balance sheet by the highest authority of a non-governmental organization remains one of the invalid norms in the current legislation.

According to the paragraph 19 of the regulation No. 5 on the procedure for liquidation of NGOs, approved by the Cabinet of Ministers on January 15, 2015, in accordance with the interim liquidation balance sheet, from the date of its approval, the liquidation Commission pays creditors the following amounts:

first- satisfaction of citizens' claims arising from labor relations, alimony and monetary payments under copyright agreements, as well as claims of non-governmental organizations for causing harm to the life and health of citizens by canceling the corresponding temporary payments;

Second - payments to the state budget and state trust funds of the Republic of Uzbekistan;

thirdl - claims of other creditors (in the order of priority on the calendar).

According to Article 96 of the Family Code of the Republic of Uzbekistan, parents are obliged to provide for their minor children. Alimony is levied on a parent who has not voluntarily fulfilled his obligation to provide for his minor children in accordance with a court decision or court order.

If there is no agreement between the parents on the payment of alimony to minors or if the alimony is not paid voluntarily and neither parent has filed a lawsuit or application for alimony, the guardianship and trusteeship authorities, as well as the maintenance of a minor under the age of fourteen has the right to sue the parent for alimony in the amount prescribed by law.

If the parents and the child live separately, the guardianship and trusteeship authorities, as well as the child who has reached the age of fourteen, have the right to file a claim for alimony from the parents at the same time for the maintenance of minor children.

Pursuant to these norms of the Family Code, alimony is collected from the parents, i.e. from the individual.

When expelled from an individual, it is directed to the funds arising from the labor relations of citizens.

The legislation does not stipulate that alimony is collected from a legal entity that is a non-governmental organization.

Therefore, in the event of liquidation from a legal entity - a non-governmental organization, creditors will not be required to separately indicate the requirements for the recovery of alimony from the procedure for payment of monetary amounts in turn.

The existing system of liquidation of a non-governmental organization and its subdivisions only leads to the collection of documents in the form of traditional paper, from different bodies, and must be available within a few months.

In particular, according to paragraph 30 of the regulations on the procedure for liquidation of public associations, approved by the Cabinet of Ministers on 15 January, 2015, № 5, the liquidation Commission shall submit to the registration authority for inclusion in the Unified state register of legal entities the following documents:

Application for inclusion in the state register of record about liquidation of non-governmental organizations;

Announcement about the liquidation of a non-governmental organization published in one or more periodicals;

Originals of the Charter (the Charter) non-governmental organization and certificate of state registration of non-governmental organization;

Duly approved liquidation balance sheet;

Certificates from servicing banks confirming the closure of all accounts of a non-governmental organization;

Notifications to the judicial authorities about their exclusion from the relevant registers, if there are separate divisions of a non-governmental organization;

Documents confirming the fact of disposal of the remaining property after full satisfaction of creditors' claims;

Certificate of the Ministry of Internal Affairs on the destruction of seals and stamps;

Originals, if any, of all licenses and permits, as well as a certificate of state registration of the symbol of a non-governmental organization;



Conclusion of the state tax service body on the absence of arrears of taxes and other mandatory payments;

Written response from the Territorial Department of the Bureau stating that the liquidated non-governmental organization has participated as a debtor and that there is no unenforced execution document;

Certificate confirming the transfer of documents of the non-governmental organization to the state archive.

Taking into account these documents, the liquidation Commission must submit 12 different documents for entering an entry on the liquidation of a non-governmental organization in the Unified state register of legal entities.

This leads to a large number of documents in the finishing process and to a loss of time, which makes the finishing process incomplete over the years.

Therefore, it is time to reduce the type of documents and the liquidation process to a completely electronic form, using modern information technologies and systems for online exchange of information between offices in real time.

## RESULT AND DISCUSSION

Based on the above, it is proposed to include the following norms in the draft Code "On non-governmental organizations of the Republic of Uzbekistan", which is planned to be adopted:

**Firstly**, it is proposed to make the following amendments to the legislation related to the suspension of the activities of a non-governmental organization.

"From the date of entry into force of the court decision on the suspension of the NGOs, their activities, rights as a founder and editor of the media, the goals and objectives of the charter and the implementation of advocacy, organization of events, entrepreneurship, property and the use of funds in bank accounts will be suspended for the period specified in this resolution.

During the suspension of activities of a non-governmental organization, as an exception, the organization retains the average salary of employees (in accordance with labor legislation, local and internal documents), payments related to property protection, and compensation for damage caused by their actions. Refunds, taxes, and other mandatory payments may be incurred."

**Secondly**, the legislation does not specify which court is responsible for the liquidation of a non-governmental organization.

Accordingly, when liquidating the non-governmental organization in court, these tasks are proposed to be carried out by the Supreme Court of the Republic of Uzbekistan, the non-governmental

organization registered with the Ministry of Justice of the Republic of Uzbekistan, and the non-governmental organization registered with the territorial administration bodies of the Ministry of Justice of the Republic of Uzbekistan.

**Thirdly**, placing such an obligation on the founders or members of the governing body of a non-governmental organization increases their responsibility when creating an NGO.

Therefore, it is proposed to make the following amendments to the legislation. "As a rule, the court that decides to liquidate a non-governmental organization appoints the founders or members of the governing body or the head of a non-governmental organization (other than political parties and trade unions) as liquidators.

In case of judicial liquidation of divisions of a non-governmental organization registered in the territorial bodies of justice, the head of the division or the head of the parent organization or other employees of the parent organization shall be appointed as the liquidator";

**Fourthly**, it is proposed to remove from the Regulation on the procedure for liquidation of NGOs, approved by the Cabinet of Ministers on January 15, 2015 No. 5, the requirement for approval of the liquidation balance by the highest body of NGOs.

**Fifthly**, in order to clearly define the grounds for suspending the activities of NGOs and establish specific procedures for liquidating their activities in case of violations, it is proposed to adopt the following rule:

"The activities of a non-governmental organization may be suspended by a court in case of violation of the Constitution and legislation of the Republic of Uzbekistan.

If a non-governmental organization violates the law on non-governmental organizations, as well as acts contrary to the purposes of the Charter, the Prosecutor's office or registration authorities shall submit a report to the governing bodies of the public organization. If violations are not eliminated within the prescribed period, the activity of a non-governmental organization is suspended for a period of six months by the court upon application of the Prosecutor or registered bodies.

The procedure for suspending the activities of a non-governmental organization in the event of a state of emergency on the territory of the Republic of Uzbekistan is established by law";

**Sixth**, in order to clearly regulate the process and stages of liquidation of a non-governmental organization, it is proposed to adopt the following version of the norm:

### "Liquidation of a non-governmental organization

Voluntary liquidation of a non-governmental organization (with the exception of a public fund) is



carried out by decision of a higher body authorized to do so in its constituent documents, and compulsory liquidation - by a court decision.

Registration authority or Prosecutor's office:  
when a non-governmental non-commercial organization carries out activities prohibited by this Code;

a non-governmental organization may apply to the court for compulsory liquidation of the organization if it failed to eliminate the violation that led to the liquidation of its activities, or if such a violation is repeated.

The decision on the liquidation of international, republican, interregional non-governmental organizations and representative offices and branches of international and foreign non-governmental organizations can be adopted by the Supreme Court of the Republic of Uzbekistan, as well as on liquidation of other non-governmental organizations by the civil courts of the Republic of Karakalpakstan, regional and Tashkent city courts for civil cases, respectively.

The decision of the Supreme Court of the Republic of Uzbekistan on the compulsory liquidation of non-governmental organizations is not subject to appeal.

The Supreme Court of the Republic of Uzbekistan has the right to appeal against decisions on the liquidation of non-governmental organizations made by the courts of the Republic of Karakalpakstan for civil cases, regional courts for civil cases and Tashkent city.

The founders, participants (members) of a non-governmental organization or body that has made a decision to liquidate a non-governmental organization will appoint a liquidation Commission.

The compulsory liquidation of a non-governmental organization in court may be carried out by a non-governmental organization in case of violation of legislation and in other cases provided for by law.

The court which made a decision to liquidate the activities of a non-governmental organization has the right to appoint the members of the governing body or the head of the non-governmental organization as liquidator.

The liquidation of a non-governmental organization is carried out in the manner prescribed by law.

## CONCLUSION

In the absence of specific provisions of this Code, the property remaining after the satisfaction of creditors' claims is not distributed among the participants (members) of the organization, as well as members of management bodies or employees of non-governmental organizations and is used (spent) for the purposes and (or) charitable purposes

provided for by the constituent documents of non-governmental organizations.

A non-governmental organization (other than a public Foundation) that was forcibly liquidated by a court decision can be converted into state property for the purposes stipulated in the constituent documents, or for charitable purposes, provided that it is not returned.

The provisions of this Code for the liquidation of non-governmental organizations (excluding public funds) do not apply to the liquidation of non-governmental organizations with the signs of bankruptcy provided in the legislation.

## REFERENCES

1. Potyagaeva L.I. *Liquidation of non-governmental organizations under Russian Civil Legislation // Moscow. - 2006. -- P. 14.*
2. Kornishina A.M., Kim Yu. A. *Features of liquidation of a non-governmental organization // Proceedings of the Institute of Management Systems of the SSEU. - 2018. - No. 2. - P. 136-141.*
3. Melekhina T.I. *Features of liquidation of non-governmental organizations // Accounting in budgetary and non-governmental organizations. - 2010. - No. 12.*
4. Kalinina O.E. *Tendencies of reorganization and liquidation of non-governmental organizations // Bulletin of arbitration practice. - 2013. - No. 2. - P. 5-10.*
5. Mebnikov A.A. *Civil legal regulation of liquidation of activity of legal entities // dis. to apply for an account. degree of Cand. legal entity Sciences: spec. - 1997. - T. 12. - No. 03.*
6. Spektor E.I. *Development of administrative legislation on state registration // Journal of Russian law. - 2002. - No. 7. - P. 36-47.*
7. Guilyev A. *NGOs in Azerbaijani Legislation as Institutions // Int'l J. Not-for-Profit L. - 2011. - T. 13. - P. 93.*
8. Hadiwinata B. S. *Securitizing poverty: The role of NGOs in the protection of human security in Indonesia // Presentation, Singapore. - 2004.*
9. Райхерт. *Vereins- und Verbandsrecht (Правовое регулирование деятельности союзов и объединений). 13-е изд. 2016. С. 716; Вайс // Бауманн, Сикора. Hand- und Formularbuch des Vereinsrechts (Сборник формуляров и руководство по правовым нормам, регулирующим деятельность союзов). 2015. Пар. 13, n. 234.*
10. Sauter E., Schweyer G., Waldner W. *Der eingetragene Verein, 19 // Auflage, Verlag CH Beck, München. - 2010.*
11. Reichert, *Vereins- und Verbandsrecht, 13. Aufl. 2016, P. 1140*
12. Adam B. *Rechnungslegung gemeinnütziger Organisationen. Eine empirische Untersuchung zu Merkmalen und Rechnungslegung gemeinnütziger Organisationen in Deutschland // ZögU Zeitschrift für öffentliche und*



- gemeinwirtschaftliche Unternehmen.* – 2020. – T. 42. – №. 4. – C. 408-421.
13. Schultz C., Hoffmann S., Ferdinand M. *Vertrauensbasierte Organisationen als Grundlage von erfolgreichen digitalen Plattformen für personennahe Dienstleistungen //HMD Praxis der Wirtschaftsinformatik.* – 2020. – C. 1-16.
  14. Freund S. *Freiwilligenarbeit in Organisationen //Organisationsentwicklung in Freiwilligenorganisationen.* – Springer, Wiesbaden, 2020. – C. 5-29.
  15. Schön A. *Schuldrechtliche Gesellschaftervereinbarungen in der Gesellschaft mit beschränkter Haftung unter besonderer Berücksichtigung der Rechtsnachfolge.* – Nomos Verlag, 2018. – T. 925.
  16. Fischer B. *Der Bestimmtheitsgrundsatz im Personengesellschaftsrecht : duc.* – Bucerius Law School, 2018.
  17. Haas U., Neumayer L. *Vereinsgerichte–eine rechtsvergleichende Untersuchung zum deutschen, österreichischen und schweizerischen Recht //Recht und Realität.* – Nomos Verlagsgesellschaft mbH & Co. KG, 2017. – C. 842-871.
  18. Marx R. *Vorstandsarbeit im gemeinnützigen Verein: Zwischen unentgeltlicher Geschäftsführung und Haftungsrisiko.* – diplom. de, 2016.
  19. İlgin-Birhimeoğlu E. *Vereine als Orte der Produktion und Manifestation von symbolischer Ordnung //Symbolische Ordnung und Bildungsungleichheit in der Migrationsgesellschaft.* – Springer VS, Wiesbaden, 2016. – C. 343-355.
  20. *Report Research of international experience in the field of legislative regulation of the activities of NGOs in foreign countries and a comparative analysis of the legislation of foreign countries.* // Pavlodar, 2017.
  21. Romanovskaya O.V. *Legal status of a foreign agent // Citizen and law.* - 2020. - No. 1. - P. 36-48.
  22. Klimovskikh N. V., Tarek N. *Modern problems of the functioning of non-governmental organizations in the Russian Federation//Economy and business: theory and practice.* - 2020. - No. 6.
  23. Pervyakova R.N. *Ways of practical implementation of the power of the people through non-governmental organizations of civil society//State and municipal management. Scholarly notes.* - 2020. - No. 2. - P. 286-291
  24. Dmitriev A. *On the formation of the institutional base of civil society in modern Russia//Society and Economy.* - 2020. - No. 4. - P. 89-98.
  25. Romanovskaya O.V. *Legal status of a foreign agent // Citizen and law.* - 2020. - No. 1. - P. 36-48.
  26. Martínez-Villarreal A. A. et al. *A case series and a review of the literature on foreign modelling agent reaction: an emerging problem //International wound journal.* – 2017. – T. 14. – №. 3. – pp. 546-554.
  27. *Bulletin of the Oliy Majlis of the Republic of Uzbekistan,* 1999, No. 5.
  28. *Bulletin of the Oliy Majlis of the Republic of Uzbekistan,* 1999, No. 5.
  29. *Bulletin of the Oliy Majlis of the Republic of Uzbekistan,* 1999, No. 5.



# THEORETICAL SIGNIFICANCE OF SOCIAL WORK IN A SCHOOL FOCUSED ON THE EDUCATIONAL FIELD OF THE SOCIAL WORK PROFESSION

**Abdurakhmonova Manzura Manafovna**

Associate Professor,  
Candidate of Economic Sciences,  
Fergana State University,  
Head of the Department of Social Work,  
Uzbekistan

---

## ABSTRACT

*The theoretical significance of the professional direction of school social work in the education system of developed foreign countries and the need for it in the lives of students in today's era of globalization are highlighted. The article describes the theoretical foundations of school social work, such functions as prevention, rehabilitation and social assistance as a form of comprehensive support for students in the professional direction of school social work.*

**KEYWORDS:** School social work professional direction, students, school, school-family-community cooperation, systems theory, environmental theory, communication theory.

---

## INTRODUCTION

At a time when the process of globalization is going on rapidly in the world today, schools are facing many challenges. Problems such as the rise of poverty and domestic violence, abuse, and student health are leading schools to a crisis. [1] It is important to carry out activities to help and support different categories of students, who are distinguished by their diversity, in order to overcome the problems that arise at an important stage of their development. It is also one of the urgent problems that need to be addressed today, mainly due to the negative situation with young people, the lack of systematic work to work with young people and prepare them for life. [2] So, in order to prevent problems, first of all, it is necessary to strengthen cooperation, seek solutions together with the school system, families and other relevant organizations.

School is an area where children learn and communicate, learn about each other and other people, and develop social skills and values. A healthy and friendly school environment is crucial to students' success and development. Therefore, in our opinion, social work is very important in the school environment, because it contributes greatly to the maintenance and maintenance of school well-being.

## MATERIALS AND METHODS

Originally a social work practice in secondary schools, it was established as a service for teachers in New York, Chicago, Boston and Hartford, Connecticut in 1906-1907 as a result of a close collaboration between family and school to meet the needs of their children under the New York State program.[3]

The first school social workers were called "visiting teachers" and their many practical innovations, such as their visits to the family and consultation with teachers, directors, relying on the means established in the field of social work, are still used in countries where there is a social work sector in the school today. Mary Richmond (1922) stated the importance of visiting the service of students "occupies a strategic position between the family and the school, there was still no better way to get used to it." [4] In Mary Richmond's textbooks on social work, information about the qualification and role of the visiting teacher has come. A visiting teacher is a social worker, a person with experience in teaching, mainly in the classroom. One of the activities that the teacher uses when visiting states that it is like changing the environment of the child through the use of personal influence, the interaction of parents, the advice of medical and psychiatric specialists, as well as various social facilities and the use of various opportunities.[5] In 1916, J.W. The definition and



concept of school social work was first described by Kulbert. The definition focuses on the child and the school environment, not on the individual child in the family. The role of the school social worker is to “explain the child’s extracurricular life to the school, supplement the teacher’s knowledge of the child so that he or she can learn the whole child and teach the children the life they look forward to, and secondly, the visiting teacher. explains the needs of the school to mothers and focuses on meeting the specific needs of the child ”.[6] The description of the role of the school social worker by J. Openheimer is “developed and described as a school-family-community relationship”. [7]

The National Association of Social Workers, founded in 1955 [8], defines the concept of school social work as follows: School social workers are an integral link between school, family, and community, helping students achieve academic success. They work directly with school administrations, as well as students and families, and provide leadership (guidance) in the formulation of school discipline policies, mental health interventions, crisis management, and support services. As part of an interdisciplinary group that helps students succeed, social workers also promote student success, as well as support community involvement in schools.[9] The main direction of social work in the school is the teacher, parents and students, the correct distribution of responsibilities of the objects of the three directions, performance control is carried out by a social worker, and a healthy environment is ensured through properly organized activities. School social workers play an important role in enhancing the scientific mission capability of places, especially through family, school and community collaboration in carrying out this task. [10]

## RESULTS AND DISCUSSION

There are various theoretical directions relevant to the social work of the school, and these theories argue that a new perspective is needed to be aware of changing social conditions. These theories include: consulting theory, role theory, organizational theory, competency theory, systems theory, and environmental theories.

Counseling theory is included in the discussion of theoretical directions as it provides solution and prevention of multi-level problems. Therefore, there is a need to develop consulting theory and consulting models. At this stage, several theoretical perspectives are considered that consider different aspects of the problem. Using psychodynamic theory, a social worker refers to various counseling actions aimed at an internal dispute about a client or problem.[11]

Communication theory is the conceptual basis of the social interaction model in school social work practice. The focus of this theory is on “understanding how people receive information from

their emotions, thoughts, memories, physical sensations, and the environment, how they evaluate this information, and how they act later”. People need to focus on learning after communication or how they affect each other. This effect is described in terms of communication habits, communication skills, and the impact of nonverbal communication.

Competence theory is a competency-based social work practice that encompasses many attitudes, principles, and strategies. These are designed to enhance the business by focusing on the client’s strengths, emphasizing the use of networks that help naturally and the use of environmental resources.[12] In relation to environmental approaches and systems theory, the area of competence suggests interrelated topics that are useful in guiding school social workers and is described and described as follows; [13]

- parents and children can be viewed as ecological systems that require active aspiration in their lives. These systems are viewed as providing a dynamic response to their environment. They are not closed to the changes that are happening around them. The compartments of open systems and the need for Responsible adaptation to changes do not belong to the theory of competence;

- practitioners may shy away from helping clients solve environmental problems. At the center of change is often the environment itself, not the person;

- people need a variety of environmental opportunities and social support to grow, develop self-governance and empowerment. The focus of the intervention is not on the dysfunctional individual, but on the broken and dysfunctional systems. A macrosystemic response is required in response to the challenge of filling traditional microsystemic interventions;

**Systems theory.** In early 1975, L. Costin identified the theory of systems as relevant to school social work practice. [14] He saw the school as made up of systems that were constantly interconnected. The school system has a clearly defined structure to maintain the relationships that exist within it. No part of the system can operate independently or any part can operate without affecting other parts of the system.

L. Kostin described a model of social work practice in school that emerged from a systemic perspective.[15] This model emphasizes the relationship between school, student, and community. L. Kostin did not mean that the person is not important, but stressed that attention cannot be limited to the person. Allen-Mear stressed that the prospects of the systems do not contradict the traditional view.[16]

**Environmental theory.** The following are the characteristics of environmental theory in relation to school social work:

- the first approach focuses on the intervention as a whole community or ecological system of the child.



An attempt is made to understand the impact of the whole environment on the child. This allows the school social worker to get a comprehensive diagnosis of the problem;

the second approach seeks to synthesize information from different social situations. This synthesis may include physical, biological, and social variables. It is of great importance for school workers to be able to see such synthesis variables independently or individually;

the third approach emphasizes individual adaptation. The environmental approach does not preclude the use of the clinically traditional method. The child can adapt to the school environment as well as the social environment. The child's ability to interact with others lays the groundwork for coping with the physical environment. That is why S. Cilliers calls the complex function of raising a school child "life skills teaching".[17] The Life Skills course prepares the child for in-school and out-of-school realities, thus requiring an individual and environmental approach;

the fourth approach assumes that information from different aspects of the child's environment can be used to create a "compatible" environment. The intervention is designed to provide teachers and children with clear information about the resources in the environment and the different choices of the environment. Many problems can be avoided if clients are aware of the resources to encourage the development of a "compromise" between the child and his or her environment;

the fifth approach focuses on focus values or values. Although a child's response is culturally relative, values in the environment also affect his or her responses. Thus, an ecologically different approach to a child of a "conservative" age due to environmental pressure may be influenced by the child's cultural values and the harmony or lack of harmony between the environment.

Social work in school is a specialized field of practice in a wide range of social work professions, where school social workers bring unique knowledge and skills to the school system and the student body. Today, school social workers argue that it is an integral link between family, school and community.[18] Social work in school is a growing field of practice that contributes to students' academic achievement and healthy development outcomes. Constant changes in general education, including childhood poverty, are more dependent on alternative school conditions, and the role of existing social workers in schools needs to be increasingly variable to strengthen market-based education reform measures in schools.

## CONCLUSIONS

In our opinion, a social worker in a school is an activity that corresponds to the general organization

and structure of the school and offers services through the use of knowledge and skills of social work, as well as distributes the contribution of these services to achieve the main goal of the school. School social workers are professionals who connect the family, the school, and the community, bringing them into contact with each other.

Although the general principles and methods of social work in school form the basis of school social work, social work in school differs from one country to another with its application and institutional mechanisms.[19] This diversity applies to all countries where there is a school of social work.

In our opinion, the therapeutic, prophylactic and developmental aspects of school social work are the most important areas. The task of the school social worker is to ensure the interaction and harmony of society, family and schools, to take into account the issues and problems that hinder the child's education in school, the learning process.

## REFERENCES

1. Chen,G.(2019).10 Major Challenges Facing Public Schools. Retrieved from: <https://www.publicschoolreview.com/blog/10-major-challenges-facing-public-schools> ( accessed 20.06.2020)
2. Нарбаева Т. Хотин-қизлар ижтимоий-сиёсий фаолигини ошириш – мамлакатимизда амалга оширилаётган ислохотларнинг муҳим омил/Таълим муассасаларида таълим ва тарбия уйғунлигини таъминлашда хотин-қизларнинг ўрни. - Тошкент - Iqtisod-Moliya. 2019. - Б.8.
3. Leticia Villarreal Sosa, Tory Cox, Michelle Alvarez. School social work : national perspectives on practice in schools. Oxford; New York: Oxford University Press.,2016. 11 p
4. Richmond, M. E. What is social case work? An introductory description. New York, NY: RussellSage: Foundation.,1922.197p <https://archive.org/details/whatisocialcase00richuoft/page/26/mode/2up>
5. Richmond, M. E. What is social case work? An introductory description. New York, NY: Russell Sage: Foundation.,1922. 198-199pp <https://archive.org/details/whatisocialcase00richuoft/page/26/mode/2up>
6. R. Constable, J.P Flynn and McDonald, Sh. School social work. Practice, Police, and Research Perspectives. Lyceum Books.,2002.11p <https://archive.org/stream/schoolsocialwork05educnse#page/n7/mode/2up>
7. R. Constable, J.P Flynn and McDonald, Sh. School social work. Practice, Police, and Research Perspectives. Lyceum Books.,2002.11p <https://archive.org/stream/schoolsocialwork05educnse#page/n7/mode/2up>
8. National Association of Social Workers. (2012).National standards for school social work services. Retrieved from <http://>



- [http://www.naswdc.org/practice/standards/NASW\\_SchoolSocialWorkStandards.pdf](http://www.naswdc.org/practice/standards/NASW_SchoolSocialWorkStandards.pdf)
9. National Association of Social Workers. *Standards for School Social Work Services*,. 2012.12 p. <https://www.socialworkers.org/LinkClick.aspx?fileticket=1Ze4-9-Os7E%3D&portalid=0>
  10. School Social Work Association of America. (2005). *SSWAA's organizational mission statement*. Retrieved April 1, 2020, from <http://www.sswaa.org/>
  11. Sabatino C. A. (1982). *Consultation and School Social Work Practice*. pp. 271-281.
  12. Winters N. & Maluccio A. (1988). *School, Family and Community: Working Together to Promote Social Competence*. *Social Work in Education*, Vol. 19 No.4.(-P.214.)
  13. Winters N. & Maluccio A. (1988). *School, Family and Community: Working Together to Promote Social Competence*. *Social Work in Education*, Vol. 19 No.4
  14. Costin L. B. (1975). *School Social Work Practice: A New Model*. *Social Work*, Vol.20 pp. 135-139
  15. Costin L. B. (1975). *School Social Work Practice: A New Model*. *Social Work*, Vol.20 pp. 135-139
  16. Allen-Meares, P,Robert. O. Washington, Bettie L. Welsh (1996). *Social work services in schools* Boston, MA: Allyn & Bacon., pp.47-48<https://archive.org/stream/socialworkservic00alle?ref=ol#page/n9/mode/2up>
  17. Cilliers C. D. (1989). *The Role of the School in the Republic of South Africa in the Prevention of Aids - a Situational Analysis*. *The South African Journal of Education*, Vol. 9 No.1
  18. Allen-Meares, P,Robert. O. Washington, Bettie L. Welsh (1996). *Social work services in schools* (pp. 48-87, 191–221). Boston, MA: Allyn & Bacon. <https://archive.org/stream/socialworkservic00alle?ref=ol#page/n9/mode/2up>
  19. Rocher, H.J.W. 1977. *An investigation into the role of school work with special reference to the RSA*. Unpublished D.Phil thesis, University of Pretoria.



# EVAPORATION PROCESS AS A RESULT OF CHANGE IN BIOLOGICAL LIQUID AND ITS CONTENT (0.9% concentration NaCl)

<sup>1</sup>Karabayev Mukhammadjon  
Karabayevich

<sup>1</sup>Doctor of Physics and Mathematics,  
Professor,  
Professor of the Department of Physics,  
Fergana State University,  
Fergana,  
Uzbekistan

<sup>2</sup>Ergashev Erkinjon Abdusattor-ugli

<sup>2</sup>Fergana State University,  
Fergana,  
Uzbekistan

## ABSTRACT

*The main directions of research on the crystallization of biological fluids (saliva) are the detection of changes in crystallization depending on the substances present in the liquid and their amounts, and the intermolecular composition of biological fluids that occur during dehydration. is to study the possibility of informing the process.*

*Numerous scientific data help us to conclude that human biological fluid (saliva) is a unique substance with great potential for use in basic research and medical diagnostics.*

**KEYWORDS:** *Biological fluid, crystallization, evaporation.*

Currently, much attention is paid to the study of the prospects for the analysis of biological fluids (saliva) for diagnostic purposes. The physical changes in the evaporation of biological fluids and methods for assessing the solid phase are widely used in laboratory diagnostics, the simplicity of the process of obtaining biological fluids in diagnosing the functional state of the body, as well as high sensitivity and access to information. is one of the problems.

**The purpose of the study.** The method of crystallization of biological fluid (saliva) (the disappearance of the liquid system during the transition to the solid phase) is a method that has recently become widely used. The main directions of research on the crystallization of biological fluids (saliva) are the detection of changes in crystallization depending on the substances present in the liquid and their amounts, and information on the process of intermolecular composition of biological fluids, which occurs during dehydration. is to study the possibility of giving.

Numerous scientific findings suggest that human body fluids (saliva) are a unique substance with great potential for use in basic research and medical diagnostics. Currently, much attention is

paid to the study of the prospects for the analysis of biological fluids (saliva) for diagnostic purposes. Increasing the use of biological fluids (saliva) in clinical analysis can help speed up the diagnosis of the disease.

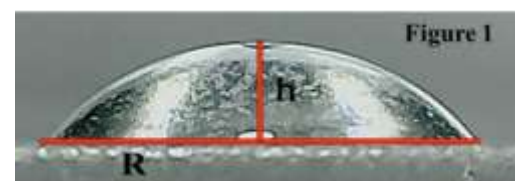
Typically, the physical processes that take place during the evaporation of a certain amount of biological fluid (saliva) in the form of droplets under test using this method, and the solid form of sediment that forms after evaporation ( The morphology of the facies) is studied.

Biological fluid (saliva) can be a source for studying human DNA and clinical analysis in the body because the composition of certain molecules in saliva reflects their concentration in the blood. Using saliva for various laboratory tests, especially in children and the elderly, is much simpler, safer, and cheaper than using blood for testing.

## Research

**method.** The process was first studied by placing the biological liquid

in a glass beaker in the form of a droplet (Fig. 1, view



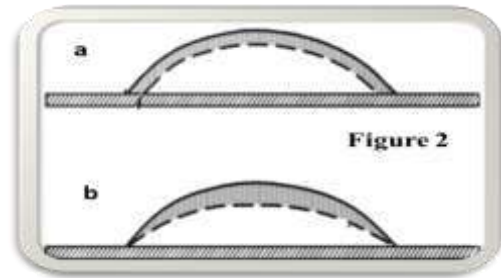
from a horizontal position) from the initial appearance to the solid phase state. was the first study of the interval process before

When a drop of liquid is placed on a clean glass surface, its height decreases during evaporation, the diameter of the base does not change during drying, and the appearance of liquid remaining as a result of liquid leaking from its surface during evaporation is not as shown in Figure 2 (a). Takes the view state in Figure 2 (b).

To study this process, we used a modern biological microscope that can meet the requirements of the time, the main function of the microscope is not only to show the object in an enlarged view, but also to take a picture, transfer the captured object to the screen, Determining the parameters consists of creating a video image.

To calculate the volume of a rainbow-shaped biological fluid (saliva) rising into the air as a result of evaporation from the surface per unit time, we can include the following formula

$$v = \Delta V / \Delta t$$



$v = v_0$

lumetric velocity formed by the evaporation of biological fluid (saliva),

$\Delta V$  –The volume that evaporates from a rainbow-shaped sample,

$\Delta t$  –the time required for a certain volume of biological fluid to evaporate.

$$\Delta V = V_0 - V$$

$V_0$  –initial volume of biological fluid,

$V$  –the volume of liquid remaining in the glass during the evaporation of the biological liquid.

$V_0 > V$

t/r	The height of the drop (mm)	The angle formed	The radius of the base (mm)	time required for a certain volume of biological fluid to evaporate (minutes)
100% saliva, 0.9% concentration NaCl is not present.				
1	0,91	27,679	1,74	0
2	0,66	20,813	1,74	10
3	0,42	13,259	1,74	10
75% Biological fluid, 25% NaCl at a concentration of 0.9%.				
1	0,91	27,679	1,74	0
2	0,65	21,102	1,74	10
3	0,44	14,191	1,74	10
50% saliva, 50% NaCl in 0.9% concentration				
1	0,91	27,679	1,74	0
2	0,68	21,631	1,74	10
3	0,46	14,727	1,74	10
25% Biological fluid, 75% NaCl at a concentration of 0.9%				
1	0,91	27,544	1,74	0
2	0,68	21,346	1,74	10
3	0,47	15,138	1,74	10
100% NaCl, 0.9% concentration, no saliva.				
1	0,91	27,794	1,74	0
2	0,69	21,675	1,74	10
3	0,49	15,728	1,74	10

**Object of inspection.** Samples of a mixture of NaCl with a concentration of 0.9% in the amount of 25%, 50%, 75% in the biological fluid (saliva) in the

human body, as well as in this biological fluid (saliva), and in the concentration of pure 0.9%. Taking a sample of NaCl, a drop of it was dropped on



a glass beaker using a pipidka, and the processes that take place in it, that is, the volume of liquid that evaporates from its surface over time and the formation of form elements, are connected to a computer. observed under a microscope (horizontal and vertical).

**Research results.** The parameters of the biological fluids (saliva) under test are given in the table. The table shows the appearance of the sample in different states, ie their parameters in the time interval (the time required for a certain volume of biological fluid to evaporate). Using these parameters, the total volume of the biological fluid is  $V_{um}$ , and the volume of the droplet evaporated at each time interval (10 minutes) is found to be  $\Delta V$ , which is the result of the evaporation of the biological fluid (saliva). the volumetric velocity is found by the formula  $v = \Delta V / \Delta t$ .

Using the values given in the table for biological fluid (100% saliva), the volumes of the evaporated droplet in the time interval (10 minutes) are  $\Delta V_1 = 1,82 \text{ mm}^3$ , and  $\Delta V_2 = 1,28 \text{ mm}^3$ , volumetric velocities are

$$v_1 = 0,182 \text{ mm}^3 / \text{minut}$$

$v_2 = 0,128 \text{ mm}^3 / \text{minut}$ . The average volume velocity is  $v_{avr} = 0,155 \text{ mm}^3 / \text{minut}$ .

The volumetric velocity formed by the evaporation of the biological liquid at 75% and NaCl at 25% is  $v_1 = 0,18 \text{ mm}^3 / \text{minut}$

$v_2 = 0,12 \text{ mm}^3 / \text{minut}$  The average volume velocity is  $v_{avr} = 0,15 \text{ mm}^3 / \text{minut}$

When the biological liquid is 50% and NaCl is 50%, the volumetric velocity of the resulting liquid is  $v_1 = 0,162 \text{ mm}^3 / \text{minut}$

$v_2 = 0,129 \text{ mm}^3 / \text{minut}$ . The average volume velocity  $v_{avr} = 0,1455 \text{ mm}^3 / \text{minut}$

When the biological liquid is 25% and NaCl is 75%, the volumetric velocity of the resulting liquid is  $v_1 = 0,165 \text{ mm}^3 / \text{minut}$

$v_2 = 0,119 \text{ mm}^3 / \text{minut}$ . The average volume velocity  $v_{avr} = 0,142 \text{ mm}^3 / \text{minut}$ .

When NaCl is 100%, the volumetric velocity of the liquid formed as a result of evaporation is  $v_1 = 0,16 \text{ mm}^3 / \text{minut}$

$v_2 = 0,117 \text{ mm}^3 / \text{minut}$ . The average volume velocity is  $v_{avr} = 0,1385 \text{ mm}^3 / \text{minut}$ .

**CONCLUSION:** In the study of the process of dehydration of a drop of biological fluid, the study of changes in its volume and surface was carried out experimentally for the first time, and as a result the substance contained in biological fluid (saliva) (0.9% NaCl solution) As a result of the change in the amount of water, the volume of liquid released during the dehydration process decreased, and the time of the dehydration process increased, but the volume rate also decreased.

## REFERENCES

1. Барер Г.М., Денисов А.Б. Кристаллографический метод изучения слюны. - М.: ВУНМЦ Росздрава, 2008.
2. Шабалин В.Н., Шатохина С.Н. морфология биологических жидкостей человека. М.: Хризостом, 2001
3. Шатохина С.Н. Морфологическая картина ротовой жидкости: диагностические возможности / С.Н.Шатохина, С.Н.Разумова, В.Н.Шабалин // Стоматология. - 2006.



# OUR EXPERIENCE IN CONDUCTING INTEGRATION LECTURES ON BIOPHYSICS AND EYE DISEASES ON "OPTICS. BIOPHYSICS OF VISION"

**Nurmatova Feruza Bakhtiyarovna**

Tashkent State Dental Institute  
Head of the Department of Biophysics and  
Information Technology in Medicine,  
Uzbekistan.

## ANNOTATION

*The article deals with the results of the investigation which took place at Tashkent Dental Institute. The data revealed the attitude of the medical students to "Biophysics". Offered methodological recommendations to the lecture "Optics. Biophysics of vision". The main goal of medical education is to improve the quality of training for the healthcare system based on high clinical, scientific, and ethical standards in medical education, the introduction, and the development of innovative educational technologies. At the same time, the basis of teaching should be the well-known didactic principles of pedagogy, and methods of teaching students the natural sciences - systematic, and consistent presentation of educational material, visualization, and accessibility, integration of sciences, and the spread of inter-subject relationships in the educational process at all its levels, requirements for a training experiment.*

**KEYWORDS:** *biophysics, density, medical education, method, physical measurements*

## DISCUSSION

Biophysics is the science of the physical principles that underlie all the processes of life, including the dynamics, and kinetics of biological systems.

The subjects of biophysics are the physical principles that underlie all the processes of living systems. Biophysics is an interdisciplinary science somewhere between biology, and physics - as its name implies and, also, it is associated with other disciplines such as mathematics, physical chemistry, and biochemistry. Biophysics can be considered on an equal footing as part of physics. Especially today, when the boundaries between the classical disciplines are no longer established, it would be futile to try to balance these aspects with each other. Biophysics is one of the best examples of interdisciplinary science.

At present, in the conditions of increasing globalization of all spheres of social reality, the formation of a multidimensional world that cannot be mastered by people with a monological type of thinking, it is obvious that the increasing number of problems due to their polymodal nature requires interdisciplinary analysis and synthesis, the search for consensus between different alternative positions and ways of thinking.

Therefore, a special role in the learning process should be given to the development of system thinking, the ability to enrich their knowledge, guided by the flow of information of varying degrees of complexity and orientation. Components of education that reflect trends in the integration of scientific knowledge are of primary importance here. It is integration that determines today the style of scientific thinking and worldview of a person.

In modern dictionaries the term "integration" is most often defined as follows: integration (Latin) - restoration, replenishment, the unification of parts into a whole (integer - the whole), and not a mechanical connection, but interpenetration, interaction, mutual vision. Integration process means a new formation of integrity, which has systemic qualities of general scientific, inter-scientific or intra-scientific interaction, appropriate mechanisms of interrelation, as well as changes in the elements and functions of the object of study, resulting from the feedback of newly formed system means and qualities.

Many modern scientists come to the conclusion that integration is both the main way to renew the content of education and the leading form of education organization. Since it is based on the



universality and unity of the laws of nature, human integrity and the integrity of the perception of the subject of the world around it. From the point of view of modern methodical science, the integration of subjects allows passing from local, isolated consideration of various subjects and phenomena of reality to their interconnected, complex studying that promotes more effective studying of a material.

Therefore, the introduction of integration into the educational process is undoubtedly an actual and leading trend in the global and domestic educational process.

Integration of academic disciplines in order to increase the content and integrity of education should be carried out by increasing the motivation for the study of general subjects, as well as creating more realistic and close prospects for the use of knowledge and skills acquired by students, ensuring consistency in the formation of knowledge among students.

In this regard, having analyzed the curricula of biophysics and ophthalmology subjects, we came to a mutual agreement to hold an integration lecture. The subject of biophysics was taken as a basis. In professional training, the idea of integration was carried out gradually: first, as the establishment of interdisciplinary relations, then as the interaction between the subject and the object of study. At the same time, we took into account that the teacher's activity is aimed not only at informing students of theoretical knowledge, but also at forming the skills and abilities prescribed by the program for the disciplines under study. Equally important is the ability to create a need for students to learn, organize cognitive activities, and develop their creative abilities and talents.

In preparation for the lecture we have set the following stages:

- 1) Formulation of the subject of the lecture;
- 2) Defining the purpose;
- 3) Choice of lecture type;
- 4) Highlighting the main key concepts around which the presentation of the material will be built;
- 5) Building a plan;
- 6) Selection of content;
- 7) Structuring the content and, if necessary

(this is particularly important for the young lecturer), drafting the lecture outline;

8) Determine the nature of the students' inclusion in the lecture and the means by which they will be included in their own activities (questions, tests, assignments, tasks);

9) Selection of means to ensure the achievement of the objectives of the lecture (the language of schematic images, video equipment, electronic educational resources).

The wording of the topic is the first significant step when the teacher needs to "outline" the range of issues addressed in the lecture. This is a kind of

framework of the event, which the teacher does not expect to go beyond. We chose the theme "Optics. Biophysics of vision" and the aim was defined - to show the relationship between optics and biophysics of the eye. In accordance with the goals, the type of lecture is chosen. The first part of the lecture was entirely devoted to optics, and a generalizing type of lecture was chosen. The second part was devoted to the visual organ and its work - the biophysics of vision. The next part was built on the basis of the lecture-dialogue, where the content is presented through a series of questions that students should answer during the lecture. The questions are designed in such a way that the students set up their own "bridges" between what they hear and what they know. This includes lectures using feedback techniques as well as programmed consultation lectures. The success of a lecture is often determined by the teacher's ability to organize students' reflection on the material they have learned.

Further, in accordance with the new approach to the content of the material under study, we had to review and select the technical equipment that would allow us to comprehensively reflect and show the phenomenon under study, to include students in the active independent learning and cognitive activity, because the integration of knowledge involves a detailed study of units of educational material included in the topic. In addition to the presentation material, various informative videos and computer simulations were included to test one's vision and feelings.

Based on our analysis of the integration lecture, a conclusion can be made:

- The integrated lecture provides an opportunity to synthesize knowledge and develops the ability to transfer knowledge from one industry to another. This, in turn, stimulates students' analytical activity, develops the need for a systematic approach to the object of cognition, forms the ability to analyze and compare complex processes and phenomena of objective reality;

- Integration helps to relieve tension, overload, and fatigue of students by switching them to different types of activities during the lecture;

- Integration is a means of obtaining new ideas based on traditional subject knowledge. It is aimed at the development of students' erudition, at updating the existing narrow specialization in learning. But integration should not replace learning traditional subjects, it should combine the knowledge gained into a single system.

- Integration is a source of new facts that confirm or deepen certain observations, conclusions of students in different subjects. It relieves the fatigue and strain of students by switching to a variety of activities, involves the strengthening of cross-curricular links, reducing student overloads,



expanding the scope of information received by students, strengthening the motivation of learning.

After the end of the lecture, a survey among students was conducted. The essence of the survey is to find out the opinion of students on the conducted integrated lecture. During the survey, 54 students participated.

All students gave a positive assessment.

## LITERATURE

1. Bazarbayev M.I, Mullajonov I. And others *Biophysics, Textbook* 2018.
2. Harten U. *Physik für Mediziner.* - Springer, 2011.10.70-71s.
3. P. Davidovits *Physics in Biologist, and Medical.* - 2013.- P 57-59.
4. Roland Glaser *Biophysics Springer Heidelberg Dordrecht London New York Library of Congress Control Number: 2012936486 # Springer-Verlag Berlin Heidelberg* 2012
5. Biryukova A.N. (Kobzar, A.N.) *Preparation for the solution of professional problems of medical students in physics studies taking into account interdisciplinary integration: diss. ... cand. ped Sciences: 13.00.02 [Text] / Biryukova Antonina Nikolaevna.* - M., 2013.-- 277 p.
6. Biryukova A.N. (Kobzar, A.N.) *Physics at a medical university; under the editorship of S.I. Desnenko [Text] / A.N. Biryukova (A.N. Kobzar).* - Chita: IITs ChGMA, 2012.-- 83 p.
7. Nurmatova F.B., Kobzar A.N. *Modern methods of physical properties of dental materials: Teaching aid* - p.59
8. *The working curriculum on the subject "Biophysics". Field of education: 5510400 - dentistry, 5511000 - pediatric dentistry.* - Tashkent: TGS, 2019.-- 23 p.
9. Rakhimova H.Zh., Nurmatova F.B. "Guideline for conducting practical classes in biophysics" 2018.
10. Rakhimova Kh. Zh., Nurmatova F.B. *The main physico-chemical properties of dental materials / Kh. Zh. Rakhimova, F.B. Nurmatova // Stomatologiya.* - 2018. - No. 2.- p. 79
11. Remizov, A.N. *Medical, and biological physics: textbook 4th ed., Rev., and reslave.* - M: GEOTAR-Media, 2018.
12. T.A. Shirshova, T.A. Polyakova *Laboratory work as a means of motivating, and enhancing student learning. Omsk Scientific Herald № 4 (141) 2015* 188-190c.



## CARBOHYDRATES MEET IN NATURE. PENTOSE. HEXOSE

**Diniyeva Guliston Kurbanbaevna**

Teacher of Chemistry,  
 Secondary School No. 55,  
 Department of Public Education, Ellikkala District,  
 Republic of Karakalpakstan,  
 Ministry of Public Education of  
 the Republic of Uzbekistan.

### ABSTRACT

*The article describes the process of "Carbohydrates in nature pentoses, hexoses" in the educational process of the younger generation.*

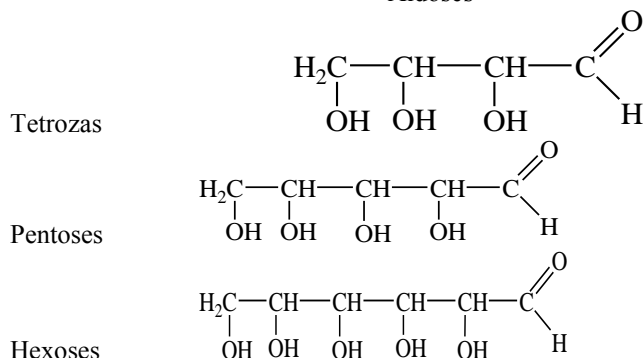
**KEYWORDS:** Carbohydrates, pentoses, hexoses.

### DISCUSSION

Carbohydrates are one of the most abundant natural compounds in nature. Carbohydrates make up about 80% of the dry mass of plants and 2% of the body of animals. Carbohydrates are one of the main nutrients. It is used in industry as a raw material for the production of paper, ethyl alcohol, synthetic fibers and other products.

The term carbohydrates, or "carbonated waters," was coined in 1844 by K. Schmidt. Because the elemental composition of carbohydrates is

Aldoses

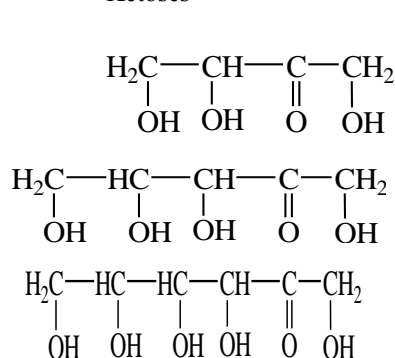


Chemically, monosaccharides are polyhydroxycarbonyl compounds. The molecules of monosaccharides are opaque, with one or more asymmetric centers. Therefore, monosaccharides have many spatial isomers. Carbohydrates extracted

expressed by the general formula  $C_n (H_2O)_m$ . Nowadays, carbohydrates are very diverse substances.

Carbohydrates are usually divided into mono-, oligo- and polysaccharides. Monosaccharides are the simplest carbohydrates and are classified according to the number of carbon atoms in the carbon chain and the presence of an aldehyde or ketone group. For example,

Ketoses



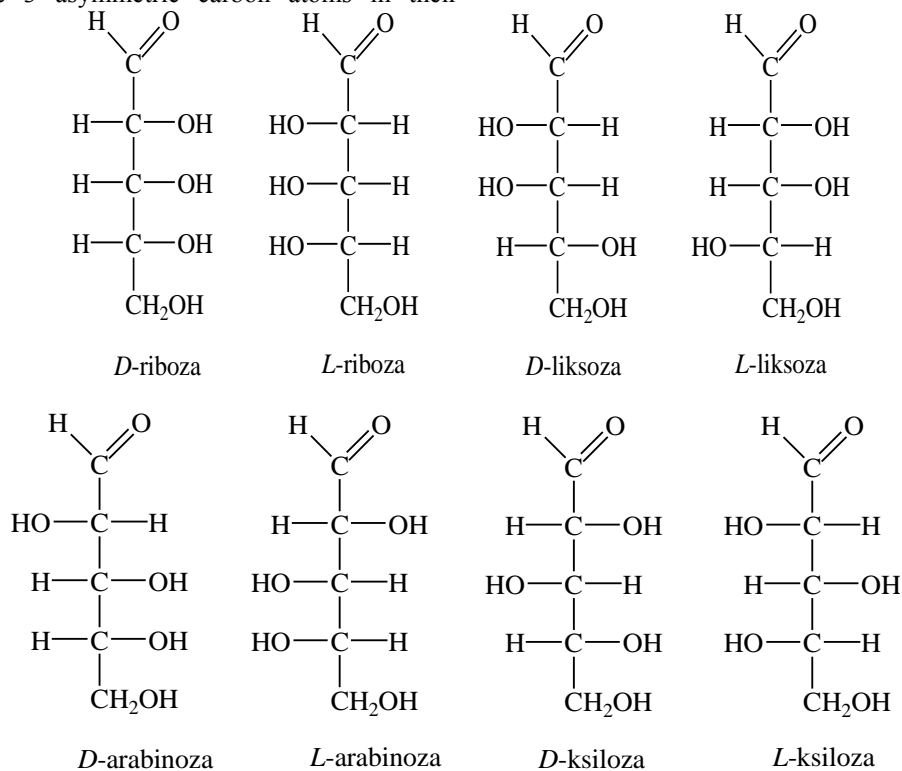
from natural products are optically active compounds.

Among the monosaccharides are pentoses and hexoses, as well as their derivatives.

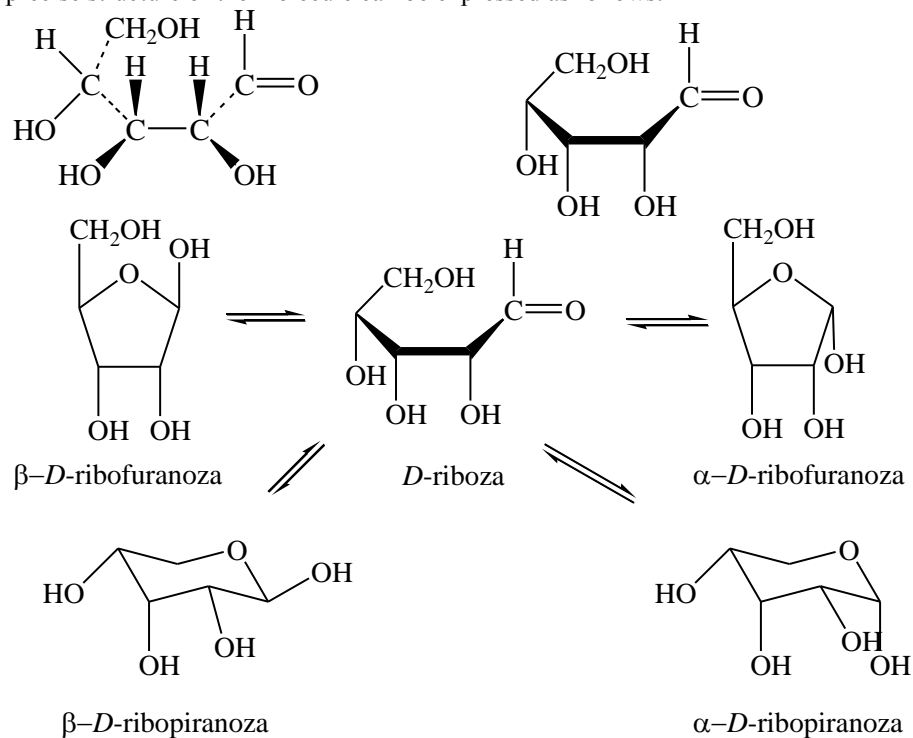
**PENTOSEs.**

Aldopentoses from pentoses are common in nature. They have 3 asymmetric carbon atoms in their

molecule. Therefore,  $2^3 = 8$  spatial isomers and 4 pairs of enantiomers.



A more precise structure of the molecule can be expressed as follows:



Aldopentoses can form cyclic hemiacetals through hydroxyl groups in states 4 and 5. During the formation of the furanose cycle, there are 3-4

rotations. This cycle is not observed during the formation of the pyranose cycle.



In solutions of aldopentoses, the open-chain form and the cyclic form are in equilibrium, that is, a unique tautomeric system is formed.

In cyclic form, a new asymmetric carbon atom is formed. This results in two furanoses or two pyranoses. Two different cyclic isomers are called anomers. They are denoted by the letters a and b. To determine which a- or b-isomer of a molecule, the spatial position of the hydroxyl group in the first carbon and the OH group in the fourth carbon or OH is determined. These groups are b-isomers if they are in the *sis* state, and a-isomers if they are in the *trans* state. Each anomer has its own specific optical deflection value.

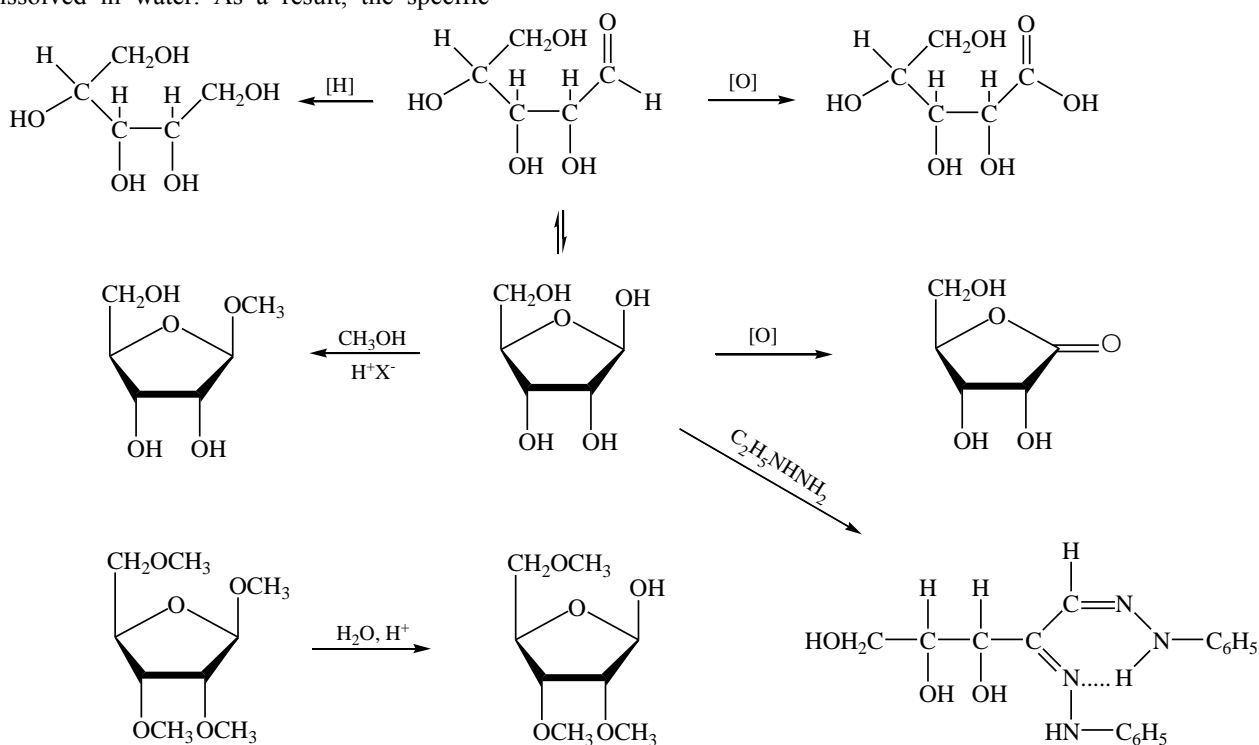
When aldopentose is present in a certain form in the crystalline state, tautomeric changes are observed when the a- and b-isomers are equilibrated when dissolved in water. As a result, the specific

optical deflection value changes to a constant value. This phenomenon is called mutarotation.

### Chemical properties.

Aldopentoses are involved in all reactions specific to aldehydes and polyhydric alcohols. They are oxidized, react with silver mirrors, react with Fehling's reagent, form carbonic acids under the influence of weak oxidants (in the form of lactone), when converted into five-atom pentites, and so on.

When alkyl pentoses are alkylated, simple esters are formed. First, the hydrocarbon group-glycoside or semi-acetal group in the first carbon reacts. strong alkylating reagents, such as dimethyl sulfate, form tetraalkyl esters. The methyl group attached to the first carbon in these esters is easily separated.



### Important representatives.

Xylose (wood sugar) is a colorless crystalline substance that liquefies at 145 oC and is optically active  $[\alpha]_D = + 93.60$ . Contains xylan polysaccharides. Xylans are found in wood, sunflower husks, corn husks, and straw. When they are hydrolyzed, xylose is formed. It belongs to the D-series monosaccharides, is crystalline in the form of pyranose, and its spatial structure corresponds to the  $\alpha$ -anomer.

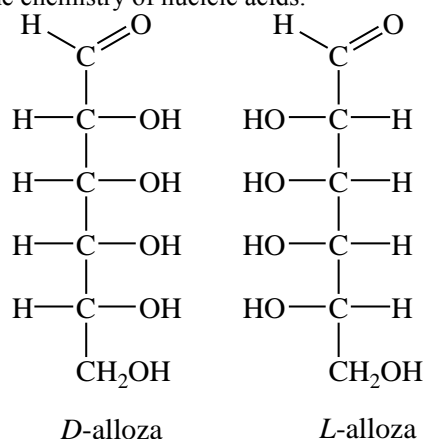
When  $\alpha$ -D-xylopyranose is dissolved in water, mutarotation is observed,  $[\alpha]$  forming an equilibrium mixture containing 33%  $\alpha$ -anomer with  $D = + 18.80$ .

When xylose is heated in sulfuric acid solutions, it dehydrates to form a heterocyclic compound, furfural.

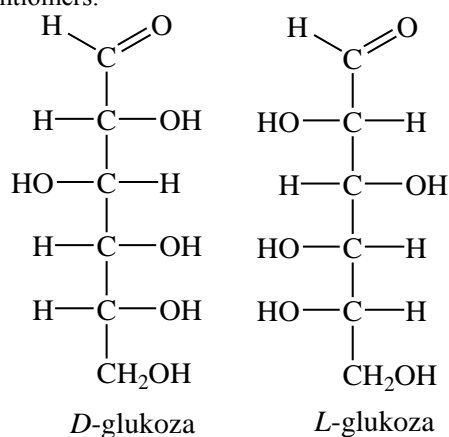
Ribose is a colorless crystalline substance that liquefies at 87 oC, optically active  $[\alpha]_D = - 23.10$ . It belongs to the D-series monosaccharides, in the form of furanose in the crystalline state, the spatial structure of which corresponds to the b-anomer. Mutation is observed in the aqueous solution.  $[\alpha]$  An equilibrium mixture containing 26%  $\alpha$ -anomer is formed, where  $D = -23.70$ .

Ribose is one of the most important natural compounds in ribonucleic acid. Obtained by hydrolysis of ribonucleic acids. Used in the chemistry of nucleic acids in the synthesis of nucleosides.

In deoxyribonucleic acids, the derivative of D-ribose is 2-deoxyribose. This compound forms colorless crystals that liquefy at 78–82 °C, optically active  $[\alpha]_D = -91$ . In the crystalline state it is in the form of furanose. Used in the synthesis of nucleosides in the chemistry of nucleic acids.

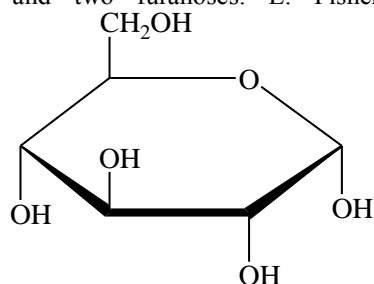


HEXOSES  
 Hexoses also occur in the form of aldohexoses and ketohexoses. The aldohexose molecule contains four asymmetric carbon atoms, so there may be  $2^4 = 16$  stereoisomers, or 8 pairs of enantiomers.



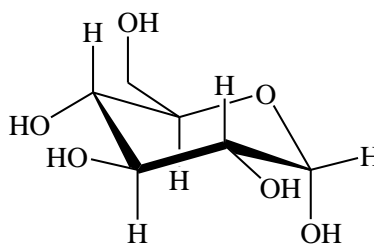
Aldohexoses are crystalline in the form of pyranoses, and their solutions form a balanced mixture of cyclic and open forms.

Each aldohexose molecule can exist in the form of two pyranoses and two furanoses. E. Fisher's



The D-glucose solution can undergo ring-chain tautomeric changes. Aldohexoses can form cyclic semi-acetals through hydroxyl groups in cases 4 and 5. This results in the formation of rings of furanose (less in aldohexoses) and pyranose, respectively. In the formation of the ring structure, there is a rotation around the bond between 4-5 carbon atoms.

projection formulas can be used to represent cyclic shapes, or the more perfect U. Haworth perspective formulas. For example,  $\alpha$ -D-glucopyranose is expressed as follows:



## REFERENCES

1. Khomchenko G.P., Sevastyanova K.I. *Okislitelno-vosstanovatelnye reactions. M.Ximiya, 1980g*
2. *Methods of purification, separation and disposal of organic compounds. Method. manual, / O'teniyazov Q., Bektursynov B. x.b./, QMU, No'kis, 1992,*
3. Uteniyazov Q., Bektursynov B., Uteniyazov K.Q. *Practical work on organic chemistry. Don't read. Nokis, QMU. 1999..*
4. Bektursinov B., Ismaylov M., Uteniyazov K. *Superconductivity of monofires of sucrose and*

*carbonic acid. Materials XXV nauchno-prakt. konf. KGU, Nukus, September 13-15, 2001.*

5. Bektursinov B., Uteniyazov K. *Carbonic acid emulsifier of monoglycerin. Thesis conf. "Chemical education, science and technology in Uzbekistan". Tashkent, November 28-29, 2002*



# IMPROVING THE METHODOLOGY OF FORMATION OF STUDENTS' CAMPS IN VOCATIONAL EDUCATION ON THE BASIS OF INNOVATIVE APPROACHES

**Mambetova Sayyora Madraimovna**

Teacher of "Zoology of Human Morphology"  
and Its Teaching Methods,  
Ellikkala Department,  
Nukus State Pedagogical Institute Named  
After Ajiniyaz and Independent Researcher of  
The Institute of Pedagogical Innovations,  
Vocational Education Management and  
Retraining of Teachers,  
Uzbekistan.

## ANNOTATION

*The article is about the sequence of the educational process of the younger generation. Improving the quality and efficiency of education in the educational process and the concept of "Improving the methodology of formation of students' competencies in vocational education on the basis of innovative approaches".*

**KEYWORDS:** *modern education, types of education, types of competencies, types of teaching,*

## DISCUSSION

The meaning of the word kompetetsiya is derived from the Latin words "competent", "competence", which means "I deserve to achieve".

When it comes to the younger generation, it is important for a person to develop, to understand his position. At the heart of this, of course, is education. Education as a process is the organization of special activities aimed at mastering a certain set of knowledge, skills and competencies in the relevant practice of activities and relationships. The education system as a system is a complex of government agencies and governing bodies. Thus, education always represents both the process of upbringing and the process of teaching. The peculiarity of teaching and learning is that it combines education as a social phenomenon, pedagogical activity, the formation of the individual, and on these three bases creates a real pedagogical process, which is designed using various district concepts, theories and implemented in educational institutions.

The following are some of the innovative activities: - Differentiation of educational activities;  
-coordination of educational processes according to the personality of different people;  
-create the necessary conditions for the development of abilities and interests of each student;

- Convenience of educational activities;
- Psychological protection;
- Trust in the student and his strengths and abilities;
- Accept the student as he is;
- Ensuring the success of educational work;
- Mastering the purpose of the school;
- Substantiation of the level of development of each student;

- Strengthening humanities education;

The statement of the 12th video conference held on March 19, 2019 under the leadership of President Sh.M.Mirziyoev stated that the strengthening of attention to youth, their broad involvement in culture, arts, physical culture and sports, they were introduced to 5 important initiatives aimed at inculcating the skills of using information technology, promoting reading among young people and increasing women's employment. Of course, we need to pay a lot of attention to kindergarten activities in order to ensure 5 important initiatives. Education plays an important role in preschool children. We, educators, should try to prepare their interests, talents and abilities from kindergarten.

## Professional training

This requires a high level of activity from students in education, a creative approach to the full



understanding of information in advance. The main criteria for teaching in vocational education are informal discussions, free expression of teaching materials, reducing the number of lectures, encouraging students to take initiative, group tasks that require teamwork and written work. Vocational education encourages students to think creatively, to actively solve information, to express ideas freely, to take initiative, to find solutions to problems in groups, to work collaboratively, to express ideas in writing.

In vocational education, no student is left out, that is, they have the opportunity to openly express what they see, know, think. Through collaboration, students will have the opportunity to make their own personal contribution to mastering the content of the topic. The process of exchanging knowledge, ideas, opinions takes place. Such situations provide mutual sincerity, increase the desire to acquire new knowledge, in the process of supporting each other, mutual friendly relations are formed. This is of great educational importance. The following elements should be taken into account in the group organization of teachers' learning activities. Preparing students for group work, clear application of learning tasks, group work, understanding of group work, setting rules.

1. Develop a plan for the implementation of educational tasks, discuss, identify ways to solve it and assign tasks for the work.

2. To be able to organize the work on the implementation of educational tasks.

3. Monitor the work process and the work process of the members in the organization of work in the group.

4. Carrying out mutual inspection and control in the course of group assignments.

5. Provide information on the results of assignments in groups, class discussions, additions and corrections to the work process. Summarize and summarize the results of the work by the teacher.

6. Analytical assessment of the results of each group. Sources, such as textbooks, reference books, dictionaries, recommendations.

"Everyone should have a perfect knowledge of the profession, a good upbringing, good manners and qualities."

Abu Nasir Faroobi

"There is no more natural feeling than the pursuit of knowledge."

M.Monten

"From childhood, man should not step into life without buds of goodness and beauty, and generations cannot be sent to life without buds of goodness and beauty."

F.M.Dostaevskiy

### Competences in biology students

Competence of students in biology is the ability to apply, apply and apply the knowledge and skills acquired in the field of biology, as well as the skills and abilities in everyday life, practical and theoretical, problem solving. For example, if we take a

plant, the learner will be able to use it in the course of the lesson, because of the knowledge of the medicinal properties of the plant, for learning and agrotechnics. It is necessary to express such an opinion on the formation of education. At the present time, the conditions of education of young people have the opportunity to learn from a distance, created by the charter. In my mind, I found it expedient to say these thoughts.

"We have a spiritual destiny for development," he said

people solve. Technical knowledge, complex tech-

nalogiyaniegallashkobilyatimanaviy perfection must go along. Mental intelligence and spirituality

The spiritual potential of enlightenment is the two wings of man.

I.A. Karimov.

The proclamation of the Law of the Republic of Uzbekistan "On Education" (1997) "National Program of Personnel Training" (1997) as a priority of education in the social sphere of the state has entrusted a very responsible and glorious task to the science of pedagogy. divided into several types.

If we take the natural sciences.

1. Components formed in teaching biology.

2. Components formed in teaching chemistry.

3. Components formed in teaching physics.

Theoretical and practical knowledge is imparted to students in order to form competencies, and it is put into practice.

### REFERENCES

1. *Pedagogy Publishing house "Uktuvchi" Tashkent-2012 [121-122-126-p]*
2. *Vocational education. Technology. Spirituality. Skills. I. Xolliiev, J. Xusanov. Uktuvchi Publishing House, 2003. [116-117-p]*
3. *TAFAKKUR GULSHANI VI. Varantsov Gofur. Gulom Publishing House of Literature and Art. Tashkent 1981. [220-221-p]*
4. *Theory of pedagogy X Ibragimov Sh Abdullaeva Tashkent "Science and technology", 2008. [2-3 b].*



# THE INTRODUCTION OF ERP-SYSTEM AS A MEAN OF INCREASING THE INVESTMENT ATTRACTIVENESS OF AN ENTERPRISE

**Juraev J.T**

PhD,

Academy of Public Administration under  
The President of the Republic of Uzbekistan.

## STATE OF THE ISSUE

A great number of foreign companies, which involved in the development and implementation of management systems exist at the enterprises of various levels and different industries, however, it should be stressed out that these systems are practically not implemented at the enterprises of medium-size and small segments of business.

## MATERIALS AND METHODS:

The conducted research is based on scientific developments of well-known Western experts. In addition, the main advantages and disadvantages of the implementation of optimized enterprise resource management systems, affecting all key performance indicators, were investigated.

## RESULTS:

The main advantages and disadvantages of using ERP-systems are shown. The possibility of introducing ERP-systems from the point of view of financial investments, as well as the technical possibilities of their implementation at the enterprise, taking into account the specifics of the market, have been investigated.

## CONCLUSIONS:

The study results of showed that the automation of the administrative process at the enterprise allows to increase the level of its investment attractiveness through the implementation of communication flows within the company, which ultimately makes it possible to increase the customer's loyalty to the goods and services provided by the company.

## KEY WORDS:

automation of management processes in a company, enterprise resources, ERP systems, client.

Western companies are developing, in turn, implementing the specialized management systems, in an effort to automate and optimize the processes, which is closely connected with the enterprises' management of external and internal resources. A great number of foreign companies, which involved in the development and implementation of management systems exist at the enterprises of various levels and different industries, however, it should be stressed out that these systems are practically not implemented at the enterprises of medium-size and small segments of business.

Owing to the fact that there are problems of real financing at enterprises associated with its high cost, professional systems work fully only at the level of large corporations, as well, because of the peculiarities of the legislation. In the article, we try to show an attempt to analyze the advantages and disadvantages of an enterprise resource planning system, moreover, to give recommendations on justifying the integration of this system in medium-sized enterprises.

The term Enterprise Resource Planning (ERP) can be applied in two ways, according to the APICS (American Production and Inventory Control Society) vocabulary. The former is an information system for identifying and organizing all the resources of the enterprise that are necessary for the implementation of sales, production, purchasing and accounting in the process of fulfilling customer orders. The second (broader) is a methodology for effective planning and management of all enterprise resources that are necessary for the implementation of sales, production, procurement and accounting in the execution of customer orders in the areas of production, distribution and services [1].

To facilitate the flow of information between all business functions within the enterprise, as well as to maintain connections with participants in business processes using various



types of communications determines the main purpose of implementing an ERP system in the enterprises. The basis of the system is the principle of creating a single data warehouse [2], which contains all corporate business information and provides simultaneous access to it for any required number of employees of the enterprise, endowed with appropriate powers. It is also determined that this will not only increase the efficiency of the production activity of the enterprise, but also reduce the internal information flows, thereby reducing the cost of their provision. The main one, of course, is the following functional set of the ERP system:

- sustaining the design and technological specifications, which influence the composition of manufactured products, furthermore, material resources and operations required for their manufacture;
- developing the sales and production plans;
- organizing the requirements for materials and components, terms and volumes of supplies in order to fulfill the production plan;
- managing inventory and procurement: management of contracts, implementation of centralized purchases, accounting and optimization of warehouse and shop stocks;
- planning production facilities from large-scale organizing to the use of individual machines and equipment;
- operational management of finances, including drawing up a financial plan and exercising control over its implementation, financial and management accounting;
- project management, including planning stages and resources required for their implementation [3].

Classic ERP-systems [4], in contrast to the so-called "box" software, belong to the category of "heavy" software products that require a sufficiently long setup to start using them, which is the main feature of the implementation of this product in enterprises.

The preference, acquisition and implementation of an ERP system usually requires careful planning within a long-term project involving a partner company - supplier or consultant. Since ERP systems are built on a modular basis, in most cases, the customer does not acquire a full range of modules at an early stage of such projects, but a limited set of them, which is improved during the implementation of the system in all processes at the enterprise are approved. Any complication of software modules entails an

increase in the cost of their implementation, including the training of company employees.

It should be noted that the implementation and application of ERP systems in an enterprise has significant advantages, as follows:

- ERP-systems gives a chance to use one integrated program instead of several disparate ones. A single system can manage processing, logistics, distribution, inventory, shipping, invoicing and accounting;
- The means of differentiating access to information implemented in ERP systems are designed to counter both external threats, for example, industrial espionage, and internal, for instance, theft;
- It is implemented in accordance with a CRM system (Customer Relationship Management System) and quality control system, ERP-systems are aimed at maximum satisfaction of the needs of companies in business management tools.

The basic problems and difficulties at the stage of introducing ERP systems in medium-sized enterprises arise for the following reasons:

- The company owners do not trust high-tech solutions, preferring time-tested and experience-proven software products designed to solve enterprise management issues, which ultimately makes the project difficult to implement due to poor project support from their side;
- Departmental resistance to providing confidential information reduces the efficiency of the system.

It should also be noted that many problems associated with the operation of ERP systems arise due to insufficient investment in staff training, as well as due to insufficiently developed policy for updating and maintaining data in the ERP system.

There is a misconception that sometimes an ERP system is difficult or impossible to adapt to a company's document flow and its specific business processes. In fact, any implementation of an ERP system is preceded by a stage of describing the company's business processes, most often associated with the subsequent stage of business reengineering. Essentially, an ERP system is a virtual projection of a company.

The introduction of complex information systems also promises undeniable benefits for medium-sized enterprises.

First, the level of payment rises and the main debt to service providers decreases. At the same time, unclaimed debts disappear irrevocably



after some time due to the expiration of the statute of limitations on their demand. Debt reduction is often many times higher than the cost of implementing an information system, which cannot be achieved by increasing the sales and control staff.

Secondly, the efficiency of using the enterprise funds intended to increase the company's competitiveness in the market increases.

Thirdly, the automation of labor at the enterprise increases the productivity of employees and makes it possible to increase the efficiency, accuracy and reliability of the received reporting information.

Fourthly, the client's loyalty to the company and services increases due to the increased efficiency and quality of the service provided to the consumer.

## CONCLUSION

Based on the abovementioned issues, we can conclude that the introduction of an ERP system in an enterprise, business will have a significant economic effect, and will also remarkably increase the investment attractiveness of the company.

## REFERENCES

1. Koch K. *Introduction to ERP [Electronic resource]*. - Access mode: <http://www.erp-online.ru/erp/introduction/>
2. *Production management: textbook. / V.A. Kozlovsky. - M.: Infra-M., 2003. -- 574 p.*
3. Neverov M. *Accounting at the enterprise [Electronic resource]*. - Access mode: <http://www.raschet.ru/articles/49/105/>
4. Gavrilov D.A. *Manufacturing management based on the MRPII standard. - Saint Petersburg, 2005. - 416 p.*



# TREATMENT OF POSTOPERATIVE RADICULAR PAIN SYNDROME WITH PULSED RADIOFREQUENCY ABLATION OF THE SPINAL GANGLIA

**Rakhmatov K.R.**

Bukhara State Medical Institute,  
Bukhara,  
Uzbekistan.

## INTRODUCTION

Radicular pain syndrome is the main surgical target in the surgery of degenerative spine conditions (DSC). The retention or recommencement of radicular pain after a successful operation without an obvious substrate for re-intervention is the basis of the so-called "failed back surgery syndrome" (FBSS). The frequency of occurrence of FBSS is determined by different authors in the range of 10-40%, depending on the choice of assessment methodology, initial pathology and type of surgery [1-5]. There are no generally accepted approaches to the treatment of chronic radicular pain after surgery; most non-invasive methods have a weak evidence base and are supported by a limited number of low-level works [6,7]. Interventional methods show reliably better results, and the ineffectiveness of interventional methods of pain treatment is a criterion for the diagnosis of FBSS and an indication for neuromodulation [8, 9, 10], at the present time, 1-2 classes works have confirmed the effectiveness of epidural administration of glucocorticosteroids and percutaneous adhesiolysis [11, 12]. Pulsed radiofrequency (PRF) ablation is a pain treatment method based on the ultrastructural effect of high-frequency current on myelin-free nerve fibers to simulate the passage of a pain impulse. Studies of various levels demonstrate the effectiveness of the method for the treatment of pain syndrome of various etiologies, including radiculopathy. [13-17], at the same time, the number of works devoted to the treatment of radicular pain after surgical treatment is small, the results are contradictory, in most cases, patients were jointly studied without a history of surgery [18-22].

**The purpose of this study** is to evaluate the possibility of using PRF of the spinal ganglia in combination with epidural blockade (EB) for the treatment of radicular pain syndrome after surgical interventions for degenerative-dystrophic diseases of the lumbosacral spine.

## MATERIALS AND METHODS.

This work analyzes a subgroup of patients from the basic study devoted to the diagnosis and treatment of pain syndromes after surgical treatment of DDD of the lumbar spine, which was performed in the period 2017-2019. Within the framework of the basic study 155 patients were prospectively investigated and traced. The subgroup of patients with postoperative radicular pain syndrome who met the selected eligibility criteria made 28 people. 11 patients of the main group underwent PRF of the spinal ganglia in combination with EB, 17 patients of the control group - only EB by transforaminal approach. For the analysis, we selected patients who were initially or reoperated at one or more levels for spinal disc herniation (SDH) or degenerative spinal stenosis in the volume of discectomy / decompression or decompression with posterior interbody fusion and transpedicular fixation, with radicular pain syndrome.

### *Acceptance criteria.*

1. Radicular pain syndrome that persists after the intervention or appears within 1 year after it.
2. Pain level - 4 or more points on the digital pain scale (NRS-11) and / or 8 points or more on the index of anxiety caused by radiculopathy, and / or disability 20% or more on the Oswestry Disability Index (ODI).
3. Absence of obvious compression factors on the basis of postoperative magnetic resonance imaging (MRI) and / or computed tomography (CT), as well as melography in the form of incompletely removed SD hernia or eliminated stenosis, incorrect position of transpedicular screws or migration of an interbody implant. Epidural fibrosis was not considered a compression factor. The presence and degree of root compression was assessed according to the C.S. Pfirmman et al. classification [23], spinal stenosis - according to the classification of C. Schizas et al. [24], foraminal stenosis to the classification of S. Lee et.al. [25], perforation of the medial wall of the root of the arch was allowed and the distance of





the screw into the canal was not more than 4 mm, based on the recommendations of the review by E.J. Woo, M.N. DiCuccio [26].

4. No reduction in pain syndrome (at least 50% or 4 points on the NRS-11 scale, 20% ODI, 8 points SBI) while taking at least one drug from the group of antidepressants or anticonvulsants recommended for the treatment of neuropathic pain in adequate dosages in within 1 month.

5. With the predominant localization of pain in the lower limb above the knee, pain associated with movement, the presence of chronic back pain, in order to exclude other possible mechanisms of pain syndrome formation, a single test blockade of intervertebral joints and / or sacroiliac joints with a 0.2% ropivacaine solution was performed in a number of patients under fluoroscopic control. When pain syndrome decreased by 50% or more on the NRS-11 scale, patients were excluded from further analysis.

The presence of chronic back pain as a leading clinical syndrome, radiculopathy without pain syndrome, extremely severe pain syndrome, severe neurological deficit, signs of an infectious process.

The tools for assessing the preoperative state and outcomes of the interventions were the NRS-11 and SBI indices to determine the intensity of pain syndrome and the ODI index to assess the disability. Patient achievement of a positive outcome was the main study outcome of the present study. A positive result was considered a decrease in the NRS-11 index by 50% or by 4 points, and / or a decrease in the ODI index by 20%, and / or a decrease in the SBI index by 8 points from the baseline values with the preservation of the effect for 6 months or more. Patients were examined for a year with control after 6 and 12 months from the date of the procedure. In the presence of the fact of performing other interventional procedures and / or increasing the dose of analgesic drugs, as well as in case of loss of contact with the patient during the first 6 months, the result was considered negative. Key outcomes were assessed by telephone interview, email, or outpatient visit 6 and 12 months after the procedure.

The dynamics of the studied indices NRS-11, ODI and SBI were analyzed before and 6 months after the procedure. To search for factors influencing the positive outcome of interventions, the following indicators were taken into account and analyzed: age, gender, number and volume of surgeries for this pathology in anamnesis, presence of allodynia or

hyperpathy, presence of neurological deficit, duration of pain syndrome before intervention, level and number of affected roots.

All interventions were performed by one researcher in an operating room equipped with a mobile X-ray machine with a C-arch, in the prone position of the patient under local anesthesia with monitoring of vital functions. Under fluoroscopic control in oblique projection, a puncture needle or an ablation needle was inserted and passed into the area between the apex of the superior articular process of the underlying vertebra and the root of the arch of the overlying vertebra (Fig. 1). In the lateral projection, the tip of the needle should have taken a position in the posterosuperior quadrant of the intervertebral foramen (Fig. 2), in the straight line - no further than the medial pedicular line (Fig. 3). During subsequent epidurography, the spread of contrast was assessed, in the absence of adequate contrasting of the epidural space or with intravascular spread, the position of the needle was changed (Fig. 4). Taking into account the possible features of the distribution of the contrast agent and the drugs administered after the cranial or caudal spread (Fig. 4), in the case of monoradicular syndrome, the transforaminal approach was carried out at two levels - at the pathology level and below, with the biradicular - at three levels. In pathology at the LV-S1 level, to isolate the S1 root, the access was performed through the first sacral foramen (Fig. 5), to perform PRF of the spinal ganglion S1 - through the hiatus sacralis using an epidural electrode (Fig. 6), which is associated with the anatomical features of the sacral structure and the technical difficulty of reaching the spinal ganglion through the sacral foramen. In the main group, an ablation electrode was installed in the needle and sensory and motor stimulation was performed with threshold values of 0.5 V and 1.0 V, respectively, for additional verification of positioning near the target nerve, if the indicated stimulation thresholds were exceeded, the position of the needle was corrected. Pulsed radiofrequency ablation was performed for 10 minutes with the following parameters: voltage 65 V, pulse duration 5 ms, frequency 5 Hz, temperature limit 42 ° C, at the end of the procedure, epidural injection of a total of 5–8 ml of 0.2% ropivacaine solution was carried out through each needle and 1 ml of a suspension containing 40 mg of triamcinolone acetonide. In the control group, only epidural administration of these drugs was carried out.



Figure 1. Intraoperative X-ray of the lumbar spine in oblique projection. The puncture needle (marked with an arrow) is located in the area between the apex of the superior articular process of the L4 and the root of the LIV arch on the right.

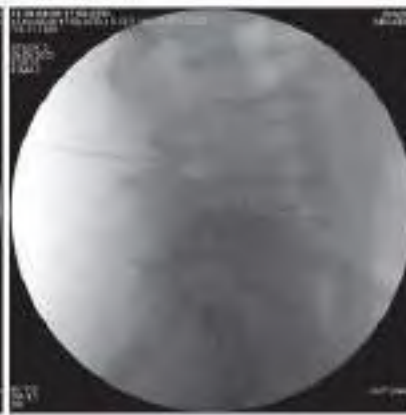


Figure 2. Lateral intraoperative radiograph of the lumbar spine. The tip of the puncture needle is located in the upper outer quadrant of the intervertebral foramen LIV-V.



Figure 3. Lumbar intraoperative radiograph spine in direct projection. The tip of the puncture needle is located in the LIV-V intervertebral foramen on the right along the medial pedicular line.



Figure 4. Intraoperative X-ray of the lumbar spine in frontal projection. Epidurography and possible routes of contrast agent distribution.



Figure 5. Intraoperative X-ray of the lumbar spine in frontal projection. Puncture of the first sacral foramen and spread of contrast along the root S 1.



Figure 6. Intraoperative X-ray of the lumbar spine in frontal projection. The epidural electrode is inserted through the hiatus sacralis and is located in the projection of the spinal ganglion S 1 on the left

After the procedure, patients could continue to take pain medications, if the treatment was effective, it was recommended to stepwise decrease the dose of anticonvulsants / antidepressants not earlier than 1 month after the intervention, by half the dose used once a week until complete withdrawal or until the onset of pain.

Checking the correspondence of the empirical laws of distribution of the studied indicators showed a significant difference between most of them from the theoretical law of normal distribution according to the Shapiro-Wilk test ( $p < 0,05$ ). In accordance

with this, the median and interquartile range were used for the statistical description of the indicators (Me [25 %; 75 %]), and for testing statistical hypotheses - nonparametric analysis methods. The assessment of the significance of differences in quantitative and qualitative indicators between the groups was carried out, respectively, according to the Mann-Whitney U and Pearson  $\chi^2$  criteria, with a small number of expected values in the contingency table, Fisher's exact test was used. Evaluation of the significance of differences in quantitative and qualitative indicators before and after treatment



within the groups - according to the Wilcoxon T test and McNemar's test. To identify the statistical relationship between the indicators, a correlation analysis was carried out using the Spearman's rank correlation coefficient. To identify predictors of outcome, a binary logistic analysis was performed to determine the odds ratio (OR) with 95 % confidence interval (CI).

## RESULTS

Of 155 patients with pain syndromes after surgical treatment of DDD of the lumbar spine, 45 patients (29%) had pain in the lower limb without an obvious compression substrate according to neuroimaging data. When performing test blockades for differential diagnosis in 13 patients (8.4%), pain relief was achieved, against the background of correction of conservative treatment, a positive effect was achieved in 5 patients (3.2%), as a result, 56 patients underwent interventional interventions, all they are traced for a year after the procedure and included in the final analysis.

Table 1 shows the distribution of the selected groups of patients before the intervention according to the studied characteristics, no significant differences between the groups were found. For both groups, a high percentage of patients with residual radiculopathy after two or more interventions (46.6%

in total), and the most frequent suffering of the L5 root should be noted (53,4 %).

Positive results of interventions, based on the specified criteria, were obtained in 9 patients (81.82%) of the main group and 10 patients (55.88%) of the control group, the differences are significant,  $p = 0,045$ . A year after the intervention, the positive effect persisted in 8 patients of the main group (72.73%) and 7 patients (44.12%) of the control group, the differences are significant,  $p = 0,048$ . In the control group, 5 patients who had a sufficient, but short-term effect of EB (at least 2 weeks), subsequently underwent PRF with a positive effect in 4 cases.

The dynamics of changes in the analyzed indicators is presented in table 2. There was a significant decrease in all indices after the intervention. In intergroup analysis, the differences in the NRS-11 and ODI indices before and after the intervention are unreliable. At the same time, the SBI index median in the main group was significantly lower than in the control group.,  $p = 0,021$ .

In both groups, there were no complications of interventions, side effects from drug administration.

Allodynia and / or hyperpathy was a major risk factor for negative outcomes in both groups, with an odds ratio of 0.79 at 95% confidence interval (0.735–0.897) in the main and an odds ratio of 0.82 at 95% confidence interval (0.780–0.929) in the control group.

**Table 1**  
**Characteristics of the study groups of patients before the intervention**

Feature	MG(n = 22)	CG(n = 34)	p*
Age, Me [25 %;75 %]	47,5 [38; 60,5]	35 [34,25; 60]	0,860
Men	14 (63,64 %)	14 (41,18 %)	0,171
Women	8 (36,36 %)	20 (58,82 %)	
Discectomy	2 (9,09 %)	2 (5,88 %)	0,103
Decompression	3 (13,64 %)	4 (11,76 %)	
Decompression + stabilization	9 (40,91 %)	16 (47,06 %)	
Decompression + stabilization of more than 3 segments	8 (36,36 %)	12 (35,29 %)	0,414
History of repeated surgery	12 (54,55 %)	14 (41,18 %)	
Allodynia / hyperpathy	5 (22,73 %)	9 (26,47 %)	0,752
L3 root	-	1 (2,94 %)	0,811
L4 root	3 (13,64 %)	3 (8,82 %)	
L5 root	13 (59,09 %)	20 (58,82 %)	
S1 root	6 (27,27 %)	10 (29,42 %)	0,417
Biradicular symptoms	2 (0,09 %)	5 (1,47 %)	

\* – level of significance of differences between groups.

**Table 2**

**Changes in the medians of the studied parameters NRS-11, ODI and SBI after the intervention**

Index	Group	The observation period		p*
		before treatment	after treatment	
NRS-11	OG	6 [4,25; 6]	4,5 [2; 6]	< 0,001
	KГ	6 [5; 7]	4 [3; 7,75]	0,004
	p**	0,261	0,725	
ODI	OG	49,5 [36; 56,5]	28,5 [16,75; 47,75]	0,02
	KГ	40,5 [33,25; 49]	33 [14,75; 48]	0,045
	p**	0,135	0,294	
SBI	OG	15 [13,25; 17,75]	5,5 [3,25; 11]	0,019
	KГ	14 [11; 17]	12 [7; 15,75]	0,031
	p**	0,507	0,021	

\* – the level of significance of differences within the group before and after treatment;

\*\* – level of significance of differences between groups.

## DISCUSSION

According to a meta-analysis of works on FBSS [15], the incidence of radicular pain syndrome without an obvious compression substrate is 4.8-10.2% among all postoperative problems. The incidence of epidural fibrosis, according to the same study, reaches 34%, and if fibrosis is not considered as an independent factor of compression along with residual stenosis or spinal disc herniation, then the incidence of radicular pain will be even higher. The relationship between the clinical outcomes of spinal interventions and the severity of epidural fibrosis according to MRI data has not been proven at the moment, as well as the importance of methods for its prevention, therefore, the severity of the cicatricial process was not taken into account in this work. The incidence of non-compression radicular pain syndrome was 11.46% among patients with various pain syndromes and / or pathological conditions after surgery for DDD of the lumbar spine. It should be noted that at the selection stage, out of 91 patients with pain in the lower extremity, 26 were excluded based on the results of positive test blocks or other potential generators of pseudoradicular pain.

The effectiveness of epidural blockade was confirmed by one randomized controlled trial [12], 59% of patients showed a positive result in the form of a 50% reduction in pain syndrome during the first year. Among the shortcomings of the study are a large number of repeated injections (on average 4 per year), the use of the least advantageous anatomical caudal approach, and the recognition of the result as positive if the effect lasts at least 3 weeks. V. Wilde et al, based on the analysis of 5 works, conclude that there is insufficient evidence of the efficacy of EB in the treatment of postoperative pain syndrome. In the present study, in the control group, satisfactory results were achieved with EB in 55.88% of patients with a single injection with an effect duration of 6 months, in 44.12% the effect persisted for a year. Positive differences may be associated with the

transforaminal route of steroid administration - much closer to the zone of the alleged inflammation compared to the caudal route with a higher concentration of the drug. The value of the selectivity of administration is indirectly confirmed by the analysis of the results of the use of percutaneous adhesiolysis - an intervention with selective catheterization of the epidural space with a flexible X-ray-positive catheter and the introduction of a steroid through it in combination with hyaluronidase and hypertonic sodium chloride solutions. The procedure demonstrated to be more effective than the caudal block, but the result was more influenced by the positioning of the catheter in the ventral epidural space, rather than the use of enzymes and aggressive solutions.

The efficacy of PRF for the treatment of radicular pain has been confirmed by a randomized, double-blind, placebo-controlled trial in cervical spine pathology. In many prospective and retrospective [20] studies, rather contradictory results were obtained - the number of patients with satisfactory outcomes did not exceed 50%, there were no significant differences in the dynamics of the studied indices compared to the control group, the worst results were in patients with FBSS. It should be noted that all the mentioned studies included patients with various pathologies, including surgically significant conditions in the form of IVD hernias and degenerative stenosis, for which the ineffectiveness of conservative treatment is an expected clinical situation. The pain scale and the Oswestry index have traditionally been used to assess the results, the latter was developed primarily to measure disability in back pain, rather than radiculopathy. In a number of high-level studies comparing the results of surgery and therapy in the treatment of IVD hernias, degenerative stenosis and spondylolisthesis, there were no significant differences in these parameters between the groups after treatment, the differences were only in the SBI index, specially designed to



assess radiculopathy. In the pathogenesis of radiculopathy, inflammation is recognized by all as the leading component, and the use of corticosteroids is an obvious pathogenetic component of treatment. The exclusion of the use of steroids in the selection of patients for PRF or selection based on the ineffectiveness of EB may negatively affect the expected result. The combination of EB and PRF was studied in the work of W. Koh et al. [22] and was significantly more effective than isolated EB.

Higher results (81.8% of positive results within 6 months, persistence of the effect for a year in 72.73% of patients) obtained in the study can be explained by the peculiarities of its arrangement on the basis of data obtained during literary search. Patients were included only after excluding the surgical substrate of radicular pain syndrome, with the additional exclusion of other mechanisms and sources of pain in controversial cases using test blockades.

## CONCLUSION

Based on the results of this study, pulsed radiofrequency ablation and epidural steroid administration are effective and safe methods for the treatment of postoperative radicular pain syndrome in the absence of surgically significant compression substrates. The use of PRF in combination with EB is a more effective technique compared to isolated EB, which is confirmed by significant differences in the number of patients with satisfactory results (81.82% and 55.88%,  $p = 0.045$ ), as well as a large decrease in the SBI index after the intervention,  $p = 0,021$ .

## LIMITATIONS OF THE STUDY

The main limitations of the study are the lack of randomization and a small number of observations, open design. The combined use of PRF and EB does not allow to fully assess the role of pulsed ablation, the background drug intake allowed in this study reduces the "purity" of the experiment and requires the arrangement of studies of a higher level, where the main problem will be finding patients, given the relatively small number of patients. Nevertheless, the demonstrated efficacy of PRF in combination with EB against the background of the absence of significant complications and side effects allows us to recommend this method for the treatment of postoperative radicular pain syndrome.

## REFERENCES

1. Chan C.W., Peng P. Failed back surgery syndrome // *Pain Med.* 2011. Vol. 12, No 4. P. 577-606. DOI: 10.1111/j.1526-4637.2011.01089.x.
2. Thomson S. Failed back surgery syndrome – definition, epidemiology and demographics // *Br. J. Pain.* 2013. Vol. 7, No 1. P. 56-59. DOI: 10.1177/2049463713479096.
3. *Neuropathic pain after spinal surgery / J.H. Cho, J.H. Lee, K.S. Song, J.Y. Hong // Asian Spine J.* 2017. Vol. 11, No 4. P. 642-652. DOI: 10.4184/asj.2017.11.4.642.
4. *An analysis of reasons for failed back surgery syndrome and partial results after different types of surgical lumbar nerve root decompression / A. Bokov, A. Isrelov, A. Skorodumov, A. Aleynik, A. Simonov, S. Mlyavykh // Pain Physician.* 2011. Vol. 14, No 6. P. 545-557.
5. *Диагностика и лечение болевого синдрома после операций по поводу грыже межпозвоноковых дисков пояснично-крестцового отдела позвоночника / О.Н. Тюлькин, В.В. Щедренко, К.И. Себелев, О.В. Мозучая // Вестник хирургии им. И.И. Грекова.* 2010. Т. 169, № 4. С. 55-57.
6. *Treatment Outcomes for Patients with Failed Back Surgery / J.H. Cho, J.H. Lee, K.S. Song, J.Y. Hong, Y.S. Joo, D.H. Lee, C.J. Hwang, C.S. Lee // Pain Physician.* 2017. Vol. 20, No 1. P. E29-E43.
7. *Treatment Options for Failed Back Surgery Syndrome Patients With Refractory Chronic Pain: An Evidence Based Approach / K. Amirdeifan, L. Webster, L. Poree, V. Sukul, P. McRoberts // Spine.* 2017. Vol. 42, No Suppl. 14. P. S41-S52. DOI: 10.1097/BRS.0000000000002217.
8. *Spinal cord stimulation versus conventional medical management for neuropathic pain: a multicentre randomised controlled trial in patients with failed back surgery syndrome / K. Kumar, R.S. Taylor, L. Jacques, S. Eldabe, M. Meglio, J. Molet, S. Thomson, J. O'Callaghan, E. Eisenberg, G. Milbouw, E. Buchser, G. Fortini, J. Richardson, R.B. North // Pain.* 2007. Vol. 132, No 1-2. P. 179-188. DOI: 10.1016/j.pain.2007.07.028.
9. *Spinal cord stimulation versus re-operation in patients with failed back surgery syndrome: an international multicenter randomized controlled trial (EVIDENCE study) / R.B. North, K. Kumar, M.S. Wallace, J.M. Henderson, J. Shipley, J. Hernandez, N. Mekel-Bobrov, K.N. Jaax // Neuromodulation.* 2011. Vol. 14, No 4. P. 330-335. DOI: 10.1111/j.1525-1403.2011.00371.x.
10. *Clinical Evidence for Spinal Cord Stimulation for Failed Back Surgery Syndrome (FBSS): Systematic Review / L. Kapural, E. Peterson, D.A. Provenzano, P. Staats // Spine.* 2017. Vol. 42, No Suppl. 14. P. S61-S66. DOI: 10.1097/BRS.0000000000002213.
11. *A comparative effectiveness evaluation of percutaneous adhesiolysis and epidural steroid injections in managing lumbar post surgery syndrome: a randomized, equivalence controlled trial / L. Manchikanti, V. Singh, K.A. Cash, V. Pampati, S. Datta // Pain Physician.* 2009. Vol. 12, No 6. P. E355-E368.
12. *Assessment of effectiveness of percutaneous adhesiolysis and caudal epidural injections in managing post lumbar surgery syndrome: 2-year follow-up of a randomized, controlled trial / L. Manchikanti, V. Singh, K.A. Cash, V. Pampati // J. Pain Res.* 2012. Vol. 5. P. 597-608. DOI: 10.2147/JPR.S38999.



13. Pulsed radiofrequency: current clinical and biological literature available / A. Cahana, J. van Zundert, L. Macrea, M. van Kleef, M. Sluiter // *Pain Med.* 2006. Vol. 7, No 5. P. 411-423. DOI: 10.1111/j.1526-4637.2006.00148.x.
14. Chua N.H., Vissers K.C., Sluiter M.E. Pulsed radiofrequency treatment in interventional pain management: mechanisms and potential indications – a review // *Acta Neurochir. (Wien)*. 2011. Vol. 153, No 4. P. 763-771. DOI: 10.1007/s00701-010-0881-5.
15. Заболотский Д.В., Портнягин И.В. Применение импульсной радиочастотной абляции при лечении тяжелого хронического болевого синдрома после эндопротезирования плечевого сустава (клинический случай) // *Травматология и ортопедия России*. 2015. № 4 (78). С. 126-130.
16. Егоров О.Е., Евзиков Г.Ю. Лечение большого с радикулопатическим болевым синдромом с применением импульсной радиочастотной невротомии заднего ганглия корешка спинномозгового нерва. Клиническое наблюдение и обзор литературы // *Неврологический журнал*. 2015. Т. 20, № 1. С. 28-33.
17. Генов П.Г., Смирнова О.В., Тиммербаев В.Х. Успешное применение импульсной радиочастотной абляции ганглиев спинномозговых нервов при лечении пациента с хронической нейропатической болью в культе ампутированной конечности // *Регионарная анестезия и лечение острой боли*. 2016. Т. 10, № 1. С. 60-64.
18. Radiofrequency lesioning of dorsal root ganglia for chronic lumbosacral radicular pain: a randomised, double-blind, controlled trial / J.W. Geurts, R.M. van Wijk, H.J. Wynne, E. Hammink, E. Buskens, R. Lousberg, J.T. Knape, G.J. Groen // *Lancet*. 2003. Vol. 361, No 9351. P. 21-26.
19. Hussain A.M., Afshan G. Use of pulsed radiofrequency in failed back surgery syndrome // *J. Coll. Physicians Surg. Pak*. 2007. Vol. 17, No 6. P. 353-355. DOI: 06.2007/JCPSP.353355.
20. Pulsed radiofrequency in lumbar radicular pain: clinical effects in various etiological groups / D. Abejón, S. Garcia-del-Valle, M.L. Fuentes, J.I. Gómez-Arnau, E. Reig, J. van Zundert // *Pain Pract.* 2007. Vol. 7, No 1. P. 21-26. DOI: 10.1111/j.1533-2500.2007.00105.
21. Pulsed radiofrequency treatment of the lumbar dorsal root ganglion in patients with chronic lumbar radicular pain: a randomized, placebo-controlled pilot study / H. Shanthanna, P. Chan, J. McChesney, L. Thabane, J. Paul // *J. Pain Res.* 2014. Vol. 7. P. 47-55. DOI: 10.2147/JPR.S55749.
22. Treatment of chronic lumbosacral radicular pain using adjuvant pulsed radiofrequency: a randomized controlled study / W. Koh, S. S. Choi, M. H. Karm, J.H. Suh, J.G. Leem, J.D. Lee, Y.K. Kim, J. Shin // *Pain Med.* 2015. Vol. 16, No 3. P. 432-441. DOI: 10.1111/pme.12624.
23. MR image-based grading of lumbar nerve root compromise due to disk herniation: reliability study with surgical correlation / C.W. Pffirmann, C. Dora, M.R. Schmid, M. Zanetti, J. Hodler, N. Boos // *Radiology*. 2004. Vol. 230, No 2. P. 583-588. DOI:10.1148/radiol.2302021289.
24. Qualitative grading of severity of lumbar spinal stenosis based on the morphology of the dural sac on magnetic resonance images / C. Schizas, N. Theumann, A. Burn, R. Tansey, D. Wardlaw, F.W. Smith, G. Kulik // *Spine*. 2010. Vol. 35, No 21. P. 1919-1924. DOI: 10.1097/BRS.0b013e3181d359bd.
25. A practical MRI grading system for lumbar foraminal stenosis / S. Lee, J.W. Lee, J.S. Yeom, K.J. Kim, H.J. Kim, S.K. Chung, H.S. Kang // *AJR Am. J. Roentgenol.* 2010. Vol. 194, No 4. P. 1095-1098. DOI: 10.2214/AJR.09.2772.
26. Woo E.J., DiCuccio M.N. Clinically significant pedicle screw malposition is an underestimated cause of radiculopathy // *Spine J.* 2018. Vol. 18, No 7. P. 116-1171. DOI: 10.1016/j.spinee.2017.11.006.



# MORPHOLOGICAL CHARACTERISTICS OF THE SPLEEN OF WHITE RATS IN NORMAL, CHRONIC RADIATION SICKNESS AND WHEN CORRECTED WITH A BIOSTIMULATOR

**Sh. J. Teshaev**

Bukhara State Medical Institute,  
Bukhara,  
Uzbekistan.

**M. R. Turdiev**

Bukhara State Medical Institute,  
Bukhara,  
Uzbekistan.

## ABSTRACT

*In an experiment on 32 mongrel white rats of 3 months of age, we studied the morphological parameters of the spleen in normal, chronic radiation sickness and when correcting the biostimulator ASD-2 fraction. The study found that in response to the action of a chronic radiation factor in the spleen of white rats, there is a decrease in structural indicators. This is reflected in the morphological parameters of the organ. Improvement and approximation of these parameters to the control values shows a positive effect of the use of ASD-2 fraction during chronic irradiation.*

**KEYWORDS:** immune system, spleen, lymphoid follicles, chronic radiation sickness, biostimulators.

## INTRODUCTION

In recent decades, the world is growing disease associated with damage to the immune system, which is associated with environmental pollution, leading to a violation of the protective and adaptive processes of the body [12,16].

The spleen is the largest peripheral organ of immunogenesis [3,14] and is responsible for the effectiveness of cellular and humoral immune responses of both innate and acquired immunity [9].

The effect of stress, severe pathological conditions, and ionizing radiation on the body can be expressed by changes in the function of the spleen. This is manifested by a decrease in the proliferation and differentiation of immunocompetent cells, which leads to cellular devastation, increased apoptosis and activation of macrophages [8,15].

Man and all other living beings on earth throughout their lives are continuously exposed to ionizing radiation from natural and artificial sources of ionizing radiation, by external and internal irradiation [6,13].

The increasing growth of human and animal diseases, associated with socio-economic factors, actualize the problem of obtaining biologically active substances for the correction of metabolism and immunity [5].

Currently, of great interest are tissue preparations of animal origin, which are used to prevent diseases of various types of animals, increase

the natural resistance of the body and normalize metabolism [1,2,4].

Among the existing means of tissue therapy, the ASD-2 fraction occupies a special place.

ASD-2F has a stimulating effect on biochemical processes and is able to improve the metabolism of carbohydrates, lipids, and proteins [10,11].

Under the influence of the drug, pulmonary gas exchange increases, oxygen consumption by tissues and the activity of a number of enzyme systems increases, and antioxidant protection increases [7].

## Purpose of research

To study the morphological parameters of the spleen in white rats of 3 months of age in normal, chronic radiation sickness and with the correction of biostimulator ASD-2F.

## MATERIAL AND METHODS OF RESEARCH

The study was conducted on 32 mongrel white male rats with a weight of 90 to 130 g. they were kept in standard vivarium conditions. Laboratory animals were divided into 3 groups: control group (n=12), 1-experimental group (n=10), 2-experimental group (n=10). Irradiation of rats of both experimental groups was carried out using the device "AGAT P1 "(Baltiets plant" Narva, Estonia, 1991 year of manufacture, operation since 1994, recharge 2007) with a capacity of 25,006 SGR/ min for 20 days at a



dose of 0.2 G. The total radiation dose for rats up to 90 days of age was 4.0 Gy. Rats of the 2-experimental group were intragastrically injected with 0.1 ml of ASD-2 fraction solution diluted with 0.4 ml of distilled water in parallel with irradiation. All experimental studies on animals were conducted in accordance with the " Rules for conducting work using experimental animals».

Animals were removed from the experiment at 90 days of age by instant decapitation under ether anesthesia.

The spleen was removed from the abdominal cavity. To conduct morphological and morphometric studies, spleen fragments were fixed in a 10% formalin solution, passed through a battery of alcohols and poured into paraffin blocks according to generally accepted methods. Paraffin sections with a thickness of 5-8 microns were stained with hematoxylin-eosin. The sections were examined morphometrically using an eyepiece-micrometer DN-107T/ Model NLCD-307B (Novel, China) measured the diameter of the periarterial lymphatic couplings, lymph nodes and their germinal centers, the width of the mantle, marginal and periarterial zones, the relative area of the white pulp and connective tissue elements of the spleen to the total area of the cut. Measurements were made in five fields of view of each histological section. The fields of view were chosen randomly.

In order to study the cytoarchitectonics of the spleen's lymphoid structures, cells were counted using a NOVEL Model NLCD-307 microscope, at 10x90 magnification, under oil immersion. The cells were counted using a morphometric grid embedded in the eyepiece (10x) of a microscope.

We calculated the total number of lymphocytes, the number of large, medium and small lymphocytes per unit area of the cut in the PALM, in lymphoid nodules without a breeding center.

Mathematical processing was performed directly from the General matrix of the Microsoft Office data package "Excel 7.0" on a Pentium – IV personal computer using the capabilities of the program "STTGRAPH 5.1", the indicators of standard deviation and representativeness errors were determined

## THE RESULTS OF THE STUDY AND THEIR DISCUSSION

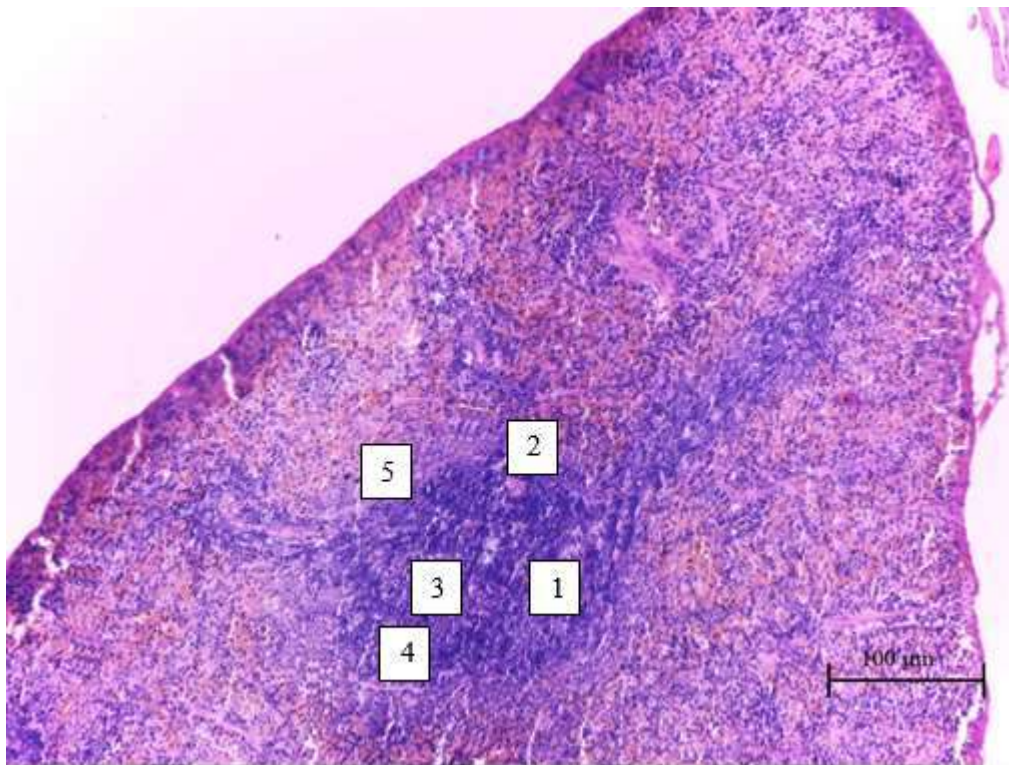
Histological examination of the spleen of 3 month old intact rats obtained the following data:

The relative area of the white pulp varies from 19.8% to 26.2%, with an average of  $22.2 \pm 0.59\%$ . The relative area of connective tissue elements varied from 5.0% to 6.1%, on average  $5.52 \pm 0.1\%$  (to the total area of the spleen section)

The diameter of the PALC ranges from 122.6 microns to 139.6 microns, with an average of  $132.14 \pm 1.56$  microns. The diameter of the lymph nodes ranges from 341.8 microns to 486.05 microns, with an average of  $466.05 \pm 13.27$  microns. LN can be visually divided into primary and secondary, with a percentage ratio of 32% and 68%, respectively. In secondary LN, the formed germinative centers are determined. The diameter of the germinate centers ranges from 94.6 microns to 167.8 microns, with an average of  $147.8 \pm 6.73$  microns. They are large and often merge. The LN of the white spleen pulp is generally round, oval, and elongated.

In most cases, the LN zones are clearly distinguishable. The width of the mantle zone ranges from 39.7 microns to 49.45 microns, with an average of  $45.32 \pm 0.89$  microns. The width of the marginal zone ranges from 70.3 microns to 84.7 microns, with an average of  $77.14 \pm 1.32$  microns. The width of the periarterial zone ranges from 81.9 microns to 89.4 microns, with an average of  $85.04 \pm 0.69$  microns. (Fig. 1).





**Fig.1. Spleen of a 3-month-old control rat. Painting with hematoxylin – eosin. Oc. 10 x Ob. 20.**  
1 - lymph node, 2 -periarterial zone, 3-germinal center, 4-mantle zone, 5- marginal zone.

It was found that the total number of lymphocytes in the LN without breeding centers is 42-53, with an average of  $47.3 \pm 1.01$  cells. Lymphoid nodules without centers of reproduction contain (per unit area) small lymphocytes-30-38, on average -  $34.0 \pm 0.74$  cells, medium lymphocytes-10-12, on average -  $11.0 \pm 0.18$  cells, large lymphocytes-2-3, on average- $2.3 \pm 0.1$  cells.

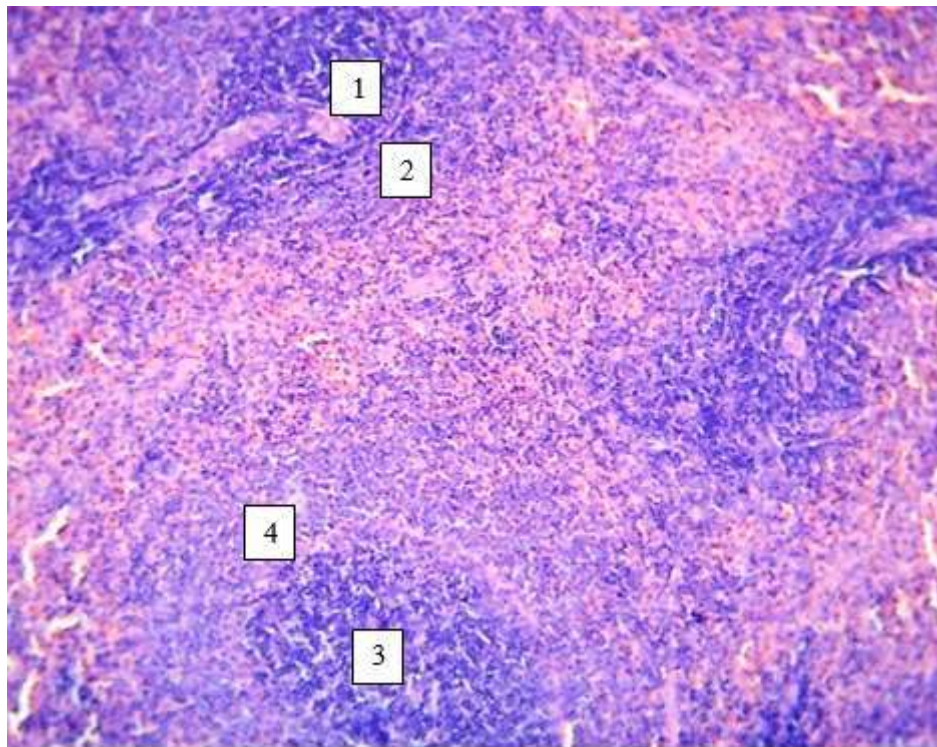
The total number of lymphocytes in the periarterial lymphoid couplings of the white spleen pulp is 41-53, with an average of  $47.2 \pm 1.1$  cells. Periarterial lymphoid couplings contain (per unit area) small lymphocytes-29-37, on average- $33.0 \pm 0.74$  cells, medium lymphocytes-9-11, on average -  $10.25 \pm 0.18$  cells and large lymphocytes-3-4, on average- $3.5 \pm 0.1$  cells.

In histopreparations of the spleen of 3-month-old irradiated rats, the relative area of the white pulp ranges from 12.8% to 16.4%, on average- $14.6 \pm 0.39\%$ . The relative area of connective tissue

elements varied from 5.2% to 6.3%, on average- $5.73 \pm 0.84\%$  (to the total area of the spleen section)

The diameter of the PALC ranges from 95.2 microns to 104.3 microns, with an average of  $99.35 \pm 0.98$  microns. The diameter of the lymph nodes is in the range from 160.4 microns to 240.2 microns, on average  $195.81 \pm 8.62$  microns in the LN there are no germinative centers. Lymphoid nodules generally take a rounded-oval, elongated (67.6%) and irregular (32.4%) shape.

In micropreparations, you can visually distinguish all the zones of LN. The width of the mantle zone ranges from 32.3 microns to 40.4 microns, with an average of  $36.54 \pm 0.87$  microns. The width of the marginal zone ranges from 56.8 microns to 65.7 microns, with an average of  $60.26 \pm 0.96$  microns. The width of the periarterial zone ranges from 57.2 microns to 65.4 microns, with an average of  $59.88 \pm 0.88$  microns (Fig. 2).



**Fig.2. Spleen of a 3-month-old rat with chronic radiation sickness. Staining with hematoxylin-eosin. Oc. 10 x Ob. 20. 1-lymph node, 2-periarterial zone, 3-mantle zone, 4-marginal zone.**

It was found that the total number of lymphocytes in the LN without breeding centers is 30-38, on average -  $35.1 \pm 0.86$  cells. In micropreparations as part of lymphoid nodules without a breeding center, large lymphocytes are not detected. Lymphoid nodules without centers of reproduction contain (per unit area) small lymphocytes-22-28 on average- $26.0 \pm 0.65$  cells, average lymphocytes-8-10, on average -  $9.1 \pm 0.22$  cells.

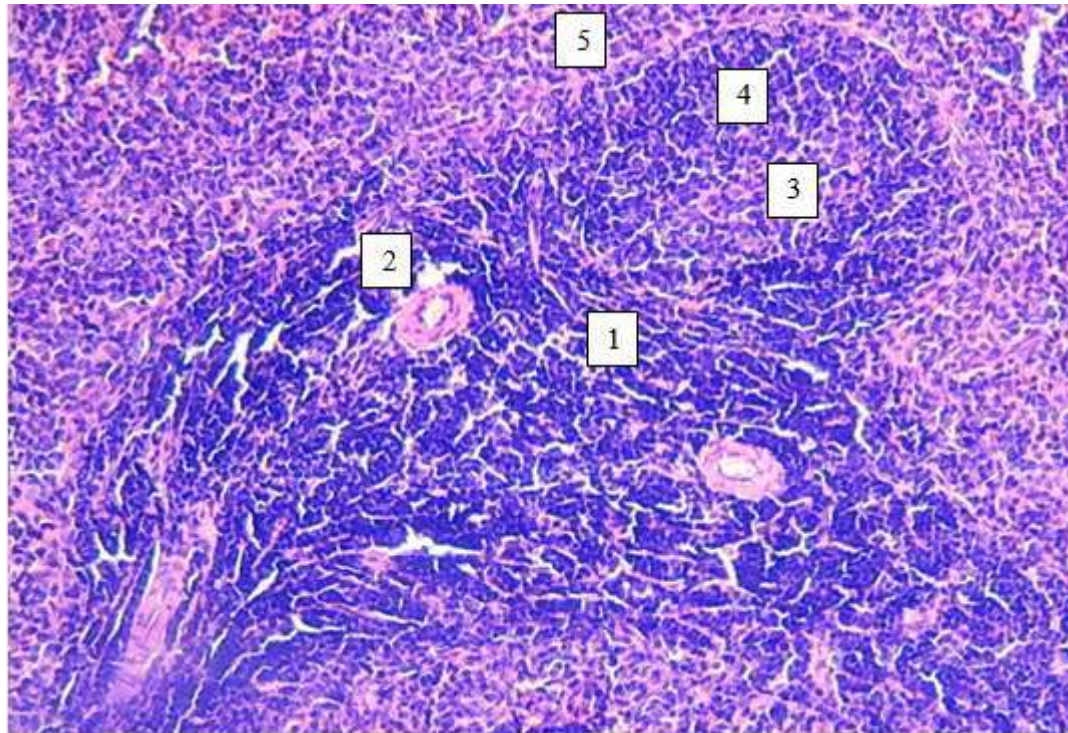
The total number of lymphocytes in the periarterial lymphoid couplings of the white spleen pulp is 31-40, on average -  $35.2 \pm 0.97$  cells. The PALC does not contain large lymphocytes. Periarterial lymphoid couplings contain (per unit area) small lymphocytes-24-31, on average- $26.8 \pm 0.76$  cells, average lymphocytes-7-9, on average -  $8.4 \pm 0.22$  cells.

According to our data, when irradiated and simultaneously administered ASD – 2 fraction at a dose of 0.1 ml to 3-month - old rats, it was found that the relative area of the white pulp ranges from 15.6% to 19.7%, on average- $17.81 \pm 0.44\%$ . The relative area

of connective tissue elements varied from 5.0% to 6.0%, on average- $5.62 \pm 0.11\%$  (to the total area of the spleen section).

The diameter of the PALC ranges from 106.4 microns to 117.3 microns, with an average of  $111.98 \pm 1.17$  microns. The diameter of the lymph nodes ranges from 248.7 microns to 334.6 microns, with an average of  $291.28 \pm 9.28$  microns. The percentage of primary and secondary LN is 44% and 56%, respectively. The diameter of the germinal centers ranges from 82.1 microns to 112.4 microns, with an average of  $97.88 \pm 3.27$  microns. Lymphoid nodules generally take a rounded-oval, elongated (82.3%) and irregular (17.7%) shape.

The width of the mantle zone ranges from 36.4 microns to 45.7 microns, with an average of  $40.46 \pm 1.0$  microns. The width of the marginal zone ranges from 60.4 microns to 71.2 microns, with an average of  $66.5 \pm 1.16$  microns. The width of the periarterial zone ranges from 62.3 microns to 73.6 microns, with an average of  $67.49 \pm 1.22$  microns (Fig. 3).



**Fig. 3. Spleen of a 3-month-old rat under irradiation and simultaneous administration of ASD-2 fraction in a dose of 0.1 ml. Stained with hematoxylin-eosin. Approx. 10 x 20 vol. 1-lymph node, 2-periarterial zone, 3-germinate center, 4-mantle zone, 5- marginal zone.**

It was found that the total number of lymphocytes in the LN without breeding centers is 33-43, on average -  $39.3 \pm 1.08$  cells. Lymphoid nodules without centers of reproduction contain (per unit area) small lymphocytes-25-32, on average -  $29.2 \pm 0.76$  cells, medium lymphocytes-8-10, on average- $9.6 \pm 0.22$  cells and large lymphocytes-0-1, on average- $0.5 \pm 0.11$  cells.

The total number of lymphocytes in the periarterial lymphoid couplings of the white spleen pulp is 34-45, on average -  $39.5 \pm 1.18$  cells. Periarterial lymphoid couplings contain (per unit area) small lymphocytes-25-33, on average- $29.7 \pm 0.86$  cells, medium lymphocytes-8-10, on average -  $9.0 \pm 0.22$  cells and large lymphocytes-1-2, on average- $1.2 \pm 0.11$  cells.

Thus, the relative area of the white pulp of the spleen of white rats of the intact group is on average  $22.2 \pm 0.59\%$ , and in rats with chronic radiation sickness, there is a decrease in this indicator by 1.52 times ( $14.6 \pm 0.39\%$ ). In rats taking ASD-2 fractions at a dose of 0.1 ml in parallel with irradiation, this indicator is 1.22 times higher than in irradiated rats and is equal to  $17.81 \pm 0.44\%$  (to the total area of the spleen section).

The diameter of the PALC and lymph nodes of the spleen in the control group of rats is on average  $132.14 \pm 1.56$  microns and  $466.05 \pm 13.27$

microns, respectively, in irradiated  $99.35 \pm 0.98$  and  $195.81 \pm 8.62$  microns, respectively, and in rats taking ASD - 2 fractions at a dose of 0.1 ml in parallel with irradiation  $111.98 \pm 1.17$  and  $291.28 \pm 9.28$  microns, respectively. The lymphoid nodules of the spleen of the healthy group were mostly rounded-oval and elongated in shape, in rats with chronic irradiation, irregular shapes were determined (32.4%), and in rats taking ASD - 2 fractions at a dose of 0.1 ml in parallel with irradiation (17.7%). The diameter of the spleen HZ in rats of the intact group is on average  $147.8 \pm 6.73$  microns, in rats with chronic radiation sickness, histopreparations do not reveal breeding centers. In rats taking ASD-2 fractions at a dose of 0.1 ml in parallel with irradiation, this indicator is on average  $97.88 \pm 3.27$  microns. The width of the mantle, marginal and periarterial zone in healthy rats is  $45.32 \pm 0.89$  microns,  $77.14 \pm 1.32$  microns and  $85.04 \pm 0.69$  microns, respectively, in irradiated rats  $36.54 \pm 0.87$  microns,  $60.26 \pm 0.96$  and  $59.88 \pm 0.88$  microns, respectively, and in rats taking ASD-2 fractions at a dose of 0.1 ml in parallel with irradiation  $40.46 \pm 1.0$  microns,  $66.5 \pm 1.16$  and  $67.49 \pm 1.22$  microns, respectively.

The total number of lymphocytes in the LN without breeding centers and periarterial lymphoid couplings of the spleen in control group rats is on average- $47.3 \pm 1.01$  and  $47.2 \pm 1.1$  cells, respectively,



in rats with chronic irradiation of  $35.1 \pm 0.86$  and  $35.2 \pm 0.97$ , respectively, and in rats taking ASD-2 fractions at a dose of 0.1 ml in parallel with irradiation of  $39.2 \pm 1.08$  and  $39.5 \pm 1.18$  cells, respectively.

## CONCLUSIONS

1. In chronic radiation sickness in the spleen of white rats, there is a decrease in the relative area of the white pulp, the diameters of the periarterial lymphatic couplings and lymph nodes.

2. In the lymph nodes of the spleen, no centers of reproduction are detected. There are irregular forms (32.4%) of lymph nodes that are not detected in the spleen of healthy rats.

3. The width of the mantle, marginal and periarterial zone decreases, as well as the total number of lymphocytes in the lymph nodes without a breeding center and periarterial lymphatic couplings. A decrease in the morphological parameters of the spleen indicates a decrease in the level of immune protection in response to the radiation factor.

4. The use of the ASD-2 fraction biostimulator in parallel with irradiation reduces the damaging effects of radiation on the lymphoid structures of the spleen. Improvement and approximation of the morphological parameters of the spleen to the control values shows a positive effect of the use of ASD-2 fraction during chronic irradiation and leads to an earlier recovery of the morphological parameters of the spleen white pulp.

## REFERENCES

1. Bessarabov, B. F. Stimulation of egg productivity in female quail with ASD-F2 / B. F. Bessarabov, I. I. Melnikova, E. A. Lazutkina // *Vet. the medicine.*- 2006. - № 2-3. - P. 37-38
2. Bulasheva, A. I. Influence of tissue preparation on the cellular link of the immune system in the treatment of subclinical forms of mastitis / A. I. Bulasheva // *Vestn. nauki kgau im. S. Seifullin.*- Astana, 2005. - Vol. 4, No. 8
3. Volkov V. P. Functional immunomorphology of the spleen in the age aspect // *Innovations in science: sat. St. on mater. XLVI international. scientific-practical Conf. no. 6 (43).* - Novosibirsk: Sibak, 2015. - P. 113-123
4. Grafov, D. ASD-2F in subclinical mycotoxicosis of broilers /D. Grafov, B. Bessarabov, L. Gontsova // *poultry Farming.*- 2007. - № 5. - P. 29-30.
5. Grebenshchikov A.V., Vasilenko L. I., Golubev A. I. Biogenic stimulator based on bovine spleen tissue. // *Electronic scientific and educational Bulletin Health and education in the XXI century.* 2016. Vol. 18. No. 5. P. 1-5
6. Ivanov A. A., Maltsev V. I. the Role of the immune system in radiation damage to the body // *Medical radiology and radiation safety.* 2001. - Vol. 46, No. 3. - P. 64-78., 58
7. Kiryutkin, G. Revival of the drug ASD /G. Kiryutkin, V. Abdrakhmanov, V. Shabanov // *Animal Husbandry Of Russia.*- 2004. - no. 10. - P. 46-47
8. Makalish T. P. Morphofunctional features of the spleen under the influence of factors of various Genesis on the body // *Tauric honey.*- Biol. Vestn. - 2013. - Vol. 16, - CH. 1. - P. 265 -269
9. Ryabikina A. I. [et al.] Ontogenetic aspects of stromal-parenchymal relationships in the spleen // *Morphology.* - 2008. - Vol. 132, No. 2. - P. 58
10. Tshaev sh. Zh., Khasanova D. A. Comparative characteristics of morphological parameters of the lymphoid structures of the small intestine of rats before and after exposure to the antiseptic-stimulant Dorogov fraction 2 on the background of chronic radiation sickness // *Operative surgery and clinical anatomy (Pirogov journal)* 2019, Volume 3, No. 2. Pp. 19-24.
11. Hodorova I., Khasanova D.A., Tshaev Sh.J / *Macroanatomy of payer's patches of rat's small intestine under the influence of antisepticstimulator Dorogov faction 2 on the background of chronic radiation sickness // Новый день в медицине.* 2020.2/1 (30/1).C.21-21
12. Karmaus W., Brooks K., Nebe T., Witten J., Obi-Osius N., Kruse H. Immune function biomarkers in children exposed to lead and organochlorine compounds: a cross-sectional study. // *Environ. Health.* - 2005. - Vol.14. - №1. - P.5.
13. Tshaev Sh.J., Khasanova D.A / *Topografic-anatomical features of lymphoid structures of the small intestine of rats in norm and against the background of chronic radiation diseases // European science review Vienna, Austria №9-10 2018, Volume 2. Medical science P.197-198*
14. Turdiyev, M. R., Teshayev Sh. J. Morphometric Assessment of Functional Immunomorphology of White Rat Spleen in the Age Aspect *American Journal of Medicine and Medical Sciences* 2019, 9(12): 523-526 DOI: 10.5923/j.ajmms.20190912.16
15. Turdiyev M.R., Tshaev Sh.J., Sohibova Z.R., Uktamova R.U. / *Morphological parameters of structures of the spleen of white rats in normal and on the background of chronic radiation disease // Новый день в медицине.* 2020.2/1 (30/1).C.175-177
16. Udoji F., Martin T., Etherton R., Whalen M.M. Immunosuppressive effects of triclosan, nonylphenol, and DDT on human natural killer cells in vitro. // *J. Immunotoxicol.*-2010. - Vol.7. - №3. - P.205-212.



# COMPARISON OF BOTH MIDDLE EAST COUNTRIES' AND COMMON LAW JURISPRUDENCE ON 'ARBITRARY TERMINATION' AND 'UNFAIR DISMISSAL' IN EMPLOYMENT LAW

**Bakhramova Mokhinur Bakhramovna**

Lecturer,  
Intellectual Property Department,  
Tashkent State University of Law,  
Tashkent,  
Uzbekistan.

## ABSTRACT

*It is extremely important to distinguish between unfair dismissals from the general law, which is corrected for unlawful dismissal. The latter is a legal remedy for civil law, mainly formed in the violation of the employment contract. From the worker's point of view, there are significant shortcomings in this civil law as a remedy. Civil law does not provide a remedy by restoration. Since the employer, as a rule, has the right to dismiss in accordance with the terms of the contract after the provision of the relevant notice period, as provided for in the contract, the damage will often be limited to loss of earnings during this period.*

**KEY WORDS:** *Arbitrary termination, Arbitration law, Arbitral Tribunal, DIFC law, ADGM law, unfair dismissal, labor law, UAE Labor Law, common law, civil law.*

## INTRODUCTION

There are no legal remedies based on breach of contract, for failure to comply with proper complaints and disciplinary procedures before dismissal. "However, it will be stated below that the development of the concept of unfair dismissal and the number of remedies available to it may have allowed the employee too much with an ironic result that he may ultimately be less satisfied with the consequent unwillingness on the part of potential employers to expose themselves to the consequences of using an individual who, in time, will be able to pursue such a strong relief from them".

The basic laws governing labor relations in the United Arab Emirates are 1981, No 24, 1981, No 15, No 12 and No 8 (Labor Legislation) and the Ministry's instruction to execute those provisions. This applies to all employees (including foreigners) working in the United Arab Emirates except for the following categories of workers:

- Staff assigned to federal and local government officials, employees and federal and local government projects.

- Households working in private homes.
- Armed forces, police and security personnel.
- Agricultural workers (repairs or repair of agricultural machinery or agricultural machinery).
- Employees working at Abu Dhabi Global Market (ADGM) and usually working for ADGM. These employees are eligible for ADGM Employment Law No.1 of 2014.
- Employees working at DIFC and working in the DIFC are usually employees of the Dubai International Financial Center. These employees have amended DIFC Labor Act No. 4 (2005 DIFC Labor Law).

The parties may choose to apply the law applicable to the contract. If the rules of a free zone conflict with the Labor Law, labor laws will prevail. However, this does not apply if labor law is less favorable than the rules of the free zone. Employees (including foreigners) working in the United Arab Emirates (except those employed by DIFC and ADGM) in one of the many free areas are subject to the Labor Law and the relevant workplace regulations.



However, in practice, the courts of the United Arab Emirates generally have the jurisdiction, usually when they are not handled by DIFC or ADGM (unless they believe that they have assumed the jurisdiction of the DIFC or ADGM) jurisdiction.

DIFC's sovereign workflow, DIFC Labor Act (DIFC Act 4/2005, amended) settles business-related problems in DIFC. Dubai International Finance Center (DIFC) is a free zone that manages under the legal system of the UK law. It does not depend on the arrangement or method of act of other free zones or areas of the UAE. It is significant that the DIFC has no concept of dismissal and therefore there is no dismissal compensation. However, there are accurate and clear prejudicial rules. DIFC does not have employer requirements or policies or employment regulations for UAE citizens.

The passport holders of the United Arab Emirates and other Gulf Cooperation Councils (GCC) are commented narrowly differently, since they buy or purchase a place residence permit of the United Arab Emirates not required (The Concept of Freedom of Movement in Different States of GCC Membership). However, there is still a request for a DIFC card. The residence and job permits are valid for a cycle of three years and may be renewed, due to the diplomatic eclipse among the two countries, Qatari citizens, who are not currently allowed to the United Arab Emirates, are only one exclusion. The United Arab Emirates labor regime is closely connected to the immigration regime. Residents of other countries could not work legally in the DIFC, without the right to employ and the right to address for labor permission by a domestic licensed or registered legal department.

The DIFC Business Act does not include any particular rules controlling or settling post-contractual limitations. However, since DIFC is a united authority (with respect to the common civil jurisdiction of the United Arab Emirates), the DIFC courts may force limits on the employer's labor contract after certain terms, and this is due to the English legal rules - its degree, expanse and length and does not have a reasonable need to preserve the benefit of the employer's legitimate labor interests. The SISC can take juridical action against the worker, but in implementation this can only be done in the DIFC territory. These procedures could not be productive if the employee chooses to work externally from the DIFC.

As with the Dubai International Finance Center ("DIFC") ADGM becomes a private free zone and controls as a new authority from the United Arab Emirates and does not observe with the UAE civil and commercial laws. Any misdiagnosis of common law is

addressed to a section of the ADGM law with suitable and detailed measures so as not to be postponed by ADGM and its common law applies. This was not an sudden event because ADGM composes a legitimate legal environment for international banks and financial institutions.

From the point of view of employment, the Rules carefully apply to the requirements of the DIFC and differ from a number of key areas of the UAE.

A solitary figure of ADGM is the drafting of a new authority, but another feature is the development of a new regulatory body. Most workers currently employed by ADGM are allocated to the Ministry of Labor ("MOL"). Their employees are granted labor cards (work permits) and employers' MOL observations and supervision. There are some state-owned organizations in the region that do not have MOL.

In the case of the Free Zone, the migration process will be licensed by employers with the ADGM Free Zone Territory ("FZA"), and employees will be granted free entry visas for free visas. From the point of view of the right to work, this is to cancel one job and start another. It is important to consider how to deal with benefits calculated by the employer as well as the end of the annual leave. The majority of employers are expected to work to achieve these new benefits to achieve these new benefits, which can be achieved through existing contracts.

"Abu Dhabi (but not for the employee's visa) and it is not clear yet whether this will change under the new regime.

From an employer's perspective the FZA will replace the MOL as the regulatory and oversight body. Generally speaking free zones are considered to be more relaxed about providing permission for hybrid working arrangements and short term working arrangements.

Most free zones have a mediation process (with differing levels of formality) that must be exhausted by the parties to an employment dispute before a party can file a case in court and it remains to be seen whether this is followed in ADGM.

The Regulations are very employer friendly in that the prospect of obtaining injunctive relief to enforce post termination restrictions is likely to be attractive to employers. The working hour arrangements, which oftentimes can represent a challenge for onshore employers, are also quite flexible".

While there is no express provision for the dismissal of dismissal, the explicit recognition of the rights and confidence. It is yet to be seen how this may be interpreted and applied in practice.



From the employee perspective, there is an anti-discrimination and data protection policy, as well as for the first time in the UAE private sector, paternity leave. There is no reduced gratuity where the employee resigns.

Overall the regulations are likely to be welcomed by employers and without a doubt they send out a powerful message that ADGM is open for business.

In contrast to European countries, the termination of business relations may be more complicated, particularly for long-term employees, the UAE can simplify the employment of a worker by giving the agreed number of employers.

Common Labor Legislation consists of several legal provisions working places in various laws. Employment Agreement shall be considered current if the employee (service) is obliged to provide service for a certain period of time (to the employer). Staff personally and economically depending on the employer. Right to work labor legislation (personal labor law),(Collective labor legislation), procedural laws and conditions health and safety issues. This is the main purpose of the right to work eliminating the social imbalance between employees and employers. This is an important part of social policy.

Labor protection in Great Britain is primarily legitimate. Additionally to legal provisions (by courts and For example, years of workplace) some areas (eg. discrimination and dismissal) issued by government-sponsored bodies. Codes are illegal are not mandatory, but they should be considered by the Labor Tribunals and that is why it should be taken into account employers. Contract law (based on customary law) not by law) plays an important role protection.

There is plenty of employment in the European Union. As Part of the European Union (EU), Britain is subordinate to the EU business legislation, some of which are directly related to the UK but most of them define minimum standards must be made locally by each Member State. Thus, there are many laws in different Member States different from those of the same EU law.

“At Common Law, an employer can terminate the services of an employee without giving reasons, provided that the appropriate period of notice is given in accordance with the applicable contract. However, this position has been altered by the Act, which establishes certain minimum procedural standards an employer must follow prior to terminating the services of an employee who is eligible to claim unfair dismissal”.

The mandatory requirement is that the worker does not complete the job service of the employee in the end of service it is harsh, unfair or unreasonable.

According to the Common Law system for arbitrary termination following circumstances should happen, such as:

- Whether or not the employer has an explanation to do so whether the job is terminated and whether the employer has been granted or not so with the opportunity to respond;
- Whether there are valid reasons to stop based on the employee's capabilities or behavior according to the employer's operational requirements;
- Lacks of alerts or warnings are given to the employee prior to termination of the case.

Discrimination claims should normally be granted before Labor court. As discussed above, the time limits are short and claims must be filed within three months of the appearance of the complaint. If temporary discrimination persists, the time will come from the last movement in the chain. Complaints on the same charge the law can be enforced at any time or in the following cases:

- (i) Within six months of employment termination (for requests in front of the Labor Courts); or
- (ii) 6 years (for prior notice) traditional courts).

Compensation is the main tool of guilty behavior and it gives advice to the Tribunal that the employer has taken concrete steps to eliminate discrimination actions.

“There are five reasons that are treated as “fair” reasons under the legislation:

- (i) redundancy (where an employer reduces the number of employees in a particular role and/or at a particular site);
- (ii) misconduct;
- (iii) capability (i.e., performance issues or inability to do a job);
- (iv) where continued employment would breach a legal duty (such as allowing a disqualified driver to continue to drive); and
- (v) Some other substantial reason, which acts as a catch-all category.”

“Labour legislative requirements and the case law require employers to:

- provide eligible employees with specific details of any concerns with their conduct or performance and give them an opportunity to respond to the same;



- provide eligible employees with sufficient warning that if their conduct or performance does not improve then their employment may be terminated;
- where appropriate, counsel or train employees on how their conduct or performance can be improved; or to provide employees with a final opportunity to respond before terminating their services. Where FWA finds that a termination was unfair, it can order reinstatement of the employee. It also has the power to order the payment of compensation of up to six months' remuneration".

On the contrast to the Common Law system, Labor disputes in the United Arab Emirates are subject to the jurisdiction of the United Arab Emirates courts following the initial intermediary sent to the United Arab Emirates Ministry of Labor. Courts of the United Arab Emirates are not affiliated with the precedent, and similar cases are considered on a case-by-case basis. In general, it should be noted that labor laws have agreements for a "certain period" (ending in a certain period of time) and "explicit" (without agreement). The Labor Law provides detailed information on the terms and conditions of the employment contract and its financial consequences.

The UAE Courts have, however, held that, for contracts which do not have a fixed term, redundancy is a valid reason for termination and will not be treated as arbitrary. The employer will, however, need to show that the redundancy is genuine (i.e. other employees are also being made redundant and the specific job in question should not be taken by another employee etc.).

"Examples of where the UAE Courts have held a dismissal to be unfair thereby entitling the employee to compensation include:

- where an employer has been in breach of his obligations under the employment contract or those provided by law, including the obligation to pay an employee's salary within the timeframe laid down in the employment contract and this has caused the employee to leave his employment; and
- where an employer has, by his oppressive acts and his breach of the conditions of the employment contract, put the employee in a position that makes it appear that it is the employee who has terminated the contract (whatever may have been the form of the termination), provided that it is proved that it was the acts of the employer that gave rise to such termination."

In evaluating the amount of compensation for unjustified dismissal, the United Arab Emirates

emphasized the need to pay attention to the type of work: the degree of damage and the employment.

However, Article 123 of the Labor Law stipulates that compensation for unjustified dismissal should not exceed three months' wage, unless the contract expires. In this situation, the employee will be entitled to compensation in the amount equal to the amount of wages for the three months' wage and the remainder of the contract balance, with the consent of the employee to the higher level of compensation.

## CONCLUSION

Although the evidence in the preceding paragraph may well be seen as a tongue in the cheek, it can be said that it can be worthy of re-evaluating the effectiveness and equilibrium of the current law approach in cases of dismissal. Of course, since 1971, it is unrealistic to suppose that the cancellation of all workplace protection can be abolished, as the protection of the employee against the employer has so far been extended.

"Until recently, redundancies in the GCC were practically a non-existent phenomenon, which is fortunate as labor laws aren't exactly generous towards the employee. However, with the economic crisis exerting an ever tightening grip in the region, it's worth knowing what rights you have.

The concept of unfair dismissal isn't recognized by the UAE labor law, so if you believe you've been ousted unjustly, you'll struggle to receive significant compensation.

The closest thing to this is called 'arbitrary dismissal', where an employee loses their job for reasons other than an inability to perform their duties. Even then, the maximum compensation is only three months' salary."

Prior to the 2002 Labor Law, even the employer was inadequate when the employer needed to be employed when needed for the proper job security. It was undeniably accurate and appropriate that the previous general legal approach to the damage compensation in case of forced dismissal on the strict application of the Convention principles was insufficient to protect the employer from the ability to understand very long in favor of the supplier.

This creates a threat to avoid employers' employment, and they are reluctant to nominate candidates or even refuse to appoint them, fearing the financial consequences of terminating their employees. As shown, the introduction of legal disciplinary and procedural procedures in October 2004 entails a great deal of interference in matters that can be voluntarily exercised by the legislature or is insufficiently adequate. The key argument set out above is that,





despite the employer's illicit restriction, the consequences of non-compliance with disciplinary regulations - should not be forgotten that the new law governing the law-abiding behavior is also in the workplace (a complaint procedure for the dismissal) may cause discomfort to the worker.

## REFERENCES

1. *UAE Constitution, 1971*
2. *UAE Civil Procedure Law, 1992*
3. *UAE Employment Law, No. 8 of 1980*
4. *The DIFC Employment Law No. 4 of 2005*
5. *Abu Dhabi Global Market (ADGM) Law, 2015*
6. *Margaret L. Moses, The Principles and Practice of International Arbitration, 2012*
7. *O'Sullivan, Arthur; Sheffrin, Steven M. (2003). Economics: Principles in Action. Upper Saddle River, New Jersey: Pearson Prentice Hall.*
8. *John P. Campbell, "Taft, Roosevelt, and the Arbitration Treaties of 1911," Journal of American History (1966) 53#2 pp: 279-298*
9. *Nelson M. Blake, "The Olney-Pauncefote Treaty of 1897," American Historical Review, (1945) 50#2 pp. 228-243.*
10. *Baker & McKenzie, "The Global Employer: Focus on Termination, Employment Discrimination, and Workplace Harassment Laws", 2012*
11. <https://news.efinancialcareers.com/gulf-en/13466/what-rights-do-you-have-to-claim-for-unfair-dismissal-in-the-uae/>
12. <https://www.globalworkplaceinsider.com/2013/09/unfair-dismissal-in-the-uae-2/>



## PRESERVATION OF WORDS IN THE MENTAL LEXICON

**O`razova Iqbol Abdikarimovna**  
 Teacher of Chilanzar Academic Lyceum  
 Named after Sirojiddinov under  
 The National University of Uzbekistan,  
 Tashkent, Uzbekistan.

### ABSTRACT

*This article is about the preservation of words in the mental lexicon, which is one of the current topics of psycholinguistics. The article analyzes the results of the associative experiment and draws conclusions.*

**KEYWORDS:** *mental lexicon, associative experiment, recipient, stimulus word, reaction, paradigmatic relation, syntagmatic relation, coordination relation, subordination relation, superordination relation, lemma.*

### INTRODUCTION

The evidence obtained as a result of a detailed study of the peculiarities of human speech activity and the subsequent development of scientific ideas in this regard testifies to the fact that the lexicon in man is one of the foundations of speech activity and an attribute of language. A lexicon is considered to be a lexical component that triggers human speech activity. It is not an inactive source of information about language, but a dynamic functional system that moves spontaneously as a result of constant communication in the process of processing and regulating speech experience and its products. Because in speech practice, innovation that does not fit into the framework of the system leads to its reconstruction, each changed state of the system serves as a basis for comparison in the next processing.

### Experimental analysis to determine the retention of words in the mental lexicon.

Lexicon research should also be conducted within different languages. It is impossible to determine the boundaries of the general and specific aspects of the existence of the human lexicon without comparing the results of research conducted on the basis of a typologically different language source. Therefore, a small associative experiment was conducted to study the preservation of words in the mental lexicon in practice. 2nd year masters of Uzbek philology of the National University of Uzbekistan were involved in the experiment. Ten people took part in the experiment. 6 of them are girls and 4 are boys. Each of the recipients was individually given the following stimulus words and asked to write down the first reaction that came to mind. Stimulus words were selected in equal numbers, ie from 2, five word groups (noun, adjective, number, form, verb).

**As a result of the experiment, 100 responses were collected and shown in the table as follows:**

Stimulus words	Repeated reaction	Unrepeatable reaction
little	<i>few (6)</i>	<i>many (1), lack (1), time (1), everything in life is lacking (1)</i>
early	<i>anteriorly (4), overmorrow (2)</i>	<i>four o'clock awakening (1), first (1), today (1), unknown (1)</i>
lazy	<i>sluggard (4), student (2)</i>	<i>myself (1), sleeper (1), unstable (1), neglectful(1)</i>
sharp	<i>knife (2)</i>	<i>good cutter (1), good working (1), pointed (1), sharp (1), word (1), severe (1), excellent (1), bad (1)</i>



million	money(4), "Cheerful And Clever" (QVZ in Uzbek) (2)	most (1), favorite number (1), dollars (1), sum (1)
eight	number (6)	nine (1), living floor (1), S. Gerard (1), Sergeli 7- Bus at Chilanzar 25 (1)
eagle	bird (4), sharp eye (2)	height (1), proud (1), deft (1), king of birds (1)
love	amour (4), kindness(2),	marriage (1), kindness (1), suffering, torture (1), the current problem is (1)
lightning	thunder (2), lightning (2), fire (2)	light (1), unexpected (1), spring (1), a moment (1)
blush	be ashamed (8)	ripe (1), shame (1)

Scholars have made various assumptions about the preservation of polysemantic words in the lexicon and came to this conclusion. Different lexical-semantic variants of a polysemous word are stored separately in the individual lexicon, just like words. They can enter into semantic relationships with their lemmas at any time. Polysemantic in order to confirm this idea in practice and homonymous words were also included in the list of stimuli.

The words *sharp*, *million*, *love*, *blush* stimulus are ambiguous, and the words *early*, *lightning* stimulus are homonymous.

In the course of the experiment, *sharp*, *million*, *blush* stimuli were observed, both relevant and mobile. But the word *love* is accepted only in its meaning (*love, affection, marriage, goodness, suffering, torture, this is the current problem*). No recipient perceived him as a famous noun. This may be due to:

The stimulus may be taken as a cognate noun because it is written in lower case;

The youth and emotionality of the experiment participants prevented the emergence of a figurative meaning;

The activity of the reaction formed as a result of extralinguistic factors has led to the blurring of the figurative meaning. For example: A.S. The change in her life led to the marriage stimulus. The current problem is that K.Sh. gave this stimulus because he was afraid to make a firm decision or make a mistake in life.

Reactions were obtained to explain both meanings of the word *early* homonym. But the *lightning* stimulus was accepted by all recipients as a noun and reactions are also aimed at interpreting noun stems (*thunder, lightning, fire, light, unexpected, spring, a moment*). There were no reactions to the stimulus. This can be caused by:

- The sequence of the words *lightning* and *eagle* among the stimulus words caused the reactions in the recipients of the noun family;

- caused by the fact that the verb is not used in the infinitive form in speech; Because in the Uzbek language, verbs enter the speech mainly in the form of tense, person-number. Indefinite verbs are rarely used in the speech process;

- The verb lexeme form of the word stimulus is rarely used in everyday life; In an urban setting, no action is taken on the meaning of the same verb. As a result, this lemma may have fallen into an inactive layer in the lexicon;

-recipients' emotionality activated lemmas associated with the noun phrase. *Fire, light, unexpected, momentary* reactions are examples of this.

This means that the word "*lightning*" is more actively preserved in the lexicon as a noun. However, depending on the speech situation, the verb lemma of the same form can be chosen.

While studying the results of the experiment, we saw that in the mental lexicon, the meaning of a polysemous word is more active than its figurative meaning. Although the word "*sharp*" has many meanings, 8 recipients accepted it in their own sense, only two participants focused on its figurative meaning (*word, heavy*). The *million* stimulus was perceived as a number in 8 of the given reactions, with only 2 recipients recording its nominal value (*Cheerful And Clever (QVZ in Uzbek)*). This is due to the active use of the semantic in speech.

However, in the lexicon, the derivative meaning of some polysemous words may be more active than their own meaning. This situation can be explained as follows. If the product is actively used in speech in relation to the meaning that creates the meaning, this is reflected in the experimental process.



Because each speech pattern leaves its mark in the lexicon, and the stimulus reacts to this "trace". The verb to **blush** has many meanings. However, 9 recipients took the word as a verbal emotional state verb (*shame, embarrassment*), only one participant noted its meaning (*matured*). This indicates that the figurative meaning of the stimulus is more active than its meaning.

In conclusion, in the experiment, when examining 4 polysemous and 2 homonymous words in the series of stimulus words, the nominal meaning of 1 polysemous word, 1 homonymous word. the second meaning of z was not revealed. Polysemy did not affect this process because it was observed within a single word group. However, the process was

affected by the fact that the homonymy in the lightning stimulus was in different word groups and there was no reaction associating the meaning of the same we were referring to. In our following analyzes, we classify reactions to lightning stimuli as noun lexemes.

There are two different relationships between the reactions and stimuli received during the experiment:

- ✓ Associations representing paradigmatic attitudes;
- ✓ Associations representing a syntagmatic relationship.

**The results were grouped as follows:**

Stimulus words	Reactions representing a paradigmatic relationship	%	Reactions representing a syntagmatic relationship	%
little	<i>few(6), much (1), lack (1)</i>	80	<i>time(1), verything in life is lacking (1)</i>	20
early	<i>anteriorly (4), overmorrow (2), first(1), today(1), unknown(1)</i>	90	<i>four o'clock awakening (1),</i>	10
lazy	<i>sluggard (4), , sleeper (1), unstable (1), neglectful(1)</i>	70	<i>myself (1), student (2)</i>	30
sharp	<i>pointed (1), sharp (1), heavy (1), bad (1), excellent (1), good cutter (1), working well (1)</i>	70	<i>word (1), knife (2)</i>	30
million	-	0%	<i>money(4), "Cheerful And Clever"(QVZ in Uzbek) (2), most (1), favorite number (1), dollars (1), sum (1)</i>	100
eight	<i>number (6), nine(1)</i>	70	<i>living floor (1), S. Gerard (1), Sergeli 7- Bus at Chilanzar 25 (1)</i>	30
eagle	<i>bird(4), height(1 ta)</i>	50	<i>proud (1), deft (1), king of birds (1), sharp eye (2)</i>	50
love	<i>amour(4), kindness(2), marriage (1), kindness (1), suffering, torture (1),</i>	90	<i>the current problem is (1)</i>	10
lightning	<i>thunder (2), lightning (2), light (1), spring (1), a moment (1)</i>	70	<i>unexpected (1), fire (2)</i>	30
blush	<i>be ashamed (8), shame (1), ripe (1)</i>	100	-	-

In the obtained reactions it became clear that the paradigmatic association is much higher than the syntagmatic association:

- paradigmatic associations - 69 (69%);
- syntagmatic association - 31 (31%).

It can be concluded that in the mental lexicon words are grouped in a paradigmatic relationship and are stored in this state.



**This indicator is different in each word group:**

Word series	Number of reactions	Paradigmatic association	%	Syntagmatic association	%
Noun	30	21	70	9	30
Adjective	20	14	70	6	30
Adverb	20	17	85	3	15
Number	20	7	35	13	65
Verb	10	10	100	-	-

In reactions to form adjective, noun, and verb phrases, paradigmatic responses appear to be far superior to syntagmatic responses. The opposite can be seen in the response to a number of words, that is, syntagmatic reactions are more than paradigmatic reactions.

Among the paradigmatic reactions (68) there is the following relationship:

1. **Coordination approach.** Two events were observed in coordination:

- Synonym: *low-lack-6, early-anteriorly-4, first-1, lazy-reluctant-4, sleeper-1, unstable-1, neglectful-1, sharp-pointed-1, cutting-1, grasper-1; love - amour - 4, kindness - 2, goodness - 1, lightning - thunder - 2, light - 1; blush - be ashamed-8, ripe - 1*
- Antonym: *little-much-1, tomorrow-overmorrow-2, today-1, unknown-1, eight-nine-1*

2. **Subordination approach:** *love-marriage-1, suffering, torture-1; lightning -a moment-1;*

3. **Superordination approach:** *little-lack-1; sharp-excellent -1, good cutter-1, working well-1, bad-1; eight-number-6, eagle-bird-4; lightning-*

*thunder-2, spring-1; blush-shame-1; eagle-height-1;*

46 of the paradigmatic reactions represented a coordination relationship. There are 3 reactions that represent a subordination relationship and 20 reactions that represent a superordination relationship. 59% (40) of the given paradigmatic answers are synonymous words. Form, quality, abstract Synonyms are more common in reactions to the verb at (love). Opposition is 4% (little/much, tomorrow/overmorrow, early/late, early/unknown) and only applies to the word group. To our surprise, although there are antonyms of both qualities, there are no antonyms in the reactions. The same situation was observed in the study of the results of E.Khannazarov's experimental study on "Experimental study of words and word groups." However, in G.Iskandarova's experiment on children aged 2-4, we saw that the opposition was 45%. From this we can conclude that in the early stages of human life, he perceives the world through the contradiction of being and learns, but the acquired knowledge is included in the lexicon, combined into semantic cells. Stimuli evoke synonyms around or next to each other.

**Two main relationships were observed between the given syntagmatic reactions (31):**

Stimulus words	Reactions expressing the exponent-explained relationship	Reactions expressing the subject-predicate relationship
little	<i>less time (1)</i>	<i>everything in life is lacking (1)</i>
early	-	<i>early-four o'clock awakening (1)</i>
lazy	<i>lazy student (2)</i>	<i>lazy- myself (1)</i>
sharp	<i>sharp knife (2), shrewd word (1)</i>	-
million	<i>million money(4), million dollar (1), million sum (1)</i>	<i>million- Cheerful And Clever"(QVZ in Uzbek)(2), million - most (1), million - favorite number (1)</i>
eight	-	<i>eight- living floor, eight- S. Jerard, eight- Sergeli 7- Bus at Chilanzar 25</i>
eagle	<i>sharp-eyed eagle (2), proud eagle (1), deft eagle(1)</i>	<i>eagle- king of birds (1)</i>
love	-	<i>the current problem is (1)</i>
lightning	<i>unexpected lightning (1), lightning like fire (2)</i>	-
blush	-	-



Of the syntagmatic reactions, 19 represented the “exponent-explained” relationship and 12 represented the “subject-predicate” relationship. The "exponent-explained" relationship is formed only by conjugation and is formed in the form of [sign word + noun]. Adjective, number, form, adjective phrases are used as adjectives.

We have seen that extralinguistic factors play an important role in the emergence of syntagmatic reactions. *lazy student, lazy - myself* reactions were the result of students who were tortured during the exam to admit their guilt. *four o'clock awakening - A.S., eight - living floor (A.Sh.), eight - Sergeli 7- Bus at Chilanzar 25 (H.E)* reflects information about their life. Q.Sh.'s interest in football caused *eight* reactions - *S. Gerard*.

To the “million” stimulus, recipients responded with a 100% syntagmatic response. This can be explained as follows:

- The number "million" is a large number and is not used as a number;

- the use of this amount in relation to money in everyday life;

- The desire of the recipients for a full life, the efforts to meet the material needs led to the formation of reactions to *millions of dollars, millions of dollars, millions of sum*;

-personal interests of participants;

-Some of the recipients were fans of the "million", ie the former “Cheerful And Clever”(QVZ in Uzbek). This can be attributed to the age of the participants, their interest and quick response to news.

55% of the answers given by the guys are paradigmatic and 45% are syntagmatic. 72% of the girls 'answers were paradigmatic and 28% were syntagmatic. In both cases, paradigmatic reactions seem to prevail over syntagmatic reactions. However, in girls, paradigmatic responses are far superior to syntagmatic responses.

Reactions to stimulus words make up a different set of words.

This is reflected in the table below:

Stimulus words	Same phrase	Noun	Adjective	Number	Verb	
little	7 (little/much)	1 (time)			1(lack)	
early	3(today,overmorrow )	-	5(anteriorly ,unknown)	1(first)	1(four o'clock awakening)	
lazy	7 (sluggard , sleeper, unstable , neglectful)	2 (student)		-	-	1(myself) pronoun
sharp	5(pointed,cutting, grasper, excellent, bad)	3(knife,word)	-	-	2(goodcutter,w orking well)	
million	-	10 (dollar,sum, money, QVZ, most)	-	-	-	-
eight	1 (nine)	9 (number S.Jerard, Sergeli 7- Bus at Chilanzar 25, living floor)		-	-	-
eagle	8(bird, sharp eye, height,king of birds)		2 (proud, deft)	-	-	-
love	9 (marriage, love, kindness, goodness, suffering, torture)		-	-	-	-
lightning	8(thunder,lightning, spring, fire, light)		-	-	1(unexpected)	1(a moment) adverb
blush	9 (be ashamed,ripe)	1 (shame)	-	-	-	-

Of the reactions, 57 (57%) belonged to the same category as the stimulus, and 43 (43%) to another word group. Similar reactions have been reported in different cases. For example, the adverb stimulus is explained by adjective (early-anteriorly ),

or the adjective stimulus is explained by participle (sharp-good cutter).

Of the reactions to adverb phrase, 10 are expressed as adverbs and 5 as adjectives. Because



adverb is a signifier, a signifying reaction is formed in the minds of the recipients.

There are 12 adjectives given to adjective stimuli, 2 paradigmatic relations in adjective reactions, 5 nouns referring to nouns, and 1 syntagmatic relation in adjectives referring to 1 person.

In noun and verb stimuli, most reactions are in the same word group. In different cases, there is a paradigmatic relationship between stimulus and reaction.

Of the reactions to numerical stimuli, 1 is in the form of a number, 19 in the form of noun, and 2 in the form of a noun. This can be explained as follows:

- In the lexicon, each lemma lives with the linguistic features of the language. In our speech, the fact that a number of words is mainly connected to a noun, used in relation to an object or a person, and is not able to express its meaning alone, activates the noun's reactions;

- The phenomenon of synonymy is widely used in associations with other word groups. There is no synonymy in the number group. Recipients therefore sought to fill the gap through syntagmatic reactions based on extralinguistic factors.

## CONCLUSION

A lexicon is a whole system that reflects the linguistic possibilities of a word, and its equivalent units are complex functions related to the word, as well as to the representative structures of the encyclopedic knowledge behind it. The lexicon is not a stable source of words, but a dynamic system that is constantly moving, rearranged after each innovation.

In the lexicon, words live together in common frames. Frames are divided into groups. The lemmas that make up semantic groups retain both paradigmatic and syntagmatic features. Based on experience, it can be said that the closest relationship among group members is a paradigmatic relationship. Because it is a one-step process, the stimulus activates the lemma in the same cell as a reaction. The syntagmatic relationship is a multi-stage process, resulting from the activation of common frames. First the general frames are connected, then the appropriate words are selected from the frames, the pattern is selected according to the words and a syntagmatic relationship is formed on the basis of the grammatical knowledge of the speaker. Because of this complex process, recipients turn to syntagmatic reactions only when needed.

Stimulus and reaction are mainly within a group of words. Because the paradigmatic relationship is also observed within a group of words.

Polysemous words and homonymous words are stored in the lexicon as separate lemmas and can be active or inactive lemmas.

Reactions can also be influenced by extralinguistic factors. The association also provides information about the recipient's age, gender, interests, emotional state, or vice versa.

## RECOMMENDATIONS

Increasing this type of research will bring the Uzbek language to a new level.

Polysemous words and homonymous words should be studied separately and analyzed according to word groups.

Conducting the experiment at different ages is the basis for summarizing the results of the study.

## REFERENCES

1. Sh. Usmanova. *Psycholinguistics. Text of lectures. Tashkent, 2013.*
2. А.А. Залевская. *Введение в психолингвистику. Москва, 1999.*
3. С.В.Полубоярин. *Психолингвистический эксперимент как метод изучения концептуального содержания онимов.*
4. В.Н. Денисенко, Е.Ю. Чеботарева. *Современные психолингвистические методы анализа речевой коммуникации Москва, 2008.*
5. G.Iskandarova. *Development of word meaning in speech ontogenesis // Linguist V.—Tashkent, 2014. — P.119-122*



## THE SUBJECT OF MORALITY AND IMMORALITY IN EASTERN AND WESTERN LITERATURE

**Khoshimjon Akhmedov**

Candidate of Philological Sciences,  
Senior Lecturer of the Department of  
Methods of Teaching Uzbek Literature,  
Tashkent State University of  
the Uzbek language and literature,  
Uzbekistan.

---

### ABSTRACT

*This article examines how the topic of immorality is covered in the West and the East, especially in Uzbek literature and novels. In the world literature, there is an opinion about how moral depravity - pedophilia - is understood and how it is treated. Independent observations have been made of the subject of Uzbek literature, Abdullah Qadiri's novels, which describe pedophilia, and how the literary community views these aspects.*

**KEYWORDS:** world literature, Uzbek literature, novel poetics, immorality - the subject of pedophilia.

---

### DISCUSSION

Here we consider the issue of morality in the literature. From time immemorial, when people began to enjoy art and aesthetics, the question arose: "What does literature describe?" After a long debate, major themes were identified in the literature: love, homeland, humanity, compassion, war, and heroism. Later, the question of "how to describe what?" In time, that question was answered. Images of exemplary people, events, and role models came to the fore. Thus, literature developed by working on the categories of aesthetics. It has been observed that in Eastern literature, moral issues have been carefully portrayed. In Western literature, however, romantic and sexual imagery continued in a more explicit way. From the Middle Ages onwards, the subject of morality has been the subject of much debate. But from the eighteenth century onwards, morality and immorality began to be portrayed from sharper angles. Gradually, there were stories of unusual sexual desires between men. Events on the subject and novels on the subject also appeared. As we have already mentioned, in one part of the world this subject has become more open and transparent, while in the Eastern literature this subject has been described in a very short and veiled way. Nowadays, despite the great diversity of opinions, the immoral activities of adults with young people and children - "Pedophilia" - are equally condemned. Our article is

about how this topic is covered in the literature, especially in Western and Eastern literature.

From time immemorial, mankind has lived with its flaws and virtues. Although pure in its creation, over the centuries, the human race has developed a variety of bizarre behaviors. Although much has been written and is being written about the good behaviors described by Abdullah Avloni, our topic is one of the flaws that should not be mentioned in "Turkish Gulistan" - infertility. Look, this defect can be found in any corner of the earth. Why this immoral situation has not been solved for so long is now a human problem. In the West, the term is called "pedophilia." And there are always going to be "tumultuous events." These incidents, especially among church officials, caused another uproar after the election of a new pope. That is, even among the representatives of the sanctuary, this "profession" is practiced to a certain extent, in secret. Although Pope Francis has officially condemned the practice, he is unable to prevent it. In the recent past, Hieromonk Makariy, a Russian cleric, has called for a ban on Nabokov's *Lolita*, a prominent neo-Romanist movement. According to him, this work is "rape of a homeless girl - immorality, a work that promotes pedophilia" (rastlenenie maloletnyx i propaganda pedophilii). In the world literary process, the problem has always been to one degree or another. In the United States, Hana Yanagihara's book "Lyudi sredi





derevev" was popular at the time and even won the Nobel Prize. In it, the author tells the story of Norton Perin, a scientist who won the Nobel Prize in Medicine in 1976. The scientist, who became acquainted with the life of one of the poorest tribes in Africa, lived there for a while, adopted a couple of local boys, and later became involved in childbirth. The book has caused a great deal of controversy in America. The novel's prototype, the famous scientist Daniel Karetton Gayduzek, was publicly condemned after his actions were exposed. Another American writer, a leading figure in American postmodern literature, the winner of the Faulkner and National Book Award, and the greatest literary figure after James Joyce, Thomas Pinchon, also has a place in our subject. An example is his "Raduga tyagoteniya". The best-selling novel is considered the second most popular work after Joyce's Ulysses and is one of the 100 most popular novels in the world. The play has several plot lines, one of which depicts sexual misconduct as well as sexual misconduct. French literature, one of the world's great centers of novelism, is also known for its sensational works on the subject. The Marquis de Sade has written quite well-known works on the subject. His "120 dney Sodoma ili Shkola razvrata" was a sensation. The author's work "Justina, ili Neschastnaya sudba dobrodetelya" is also rich in pleasure. Western readers, on the other hand, have different attitudes toward free society. One part condemns, the other - indifferent. Others even justify it. This problem is still common among Asian countries. Experts say the practice is known as "Bacha-bazi" in Pakistan and Afghanistan. In the memoirs, reports, and other works of the "brothers" of our recent past, this ugly flaw in us is described in a different way. The artist Vasily Vereshagin described one such scene in detail in his memoirs. In it, a young teenager is played in the middle, sings, in short - a picture of a greedy scene. The wake is now known... Khalid Husseini, a representative of contemporary American literature of Afghan descent, said in his novel Running After the Wind that these greedy tendencies still exist in the war-torn Afghan land. We all know that Abdullah Qadiri is the head of the Uzbek national novel. A genius artist who opened a new horizon in the dawn of national literature of the twentieth century. Classical artists usually focus on current issues of their time. In both novels, Abdullah Qadiri expresses a number of negative aspects of Uzbek life and socio-political past in artistic forms. In particular, first of all, in both works, the 19 century is reflected in the "most ugly period" of our national history - the time of Khudoyorkhan. Sometimes the reader discovers deeper and more convincing than the science of history, and reaches deeper into the heart. In particular, we would like to draw your attention to the problem of pedophilia, which has long been a source of controversy among the clergy these days

and, in fact, in Western opinion. The term is called "bachchavozlik" in Uzbek. It seems that the master writer took this great flaw in our national life seriously and condemned it. Interestingly, this "evil lust" attack does not choose a nation or race. Surprisingly, there are those among the clergy who have suffered from this "sin of the orphan." From time to time, this hidden flaw among Western believers has grown, sometimes leading to serious protests and social unrest. The same issue has been on the agenda several times since Pope Francis XVI, and some sinful believers have been punished at the behest of the public. But the strange thing is, why do those who are now responsible for the promotion of God fall into this trap themselves? Doesn't that tarnish the name of religion? Doesn't skepticism call into question people's religious beliefs? Interestingly, such a hidden flaw was also found among Muslim leaders. We learn this in detail in the story "A Dirty Scorpion" from the novel "Scorpion from the Altar". Abdurahman, the main villain of the play, reveals all the details of the teacher's past. Sexual harassment, which is a heinous form of sexual violence, is strongly condemned and condemned in all ages and in all religions.

The author's masterpieces, Navo Kuyi and Rakib Izidan, in his novel The "O'tgan kunlar", describe the abominable and immoral activities of the gang led by Homid, who opposed Otabek, and the details of the "bachavozchilik" trade. According to the author, "these were "Muslim times", but there were some things that distorted the solemn meaning. The khan was a Muslim, the bey a Muslim, the people a Muslim, and the conduct was Muslim. His hand is cut off or hanged for stealing. Zones with zones are also thrown from the roof, forty lashes are beaten for drinking. The chairman used to beat his officials, check those who did not pray, and beat those who did not know the fard. Though the case is so sensitive, thieves will not be left behind. Esh aka and Tosh aka's houses are being torn down, their cattle are being stolen, and prostitutes are growing up to be strangled from the roof. There are many people who have never prostrated their foreheads in their lives, but everyone could easily recite four or five sentences from the head of the fard ayn. In many people's homes, there is a lot of wine and booze, and on the other hand, there are people who make a living by selling alcohol". Apparently, the author points out that a number of vices in the life of the people are still alive, despite strict rules. Here, during conversations between Homid, Sadiq and Mutal, Mutal speaks of his "courage" in relation to infertility. Although these expressions are described in a veiled way, the text condemns that vile immorality.

Although the author's second novel, "Mehrobdan chayon", was published two years later, it seems that the above-mentioned anecdotes are



among the last of the most brutal khans in Uzbek national history. - It is noteworthy that it was at its peak in the time of Khudoyorkhan. Anvar's rival, Abdurahman Domla, describes his ugly life in Bukhara as ugly for a man with a disgusting past. Here, too, the author's sharp artistic vision effectively narrates the whole disease and its stigma. Here we see that the writer is deeply concerned about the future of the nation, warns of the dangers of this evil and shakes his pen more seriously.

The author first describes the moral work of Abdurahman's two-year failure: "He will be a drunkard for May, wearing a weak shirt, a mustache and a plait on her head, and will take the picture of a sixteen-year-old girl; touches the lips with tea and "sanctifies"; a dutar, a tambourine, and a player; with a plait on his head, he mercilessly whips the "lovers" and becomes an oppressor and tyrant. The author goes on to say, "Abdurahman" corrected "the morals among the merchants for three years, and for two more years he" perfected "the corrected morals in the madrasa. He is accustomed to masculinity, to various pleasures, to various "honors," and to some shameful tricks, such as shaving his "untimely" beard. He would pick up a bag, look in the mirror ten times a day, and go to the market every day to find a new buyer".

It should also be noted that Uzbek scholars and the literary community do not pay much attention to the issue of "pedophilia" in Abdullah Qadiri's novels. Or they are just accusing in general. Even the observations of prominent Uzbek literary scholars do not address this issue in detail. There is a similar general view in the works of Matyokub Kushjanov. Among the next generation of literary critics, Bahodir Karim also conducted serious research. But the subject we have raised has a more general view in his work. Without underestimating the work of the above-mentioned scholars, we can say that "bachavozlik" seems to be a topic that is not openly discussed among intellectuals in the Uzbek cultural stratum. So, since there is a theme in the novel, it is important to pay attention to it. This aspect means that it is possible to redefine the writer's skill, to once again acknowledge his individual skill.

One of the peculiarities of Abdullah Qadiri's intellect is that the writer considered chastity and a pious way of life as a belief, which is reflected in his works. On the other hand, through both works, the author reveals the beautiful and unique features of the nation, as well as leaves an indelible mark on our literature with images of noble and courageous, noble deeds. It is through these works that the negative vices in our lives are sounded. It is worth noting that in the description of the existing shortcomings, the writer shows the qualities of sadness, the fate of the nation, attention to lifestyle. In short, both novels of Abdullah Qadiri deserve to be loved and respected in all their features.

## REFERENCES

1. *Abdulla Avloni. "Turkiy Guliston yoxud axloq". Tashkent. 1990-1991. 1-book. 290 p. 2-book. 272 p.*
2. *Педофилия – бачавозлик. <https://ru.wikipedia.org/wiki>.*
3. *Набоков. В. Полита. М.: Азбука. 2015. Стр. 416.*
4. *<https://eksmo.ru>. Пинчон Томас.*
5. *<https://> James Joyce. *The Adventures of Ulysses*. T.: Uzbekistan. -840 p. Translator-I.Gafurov.*
6. *[www.livleib.ru](http://www.livleib.ru)>author>top-markiz-de-sad*
7. *[wikipedia.org/wiki](http://wikipedia.org/wiki)>Bacha-bazi. (Берешазун. "Из путешествия по Средней Азии")*
8. *Xolid Xusayniy. Shamol ortidan yugurib. T.: Yangi asr avlodi. – 2016. 208 .*
9. *Abdulla Qodiriy. Mehrobdan chayon. T.: Yangi asr avlodi.-2011. 320 p. 76-81-pages.*
10. *Abdulla Qodiriy. O'tkan kunlar. T.: O'qituvchi.- 1980. 382 p. 205-p.*
11. *Sharafiddinov O. "Ijodni anglash baxti". SHARQ NMAK. T.: 2004. 640 p.*
12. *Qo'shjonov M. Qodiriy – Erksizlik qurboni. T.: "Fan". 1992. – 96 p.*
13. *Karimov B. Abdulla Qodiriy: Tanqid, tahlil va talqin. T.: "Fan". 2006.- 232 p.*



# THE EFFECTIVENESS OF THE USE OF MOBILE TECHNOLOGIES IN THE EDUCATIONAL PROCESS

**Nafasov Mirzomurod Mukhamadovich**

Doctoral student,  
Department of Information and  
communication technologies,  
Bukhara Engineering Technological Institute,  
Bukhara,  
Uzbekistan.

## ABSTRACT

*In this article, the foreign experience of using mobile technologies in the educational process, the need for it in our country and its effect in increasing the knowledge of students, problems of application of mobile technologies to the educational process, solutions and conclusions are presented, the advantages of using mobile education in modern education are discussed. Currently, despite the widespread use of mobile phones among students, mobile education is less common in local higher education institutions. In the educational process, the technical and psychological preparation of teachers and students for the use of mobile technologies, as well as the need to consider new opportunities for more effective use of mobile learning opportunities will be analyzed.*

**KEYWORDS:** *Mobile education, technology, didactics, interactive, teaching method, Mobiledu, electronic textbook, gadgets, individual, competence, communication.*

## INTRODUCTION

Today, mobile technology has become an integral part of our lives. They allow us to significantly save our time and transfer data more easily and quickly. Although the advantages of using mobile technologies in everyday life are almost certain, the issue of their implementation in the educational process remains open. It is not an exaggeration to say that the introduction of mobile technologies into the educational process is at the beginning of its development.

The term "Mobile learning" (m-learning) refers to the use of mobile and portable IT devices in the learning process, such as PDAs (Personal Digital Assistants), mobile phones, laptops, and tablets. Since computers and the Internet have become indispensable educational tools, these technologies are more portable, affordable, efficient, and easy to use, which opens the door to new opportunities for ICT, in particular, to expand opportunities for participation and use on the Internet. Mobile devices such as phones and PDAs are much cheaper than computers, and therefore it represents a cheaper way to access the Internet, which is one of the main tools for organizing Independent Education. [1]

The concept of M-learning was used by Alan Kay in the 1970s. Although by the 1994 years smartphones were created and used as personal communicators, since then, technological companies have begun to develop devices that are much more sympathetic and functional even in terms of design, known as "smartphones". The creation of the smartphone provided a platform for mobile education, and the innovative movement of mobile devices brought mobile education to the status of a project and research.

## MATERIALS AND METHODS

The first (and most common) way is to use a mobile phone as a means of accessing a global network. It is possible to organize access to specialized sites with electronic training courses, tests, practical classes, and additional educational materials (photos, photos, voice, and video files). It is also possible to exchange information via e-mail and instant messaging in ICQ, QIPs, their versions are also available for mobile phones. Thus, at all stages of teaching, the audience will be able to find information materials and also have many opportunities that will help them to monitor the entire learning process and solve problems.



The M-Ubuntu Project, developed in the second half of 2007 by Sweden's largest educational academy Worldwide, is an example of the use of mobile phones. Within the framework of this project, a distance learning platform was presented. This will allow you to create all the conditions for acquiring new knowledge and actively use the latest information technologies, even in remote regions and third countries. The M-Ubuntu programmers paid special attention to training with the use of mobile phones, and this system was developed not only for the use of students but also for applications for the improvement of qualifications for teachers, as well as for the development of test and control programs for students. Using the M-Ubuntu platform, any teacher has the opportunity to get advice from professors from large universities.

The second way to use mobile phones for training is to use special programs for mobile phone platforms that are capable of opening and viewing Office program files such as Office Word, Powerpoint, Excel. When you have such files, where there is training data in the memory of the mobile phone, they can be viewed with a convenient scroll bar, suitable shrift and a convenient interface, adapted for screen versions.

Besides, the data source video and audio files, which are available on every phone in recent years, the player software can serve as an additional option. This opportunity is especially important for those who want to learn foreign languages.

The successful application of this method of teaching can be exemplified by several educational programs in Japanese and Chinese universities. Taking into account mobile technologies, the teachers of these universities consider them very promising in the conditions of informatization of modern society. The National Cyber Institute of Japan, specializing in distance learning through the Internet, in the 2008 year proposed an innovative system of teaching using a mobile phone that allows you to learn any discipline-both at home and in a cafe and the subway. If during the lesson the text of the lecture on the computer and all the necessary pictures are displayed in the middle of the screen, and the lecture itself is transmitted in the video corner, then the mobile version is based on streaming video technology, and all the text and pictures are additionally downloaded. Students are offered to study about 100 different topics, including ancient Chinese culture, journalism and English literature.

In China, Nokia is developing a Mobiledu application, which began in the 2007 year and includes English-language teaching materials and other educational content, from many online data suppliers directly to mobile phones. You can access

this information through Nokia mobile phones or the application website. During the activities of the Mobiledu program, more than 20 million people have already become its subscriber.[2]

Another way to use mobile phones for the study is to use specialized electronic textbooks and courses that are adapted to the viewing and operation of students' mobile phones. Students are offered to download Java programs on their phones, for example, tests on certain subjects, as well as the information necessary for their successful implementation (electronic textbooks, lecture texts). Modern technologies make it sufficiently easy to design and programmatically implement such electronic manuals. The ability to place diagrams, drawings, and formulas make writing e-learning courses for mobile phones Univer practical and applicable to any subject under study. It is also possible to carry out educational programs using the capabilities of telephone graphics in gaming programs, but the implementation of such programs is a rather complex and time-consuming process. As a result, writing science test programs for electronic textbooks and mobile phones seem to be a more promising direction. There are many special programs for calculators of different complexity (simple, scientific), Office programs for cell phones, applications that include various tests (for example, for psychologists), etc.

For example:

Compared to Duolingo, it is the best language learning platform in the world. Duolingo uses the mechanics of the game: the lessons are organized at a high level, to move to the next, you need to move to the previous part in full or in part. For daily visits, the user is given experience and a variety of Pleasant virtual bonuses.

Netology is an online university for online professions. Training is conducted in the form of a webinar, which can then be downloaded and re-listened to. In the end, a certificate of termination is issued. You can also buy and download lessons from video tutorials.[3]

Foxford-Netology programs Group. They will help to pass the school course in all subjects, find a teacher and solve complex problems.

ABBYY Lingvo-three programs were created from the Russian company to learn another language. Only here is not a series of lessons like Duolingo, but a set of high-quality translators, dictionaries and popular phrases are used.

Khan Academy-offers more than 4000 lectures free of charge on various subjects: mathematics, physics, history, biology, chemistry, economics and others. You can see them on the official website or download the program. Of course, there are more lectures in English, but important parts are translated into Russian.



Quizlet teaches on the card. In it, it is possible to prepare for exams (in different disciplines), sharpen the mind, you can create and create cards yourself, or you can use the Variety left by other users. The application helps to remember any important information in the form of a game, so it is suitable for almost all areas of study.

## RESULTS

According to Ian Blair's research, there are more than 2,7 billion smartphones, 1,35 billion tablet users worldwide, and their number is increasing day by day.[4] given the availability of these devices in the majority of students, further use in the educational process can lead to positive results.

First of all, the use of mobile technologies in the educational process has the following advantages:

- Students can interact with each other and the teacher without hiding behind a large monitor;
- It is easier to accommodate multiple mobile devices than multiple computers in most audiences;
- Mini or tablet computers (PDAs) and e-books are lighter and take up less space than files, papers and textbooks and even laptops. Using the touch screen Help is easier than using the keyboard and mouse;
- Ability to share tasks and tasks and collaborate;
- Students and teachers can send, cut, copy and paste text via email, transfer devices within a group, infrared functions of a PDA or wireless network, for example, work with each other via Bluetooth;
- Mobile devices can be used anywhere, anytime, including at home, by train, in hotels;
- \* ease of use in vocational training;
- Mobile technical tools, such as cell phones, gadgets, gaming devices, etc., will arouse interest in students - education.

Secondly, the following advantages of the use of mobile technologies in independent education are highlighted:

- M-learning through a mobile device allows you to be truly individual. Students have the opportunity to choose the content of the study based on their interest, as a result of which m-learning can be said to be student-oriented.
- Mobile flexibility, instant access to information needed for a particular job using mobile devices can enhance a person's productivity.
- Independent study and immediate submission of content-on-demand is a distinctive feature of m-learning. This allows users to train around the clock and create conditions for joint training and interaction.

Also, the main didactic features of mobile technology are interactivity, information content, visibility, autonomy, ease of use, as well as quick access and exchange of views. These didactic features determine the expediency and effectiveness of integrating mobile technologies and educational mobile applications into the educational process through the following:

Development of communicative, social-cultural and Information-Communication competences of students;

Organization of auditory and independent work;

Individual and group work organization;

Securing reverse contact;

Visualization of materials;

To formulate additional skills in the field of project specialization, it is necessary to perform tasks in the traditional and new formats, including in the field of ICT;

For the formation of professional practical skills, the implementation of formative control (the English Working term: formative assessment) as a component of the current control.

## DISCUSSION

Creating an interactive learning environment requires the development of methodological support for this process. The identification of the theoretical and methodological basis for the integration of mobile technologies into the educational process includes the analysis of software and normative documents, as well as the experience of local and foreign specialists in the teaching of information and communication and mobile technologies (new for the last fifteen years) specialty subjects.

Since the integration of mobile technologies into the educational process is a new direction in internal methodology, there are many contraindications in this area:

With the introduction of new forms of training for the educational process (interactive lectures, discussions, project activities, etc.), it is necessary to establish the interactivity of the training and the lack of methodological assistance to these types of activities, including assignment forms;

Between the social need and the use of mobile technologies and educational mobile applications as an educational tool, as well as the implementation of tasks related to the typologies of mobile applications and systems, in particular, the lack of methodological provision in the process of teaching specialty subjects;

Between the competence of the teacher with the use of the latest information and communication and mobile technology in



professional activity established by the normative documents, their knowledge and skills.

One of the main conditions for the successful integration of mobile technologies into the educational process is the information and communication skills of the teacher, which consists of general-used, general-pedagogical and special-pedagogical components within the framework of science. The information and communication competence of the teacher should include the knowledge and skills on the use of mobile technologies that are the most modern and popular today.[5]

To determine the requirements for the integration of mobile technologies into the educational process based on the theoretical methods of conducting scientific research:

\* analysis of software and normative documents (information and communication technologies as a component of teaching specialty subjects);

\* summarizing experiences and methodical literature on the integration of mobile technologies into the process of teaching specialty subjects;

\* it will be necessary to classify and systematize mobile applications that are suitable for use in the educational process.

## CONCLUSIONS

Even though the number of modern mobile phones and communication devices is several times more than the number of personal computers, mobile devices are much cheaper than personal computers, and the power of modern mobile devices exceeds the power of computers in the early 90-is, in our country mobile phones are poorly used in the educational process. Based on the conclusions described above, this fact can be explained by the need to develop new strategies for the introduction of new technologies into the teaching process and the application of certain organizational efforts.

Undoubtedly, organizational, scientific and methodological work is necessary to introduce modern strategies, forms and methods into the educational process to take advantage of new opportunities for mobile education in the educational process.

Didactic features and related functions of mobile technologies (in particular, their interactivity, information composition, visualization, autonomy, ease of use, prompt application and the availability of feedback) contribute to the effective development of communicative, socio-cultural and Information-Communication competences of students.

Mobile technology increases the efficiency of not only students but also teachers. The use of

technology provides a quick connection between the teacher and the student, accelerates the process of evaluating and evaluating the learning outcomes. It is worth noting that the inclusion of mobile technologies in the educational process should be carried out step by step. Both the teacher and the student must first formulate the skills of using technology and then systematically develop it.[6]

In conclusion, we can say that mobile education does not replace traditional education by 100%, but it can be used as an addition to the educational process in a higher institution and as a component of mixed education. Active use of mobile learning does not aim to replace computers with portable devices but rather fills the learning environment with exciting new methods that are more approachable and more accessible to students.

Scientific research on the possibilities of mobile technologies and the conditions for their introduction in the educational system is carried out intensively, and today their practical application is developing in Uzbekistan.

## REFERENCES

1. И.Н.Голицына. Н.Л.Половникова. Мобильное обучение как новая технологии в образовании.
2. *Mobiledu and Widjets for China.*
3. *Staupe Arvid, Kolas Line. Mobile Tutoring - distributed interactive learning arena with synchronous video and audio. I: Society for Information Technology & Teacher Education International Conference Annual. Association for the Advancement of Computing in Education, 2007*
4. <https://buildfire.com/app-statistics/> (murojaat sanasi 15.08.2020)
5. Авраменко А.П., Титова С.В. Компетенции преподавателя в сфере мобильного обучения/ А.П. Авраменко, С.В. Титова// Высшее образование в России. – 2014. – №6. – С. 162-166.
6. Рябкова В.В. Интеграция мобильных технологий в процесс обучения (начальный этап). DOI: <https://doi.org/10.23670/IRJ.2017.59.075>



## LANGUAGE, COGNITION AND CULTURE IN THE SPHERE OF LINGUISTICS

Shakurova Nargiza Khamrakulovna  
Karshi State University,  
Uzbekistan

### ABSTRACT

*This article analyzes cognition and culture as interacting: with each other and with other systems, in particular with the language. The article presents the relationship of culture and cognition in two dimensions: firstly, the existence of culture is the result and expression of cognitive abilities of a person, secondly, human societies form the culture of any aspect of human life. In previous days, linguoculturology is like a fluttering modern science since language and cognition is a cultural dimension. Cultural cognition needs to be seen in parallel in a variety of communicative events, being aware of cultural conceptualizations, cultural patterns, and patterns. And so cognition is divided into two semantic parts: a universal concept which means the general meaning of words, the second type of concept that includes the science of culture. The author analyzed the conceptual and cognitive features of the "OHA" "MOTHER" frame and made conclusions based on analytical opinions in creative collaboration with the masters in solving existing problems.*

**KEY WORDS:** *concept, cognition, linguistic, sociolinguistic, pragmatolinguistic, conceptualization, existential.*

### DISCUSSION

Likhachev argues that the basis of language and cognition is cultural thinking. Language is an uniformity of the culture of a particular nation, formed in different groups [Likhachev 1992 page 28].

So it is a cognitive linguistic science that uses language as a cultural phenomenon that examines the structure of human knowledge and experience. While cognition involves the acquisition, presentation, and creation of cognitive activity information, these actions are undoubtedly directly and directly related to linguistics. Scientists are learning that knowledge and culture are associated to each other and to other systems [see D. Andrede 1995, Hatchins 1995, Shore 1996, Strass, Quinn 1997, Uzbek linguists Sh.Safarov, N.M.Mahmudova, A.A.Abduazizov and others.]

According to Sh. Safarov, the main task of cognitive linguistics is to study the mental processes emerged in the human mind in terms of linguistic activity, and its specific object is the language system, which is the source of knowledge, its application and transmission [Safarov 2006 p11]. From the linguists' point of view, linguoculturalism can be interpreted as a new way of science in the development of linguistics today, reflecting the language and exploring the culture of nations as a particular form of correlation between people.

Demyankov argues that cognition is a source of mental lexicon mind-set in the human mind [1994,

p25]. However, the conceptual system is represented as a structural,operational unit of language, memory. Members of the cultural community give different interpretations of cultural thinking. Cultural conceptualization is a system of cultural links, that is, inextricably linked to cultural models. According to Drew Andrede, cultural models mean a schema of knowledge interconnected by members of a social group [D'Andrede, 1995, p112]. F. Ungerer H.Y. Schmid [Ungerer, Smid, 2006] recognizes that cognitive models are inextricably linked to cognitive linguistics and psycholinguistics, while cultural models are studied in sociolinguistics and anthropological linguistics, but these are as intertwined. Lexicographic research of languages played a vital role in the study of language and culture.

The lexicographic investigations of Fillmore takes a crucial role in the study of language and culture. His notion about semantic frame has led to the research on the field of lexicography and lexicology.(Fillmore,Atkins,1992)Well-known sociologist Robert Watnow has published his book "The People's Life dictionary" An analysis of culture in the introduction to the book says that one of the necessary features of the research is that they are interdisciplinary, namely anthropology, literary criticism, political philosophy, religion studies, cultural history, and cognitive psychology. J Lorkoff and M. Jonkinson argues that the connection between language and consciousness cannot be limited only



by the inner syntactic distortions of the Khomsky tradition, but also requires research into the relationship between language and consciousness between pragmatic and cognitive models. (Larkov, Sanson, 1980).

According to Dr. Johnson, the later ethnolinguists Edward Siner and Benjamin Warf argue that every language culture has only unique meanings that are reflected in both language forms and the structure of social and cultural life. Heideger, on the other hand, language is linked with language culture. Language embodies the notions of linguistic value of each culture. "The nature of man depends on the language." At the same time, culture images the semantic signs in the language. Language is a symbol of the peculiarities of culture and cultural reality, that is, the language is believed to represent the most significant concepts of society, semantic signs of emotional, moral, aesthetic, ethical, existentialist behavior (Heideger, 1993: 259). Some researchers try to distinguish between types of concepts. "There are two sundry concepts in the language system. The first type of concepts are universal, while the second type embraces concepts of cultural and national value." The scientist also divides the concepts of the second type into: a) a key element that is explained by the linguistic specificity b) the key element that contributes to the understanding of the national mentality (Yusupov N.M. *lingvocognitive aspects of symbolism and artistic text*). S.T. Vorkachev acknowledges that in linguocultural concepts it is possible to distinguish between two and one universal and specific semantic signs: The concept of the second type is at least partly a semantic characteristic for its manifestation, which is distinguished by linguoculture, ethics, and the mentality of the linguist or the mentality of the individual. The main condition of the research is the division of whole and part, universal and specific systems.

Indeed, in all of the above mentioned definitions, we can see that the concept has been evaluated as a unit of national-cultural unity. Mentality reflects the outlook within the form and category of the national language, which combines the process of manifestation of the intellectual, mental, and "characteristics" of will in the national character. The discovery of national and culture of mentality has been the focus of many areas of "cognitive linguistics, linguaculture, ethicolinguistics, language anthropology, and genderology." In all these areas, the concept is defined as the core unit of mentality.

There are several reasons for it. One of the researchers in linguoculture M.V. Piminova states in her article << Firstly, the concept (conceptual understanding of the subject) is considered as part of the classical sensualistic scheme, its abstract object is

perception - imagination >> shows active steps such as practical and logical (abstract), emotional abilities. The linguistic landscape of the world, according to scholars' ideas, designs conceptual structures and schemes. To understand how universal the concepts are for all cultures, one must resort to the study of the nature of human thinking. On the one hand, the cognitive structure shared by all people supports the fact that the nature of knowledge and thinking processes should outweigh cultures, and on the other hand, most human knowledge stems from language and particular cultural contexts. With this in mind, language and culture filter and shape specific knowledge and even cognitive processes. At the same time, there are a number of concepts that form the basis for the formation of national cultural values, such as motherhood, motherland, freedom, love and so on. A. Verjbitskaya argues that each language has its own distinctions expressed in keywords that reflect the most crucial cultural and values. It shows that cultures can be studied and compared by basic concepts and serve as an analytical means to help identify the natural semantic mental language based on the language world. We can take the example of the word (ONA) "MOTHER".

Maternity begins with pregnancy and continues with the rest of the mother's life. Maternity and its features - the ability to create, nourish, watch, protect, care, provide. Maternity is a complex process that is related to the nature of the relationship between mother and child, as well as the role that she plays in her family. These roles of the mother are indispensable and are common to all cultures. It is well known that different language cultures illustrate differences in semantic conceptual structures. Such cultural distinctions exist between English and Uzbek, and other languages. An example of such differences, we will examine is the semantic structure and verbalization of the concept of 'mother'. If there are universal concepts for the whole community, then this is a primitive concept. The notion that reflecting the value structure of a particular society is completely different. In terms of the necessary terms and differences that affect conceptualisation of moral order or aesthetic, pragmatic and other values in different cultures, societies, historical periods, 'Mother' naturally represents the early concept of anthropological cognitive concept as 'mother'. Thus, mother is the fundamental notion of mankind.

On the other hand, this concept is culturally and socially significant because it reflects the ethical, aesthetic, pragmatic, and other contexts of each ethnicity. Thus, it is possible to speak about the dual cognitive-framing and culturally significant structure of "mother". Each period introduces to its subject specific





requirements based on the requirements of social development and assigns a research methodology method with an emphasis on the subject of study. Today, our linguistics has stepped into the study of speech units from the study of linguistic units and the stage of observing the vocabulary of linguistic capabilities. Linguocognitology is one of such direction. Linguocognitology studies the structure of cognitive resources at the base of language units. It helps to learn knowledge as a system and to reveal its systematic features.

The concept of linguocognitology. The cognitive concept differs from other concepts. Although the linguistic unit is integrated with the cognitive system it possesses the status of a cognitive concept.

## REFERENCES

1. *Вержбитская А. Язык. Культура. Познание. М. 1996*
2. *Демьянков.В.З. Когниция лингвистика как разновидность интерпретирующего подхода. М 1994 17-33б*
3. *Джусупов Н. М. Лингвокогнитивные аспекты исследования символа и художественном тексте. Автореф*
4. *Лихачёв. Д. С. Очерки по философии художественного творчества. 1996 158б*
5. *D'Andrade, R A folk model of the mind. / Cultural models in language and thought . New York Cambridge University Press, 1995 p 112-150*
6. *Fillmore Ch. Frame semantics-Seoul Hashin Publishing Co 1982 p 111-137*
7. *Lakoff, G, Johnson, M Philosophy in the flesh. The Embodied Mind and its challenge to Western thought New York 1999 p 624*
8. *М.В. Пирминова. Концепт как основная единица ментальности. august@vtsnet/ru*
9. *Safarov, Sh Kognitiv tilshunoslik. Jizzax Sangzor, 2006.*



# TYPES OF PLANTS SKILLFULLY GROWN IN THE LESS FERTILE LANDS OF THE KHIVA KHANATE AND THEIR HISTORY

**Nargiza Kamolova**  
Research Fellow,  
Khorezm Mamun Academy,  
Khiva,  
Uzbekistan.

## ABSTRACT

*Nowadays, in the Khorezm oasis of the Republic of Uzbekistan, the cultivation of agricultural products is developing rapidly. Especially during the Khiva khanate, the cultivation of agricultural crops, the reproduction of its species played a key role in the Khorezm region. On the basis of sources, this article describes how local people skillfully cultivated in low-yielding fields and what crops they cultivated during the Khiva khanate.*

**KEYWORDS:** *Wheat, barley, oats, rice, onions, cotton, clover, melon*

## INTRODUCTION

In spite of the lack of fertile lands in the territory of Khiva khanate, agriculture developed very well. Many types of crops are grown by farmers. We can study these types of crops in five groups:

- 1) Food crops, such as wheat, corn, barley, rice; legumes, such as moss, beans, as well as onions and carrots; and melons, watermelons, pumpkins;
- 2) Crops used as fodder for livestock: barley, clover, corn;
- 3) Plants grown for oil production: sesame, flax, cotton, hemp,
- 4) Plants grown for spinning: cotton and hemp;
- 5) Plants grown for dyeing, such as *Rubia tinctorum*.

Later, farmers began to grow potatoes, beets and cabbage.

## MATERIALS AND METHODS

This article describes the economic analysis and comparative analysis of how farmers in the Khiva khanate cultivated in low-yielding lands and what agricultural crops they grew.

## RESULTS

In the khanate, five types of wheat were grown, of which, 3 types were winter varieties, the remaining two types were spring varieties. According to O.O. Shkapsky's sources, more than 130 pounds (1 pound-16 kg, 380 grams) of winter wheat and more

than 100 pounds of spring wheat were harvested from one tenth of the land. [1] Wheat was planted in winter and spring, depending on the navigation. Its winter variety was planted in September, and the spring variety in March. These two varieties of wheat had been cultivated ten times, and in some cases even more. 800 tons of manure was sprayed over per ten desyatina (1 desyatina - 2400 m<sup>2</sup>) of land and irrigated up to 5 times during tillage. After reaching the quarter length, the seedlings were watered once and up to 3 times until the wheat ripened. Irrigation of winter wheat varieties began after germination in spring. In autumn, the irrigation process was stopped. Harvesting of winter wheat was carried out one or one and a half weeks before the spring harvest.

Of the food crops in the khanate, barley was planted only in March of the spring season. 1,300 tons of manure was needed for fertilization of arable barley lands. After the land was cultivated in July, the land was irrigated several times, just like wheat. Barley seedlings were irrigated once when the length was a quarter arshin (1 arshin - 0.711 m). They were irrigated 5 times before ripening. Barley was harvested at the same time as wheat. Up to 130 pounds were harvested from one tenth of the land. Barley, as mentioned above, was grown both for food and for fodder for livestock.

Another favorite food of Khiva people was corn. [1; 2] The length of corn varies from 3 to 5 arshins (1 arshin - 0.711 m) depending on the navigation. Corn was planted on well-cultivated land



in May. Farmers sowed 1,000 tons of sandy manure on one desyatina of the land planted with corn, plowed and irrigated 5-6 times. Upon completion of this process, 1,000 tons of sandy soil would be spread on each tenth of the land. Irrigation of corn would begin in June, when the seedlings would be half-grown. They were irrigated 4 times during the growing season. Farmers started harvesting corn in October, because when the weather cools down, corn seeds begin to fall in the cold. Corn was harvested with a sickle, the stalks were kept on the roofs of their houses, and in winter the stalks were used as fodder for livestock. The Khiva people planted corn in large areas because its stems were very good fodder. It was planted mainly on the trail of wheat, that is, after the harvest of wheat, corn was planted as a second crop on the vacant land. It was also used as fodder for livestock when the corn crop was not ripe. In particular, in 1981, all the corn grown in the khanate was used as fodder for livestock. Due to the fact that corn is a very productive plant, one desyatina (1 desyatina - 2400 m<sup>2</sup>) of land harvested from 130 to 260 pounds, depending on the navigation.

The next main crop in Khiva khanate was considered rice. Rice is an aquatic crop and therefore requires a lot of care. In the Khiva khanate, the rice fields were fertilized not with manure, but with licorice or humus of buyan, a common plant in the khanate. The fields were sprayed with 54 tons of fertilizer in a row on one desyatina of the land, then irrigated with water, and when the field is dry, the land is plowed 8-9 times. At the end of the process, the land was irrigated again and then the seeds were sown. Rice was planted in May, a few days after the corn, in July the rice fields were completely covered with water and the water must move around the field. To do this, a hole was dug on the other side of the rice fields to allow water to escape. After that, the rice would continue to grow without further irrigation. Farmers harvested rice in September. One pound of land yielded 130 pounds. Because rice requires a lot of water, it is grown on large areas that can be irrigated without furrows.

Among the plants widely consumed by the population, they also grow legumes. Examples of these are green gram and beans. These crops were always planted in areas where wheat or barley were harvested during the second crop season (July). Green gram is not fertilized like barley. Moss lands were irrigated once the wheat was harvested and seeds were sown. Green gram was irrigated only twice during the growing season. Green gram were harvested in September. One desyatina of land yielded 50 pounds.

As for field plants, Khiva residents mainly grew onions. Onions were planted by farmers in sandy fields. They also knew how to plant onions

with grapes. The onion fields were fertilized only with sand, once irrigated and in April the onion seeds were sown. 300 pounds of onions were taken from one desyatina of the land.

Flax, hemp and sesame were also planted for oil. Sesame, like green gram, was planted in the vacant fields after the wheat harvest in the second sowing period. Sesame fields were not fertilized separately. Only once the land was irrigated and cultivated, it was enough. Sesame was watered 3-4 times during the growing season. Sesame was harvested in September and yielded 45 pounds per desyatina. The next type of plant to be used for oil production is hemp. 1,000 tons of sandy fertilizers were sown on the hemp field, the land was irrigated 5-6 times. When the seedlings sprouted, they were watered 4 times. The crop was harvested in September. 60 pounds of seeds were taken from one desyatina of the land.

The next crop is cotton. Oil is also extracted from cotton. In addition, cotton yarn is spun and fabric is made. "The length of cotton is up to one arshin. Each bush has 12 to 40 balls and cotton inside them," O.O. Shkapsky said. [1] Manufacturing factories in Russia at that time processed raw cotton from the United States, Turkestan, Bukhara, and, of course, Khiva. In the past, cotton was imported only from America, but in the late 19th and early 20th centuries, cotton was mainly imported from Turkestan, Bukhara and Khiva khanates, as well as from the Caspian region. At that time, 3 million pounds of cotton were imported to Russia from Central Asia. Over time, the Russians' demand for Central Asian cotton would increase. This is due to the fact that the seeds of Khiva cotton were much cheaper and more durable than American cotton. In addition, the difference between Khiva cotton and American cotton is that its bud is not opened, but cracked.

Cotton is planted on well-cultivated lands, 800 t of sandy fertilizer was applied to each desyatina of the land. The land was irrigated 3 or 4 times (sometimes 5 times) and plowed 5-10 times. Cotton seeds were sown in April. Cotton fields had not been irrigated all summer. If necessary, irrigated 1 or 2 times, not more. Cotton was harvested three times in the summer, from mid-August to the end of September. 100 pounds of balls were taken from one desyatina of the land from which cotton was extracted by hand during the winter months, and machines separated the cotton from the seeds. According to O.O. Shkapsky, in the past Khiva people used hand looms to separate cotton from seeds. [1] However, by the middle of the 19th century, cotton was separated from the seeds by sawing with special machines. There were 14 Russian ginneries on the banks of the Amu Darya. The ginned cotton was turned into high-pressure



bales at the factory, each bale consisting of 8-10 pounds of cotton, which was loaded on camels. Cotton was transported by camels to Orenburg, by boats to Chorjoi, and by rail across the Caspian Sea. One desyatina of land yielded 100 pounds of balls and 20 pounds of pure cotton. Depending on the navigation in the market, the price of a pound of cotton was 4-7 rubles. A gross profit of 80-140 rubles was obtained from pure cotton on one desyatina of the land.

They also tried to plant a large amount of clover, as it gave good yields for 8 or even 10 years. Every spring, 800 tons of land are planted to ensure a continuous harvest. It was necessary to fertilize with sand. From the second year after sowing the seeds of this plant begin to bear good fruit. However, the Khiva people started harvesting clover in the first year. To do this, farmers planted clover in a muddy area after the first irrigation after the harvest of wheat. The Khiva people harvested clover with a sickle. The Khiva people did not know about the Russian raids. For this reason, farmers mainly used sickles to harvest agricultural crops. This is mentioned in Mahmud Kashkari's *Devonu lug'ti-turk*, which also mentions the sickle in the form of "arghucha". [3] In this work, wheat is also called "tariq", and in Oguzs, wheat is called "ashliq". In this play, the cotton plant is also mentioned, that is, "He produced the seeds of cotton." [3]

Khiva residents also grow melons, watermelons, pumpkins, carrots, marena, potatoes and cabbage. Cabbage and potatoes are grown mainly for sale to Russians. 800 bags of fertilizers were spread on one tenth of the land for planting these crops. The lands were irrigated 3-4 times and cultivated up to 10 times. After the melons were planted, work began to limit the melons. Ditches were dug for drainage and the soil was dumped along the sides. Three arshin ditches were dug for melons, pumpkins, cucumbers, watermelons, and one arshin ditches for carrots, cabbage, and *Rubia tinctorum*. In addition to these ditches, boundary pits were dug, the width of which was 7-8 crops.

In Mahmud ibn Wali's "Bahr-ul-Asror", in the section on the Balkh region, its geographical location, people, melons and vegetables, he reported on the products grown and imported there, and on the kuktarnay melon of Khorezm, black melon, mullah payandagi and daroyi of Bukhara, zagare melon and cherry of Samarkand, peaches of northern China, mulberry trees of Khorezm, apricots called charkhi of Margilan, sangak apple of Samarkand and others were brought to Balkh and even started to be grown there. [4]

Khiva melons were famous for their size and taste. The length of each melon was three-quarters of an arshin, and its size was more than six vershoks. This boon requires sandy soil, so it grows

well in Khiva. Watermelons are also widely grown. Both melons are among the most widely grown crops in the khanate.

Khiva melons were also popular in Balkh at that time. It is known that melons do not grow without water, and if watered a lot, they are not so sweet. Mahmud ibn Wali tells about the secret of growing melons in Khiva without irrigation. According to him, the long root of the sapling is cut lengthwise and melon seeds are placed on it. Melons are fed with sap root juice until they grow and ripen. Such a melon was big and sweet. [4]

In the 1840s, a number of articles about the Khiva Khanate began to be published in Russia. In particular, G. Gilmersen's article " Khiva in its current state ", published in 1840, states that the customs duty on caravans was collected in cash and did not specify the exact amount of tax, the tax was collected first in Urgench and then in Khiva. He told about the khanate's crops such as melons, watermelons, squash, yellow and white turnips, radishes, carrots, sugar, peas, onions, Turkish beans, cucumbers, potatoes, because Khiva was not rich in fruits. It was very expensive and was bought only by rich people. Raisins and oleander were brought from Mashhad and it was used in the preparation of vodka. One pound of Iranian raisins cost 16 coins (8 rubles). Weak vodka was made from local grapes, and one of its stems (wine equal to one-tenth of a bucket, the size of vodka and the same amount of vodka, wine) cost 5 coins. [5]

According to P. Nebolsin, in the middle of the XIX century Khiva developed trade relations with Iran and Bukhara, a clothing wrapping with small flowers and green edges, large bouquets was brought from Iran and Mashhad to Khiva, about the size of 36 arshin (0.711 meters in length), ie 25 m). and a width of 11-12 vershok (a unit of length equal to 4.4 cm) (48.4-52.8 cm). A piece of such a clothing cost 1.5 to 2 gold coins

Coins, Russian and local leather, Russian broadcloth, Khiva silk, sesame and other products were delivered from Khiva to Iran. Green tea was brought to Khiva from Kashgar via Kokand. [6] In the Khiva khanate, the main type of farming in the 19th century was grain growing. More than half of the arable land is allocated for wheat, corn, and about one-fifth for cotton. The rest of the land is roughly evenly distributed with barley and rice, flax, sesame, melon and watermelon. Although horticulture played a less important role in the economy, apricots, vines, apples, pomegranates, pears and other fruits were also grown in Khiva gardens. [7]

According to Muravyev, various crops grown on the khanate's lands, such as wheat, millet, sesame, corn, etc., were sold to Turkmens from different parts of the Khiva khanate at a much higher price. When buyers arrived, the khan imposed the



death penalty on all Khiva residents to ban the sale of grain in order to pay for all his grain at any price, thereby increasing the price of his grain. [8]

Muravyev describes the lands of the Khiva khanate as follows: "The arable lands of this khanate form a magnificent landscape. Everywhere there are green fields, fertile crops, vineyards and orchards along the canals, the owners of which live in abundance. The amount of grain grown in the khanate is much higher than the needs of the people (upper class). Overpaying for grain is an important part of their business. Their neighboring nomadic tribes: the Balkans, the Mangyshlak peoples, the Kyrgyz, the Kazakhs, some Turkmens, and the Ata and Taka tribes buy grain wholesale from them. The people of Khiva grow mainly wheat, because in their country the grain harvest is very rich, and most of it is sold on the market." [8; 7]

## DISCUSSION

In the Khiva khanate, the lack of fertile land was not the only problem, and watering the fields and timely irrigation of crops also posed significant challenges for agriculture. Especially since rice is a water-intensive plant, planting and caring for it is considered to be a difficult process. The reason was that it was not possible to grow rice in the fields, as water was pumped out of the fields. Because we take into account the fact that each melon requires a separate livestock to install a separate lane and turn these lanes, then farmers have to work in the fields all summer without rest. This is impossible for an ordinary farmer whose income consists only of the produce of his land. In particular, the majority of Khiva residents tried to grow cotton, but it was not possible, as it was possible to get a good profit from the cotton crop, which is a technical crop. This was due to the lack of arable land in more than half of the population. For this reason, they mainly planted grain crops such as wheat, corn and clover, alfalfa. These crops are not only food for themselves, but also fodder for livestock.

## CONCLUSION

According to the archives, 300 batman (1 batman - 20 kg) of wheat and 750 batmans of rice were seized from the lands of Kilich Niyazboy district. Then the amount of grain grown by slaves was showed in decline: 400 batmans of rice, 40 batmans of cotton, 30 batmans of corn, 150 batmans of green gram. A total of 4690 batman. [9] According to the archives of the Khiva khanate, in fact, grain growing was the main activity in the khanate. In his memoirs, Russian Ambassador Nikolai Muravyev notes the following. The main income of the khan came from the sale of grain and melons grown on private lands. [8] The khan's private lands were

irrigated by many pipes and cultivated by slaves, as well as by the sarts, who had been deliberately relocated for agricultural purposes, and by the inhabitants of several villages in Karakalpakstan. The khan exempted them from the cauldron tax for this obligation. Taxes brought great benefits to the khan. Therefore, there were many types of taxes imposed by the khan. The main tax was levied for the use of water. The land of the Khiva khanate is mostly sandy and unproductive, so it requires a lot of fertilizer, but due to its properties, farmers tried to flush out the rotten substances. The land was very fertile, so all the work and skills of grain growers were focused on the artificial drainage of water, and the land is estimated not by the number of swamps, but by the number of pipes that irrigate it. Thus, the rented water brought great benefits to the khan, as the population ate grain, and they have a great need to it.

## REFERENCES

1. Shkapskiy O. *How Khivans conduct field farming*, Moscow, 1900, p. 31; 36; 39
2. Danilevsky Z. *Description of the Khiva Khanate // Notes of the Russian Geographical Society*, p. 124
3. Mahmud Qashqari, *Devonu lugattit-turk*, 181; 125 p.
4. Mahmud ibn Wali. *A sea of secrets regarding the valor of the noble (geography). Introduction, translation, notes, indexes by B.A. Akhmedov. T., 1977, p. 24-25; 44*
5. Gilmersen G. *Khiva in its current state. Exp., 1840, p. 117-121.*
6. Nebolsin P. *Essays on Russia's trade with the countries of Central Asia, Khiva, Bukhara and Kokan. SPb., 1856*
7. M.Y. Yuldashev, *Feudal land ownership and state structure in Khiva khanate, Tashkent, 1959, 80-81; 158 p.*
8. Muravyev, "Journey to Turkmenistan", Part II, 80 -81; 86 p.
9. *Archive of the Institute of Oriental Studies of the Academy of Sciences, fund 33, p. 2, v.1*



## THE IMPORTANCE OF LISTENING IN FOREIGN LANGUAGE LEARNING

**Karimova Jamila Shariyevna**  
Lecturer,  
Tashkent Institute of Irrigation and  
Agricultural Mechanization Engineers,  
Tashkent,  
Uzbekistan

**Israilova Dildora Atxamovna**  
Lecturer,  
Tashkent Institute of Irrigation and  
Agricultural Mechanization Engineers,  
Tashkent,  
Uzbekistan

### ABSTRACT

*This article is devoted to the role of listening skill and its different types in terms of obtaining new language. The stages which are typically used in order to do listening are given with their instructions in the article.*

**KEY WORDS:** *Listening skills, competent listener, extensive and intensive listening, concentration.*

### INTRODUCTION

Listening, as we know, is the skill of understanding spoken language. Listening is an essential skill, present in most activities we carry out throughout our lives. We listen to a variety of things, for example, a lecture; a play on the radio; the weather forecast on the radio; a taped dialogue in class. It has taken many years to give the listening skill the importance it deserves in second and foreign language learning among the teaching profession. Listening was one of the most neglected skills in second and foreign language classrooms especially until late 1960s. Both researchers and language teachers paid more attention to reading, grammar, and teaching listening was not accepted as a significant feature of language teaching. Field states that "in early days of English Language Teaching (ELT), listening served as a means of introducing new grammar through model dialogues" [1;89]. Recently, the language teaching profession has brought into focus on listening comprehension. Listening skills have been studied by many researchers. Listening has an important role both in daily life and in academic contexts as it is crucial for people to sustain affective communication. Of all the four main language skills, listening is the most influenced one. In 1970s, listening with more importance it has gained as skill, started to take place in language teaching programs besides speaking, reading and writing. Listening plays an important role in communication in people's daily lives. As Gou and Wills state "it is the medium through which people gain a large proportion of their

education, their information, their understanding of the world and human affairs, their ideas, sense of values". As for Peterson, he states that "no other type of language input is easy to process as spoken language, received through listening, learners can create an awareness of the inter workings of language systems at various levels and thus establish a base for more fluent productive skills". Most people think being able to write and speak in a second language means that they know the language, however, we think that if they do not have the efficient listening skills, it is not possible to communicate effectively. That is, listening is the basic skill in language learning as we prove it above with clear statements. The aim of teaching listening is to help learner of English cope with listening in real life, but there is a large variety of different types of listening in real life:

- listening to the announcements in stations, airports
- listening to the radio
- participating in a meeting, seminar or discussion

Different situations require different types of listening. In the classroom situation, students can improve their listening abilities and gain valuable input by being engaged in the listening process through a combination of extensive and intensive listening.

Most researchers like to make the difference between "extensive and intensive" listening. The two types are described by Harmer (1998) to have a special importance. They provide students with the perfect opportunity to listen to other speakers than their teacher's.



"They help them to develop their pronunciation and acquire good speaking habits they absorb"

**Extensive listening**

It occurs in a situation where the teacher encourages students to choose for themselves what they listen to, using their own materials for the purpose of pleasure and language improvement .

Extensive listening materials differ, they can be found from different resources such as recordings of stories, passages taken from books, television, radio.... All the mentioned sources tend to treat spontaneous conversations, dialogues, interviews... etc. According to, foreign language teachers can enrich their classes with effective input carrying out extensive listening through a well chosen and appropriate tapes in different levels , genres and topics . Creative teachers can recommend certain tapes and ask students to talk about the ones they have enjoyed the most.

**Intensive listening**

The other type of listening is the intensive one. It is practiced in every day situations the, ability to listen intensively is considered to be an essential part of listening proficiency. It refers to" the process of listening for precise sounds words, phrases, grammatical units and pragmatic units". As far as intensive listening is concerned, it invites the learners to meet different characters specially when real people are talking in real life situations, interact

with speakers, interrupt them and why not asking for clarification this is what is named " live listening".

"Live listening" is among the good ways to carry out intensive listening. It can take many forms; such as the teacher's reading aloud to a classroom. Students dealing with this task listen to a natural spoken language of a written passage. In addition to other enjoyable activities like storytelling, conversations and interviews. [2;96]

Consequently, intensive and extensive listening are two important ways to ensure the realization of listening in general and they have to be used appropriately.

As the types of listeners, competent listener who is considered to have a high listening ability and one of the most essential type of listeners .The listener in this category is capable of:

- Understanding all the types of speech, concerning those easy to be understood by native listeners in the target community or the abstract.
  - In case speech is unintelligible, the listener can seek clarification easily, he is able to depict whether his knowledge in a certain communication situations is enough to teach an acceptable level of understanding or not, as well as being able to note where the speaker is ambiguous and vague.
  - It is noted that competent listener is elected to perform well concerning any task demanding oral comprehension
- People experience several stages whenever they are practicing it. They are required to be aware of about them beforehand in order to grasp the meaning .

**Pre-listening**

Pre-teach vocabulary in order to ensure maximum understanding

**Listening**

Extensive listening followed by general questions on context

Intensive listening followed by detailed comprehension questions

**Post-listening**

Teach any new vocabulary, analyze language

As the figure illustrates, there are three parts in a usual listening lesson: pre-listening,(while)listening and post –listening 1) Pre-listening would be the first stage, where the context is established. The teacher creates motivation and students do some activities with the purpose of preparing them for what they will hear.

2) The following stage is listening, where learners do the mentioned tasks or find answers. There are two kinds of material and procedure. On the one hand, extensive reading helps students to acquire vocabulary and grammar and it usually takes place outside the classroom.

3) The last stage is post-listening, the part where students have the opportunity to check their answers about they have been listening to, to give feedback and consolidate what they have learnt. It is useful for teachers because it helps to analyze particular difficulties the students could have with the listening

activity. In addition to this , this part gives a chance for students to state their opinions in terms of particular topic.

**CONCLUSION**

Listening skill has an important role both in daily life and in academic contexts as it is crucial for people to sustain effective communication. Listening skills are important for learning purposes since through listening students receive information and gain insights. Also, listening is vital in the language classroom because it provides input for the learner. That is, in learning language, the 50% of the time that students spend functioning in a foreign language will be devoted to listening.



## REFERENCES

1. Field J. *skills and strategies: Towards a new methodology for listening*". *ELT Journal*(1998)
2. Field J. *"listening in the language classroom"*. United Kingdom: Cambridge University Press.
3. Rost .M *"Listening in language learning"*. New York .London. (1990)
4. Rost , M. *"Introducing listening"* . London.(1994).





# INFLUENCE OF PREECLAMPSIA DEVELOPMENT MARKERS ON PLACENTAL MORPHOLOGICAL CHANGES (LITERATURE REVIEW)

**Makhmudova Sevara Erkinovna**  
Samarkand State Medical Institute,  
Uzbekistan

## ABSTRACT

*Research of the placental bed began in the late 50s of the last century, and was conducted by two independent groups of researchers who used various biopsy techniques. Histological confirmation that the biopsy material was taken from the placental bed was based on the presence of trophoblastic cells, villi, or altered spiral arteries. However, the absence of these morphological components did not indicate that the sample was not taken from the placental bed.*

**KEY WORDS:** *Cytotrophoblast, placental bed, placental site, preeclampsia, spiral arteries, myometrial segments.*

## DISCUSSION

Basic information about the role of cytotrophoblast invasion in the utero-placental area (placental site) and insufficient gestational restructuring of the endo- and myometrial spiral arteries in PE was obtained in the 80's and described in classic studies [95]. There are two types of cytotrophoblast-interstitial (ICT) and invasive, which penetrates the lumen of endometrial arteries-intravascular CT (IVCT). The maximum invasive activity of ICT and IVCT is realized at the 5th-8th week of gestation, when their combined action leads to arose of the spiral arteries and the formation of their mouth opening into major since space of placenta. As a result, during the first trimester, several dozens of utero-placental arteries are formed in the endometrium, which increases the flow of oxygen to the intensively growing organs of the embryo. After a certain decline in cytotrophoblastic invasion at the end of the first trimester, probably due to the disappearance of the hypoxic stimulus, a new rise in invasive activity begins — its second wave, reaching a maximum at the 16th— 18th week. It spreads mainly in the arteries of in the artery of adjoining myometrium. A number of authors believe that the main mechanism of endothelium and elastomuscular components of the walls of myometrial segments of spiral arteries destruction is intravascular invasion, when the CT moves against the flow of maternal blood. Absence of gestational restructuring of the myometrial segments of the spiral arteries is a significant link in the pathogenesis of

preeclampsia. This is due to the superficial or shortened cytotrophoblastic invasion during its second wave. The progress of biomedical researches has significantly expanded our knowledge of the placental bed. It is known that in PE there is no physiological reconstruction (remodeling) of spiral arteries, which consists of decidual and trophoblast-dependent stages. These processes occur in the decidual and transitive junction zone (TJZ) of arteries myometrial segments. In decidua, early vascular remodeling is at least partially performed by leukocyte infiltration, including uterine NK-cells that appear during early endometrial decidualization in the late luteal phase of the cycle and cluster around spiral arteries at the beginning of the remodeling process [46]. NK-cells play an important role in trophoblast invasion and remodeling of spiral arteries. Uterine NK-cells are an important source of angiogenic growth factors and, unlike peripheral blood NK-cells, do not have cytotoxic activity, especially in relation to trophoblast cells, but they produce high levels of cytokines:  $\gamma$ -interferon (IFN- $\gamma$ ), interleukin (IL)-10, granulocytemacrophagal colony-stimulating factor (GM-CSF), leukemia-inhibiting factor (LIF), tumor necrosis factor (TNF- $\alpha$ ) [27].

Human trophoblast cells don't have the so-called classical human leukocyte antigens of class I of the main histocompatibility complex (HLA-A and HLA-B), which are targets for the cytotoxic action of NK cells of peripheral blood. At the same time, trophoblast cells express HLA-C, HLA-E, and HLA



- G, which interact with NK cells of the endometrium and decidual tissue and are involved in the development of pregnancy. Early vascular smooth muscle disorganization also occurs in PJZ of myometrium, where NK cells are absent. Thus, NK cells play an important role in trophoblast invasion and remodeling of spiral arteries. NK cells help replace endothelial cells in the spiral arteries with trophoblast cells, which allows the spiral arteries to provide ever-increasing blood flow needs in a physiologically developing pregnancy. However, in PE, expression on decidual NK cells of the AA variant the killer cell immunoglobulin-like receptors (KIR AA) and on trophoblast cells - HLA - C2 is often found, which leads to insufficient NK cell function, decreased production of vascular endothelial growth factor (VEGF) and IFN- $\gamma$ , and impaired remodeling of spiral arteries. In contrast to decidual tissue, vascular remodeling in myometrium is enhanced by the presence of interstitial trophoblastic cells and angiogenic growth factors localized in them, which contribute to the process of early vascular remodeling [1,5,11]. Only after this stage of vascular disorganization, endovascular trophoblasts appear in the spiral arteries, followed by their inclusion in the vessel wall. During this process, the endothelium seems to disappear, while the smooth muscle and elastic layers of vessels are further fragmented due to trophoblast-induced apoptosis of endothelial and smooth muscle cells [1,4,8]. In PJZ of myometrium, there are 3 different types of spiral artery transformation disorders: partial transformation, no transformation, and no transformation with obstructive damage [1,12]. The described features of trophoblastic invasion, taken as a basis, provide important information about the formation of defective placentation in future.

Spiral artery remodeling can be described as a multi-stage process that occurs at the beginning of pregnancy [11,25]. Two main factors are being determining in the blood flow from mother to placenta: the size of placental bed, which depends from the number of spiral arteries communicating with interstitial space, and the degree of physiological transformation of spiral arteries, which is most expressed in the center of the placental bed. Studies of the placental bed using biopsy confirm that most of spiral arteries undergo a complete change in PJZ of the myometrial segment, which is consistent with the results of ultrasound studies. Studies in the second trimester of pregnancy using pulse-Doppler method with staining showed that the resistance of blood flow in the central region of the placental bed is less than in the periphery. The results of three-dimensional ultrasound Doppler screening study with the determination of the placental bed vascular index in the first trimester in 4325 pregnant women in comparison with the data of blood flow in the uterine arteries at 12 and 22 weeks, the volume of placenta

and the concentration of PAPP-A revealed a high prognostic significance of determining the placental bed vascular index in the development of severe pregnancy complications, including PE [8,4].

In severe PE, only some of spiral arteries in the center of the placental bed are completely transformed into PJZ of the myometrial segment. In addition, obstructive artery damage (such as thrombosis, acute atherosclerosis) can lead to or contribute to incomplete placentation. The placental bed of patients with PE is characterized by decreasing the number of spiral arteries with a transformed myometrial segment. This segment preserves the hypertrophied structure of the smooth muscle layer, despite the presence of interstitial trophoblasts, sometimes even in excess amount [1,3,8,16]. The determined changes are more pronounced in myometrial than in decidual segments. The placental area in patients with PE and fetal growth restriction (FGR) is similar to that described in patients with PE. It is characterized by a large number of untransformed spiral myometrial arteries, which often have obstructive damage, such as acute atheroma and thrombosis. Acute atheroma is not only a characteristic damage of small decidual arteries, but also a typical damage of spiral myometrial arteries in PE and FGR. Impaired deep placentation in PE and FGR leads to the appearance of central zones with transformed arteries. The number of interstitial extra villous trophoblastic cells is reduced in PE and, conversely, increased in the cases of fetal growth restriction (FGR) [7,14,22]. The extent of the impaired transformation of spiral arteries of myometrium and the presence of its obstructive vascular damages explain the frequent combination with placental infarctions. 90% of spiral arteries in PJZ myometrium of the placental area are completely transformed in the normal course of pregnancy. Comparison of certain clinical situations and the degree of severity of spiral artery remodeling disorders suggested that the process of cyclic decidualization and subsequent menstruation serves as a mechanism for preparing the uterus for deep placentation. Both menstruation and implantation are inflammatory conditions that cause certain physiological ischemic-reperfusion tissue stress. According to the authors, regular menstruation can be crucial in protecting the uterine tissue from deep inflammatory and oxidative stress associated with deep placentation. This process is called "preconditioning" [11]. The lack of adequate "preconditioning" may explain why the first pregnancy in young women under 20 years of age is associated with a significant risk of adverse outcomes (preterm birth, FGR and PE), compared to the first pregnancy in women after 20 years of age who have experienced "preconditioning". On the other hand, placental abnormalities even at preclinical stages are present in patients with PE and FGR. In such



conditions, impaired deep placentation is characterized by the presence of untransformed spiral arteries of the PJZ, which can be affected by obstructive vascular injuries. Arterial injuries such as intima hyperplasia, acute atheroma, and thrombosis can develop in these arteries in a very short period of time, even with slight hypertension. The combination of obstetric complications and various vascular diseases in the connective zone of myometrium indicates that "preconditioning" in this zone during fertilization can be a crucial factor for successful implantation and normal placentation. Currently, there is strong evidence that the pathology of the placental bed due to ischemia and immunologically mediated processes leads to various complications of pregnancy (PE, FGR, premature birth, premature rupture of fetal membranes in premature pregnancy, placenta abruptio). And the development of one of these complications depends on genetic factors, environmental factors, pregnancy, duration and prevalence of the ischemic zone. In addition, the determination of the clinical phenotype and the severity of its manifestations depend on the state and interaction of mother-placenta-fetus system [1,6,9]. The limited number of studies and reviews, and the lack of established criteria for separating early and late PE, suggests that additional research is needed to determine whether these two forms are separate diseases or stages of the same process. Also, most of the researches in this direction belongs to placental research, but only a few studies are devoted to the study of placental site tissues. In this regard, taking into consideration the close relationship of the placenta and placental bed, the lack of detailed data on changes in the tissues of the placental bed and placenta's condition, depending on different variants of the course of PE, the presence or absence of accompanying fetal growth restriction syndrome, further researches in this direction are required.

### **Prevention of severe preeclampsia / eclampsia.**

Scientists of different specialties (cardiologists, obstetricians, gynecologists, geneticists) have been paying much attention to the problem of PE for many decades, but despite the results obtained, there is still no accurate information about the causes and pathogenesis of the disease, reliable laboratory methods of diagnosis have not been developed yet, so there are no effective measures of prevention and treatment. It is clear that interventions should be taken as early as possible, ideally before pregnancy. Despite the fact that there is strong data on risk factors for PE, there is still no information in literature about simple, safe, non-invasive and inexpensive screening methods that would be preventive for severe PE. In the past, such methods as strict bed rest and a salt-free diet were indicated, which later proved to be ineffective. Then there were works on the role of ascorbic acid

(vitamin C) and other vitamins in the prevention of PE. It was found that a decrease in blood plasma of vitamin C, E and  $\beta$ -carotene is associated with severe PE [5,7,17]. However, these phenomena were explained by the body's response to oxidative stress, but not by a lack of nutrients. Supplements of fish oil or omega-3 polyunsaturated fatty acids showed a decrease in prostacyclin levels (an increase of this indicator occurs in PE) [23,25]. However, it has not been established whether mild or severe PE can be prevented by these additives. The supplementation of certain minerals (zinc, magnesium, cadmium, selenium, zinc) in the prevention of PE has conflicting data. For example, the concentration of zinc in plasma, red blood cells and placental tissues in pregnant women with PE decreases. One large randomized clinical trial showed that magnesium supplementation does not affect the development of PE. This was due to the fact that oral magnesium intake does not have a good absorption effect [4,6,8,17]. Studies have shown that the concentration of calcium in plasma of patients with PE is significantly lower than in plasma of healthy women. A series of randomized controlled clinical trials showed the benefits of calcium supplementation in 4500 women at low risk of PE [7,10,18].

Several randomized placebo-controlled double-blind clinical trials have been conducted since 1993, involving 22,000 women who have demonstrated the benefits of low doses of aspirin in preventing PE and the absence of adverse effects on mother and fetus [5,9,22]. However, the literature does not support the view that low doses of aspirin are used to prevent PE in low-risk women. In women at high risk for PE, preventive aspirin administration can reduce PE development by 13%. [3,5,9,27].

Since PE is associated with coagulation disorders, it was suggested to treat with anticoagulants in order to prevent PE. Research results have shown that in a group of women at high risk of PE, combined administration of aspirin and low-molecular-weight heparin (LMWH) can improve pregnancy outcomes (low birth weight and perinatal outcomes) [3,8,13].

In 2019, a multicenter randomized controlled trial was conducted in Uzbekistan [7,14,24] showed that timely treatment of women with chronic diseases complicated by placental dysfunction and the risk of pre-eclampsia with inclusion of L-arginine in the treatment regimen in the second and early third trimester of pregnancy improves perinatal outcomes, improves utero-placental blood circulation, reduces the progression of mild to severe PE, which allows to prolong pregnancy until delivery.

Summarizing the literature review, it should be noted that there are no clinically significant methods for predicting and preventing PE. The only successful method of treatment is the timely termination of pregnancy. In this regard, in modern



conditions, the only real way to reduce severe forms of PE and its complications is prediction, early diagnosis, development and implementation of a clear algorithm for monitoring and treatment, depending on the severity of PE.

## REFERENCES

1. Amaral TAS, Ognibene DT, Carvalho LCRM, Rocha APM, Costa CA, Moura RS, Resende AC. Differential responses of mesenteric arterial bed to vasoactive substances in L-NAME-induced preeclampsia: Role of oxidative stress and endothelial dysfunction. *Clin Exp Hypertens*. 2018;40(2):126-135. doi: 10.1080/10641963.2017.1339073. Epub 2017 Jul 20.
2. Aukes A.M., De Groot J.C., Wiegman M.J. et al. Long-term cerebral imaging after pre-eclampsia. *BJOG* 2012; 119: 9:1117–1122.
3. Caillon H, Tardif C, Dumontet E, Winer N, Masson D. Evaluation of sFlt-1/PlGF Ratio for Predicting and Improving Clinical Management of Pre-eclampsia: Experience in a Specialized Perinatal Care Center. *Ann Lab Med*. 2018 Mar;38(2):95-101. doi: 10.3343/alm.2018.38.2.95.
4. Chou MC, Ko CW, Chiu YH, Chung HW, Lai PH. Effects of B Value on Quantification of Rapid Diffusion Kurtosis Imaging in Normal and Acute Ischemic Brain Tissues. *J Comput Assist Tomogr*. 2017 Nov/Dec;41(6):868-876. doi: 10.1097/RCT.0000000000000621.
5. Evans C.S., Gooch L., Flotta D. et al. Cardiovascular system during the postpartum state in women with a history of preeclampsia. *Hypertension* 2011; 58: 57–62.
6. Global causes of maternal death: a WHO systematic analysis / L. Say, D. Chou, A. Gemmill, O. Tuncalp // *The Lancet Global Health*. — 2014. — Vol. 2, issue 6. — P.e323—e333
7. Jansson T., Myatt L., Powell T.L. The role of trophoblast nutrient and ion transporters in the development of pregnancy complications and adult disease. *Curr Vasc Pharmacol* 2009; 7: 4: 521–533.
8. Mikhail MS, Anyaegbunain A, Garfinkel D, Palan PR, Basu J, Roinney SL. Preeclampsia and antioxidant nutrients: Decreased plasma levels of reduced ascorbic acid, alpha-tocopherol, and beta-carotene in women with preeclampsia. *Am J Obstet Gynaecol* 1994;171:150;
9. Okby R, Harlev A, Sacks KN, Sergienko R, Sheiner E. Preeclampsia acts differently in in vitro fertilization versus spontaneous twins. *Arch Gynecol Obstet*. 2018 Jan 4. doi: 10.1007/s00404-017-4635-y.
10. Powe C.E., Levine R.J., Karumanchi, S.A. Preeclampsia, a disease of the maternal endothelium. The role of antiangiogenic factors and implications for later cardiovascular disease. *Circulation* 2011; 123: 2856–2869.
11. Rahimi Z, Zangeneh M, Rezaeyan A, Shakiba E, Rahimi Z. MMP-8 C-799T and MMP-8 C+17G polymorphisms in mild and severe preeclampsia: Association between MMP-8 C-799T with susceptibility to severe preeclampsia. *Clin Exp Hypertens*. 2018;40(2):175-178. doi: 10.1080/10641963.2017.1346115. Epub 2017 Jul 26.
12. Rao H, Bai Y, Zhang F, Li Q, Zhuang B, Luo X, Qi H. The role of SATB1 in HTR8/SVneo cells and pathological mechanism of preeclampsia. *J Matern Fetal Neonatal Med*. 2018 Jan 7:1-151.
13. Schiff E, Friedman SA, Stampfer M, Kao L, Barre-rt PH, Sibai BM. Dietary consumption and plasma concentration of vitamin E in pregnancies complicated by preeclampsia. *Am J Obstet Gynecol* 1996; 175:10f24-8
14. Shi DD, Guo JJ, Zhou L, Wang N. Epigallocatechin gallate enhances treatment efficacy of oral nifedipine against pregnancy-induced severe pre-eclampsia: A double-blind, randomized and placebo-controlled clinical study. *J Clin Pharm Ther*. 2018 Feb;43(1):21-25.
15. Shin YY, Jeong JS, Park MN, Lee JE, An SM, Cho WS, Kim SC, An BS, Lee KS. Regulation of steroid hormones in the placenta and serum of women with preeclampsia. *Mol Med Rep*. 2018 Feb;17(2):2681-2688. doi: 10.3892/mmr.2017.8165. Epub 2017 Nov 27
16. Sonek J, Krantz D, Carmichael J, Downing C, Jessup K, Haidar Z, Ho S, Hallahan T, Kliman HJ, McKenna D. First-trimester screening for early and late preeclampsia using maternal characteristics, biomarkers, and estimated placental volume. *Am J Obstet Gynecol*. 2018 Jan;218(1):126.e1-126.e13. doi: 10.1016/j.ajog.2017.10.024. Epub 2017 Oct 31.
17. Strand K.M., Heimstad R., Iversen A.C. et al. Mediators of the association between preeclampsia and cerebral palsy: population based cohort study *BMJ* 2013; 347: 4089.
18. Timofeeva AV, Gusar VA, Kan NE, Prozorovskaya KN, Karapetyan AO, Bayev OR, Chagovets VV, Kliver SF, Iakovishina DY, Frankevich VE, Sukhikh GT. Identification of potential early biomarkers of preeclampsia. *Placenta*. 2018 Jan;61:61-71. doi: 10.1016/j.placenta.2017.11.011. Epub 2017 Nov 21.
19. Vikse B.E., Irgens L.M., Leivestad T. Preeclampsia and the risk of end-stage renal disease. *N Engl J Med* 2008; 359: 800–809.
20. Volpe M. Microalbuminuria screening in patients with hypertension: recommendations for clinical practice. *Int J Clin Pract* 2008; 62: 1: 97–108.
21. Wang Y, Shi D, Chen L. Lipid profile and cytokines in hypertension of pregnancy: A comparison of preeclampsia therapies. *J Clin Hypertens (Greenwich)*. 2018 Jan 6. doi: 10.1111/jch.13161.
22. Williams D. Long-term complications of preeclampsia. *Semin Nephrol* 2011; 31: 1: 111–122.
23. Wu C.S., Sun Y., Vestergaard M. et al. Preeclampsia and risk for epilepsy in offspring. *Pediatrics* 2008; 122: 5: 1072–1078.



24. Young B., Hacker M.R., Rana S. Physicians' knowledge of future vascular disease in women with preeclampsia. *Hypertens Pregnancy* 2011; 31: 1: 50–58.
25. Padmini E., Lavanya S. Over expression of HSP70 and HSF-1 in endothelial cell during preeclamptic placental stress. *ANZJOG* 2011; 51: 1: 47–52.
26. Akcora Yildiz D, Irtegun Kandemir S, Agacayak E, Deveci E. Evaluation of protein levels of autophagy markers (Beclin 1 and SQSTM1/p62) and phosphorylation of cyclin E in the placenta of women with preeclampsia. *Cell Mol Biol (Noisy-le-grand)*. 2017 Dec 30;63(12):51-55. doi: 10.14715/cmb/2017.63.12.12.
27. Kerley RN, McCarthy C, Kell DB, Kenny LC. The Potential Therapeutic Effects of Ergothioneine in Pre-eclampsia. *Free Radic Biol Med*. 2017 Dec 25. pii: S0891-5849(17)31282-0. doi: 10.1016/j.freeradbiomed.2017.12.030.



# THE IMPACT OF JOURNALISTIC CRITICISM ON GOVERNMENT POSITION

**Sanjar Ilhomovich Shomurodov**

Student of the University of  
Journalism and Mass Communications of Uzbekistan  
Correspondent of the Electronic Information-Analytical Portal «xabar.uz»,  
Uzbekistan.

## ABSTRACT

*In recent years, there has been a lot of journalistic criticism in the media. Journalistic criticism may or may not reflect the position of the current government. In this context, we see the government trying to stifle free speech or divert the flow of information. The importance of journalistic criticism is discussed in this article.*

**KEYWORDS:** *journalistic criticism, government position, journalistic frontier, alternative media networks.*

## INTRODUCTION

In the last decade, alternative online media (sites, blogs) have emerged that criticize the government's position on what is called "primary media" (1). This meant that at the same time, state and government-owned news media organizations faced difficulties in expressing confidence, revenue, and audience perspectives. Commenting on this, media researchers Newman et al noted that "primary media" creates a huge information flow (2). Although the media networks established by the current government and the journalism networks of the new era provide a wide range and diversity of opinion in the delivery of news, the two directions often maintain two different positions. In this case, it can be done through various blogs and sites created to support the opposition, defending the interests of different party movements. In this case, the position taken by the current government may be undermined by journalistic criticism, whether organized or unorganized. The article examines the role of journalistic criticism in the government's position, both positive and negative.

## MATERIALS AND METHODS

Many private sites differ from government sites and the media in their ideological positions. We can conditionally divide them into "pro-government", "anti-government" and "neutral". Governments with authoritarian and similar administrations are legitimized in certain cases for excluding critical criticism of their positions from the media.

Tine Ustad Figenschou and Caroline Andrea Ihlebæk, in an article entitled "CHALLENGING JOURNALISTIC AUTHORITY - Media Criticism in Far-Right Alternative Media," explored the factors that affect government position.

"First, while sharing these negative views, there is a difference in the extent to which the right-wing media is seen as part of a larger political conspiracy and in their proposals to change the current media system. does.

Second, to determine the attractiveness of these sites and how they established their authority as media critics, we identified five recurring positions organized around specific forms of knowledge:

- i. internal position (knowledge in the field of professional journalism);
- ii. expert position (real legitimacy based on statistics and facts);
- iii. the position of the victims (experimental legitimacy as victims of the media);
- iv. civic position (democratic legitimacy representing the people)
- v. active position (street legitimacy through confrontation and active resistance).

Together, they form an analytical framework that can be used to enhance the reputation of alternative media and legitimize media criticism," said Professors Tine Ustad Figenschou and Caroline Andrea Ihlebæk (3).



Studies show that journalists are struggling to find effective strategies against authoritarian governments in practice (4). However, even in democracies, a lot of criticism is noted not only by local but also by foreign analysts.

Many governments use administrative and moral sanctions against journalists as an "attempt to discredit the government" when they criticize them. Government officials often cited journalists as violating "journalistic boundaries" and retreating from the "professional journalistic" position as the main reason for punishment. A number of studies by media theorist Mark Deuze emphasize the centrality of general ideas, ethics, and practices as elements of journalistic ideology, and note the existence of institutional, organizational, and cultural aspects that distinguish professional from amateur journalism (5). In authoritarian governments, unofficial and gossipy news is on the rise due to pressure from the media. This, in turn, contradicts the position of the current government.

Journalistic criticism can also come in two directions. For example, opposition to the position of the government through internal forces or opposition through external forces. In both cases, journalistic criticism must be skillful journalistic criticism. Otherwise, these criticisms will become "unfounded journalism" for journalism and the media world, not against the government. In this sense, too, journalistic criticism can be a major factor in the mass growth of society.

## CONCLUSION

Maintaining diversity of positions is a key factor in democracy and freedom of speech. In many democracies and countries where freedom of speech has been achieved, criticism and various positions are supported and not opposed. The term "increasing journalistic criticism" is associated with "increasing threats to freedom of expression." Because criticism is a common holder in countries that have achieved media freedom. If the government starts commenting too much, it will be because the journalistic criticism is not from the government's point of view.

## REFERENCES

1. Faris, Rob, Hal Roberts, Bruce Etling, Nikki Bourassa, Ethan Zuckerman, and Yochai Benkler. 2017. *Partisanship, Propaganda, and Disinformation: Online Media and the 2016 U.S. Presidential Election. Research Paper, Berkman Klein Center for Internet & Society.*
2. Newman, Nic, Richard Fletcher, Antonis Kalogeropoulos, David A. L. Levy, and Rasmus Kleis-Nielsen. 2017. *Reuters Institute Digital News Report. Oxford: University of Oxford.*
3. Tine Ustad Figenschou and Karoline Andrea Ihlebæk. 2018. *CHALLENGING JOURNALISTIC AUTHORITY - Media Criticism in Far-Right Alternative Media.*
4. Krämer, Benjamin. 2018. "How Journalism Responds to Right-Wing Populist Criticism." In *Trust in Media and Journalism: Empirical Perspectives on Ethics, Norms, Impacts and Populism in Europe*, edited by Kim Otto and Andreas Köhler, 137–154. Springer VS.
5. Deuze, Mark. 2005. *What is Journalism? Professional Identity and Ideology of Journalists Reconsidered. Journalism 6 (4): 442-464.*



# THE NEGATIVE INFLUENCE OF THE CORONAVIRUS PANDEMIC ON SECTORS OF THE ECONOMY

**Zafar Haydarov**

Manager of the sector  
“Assistance on the information and consulting”,  
Kashkadarya Regional Department of  
the Chamber of Commerce and Industry,  
Uzbekistan

## ANNOTATION

*This article clarifies one of the current pressing issues, that is, the impact of coronavirus pandemic on the economic sectors of the states. Moreover, the article highlights the unemployment rate, structural changes in the economy to ensure food security, agricultural production and rational use of land resources, development of agro-industrial complex and solving problems of social protection in the conditions of coronavirus pandemic.*

**KEYWORDS:** coronavirus pandemic, economy, stability, unemployment rate, food security, agricultural production, rational application, land resources

## INTRODUCTION

In spite of the fact that humankind has experienced many disasters in the history, and there have been several diverse crises in the world countries, it is admitting that such a situation has not been observed as nowadays.

According to The World Health Organization (WHO) and the International Monetary Fund (IMF), the deep-rooted and profound social and economic consequences of the global pandemic that is covering the whole world are worsening day by day.

Nowadays, the COVID-19 coronavirus pandemic is influencing nearly in all real sectors of the global economy, including industry, agriculture, trade, construction, transport, tourism and other services, as a consequence, the unemployment rate is rising.

## LITERATURE REVIEW

In the history, economic crises have been largely occurred, and to a certain extent have also had a negative impact on social life. Today's crisis is being assessed in socio-economic terms accordingly.

International experts are estimating that world trade will fall by 30% by the end of the year, and there is a possibility of more than 40 million people becoming unemployed. While the EU unemployment rate averaged 6.2 percent in early 2020, the figure is expected to rise to an average of

12 percent in UZA in countries such as Spain, Italy, France and Greece.

It is said that unemployment rate has risen sharply since May in the United States.

According to the basic forecasts of the International Monetary Fund in the first half of this year, the world economy is expected to shrink by 3% in 2020. The economic downturn could be 6.1% in developed countries (including 5.9 % in the United States and 7.5 % in the European countries), 5 percent in developing countries, 5.5 % in Russia and 2.5 % in Kazakhstan.

Such a tragic situation in the world also affects Uzbekistan. In the first quarter of this year, the economic growth rate in the country decreased by 1.6% compared to the same period last year.<sup>1</sup>

In addition, the volume of planned investments has decreased significantly. This was stated in the report of the Ministry of Economic Development and Poverty Reduction on the current state of the Uzbek economy and expected trends.

In the second quarter of 2020, the economic growth rate was 4.1%, a decrease of 1.6% compared to the same period last year (5.7%).

<sup>1</sup> UZA Mamayunus Pardaev, Professor of Samarkand Institute of Economics and Service, Doctor of Economics; Alisher Eshtaev, Vice-Rector of Samarkand State University, Doctor of Economics, Associate Professor





In line with the information of The World Bank, the coronavirus poses a threat to food security in Central Asian countries, and it states that there is a need to actively develop agriculture and expand cooperation in order to rectify the situation.

According to World Bank experts, economic growth will resume in 2021. This will be facilitated by the gradual recovery of commodity prices in world markets and global trade chains, increasing domestic demand for goods and services in the economies of countries. However, the negative impact of a number of factors on the implementation of this forecast remains high. These include factors such as the second wave of coronavirus infection, the longer-term depression in financing and investment, and the unexpected increase in economic recession due to the sharp decline in remittances.

In 2021, economic growth in Europe and Central Asia is expected to average 3.6 percent as a result of the pandemic's impact on the economy diminishing and trade and investment gradually recovering.<sup>2</sup>

In an online briefing for the regional media and the expert community, Sergiy Zorya, the World Bank's senior economist for agriculture, said that in the next three months - the countries of the region will face certain challenges, food in Central Asia will account for 40-60% of the population's expenditures, which makes people more vulnerable to rising prices than in other parts of the world". In particular, according to the World Bank, in the next six months, demand for food is expected to decline due to economic problems in the region, including a drop in the income of labor migrants and their inability to send money to their families<sup>3</sup>.

## RESEARCH METHODOLOGY

Unemployment is one of the main problems in Uzbekistan, as in many other countries. What causes the unemployment problem?

- Most of the enterprises have temporarily ceased operations;
- The need for new jobs for thousands of able-bodied people every year;
- Due to the return of citizens who have left the country in search of work abroad.

The process of unemployment of employees in our country has led to the almost cessation of activities in almost all sectors.

**In particular, the problem of food security** is one of the problems in our country as a result of the impact of the coronavirus pandemic.

While this is resulted from the relative cessation of all production and service activities during the quarantine period, another problem is related to the disruption of international relations, the disruption of import-export relations due to border closures, declining transportation services, disruptions in logistics services, exchange of goods and services.

In a number of countries, the epidemiological situation and quarantine have led to restrictions on the organization of agricultural work. Many countries around the world are imposing administrative and economic restrictions to ensure food security. Accordingly, the significant economic and negative impacts of partner countries on the sale of products to us or the purchase of Uzbek products have been demonstrated.

## CONCLUSION

In conclusion, all countries have begun to develop measures to tackle with the problems of food security.

What should Uzbekistan do in such conditions? What can be done to solve these problems ?! What else can be organized? These questions are becoming a topical issue.

One of the ways to solve the problems of unemployment and food security is through self-employment of the population, effective use of land, not only themselves, but also citizens, as a result of ongoing reforms to become entrepreneurs and export their products to domestic and foreign markets. In addition, it is necessary to increase exports in foreign markets. During the pandemic, health care, as well as economic development, today the government has allocated 350 billion soums from the state budget for the implementation of new projects in the field.

Practical measures have been taken to double the volume of fruit and vegetable and livestock production, to establish a family business in cattle breeding, to provide each family with a subsidy of 500,000 soums for the period of poultry farming.

Today, the focus on the development of agriculture, increasing the income of the population in our country, ensuring their employment, eliminating food insecurity, as well as the export of fruits and vegetables to foreign countries, opens up great opportunities.

<sup>2</sup> <https://review.uz> June 19. 2020 y - Quarantine measures introduced as a result of the COVID-19 pandemic and the fight against coronavirus have led to a significant reduction in domestic demand for goods and services in the economies of countries in Europe and Central Asia.

<sup>3</sup> [central.asia-news.com](http://central.asia-news.com)



## REFERENCES

1. *UZA Mamayunus Pardaev, Professor of Samarkand Institute of Economics and Service, Doctor of Economics; Alisher Eshtaev, Vice-Rector of Samarkand State University, Doctor of Economics, Associate Professor*
2. *<https://review.uz> June 19. 2020 y - Quarantine measures introduced as a result of the COVID-19 pandemic and the fight against coronavirus have led to a significant reduction in domestic demand for goods and services in the economies of countries in Europe and Central Asia.*
3. *central.asia-news.com*



## AGRITOURISM AS A TYPE OF TOURISM

<sup>1</sup>Jamila Djumabaeva

<sup>1</sup>National University of Uzbekistan  
named after Mirzo Ulugbek, Uzbekistan

<sup>2</sup>Zulfizar Yakhshieva

<sup>2</sup>Jizzakh State Pedagogical Institute,  
Uzbekistan

### ABSTRACT

*Following work is dedicated to the mountains and mountainous areas of the Jizzakh Province and its territorial structure. It can be described as 102 villages in 10 groupings administrative districts in the totaling 430 villages. The province has 561 villages, so 80% are situated in mountainous areas of the region. The main factor in their development is the infrastructure for agritourism in the villages of the area.*

**KEYWORDS:** Jizzakh Province, Zaamin, infrastructure, agritourism, tourist industry.

### INTRODUCTION

Agritourism is a type of tourism in which people visit border villages, where they learn about village life and culture and the constant cultivation of products, save and reaction of made again them. Organized tourism and agritourism were established in Italy in 1965, but they were first developed in France in the 20<sup>th</sup> century. Later this type of organization began in Italy in 1995 and was called "Agriculture and Tourism" (Agricoltura ut Turisme). Nowadays many such organizations operate in many countries of the world with state support. Countries that have developed agritourism include Greece, Malaysia, Germany, and Russia. These countries must pay special attention to farmers and the population of villages, which has led to special laws in this area, such as the "Green Certificate" awarded to farms in Latvia. This program has great potential for attracting local and foreign tourists and accommodating them in farmers' households.

Jizzakh has some mountainous regions: Bakhmal, Zaamin, Forish, Gallaaral and Yangiabad. This field is expected to develop quickly over the next 10 years in Uzbekistan, and the necessary measures will be carried out. And agriculture in this zone has developed. The majority of the population lives in villages (74% in 2007). So, many progressive socioeconomic laws have developed in the 20<sup>th</sup> century for the villages located high in the mountains and in the mountain zone: Makhul, Serdyur, Oykor, and Bagishamol are situated in the Sangzor Valley; Gulshan, Chorvedor, Omongeldi, Kizilkum, Karaobod, Eshbulak and some other villages are situated in the Zaamin and Nurata mountainous areas.

### MATERIALS AND METHODS

Zaamin is considered as an agricultural zone in Uzbekistan, which has preserved its original appearance and has unique flora and fauna. It is located in the Jizzakh Region of Uzbekistan on the tourist route between Samarkand and Tashkent. According to archeologists, the age of Zaamin exceeds 2000 years. Its importance as a key settlement on the trade routes, which later became the basis for medieval caravan roads, was very high. Zaamin has long been a part of one of the oldest agricultural regions of Central Asia – Ustrashany, located between the ancient regions – Sogd and Bactria, Fergana and Chach, between Syrdarya and Zarafshan.

Zaamin in Persian and Tajik means "agricultural land", because in ancient times it was noted for fertile soil. Today Zaamin is the green area, rich in various species of birds. In the depth of pine forests you can find such rare birds as a ring dove, bunting, turtle dove, blackbird, Turkestan owl and Turkestan starling. Also here you can find an unusual bird: white-winged grosbeak, with black, yellow and green feathering, which eats conifer seeds. The uncommon flora of Zaamin, named as "Uzbek Switzerland", deserves a special attention. The territory of park is covered with pine and conifer (archa) forests, unique all around Central Asia. There are more than 880 species of plants, and dozens of them are endemic.

In addition to unique nature, Zaamin has rich recreational resources. The national park is an ideal place for ecotourism, and Zaamin mountains are a candidate to the UNESCO List of Natural World Heritage.



The climate in Zaamin is subtropical. If we talk about the best time to travel there, spring and autumn are the ideal seasons for active tourism. The nice climate and clean air of Zaamin are good for treatment of respiratory diseases and nervous system. Also the forests of Zaamin is excellent place to go for both year-round treatment and prevention, and for winter recreation.

So, the first thing that is worth visiting during the trip is Zaamin National Nature Park (it is also a reserve). It is located on the area of 24 thousand hectares. The reserve is open for visits throughout the year.

Every year thousands of tourists come here to visit Sher-Bulok spring. According to the legend the water from the spring has medicinal properties. The favorite place to stay for tourists is Zaamin Health Resort. The sanatorium has everything necessary for qualitative diagnosis and treatment of patients.

The infrastructure of the sanatorium includes many rooms of different types, a children's playground with attractions, a bar, a library and a sports zone. If desired, guests can also hire a guide. Guest houses are available too. They tend to be more suitable for those who come to Zaamin to go skiing or to for other winter sports. There is a rental of sports equipment at the guest houses.

## RESULT AND DISCUSSION

Mountains are the esthetic riches of our country, so we must save them for our future. In this situation we can develop tourism, agritourism and ecotourism. There are some measures that may solve these problems: ordering house construction for the residents of villages; and marking the border of the mountainous area and not allowing houses to be built there. We must provide steady work for the population of villages and develop services and industry focused on that population.

We must improve life for people in villages, and we must use products of the earth. And everyone must use products of the earth. And everyone must take part in tourism. We must conserve water and agricultural products. The problems that need to be solved are significant for socioeconomic progress in Jizzakh. Mountain and desert areas form a single economic base for carrying out integration in the region. So we must analyze the nature of tourism in villages in Jizzakh Province, and most the most important factor is studying and publicizing amenities for tourists. This means assessing cultural, legacy and archeological sites, and keeping the areas separate and defending them from destruction of territorial centers of health and fitness.

So, we take into account tourist accommodations, which include archeological sites and the cultural legacy of the region. The villages of Zaamin, Bahmal, Gallaaral, Jizzakh, Forish and

others, all these historical sites have been studied well and are important for tourism in the country. We must also develop verification of archeological sites. In terms of ranking of tourist areas in Zaamin are located in western Turkistan and the Molguzar Mountains, and there are also historical and ethnographic villages. The villages of Jizzakh Province offer many types of tourist activity. There is active tourism such as hiking in the mountains; speleotourism, which is sports tourism in caves; united tourism, combining various activities; sport tourism, such as hunting and fishing; and ecotourism. There are also efforts to attract tourists to natural places or single elements: sightseeing; ancient natural features; single types of animals and plants; health and fitness or expecting illness. Other types of include cultural tourism, such as visiting historical and cultural locations; geographical tourism; visiting places of hospitality or centers for artisans; visiting historic sites and museums; and studying folklore and culture with artisans. That's why we must discuss these problems and prepare some business management for these problems and prepare some business management for these developments in Jizzakh Province.

## CONCLUSION

First of all we must develop knowledge among local people in villages in Jizzakh Province about tourism. Preparing experienced personnel for services for visitors and tourists, developing mechanism is the best way for mutual connection between local people and tourism, organizations for the protected territories, develop relationships among working groups, local organizations and farmer's organizations in Jizzakh Province.

Finally we must facilitate problems which list of visitors on hotels of village. And we must publicize agritourism in this and other regions.

## REFERENCES

1. *Ilashev A. Fan yutuqlari va ilg'orlar tajribasi el-yurt hizmatida. T.2009. P.234.*
2. *Tuxliyev N., Abdullayeva T. Ekologicheskij turizm: sushnost, tendensii i strategiya razvitiya. – T.: Natsionalnaya ensiklopediya Uzbekistana. 2006.*
3. *Samoylenko A.A. Geografiya turizma: Uchebnoye posobiye. – Rostov na Donu: "Feniks". 2006. 113 p.*
4. *Medik S. Dictionary of Travel, Tourism and Hospitality. Butterworth Heinemann, 1997, P. 318*
5. *Miriam Jacob and Peter Strutt "English for International tourism" Longman, 1997, P. 312*
6. *Cheong, S.M., and Miller, M. (2000) Power and Tourism: A Foucauldian Observation. Annals of Tourism Research 27(2): P. 371-390*
7. *Dann, G.(1996b) The Language of Tourism. Wallingford. CABI.*



## POETIC FORMS AND POET'S SKILLS

**Zoyirova Go'zal Nematovna**  
Teacher of the Boarding School  
For a Young Biologists and Chemists  
Named after Abu Ali Ibn Sina, Uzbekistan

### ABSTRACT

*This article describes the peculiarities of the representative of the Bukhara literary environment Samandar Vahidov in terms of poetic forms and poetic imagery, and tries to reveal the creative individuality of the poet in this regard.*

**KEY WORDS:** Artistic and aesthetic thinking, poetic form, duality, poetic image, skill, creative individuality.

### DISCUSSION

Poetry is such an ocean that as you swim, you pick up the jewels of words. Just as pearls are more and more captivating to a person, the more you look at them from couplet to couplet, the more you become fascinated by their magic. The floods of the poet's heart: storms and calm waves, involuntarily begin to flow into your heart. You're going to have to check your soul too. Because you will find the name of the feelings you feel in the moment in the ocean of poetry. It is safe to say that the poetry of Samandar Vahidov, a talented poet and translator from Bukhara Sharif, has a similar effect. In particular, in his poems entitled "Sakkizliklar", even seemingly simple events speak of unrestrained uprisings. It should be noted that the last quarter of the twentieth century was a period of renewal not only in world poetry, but also in the artistic and aesthetic thinking of Uzbek poetry. These changes, first of all, began to manifest themselves in the genre nature of lyrics. Poetic forms such as "Ikkilik", "Uchlik", "To'rtlik" and "Sakkizlik" were perfected. In the works of our great poets, such as Abdulla Aripov, Erkin Vahidov, Jamol Kamol, there are examples of poetic forms, rich in philosophical content and generalized ideas. Askad Mukhtor says about the demand for such small-scale poetic forms: "There are difficulties in working with this type of poetry. In it, the poet is in danger of indulging in didactics and advice at every step." <sup>1</sup> Creating original content in short lines and creating a unique image style naturally requires a great deal of skill on the part of the creator. The poet Samandar Vahidov's "Sakkizliklar" are a poetic form that arose in the face of similar demands at the request of his artistic thinking.

There is a man who lives in hope of something. In each case, they have seized it, despite

obstacles we can scarcely imagine. " But life is cruel. Not all the candles of hope burning in it will catch fire. "Once the endless harvest has been harvested, the green carpet has turned yellow. The wedding is over this morning, and the empty barn is empty. his couplets allow him to feel the state of a man whose hopes have become a mirage <sup>2</sup>

There are so many strong, insurmountable obstacles in life that one struggles to overcome them. The mind has the courage to do the impossible. But no matter how hard he tries, he is still helpless in the face of the ever-changing laws of life. Based on this logic of life, these lines are described in a very rhythmic way on the basis of the art of "Tashxis" (personalization) and intoq (speaking of inanimate objects), which makes one think deeply:

Po'rtana hayqirar jon-jahdi bilan,  
Cheksiz daryo bag'rin buzmoqchi kabi.  
Toshlarga to'sh urib, mag'lub etarkan,  
Qirg'oqqa tashlanar telba, asabiy.  
Ko'hna qirg'oq esa termular vazmin,  
O'ychan nigohida o'git bir jahon:  
"Ilk bor toshmayotir bag'rimda to'lqin,  
Bunchalar qiynama o'zingni nodon..."<sup>3</sup>

Many of Samandar Vahidov's poems in the "Sakkizliklar" series are about the qualities inherent in human nature. In one of them, the poet points out that a person always lives in pursuit of things that are not in him. The conclusion that one should appreciate what one has is clear from the text of the poem. Envious of the star in the sky and dreaming of looking at the sky from the sky, the star responds:

U miltirab der: "Inson,  
Nahot sen shuncha sodda?  
Men Yer dardida sarson,  
Sening ishqing samoda..."<sup>[4]</sup>



The poetic forms in S.Vakhidov's poetry are inextricably linked. This connection is evident mainly in the content of the ideas expressed in them. An example of this is the poet's poem "Conversation with the Mountain", written in the form of a dual in the essence of the above "Sakkizlik". Of course, this is not the individual genre in our classical poetry. The poem consists of eleven couplet, each pair rhyming separately (a-a, b-b, d-d...). Written in the form of a question and answer, this poem is about people who at first glance seem to be perfect in everything. When such people are compared to a mountain, it is as if there are tears flowing from their hearts, their majesty prevents them from walking, and the fact that they stand firm in a line is in fact a solidified devotion. If it turns out that he always enjoys the sun's rays, but the snow on his head never melts... No matter where the lyrical protagonist looks with pleasure on any side of the mountain, he gets the answer "like a widow complaining about her destiny." "I wonder if I once envied the mountains: Today, I think, even in the heart of the mountains, there are a thousand dreams," he said[5]. But the bubbling content of the poem is thought-provoking. One is to encourage people to live with gratitude, and the other is to persevere through perseverance. In fact, there are many people who, through the power of patience, inspire others to live. In the poems of Samandar Vahidov, he was able to find life images worthy of the metaphor of such people.

In S.Vakhidov's poems the images of stars, night and morning are also described in a unique way. The night is full of fire to give birth to the morning, and the stars are like the pearls of sweat on the face of the night. As the days go on, there are nights that seem to dawn soon. But the morning is still long, the sky is full of stars, and in the poet's words, the night is like "sleeping in pain to give birth tomorrow." Of course, the poem also reminds me of the pain of a mother giving birth to a child. The final couplet of the "Sakkizlik" expresses this even more deeply:

Ufq – tun etagi... Uning ostida –  
 Ko'zlarin uqalab, chiqar go'dak tong.  
 Tabiat, barkamol farzand ber tunga,  
 Go'dagin ko'rib, ko'z yumsin bearmon...[6]

The poetic conclusion is also significant in that the poet was able to give the necessary generalizations for humanity, for the future, from the usual natural phenomena, emphasizing that for centuries mankind has had the task of educating a harmoniously developed generation. In the above poem, night and morning are compared to a mother and child, while in another poem, the poet contrasts them. The night is sad because of the dawn, and the morning is upset because the night takes over the creature. Now, under "Horizon - the foot of the night", the dawn is not born, but the horizon is depicted in the form of a night with a bloody face.

What about the stars? We can see how they are portrayed in the words of the morning: "The night groans: 'Do not rejoice, celebrate one day, Then I will make a star out of your tears'" [7]

In all "Sakkizliklar" of his poems, Samandar Vahidov not only describes the events of existence, but also calmly describes their impact on his emotions. These natural phenomena seem to be caused by the feelings in his heart. Even the sun, which rises on the horizon every night, follows him, reaching for the horizon with the same kindness.

Yuksakdan ufqqa talpinar quyosh,  
 Men mushtoq chopganday onam bag'riga,  
 Nur olib erta tong ko'taradi bosh,  
 Men qonib qaytganday onam mehriga [8]

As can be seen, S.Vakhidov is one of the most common in the "Sakkizlik" of "intoq" and "Tashxis" art. shows.

Every poet wants his poems to be popular and to have a large readership. Because he longs to see many on the path he has begun to understand the truth, describing the sweet and bitter feelings he drank from the fountain of life on the path of life. Perhaps the heart of a creator holding a pen in his hand is thinner than silk. The reason is that the frustrations that seem insignificant to others, the poet's gaze, the poet's feelings, create a huge explosion. Then he prepares a shield from his poems against the evils that destroy human goodness. In his poem, which begins with the words, "I do not want to be like you, dear friend," the poet urges his reader not to succumb to the lowly, the lowly, the lame. Maybe it's good for someone to live with their hands on their chests in front of such pessimists, but for a poet's heart, for a creative person, it's like giving up oneself. In an environment full of hypocrites, the poet says: He emphasizes his philosophy of life, his ability to stand firm in his beliefs, and encourages his readers to do the same.

Modomiki, menday yashash dilda muroding,  
 Qismatingda faxrdan ko'p bo'lar faryoding,  
 Yashab ko'rgin – pand bermasa sabr-u saboting... [9]

So how do you live? Since a person has the right to live, how can he live a life that is sometimes uneasy, sometimes calm, but flowing like a river? In his poem "Yashash huquqi" S.Vakhidov said, "If a flower does not break from the blow of your footsteps, if the spark of love does not die in your heart, if the fountain of Mercy does not stop, if your friends do not leave your house, you have the right to say He makes a number of comments. This means that a person must live "soul to soul." Only then does he have the right to say, "I have lived." The general conclusion of the poem is that a person who cannot keep his heart free from the scourge of arrogance, jealousy, and corruption will only live. In the poem "munosabat", the poet secretly tells his reader that life is a balance of good and evil, black and white,



and that man, as a human being, must live by the principle of humanity. Let the dam pass through the sea of rivers that do not overflow with stones, the rivers that do not feel the danger of the tricks of the traveler, the rivers that do not feel the danger of the tricks of the traveler. According to the author, every creature in the world has a burden to carry, and even the heaviest must carry the weight.

Ro'baro' chiqmasang sabotim sinab,  
Qasdinga tig' emas, yursang tig' qayrab,  
Tirnoqning ostidan yursang kir izlab,  
Men o'ngdan kelganda, yo'lni solsang chap,  
Ag'yor, ag'yorlikning bahridan o'tgil![10]

In the poem "Agar..." the poet examines his feelings, creativity and life in the same way. In it, the poet is ready to give up his bar, saying, "You are a penny," if his poems, love, anger, and even his life are worthless. S.Vakhidov is a poet who, despite his love and anger, can assign great tasks to the cause of goodness.

In his poem "Karavan" [12], S. Vahidov observes Abdulla Aripov's sharp philosophy: If it breaks, Is it guilt, Is it sin? This echo is the soul of the rushing desert - Return and turn from Hope. A caravan is a person who is on a mission to a higher goal. And the bell is the echo of the success of this passenger as he travels - the prey he gains as he moves. His voice gives hope to the desert, to those who have given up on their dreams, and calls them to their destination. What about dogs? Dogs - "Dead begs for help from silence, Danger is at the bell of the caravan." Dogs are jealous people who are ready to tear you to pieces. They are ready to do anything to keep their peace. But that's not what the poet wants to emphasize. In the last lines of the poem there are lines of condolences to Abdulla Aripov, who is walking among the dogs of the caravan of life. (There are dogs, and everyone knows the caravan is passing.) That is, "It is a miracle that the whiteness of the white is not covered by the imperceptible black, the caravan is not known, unless the dogs bark at the dog. The poet hates the diversity of hypocrites, his heart breaks as if he were about to burst:

Manov nusxa tushganmi oydan,  
Soyasidan yuribdi tonib.  
Kecha o'zi tuurgan soydan,  
Ixlos ila suv ichar qonib

Even so, owning one is still beyond the reach of the average person, who says, "You try to be human, life, you play like a monkey." [13]

In his poems, S.Vakhidov depicts unique human relations through poetic images, and one can be sure of how optimistic the poet's heart is. There is something else that makes her beautiful in a troubled world. These are eternal values, pure feelings that have been cherished since childhood. No matter where you grow up, no matter where you live, you will miss the places of your childhood and the feelings you felt at that time. Whenever he returns to

that place, at any age, in any situation, he feels at peace, as if he has forgotten the worries of life for a moment. Many of the poet's poems are about this beloved place, about his native village, where his first poems, in his own words, inspired him to finish his "grave poems". The poet recites a heartbreaking, heartbreaking, long-suffering victim of a distant past.

Umrimdan mamnunman,  
Toleimdan shod,  
Dunyo kezgan sari – hislarim daryo,  
Yorqin istiqboldan so'zlaydi hayot,  
Va lekin, rostini tan olsam, goho –  
Sizni qo'msab yoshga to'lar ko'zlarim,  
Olis bolalikda qolgan hislarim! [14]

Samandar Vahidov is a singer of emotions dear to such a person. He is a creator who can turn his student into a pure-hearted person, urging him not to make mistakes that will erode his conscience in his life. Therefore, he himself considers it his highest goal to do good deeds, saying, "If you live like the air, enjoy the air." The content of the emotions born in his heart was able to harmonize with the poetic form and poetic images in his poems. It is this aspect that determines his poetic nature and creative individuality, the level of ideological and aesthetic thinking.

## REFERENCES

1. Воҳидов С. Айланадир бу дунё. Сайланма. I жилд.– Бухоро, 2003.74- 323-322-135-271-р
2. Ёўлдош Т. Ошиқ кўнгли: Шеърлар.Кириш сўзи Асқад Мухтор.-Т.:Адабиёт ва санъат,1979. 3-19-41-54-71-103-332-р
3. Жабборов Нурбой. Замон.Мезон.Шеърят. – Тошкент, 2015.
4. Улугбек Ҳамдам. Янги ўзбек шеърят. – Тошкент, 2012.



# PROBLEMS OF FORMATION OF THE CONTENT OF EDUCATIONAL-METHODICAL COMPLEXES IN THE SYSTEM OF PROFESSIONAL DEVELOPMENT

**Jumanazarov Sirojiddin Salaydinovich**

Tashkent City Regional Center of training and retraining  
the personnel of public education,  
PhD, Tashkent,  
Uzbekistan

## ABSTRACT

*In this article, issues of formation of the content of educational-methodical complexes on the basis of modern information technologies in the system of professional development of personnel of public education are considered.*

**KEYWORDS:** *Innovation, innovative process, innovative activity, educational-methodical complex, information technologies*

## INTRODUCTION

The innovative activity of the educator is an indispensable part of the educational process. The introduction of innovation in education makes it possible for educators to adapt to changing conditions and use non-standard methods during lessons. Modernized education in the present day requires new views and approaches from each educator, not limited to old and tested methods. The educator should be able to attract them to the educational process with the aim of giving knowledge to the students and educating the growing younger generation with the embodiment of creativity, but also achieve effective results. In this case innovative methods and approaches will not only help make the course process interesting, but will also have prospects for the development of educational content.

In this article are considered the issues of creating educational and methodological complexes for a particular educational module and the formation of its content on the basis of modern information technologies in the orientation of educators to innovative pedagogical activities in the system of professional development.

**Main part.** To create educational-methodical complexes for the system of professional development of personnel of public education, it is necessary to keep to the following rules:

- to write easy to read and understandable texts, which can help to develop the existing knowledge and skills of the educators;

- to put interesting schemes, diagrams, various drawings and tables which can help to develop educators' knowledge related to their subject;

- to test the knowledge and skills of educators, to bring practical exercises and control questions;

- to give assignments to find solutions to problematic situations that educators face in their professional activities.

In order to ensure the quality of the educational and methodical complex, it is necessary to pay attention to the following:

- to take into account the existing knowledge and practical experience and needs of the educators;

- to take into account the opportunities of all regional centers in the Republic, the circle of educators and their qualification conditions and abilities in the creation of educational-methodical complexes;

- to take into account the age of the audience of the language of the created educational and methodical complexes;

- the curriculum of a particular training module should be used as a basis for the creation of educational and methodological complex;

- attention should be paid to a number of features such as motivating the audience to activity, ensuring creativity in them, directing them to innovative pedagogical activity on the basis of specific goals and tasks, and of course being





connected with professional activity, without limiting the created educational-methodical process to provide information.

In the process of preparation of educational-methodical complexes, it is first worked with its manuscript. The following requirements must be observed in this process:

- the educational-methodical complex is based on the subject program included in the standard curriculum of advanced training centers;
- coverage of the latest achievements of Information Technology;
- the use of new materials created by foreign authors in this field of science;
- to provide control questions, tests, practical assignments for independent control of acquired knowledge on the basis of active pedagogical technology;
- to provide with decorations, images and drawings which help to develop educators' existing knowledge;
- the availability of recommendations to the educational literature as well to further develop the educators' knowledge independently.

It is also recommended to base the creation of educational and methodological complexes on the following tested criteria [1,2]:

- to compose the text of the lesson in a clear and logical way;
- to facilitate the learning process, pictures and drawings should be placed on the pages of the educational-methodical complex;
- the texts should be written in a clear, fluent and interesting way, taking into account the qualifications of the audience, and the examples given should be relevant to their experience;
- theoretical and practical lessons in the educational-methodical complex and the knowledge related to them are briefly described and deeply connected with the concluding part;
- to take into account the knowledge needs of educators in different regional centers of the country;

• the educational-methodical complex is fully consistent with the curriculum, and written in a form that fully covers it;

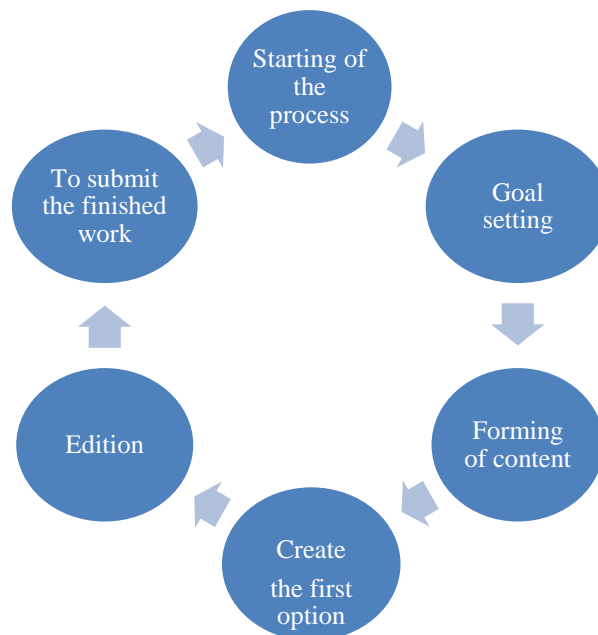
- to ensure the accuracy, color consistency and reliability of the content of the materials presented in the coverage of the topics;
- the attention is paid to the size, the use of colors in place, the quality of the paper and the cover in the created educational and methodological complex;
- adherence to criteria such as the inclusion of tasks that encourage educators to work on the given material and innovative pedagogical activities.

The content of the created educational-methodical complexes should be ensured that the listeners can develop the skills independently and free thinking, improve existing knowledge, learn independent, search new knowledge [3,4].

Also, educational-methodical complexes created on the basis of the above criteria should be convenient for listeners. It should also respond to the following:

- be interesting and captivating;
- to enable the listener to develop his / her skills, knowledge, concepts and outlook on science;
- include the material required in the formal curriculum;
- be understandable and easy to use;
- to provide examples, issues, life situations and practical concepts;
- to have pictures and diagrams that will help to link practice and theory;
- to take into account national and cultural traditions and values of the Republic;
- ability to match the listeners' qualification trends, taking into account both the high level of qualification and the low level of listeners, etc.
- should be appropriate to the qualifications of the listeners. High- and low-level of listeners should also be considered, etc.

The stages of creation of educational-methodical complexes for the system of advanced training can be schematically expressed as follows:



**1-picture. Stages of creation of educational-methodological complexes for the training system.**

To create educational-methodological complexes should be followed to the above sequence. We will talk about them below.

**Starting of the process.** Before the creation of educational-methodological complexes, the author should clarify the following:

- how to write an educational-methodical complex and for what qualification direction of listener is intended;
- getting acquainted with the approved training program plan and to determine the size of the allocated hours;
- who uses the educational-methodical complex and its specific goals;
- take into account the qualifications of the listeners and the level of using in their professional activities;
- to get acquainted with the available literature on the training module;
- study, analysis of other educational-methodological complexes and definite of requirements and criteria.

**Goal setting.** After clarifying the task, it is necessary to find the answers to the following questions:

- how and Who uses the educational-methodical complex? (the educational-methodical complex is determined for which areas of professional development and considered about its creation);
- what knowledge and skills do the listeners develop after using the created educational-methodical complex?

- what does the educational-methodical complex include? (clear concept, term, definition, rules, along with the idea and coverage of the main topic).

**Forming of content.** It is usually as follows:

- working program;
- using of active pedagogical technologies in the training module;
- theoretical training materials;
- practical training materials;
- case bank;
- topics of independent study;
- glossary;
- references.

**Create the first option.** The text of the materials prepared for the educational-methodical complex is edited several times depending on the needs of the listeners and the content of the educational module. The original text, pictures, diagrams in the creation of the internal content of the topics, as well as its content and structure are shown to other specialists. The feedback which they expressed will be explored. After that, the first option is formed.

**Edition.** The final option is usually edited in the following two ways.

- *Content edition.* Changes in the content of the text and the system of the educational-methodical complex are made by an expert.
- *Technical edition.* The technical improvement of the educational-methodical complex, the form - the interface, the shape, size of the letters, sequence of content, interpretation of images, clarity



of diagrams and tables, and other necessary aspects will be edited.

**To submit the finished work.** At this stage, the educational-methodical complex is recommended for listeners.

The advantage of using the educational-methodical complexes created for the system of professional development is that it contains materials relevant to the areas of skills for the orientation of listeners to innovative pedagogical activities, so that they can receive the necessary information at a convenient time.

Experience has shown that in the creation of educational-methodical complexes, a group of authors usually creates a higher quality complex than an author working individually. If it is decided to work as a team in the creation of educational-methodical complexes, it is useful to take into account the following:

- meet frequently to exchange ideas;
  - make important decisions together;
  - correct distribution of logically tasks and at the level of the author's capabilities;
  - set deadlines and strict adherence to them;
  - define the form and content of topics and sections to maintain a unique style, and so on.

We consider the role of pedagogical tools in the creation of innovative pedagogical activity of listeners with the help of the educational-methodical complex "Pedagogical software tools", which combines the above requirements, created on the basis of innovative approaches and currently used in the system of professional development [5]. The topics of this educational-methodical complex are formed on the basis of the study and analysis of the competence of trainees in information and communication technologies, who came to the regional centers for training.

The complex also takes into account the current state of science and technology, interdisciplinary integration and modern education. The goal is to develop trainees' competencies in creating e-learning resources using pedagogical software tools in their professional activities.

In the process of creating a set of educational-methodical complex "Pedagogical software tools" trainees should be able to use modern information and communication technologies in their professional activities, to create educational materials in electronic format and have information security competencies, as well as based on existing knowledge basically the formation of an organic sequence of topics is also taken into account. Therefore, in the theoretical part of the educational-methodical complex the basic concepts of pedagogical software tools in the educational process are given, and the necessary technical means are theoretically introduced.

The iSpring program is designed to develop the skills and abilities to create interactive electronic tests and 3D books using the opportunities of the author's program to increase the effectiveness of the educational process in practical training, and to create multimedia e-learning materials.

In the system of professional development, when passing a training module on the basis of this educational-methodical complex, special attention should be paid to the following: the purpose, content, form, methods and tools.

When the above is appropriate, the listeners can achieve following results:

- develop listener's media culture;
- develop listener's creativity;
- focuses on innovative pedagogical activities.

**Conclusion.** The formation of educational-methodological complexes on the basis of innovative approaches, as mentioned above, creates a number of advantages in the system of professional development in directing trainees to innovative activities.

## REFERENCES

1. Taylaqov N.I. *Scientific and pedagogical bases of creating a new generation of textbooks in computer science for continuing education. Monograph.* - T.: "National Encyclopedia of Uzbekistan" State Publishing House, 2005. -160 p.
2. Jumanazarov S.S. "Forming block content "Usage of information and communication technologies in the educational process" on the basis of modern information technologies" *European Journal of Research and Reflection in Educational Sciences (EJRRES)*. Vol. 8 No. 7, 2020, 91-95 p.
3. Елдашева Г.В. *Современные педагогические технологии как средство повышения качества образования. Проблемы педагогики //Научно-методический журнал., Москва.- № 2 (47), 2020 г., 6-7 с.*
4. Karimova G.Q. *Pedagogical monitoring and the stages of monitoring in the process of person-oriented education in educational institutions. European Journal of Research and Reflection in Educational Sciences, Progressive Academic Publishing, 2019. 48-52 p. Vol. 8 No. 4, 2020, Part I 157-160 p.*
5. Mahkamov A.A., Jumanazarov S.S., Masharipov M.P. *Educational-methodical complex on the module of pedagogical software in the educational process. Tashkent. Regional Center for Retraining and Qualification of Public Education. 2018 y. - 78 p.*



## ISSUES OF ORGANIZATION OF DISTANCE EDUCATION IN THE TRAINING SYSTEM

**Eldasheva Gulnoza Vasildjanovna**

Tashkent City Regional Center of training and retraining  
The personnel of public education,  
PhD, Tashkent,  
Uzbekistan.

### ABSTRACT

*In this article discussed the tasks of the Working Group on the creation of educational and methodological provision of the course, which is considered the most important of organizational issues in the organization of distance learning in the system of professional development, are highlighted.*

**KEYWORDS.** *Distance education, educational-methodical material, innovation, educational technologies.*

### INTRODUCTION

At present, the improvement of the form and content of professional development of teachers of the system of public education, development of their professional and pedagogical competence is considered one of the pressing issues. In particular, the decree of the president of the Republic of Uzbekistan № PF-5538 "on additional measures to improve the system of public education management" dated September 5, 2018 is an obvious evidence of the fact that this problem is one of the priority issues today. In this decision, the tasks of radical revision of the order of professional development of teachers, the effective use of distance education were defined.

In accordance with this, the decree of the president of the Republic of Uzbekistan dated April 29, 2019 "on approval of the concept of development of the public education system of the Republic of Uzbekistan until 2030" was adopted in order to establish the priority directions of systematic reform of general secondary and extracurricular education in the Republic of Uzbekistan, and to introduce innovative By decree, the concept of development of the system of public education until 2030 and the road map for its implementation were approved. As one of the existing problems of the people's education system in the concept, it was noted that the existing system of professional development is not suitable for the needs of teachers, the content of qualification courses and the methods used are outdated, the mechanism of remote retraining of teachers through the use of modern information and Communication Technologies is not established.

In order to eliminate the above problems, within the framework of the concept, such tasks as the establishment of the use of modern technologies

in increasing the efficiency of work activities of teachers and managers, the implementation of measures to improve the efficiency and coverage of the system of remote training and retraining of teachers, the improvement of the quality of distance education were.

Due to these tasks, conducting scientific research on the issue of directing the audience to innovative pedagogical activity in the process of professional development, creation of educational and methodological provision associated with the organization of modern distance education courses on the basis of advanced pedagogical technologies, including individual-oriented education, is one of the actual tasks of the present period [1-3].

**Main part.** The main purpose of distance education, that which is used to improve the qualification of pedagogical workers in the system of public education, is to create the opportunity to receive education according to the needs of the voluntary qualification improvement institution, regardless of where the listeners live, to improve the quality of education by using the capacities of the professors and teachers in the.

Distance learning is a form of online (video lectures, tips, real-time remote control) and offline (independent acquisition of the relevant educational and methodological resources in the distance learning system) training of skills through distance learning methods, which are not separated from production.

Work on the organization of distance training is carried out in the following directions [4]:

- organizational and educational-methodical work carried out with the participants in the development of distance learning;



- to get acquainted with information and telecommunication technologies used in the development of remote qualifications, to study and to create a computer and software complex with the necessary technical capabilities;

- creation of educational and methodological materials for distance learning;

- to study and introduce the technology of instructional materials used in distance learning development.

In particular, the most important of the organizational issues of the distance learning system is the creation of instructional materials of the course. The creation of educational and methodological materials of professional development through distance learning is the task of a working group consisting of several specialists. It is the duties of various specialists to design, develop, deliver and carry out the process of training a qualification course through distance learning.

The composition of the Working Group is determined depending on the description of the course, the technology used, the planned period and the volume of funding. We can divide the course development team into two categories, namely content professionals and technology professionals. Content specialists include teachers, Methodists and editors of the subject (module) studied in the course. The leader of the Working Group can also be called a "manager", and he is engaged in organizational tasks. It is not necessary for the manager to be an expert in the science (module) that is given in the course, but it is desirable to have basic knowledge in this direction. It is possible to attract several professors and teachers to a group of content specialists. Because international experiments show that a group of authors, consisting of two or more people, creates a course material that is more qualitative than the authors who work individually. And the Methodist advises how to write the materials in order, how to apply the elements of interactivity. The editor studies the materials in an orthographic and grammatical way and makes corrections to the desired areas.

Depending on the technology used in the course of the planned distance training or retraining, specialists in the field of the desired technology are involved. Technology professionals include operator, Graphic Designer, audiomuhandis, videomuhandis, presenter, and Web designer. The Operator enters the specified text into the computer. The task of the designer in terms of graphics is extremely responsible. Because the level of visibility in the materials of the distance learning course plays an important role. Graphic designer comes with text, pictures, drawings and diagrams in the desired format, the materials bring the learner into an attractive position.

If it is designed to have audio and video materials in instructional materials, then

audiomuhandis and videomuhandis will be involved in the group. Audiomuhandis is engaged in recording, processing, recording, processing video, recording, processing and assembly works. Bringing the materials into the state of electronic manual is the task of the craftsman and Web designer. The presenter and Web designer are engaged in the introduction of audiomuhandis and videomuhandis materials into the electronic manual, the use of hypermurogens in the text, the use of test programs and other programs, to facilitate the assimilation of the learner and to bring the visual to a higher level.

It is the responsibility of the course developers to create meaningful and qualitative educational and methodical materials of distance learning development in accordance with the established requirements. Because, the quality of the instructional materials created is one of the main factors affecting the effectiveness of distance learning courses.

## CONCLUSION

The formation of educational and methodical materials of distance learning in the system of professional development on the basis of innovative approaches as described above creates some kind of relaxation for the listeners to master the materials presented. Each educational-methodical complex should reflect the content of a particular subject and should focus on the development of information and communication technologies of the audience. To do this, it is necessary to adhere to a certain logical sequence of learning in accordance with the existing knowledge, skills and qualifications of the audience.

## REFERENCES

1. *Елдашева Г.В. Современные педагогические технологии как средство повышения качества образования. Проблемы педагогики //Научно-методический журнал., Москва.- № 2 (47), 2020 г., 6-7 с.*
2. *Karimova G.Q. Pedagogical monitoring and the stages of monitoring in the process of person-oriented education in educational institutions. European Journal of Research and Reflection in Educational Sciences, , Progressive Academic Publishing, 2019. 48-52 p. Vol. 8 No. 4, 2020, Part I 157-160 p.*
3. *Jumanazarov S.S. "Forming block content "Usage of information andcommunication technologies in the educational process" on the basis of modern information technologies" European Journal of Research and Reflection in Educational Sciences (EJRRES). Vol. 8 No. 7, 2020, 91-95 p.*
4. *Елдашева Г. Масофавий таълим асосида малака ошириши натижаларини баҳолаш // Касб-хунар таълими.-Тошкент, 2007.-№1.- Б. 12-1*



# PRIVATIZATION PROCESSES AND THE CURRENT STATE OF THE REGIONAL SECURITIES MARKET OF NAMANGAN REGION

Ph.D., Assoc. Kadirova H.T.

Namangan Engineering and Technology Institute,  
Uzbekistan.

## ABSTRACT

*The article highlights the stages of privatization in the Republic of Uzbekistan, in particular its current stage - the sale of government shares in large enterprises. The current state of the regional securities market of the Namangan region is analyzed, the existing problems of the further development of the stock market are identified and proposals for their elimination are given.*

**KEYWORDS:** *privatization, financial market, securities market, jointstock companies, capital market, investment intermediaries and consultants.*

## 1. INTRODUCTION

The phased privatization in Uzbekistan can be defined as: the stage of small privatization (1992-1993), during which the targeted orientation of privatization was shown - this is the process of housing privatization. The possibility of redemption by members of labor collectives of the repurchase of the shares of their enterprises on preferential terms, as well as the preferential procedure for privatizing the property of state farms by collectives of agricultural enterprises; the stage of large-scale privatization (1994-1998), characterized by the massive transfer of enterprises to joint-stock companies; a stage characterized by the definition of a list of objects not subject to privatization (early 1998), which continues to this day.

Currently, the process of privatization of almost all facilities and enterprises not included in this list is ongoing. Consider several periods of the last stage of privatization.

It was noted above that the last stage of privatization involved the sale of government shares in large enterprises, and this process has been ongoing to this day.

So, according to the regional branch of the Namangan Oblast State Assets Management Agency for 2019, it was noted that on the basis of decrees of the President of the Republic of Uzbekistan and decisions of the Khokim of the oblast for 2019, 87 state assets (state share and real estate) were put up for auction through an electronic trading platform "E-IJRO-AUKSION" RSE "Tashkent". In particular, on the basis of a decree of the President R. Uz. No. PU-4300 dated April 29, 2019, the state shares of 4

regional joint-stock companies (Uchurgon Yoʻr JSC, Namangan Tola Textile LLC, Namangan Wine JSC, Namanganagromash LLC) were put up for sale.

Of these, state shares of 3 enterprises were sold in the amount of 46.7 billion soums. (Uchurgon Yoʻr JSC state share - 51.7 percent, 22.6 billion soums, Namangan Tola Textile LLC state share - 51.0 percent, 17.6 billion soums, Namanganagromash LLC state share - 91.5 percent, 6.6 billion soums.). Currently, work is underway on the implementation of a block of shares of Namangan Wine JSC state. a share of -57.24 percent, for a total value of 20 billion soums. through the RSE "Toshkent".

On the basis of the President's decision No. PR-5656 dated February 5, 2019, the state share of 5

business entities is envisaged (Korakul Sharob Savdo LLC, Yangyrgon fog mist Sharob Savdo LLC, Chortoog fog Sharob Savdo LLC, Capitalagroimpex LLC and LLC "Koyoshli yurt Uzumi"). Of them state. shares in 4 companies were sold for a total amount of 5.1 billion soums. (LLC "Korakul Sharob Savdo" - 100.0 percent state share, 789.2 million soums, LLC "Yangyrgon fog sharob savdo" - 100.0 percent state share, 1.6 billion soums, LLC "Chortokum fog" Sharob Savdo" - 100.0 percent state share, 2.6 billion soums, Capitalagroimpex LLC - 21.9 percent state share, 84.8 million soums).

Gos. the share - 7.5 percent of Kueshli yurt Uzumi LLC was put up for auction through the electronic trading platform E-IJRO-AUKSION for the amount of 173.7 million soums.

Including 57 units of real state property put up for sale with a cost of "1 soum", with the condition of



attracting investments of 14.9 billion soums and the creation of new 641 jobs, were sold in the amount of 1.08 billion soums.

According to the Presidential decree dated 10/10/2018, under No. PU-5552, agreements were signed on the transfer of 23 state-owned facilities with a "0" value directly, with the condition of attracting investment in the amount of 473.5 billion soums. and the formation of 2100 new jobs for a period of 3 years.

I analyze the fulfillment of social and investment obligations in the region, it should be noted that as of 01.01.2020, 93 sales contracts were signed (of which 29 with the cost of "0" soums and 64 at the realized price) with conditions for attracting investments for a total value of -38, 0 million dollars USA and 93.3 billion soums as well as the formation of 2564 jobs. Execution amounted to 42.02 billion soums. and 1119.0 thousand dollars. USA. Attraction of investments continues.

Since the beginning of the year, 38 contracts (compared to the previous period 2.5 times) attracted investments of 48.3 billion soums, which allowed these enterprises to start work and provide 1276 new jobs (an increase compared to the previous period amounted to 1.1 times).

For example, in the Kasansai district with a "0" value, the building and equipment of OJSC 89 "Motorcade" were sold. The investor of SOFIYA SOF TEKSTIL LLC has invested 5.1 billion soums. and organized the production of socks and storage of agricultural products, whereby created 82 jobs.

In the Yangikurgan region, in the Zarbdor IFI in an empty section of the hospital and facilities, OOO ISKOVOT SHIFO MASKANI invested 2.8 billion soums. and created 35 new jobs.

In the Pap district, through the sale of the building and facilities of the former "Asab Kasalliklari" dispensary with a "0" value, the investor "LITTLE TALENTS" NTT invested 500 million soums, organized a modern non-governmental educational institution and created -33 jobs.

In the Norin region, in the MFI "Norinkapa", in the empty building of the clinic "Norinkapa", a medical care center was established by the investor Soglik Garovi of a private enterprise, -2.1 billion soums were invested. and organized - 44 new jobs.

In the city of Namangan, in the empty building "Akhborot Tizhorat Markazi", 2.2 billion soums were invested by the investor of AISHA HOME TEXTILE LLC, whereby a Design Center was created and 75 jobs were created.

Investment obligations were not fulfilled by 8 parties to the agreement, compared with last year by - 5 more. The agreement with them was terminated.

As of 01.01.2020, there are 154 enterprises with state ownership in the region, of which: -5 AO, 58- LLC, 91- unitary enterprise.

Based on the order of the President R. Uz. dated December 11, 2019 on the transformation of enterprises with a state share of ownership into other forms of ownership, certain proposals were developed and submitted to the republican working groups by the founders of these enterprises.

In particular: - 7 enterprises were asked to change the form of ownership, 61st to realize the state's share in the authorized capital, 37 enterprises to complete their activities, in the 1st to partially realize the state's share. property, in the first - to implement with the condition of partnership of the state, in - 47 to leave in the introduction of the state.

The shareholder - Agency (founder) at the end of 2018 received a net profit of -11.8 billion soums. from 11 enterprises (2- AO and 9- LLC). Dividends were received in the amount of 5.9 billion soums, including the state share in them amounted to 3.3 billion soums.

Currently, there are 91 state-owned unitary enterprises in the region, 60 of which are operating; for 9 months of 2019, net revenue from production and services amounted to 270.4 billion soums, and net profit - 12.0 billion soums.

Of the remaining 31 enterprises, 21 are in the process of liquidation, 9 are inactive.

Based on the order of the Cabinet of Ministers dated 11/15/2019, for No. 24/12993 in the region, there are 8 enterprises (Namangandonmahsulotlari JSC, Namangan Tola Textile LLC, Uchurkon YoF LLC, Korakl Sharob Savdo LLC, Chortoq LLC fog sharob savdo ", LLC "Koyoshli yurt Uzumi ", LLC "Yangyrgon sharob savdo ", LLC "Namanganagromash ") approved the program "road maps" for 2019-2020 for the rehabilitation of low-profitable, unprofitable and unprofitable enterprises.

19.6 billion soums were invested in these 8 enterprises over the 11 months of 2019, which allowed to increase net revenue by 115.4 billion soums and thereby earn a net profit of 25.8 billion soums. At the same time, inventory worth 14.9 billion soums was realized, receivables in the amount of 3.4 billion soums were recovered.

For example, the net revenue of Uchurkon-yo JSC for the 11 months of 2019 amounted to 80.0 billion soums, the growth amounted to 1.12 times compared to the previous period.

For 15 low-profitable and unprofitable shopping malls and markets in 2019, regional roadmap programs were compiled. This allowed 8 shopping malls and markets to improve their financial situation.

In total, 1,113 cases were considered on bankruptcy issues by regional economic courts: 375 enterprises declared bankrupt in 2018 and did not complete bankruptcy proceedings in 2019, 738 enterprises declared bankrupt on January 1, 2020.



Out of 375 enterprises - 374 were removed from the state register, 1 enterprise continues bankruptcy proceedings.

Out of 738 enterprises, 252 completed bankruptcy proceedings and were removed from the state register.

During the reporting period, a total of 626 enterprises were removed from the state register. Of these, 33 enterprises by decision of the court continue their activities as a result of financial recovery. Currently, bankruptcy proceedings are ongoing in 487 enterprises.

In 2019, the Regional Agency for State Assets Management established a cash receipts plan for all sources in the amount of 4.5 billion soums.

Of these, 3.1 billion soums. from the sale of real estate, 100.0 million soums. from the sale of land, 1.2 billion sums from rent and 100 million sums. - other income. In 2019, the regional administration received 32.47 billion soums from all sources. and the established plan was implemented 7.2 times.

If we consider the structure of revenues, we can note that the greater share in them amounted to 2.2 billion soums from the sale of real estate, 201.3 million soums from the sale of land plots, and 28.77 billion soums from the sale of state from the lease - 828.2 million soums, fines and penalties amounted to 93.2 million soums.

The funds received went to the Agency in the amount of 31.28 billion soums, to the local budget - 634.4 million soums.

Regarding the implementation of the legal and legislative framework, it can be noted that the orders, orders, agreements and drafts of other legal documents of the Office were examined for compliance with the law. During the year, 363 orders passed a legal examination. In the event of a conflict between legal entities and individuals, measures were taken to resolve them or refer cases to the judiciary.

During 2019, the Office drew up a total of 118 contracts, of which 84 were sale contracts, 34 were others.

Out of 28 claims submitted in 2019: 5 satisfied, 6 rejected, 8 relatively satisfied, 5 completed, 2 not approved, 2 considered.

As a defendant, 20 claims were submitted: of which 2 were fully satisfied, 14 were rejected, 3 were not considered, 1 process was completed.

During the analysis of receivables and payables owned by the Office, measures were taken to reduce them, as a result of which, by the end of the year,

318.5 million soums were recovered. accounts receivable.

Considering the leasing of state property, it can be noted that during 2019, 206761, 31 square meters were leased. m. in 1797 subjects - rent to recipients: of them 149879.44 sq.m. - 1322 subjects of small business and private entrepreneurship due to which assistance was provided in the creation of 2760 jobs.

In the region, a register of non-residential premises owned by the state and provided for their rental is maintained. The information is updated weekly and the information is posted on the websites of the Chamber of Commerce and Industry and the State Assets Management Agency of the Republic of Uzbekistan, in addition, information is posted in the advertisements of the regional newspapers Namangan Kagiqati and Namangan Truth.

Organization of tendering of leased objects of state property is carried out at online auctions at the electronic auction site "E-IJRO AUKSION" in accordance with the decision of the Cabinet of Ministers R. Uz. dated June 16, 2018, No. 454 "On approval of the Charter on the procedure for electronic bidding for the sale of state property and leasing it."

In particular, as at December 31, 2019, a rental plan was set up - 9979, 46 square meters. m. - 55 free state. objects. Measures are being taken to lease them.

From the side of the state asset management agency in 2019, 4,881.72 million soums were attracted through the lease of state-owned facilities. , 1092.3 million soums. It was directed to the appropriate budget, 897.3 million soums to the corresponding fund, 2207.0 million soums to the income of lessors of state property on whose balance it is listed.

### 3. RESULTS AND DISCUSSIONS

As of 01.01.2020, we can consider the regional sectoral structure of enterprises with state ownership and by district as of 01.01.2020 according to table No. 1.





**1-Table**  
**Information About Enterprises With State Ownership In The Namangan Region As**  
**Of 01.01.2020.**

№	City and regions	Prep with state debt	Including by industry							
			Infor tech and communes	Kom neg, builds and rendered services	Hard Prom and Finance	Lay down prom mash system and electronics	SOC, tourism and pharmacist	Neftgaz , chemical industry	agricul tural and food prom	Prom zone invest.
1.	Namangan city	67	5	37	3	2	15	-	3	2
2.	Kosonsoy region	4		3						1
3.	Mingbulaq region	6		4			1		1	
4.	Namangan region	7		5					2	
5.	Narin region	8		5			2			1
6.	Pop region	12		9			1		1	1
7.	Turakurgan region	11		8			1		1	1
8.	Uychi region	5		4			1			
9.	Uchkurgan region	6		4			1		1	
10.	Chartaq region	9		5			1		3	
11.	Chust region	10		7			1			2
12.	Yangikurgan region	9		6			1		2	
	<b>Total</b>	<b>154</b>	<b>5</b>	<b>97</b>	<b>3</b>	<b>2</b>	<b>25</b>	<b>0</b>	<b>14</b>	<b>8</b>

Analyzing the higher table on enterprises with state ownership in the Namangan region as of 01.01.2020, it can be noted that of the total number of enterprises, the largest indicator of enterprises with state ownership in industries is in the communal sector, construction and services – 97 enterprises (63%) , the next place is occupied by 25 enterprises (16.2%) - social industries, tourism and pharmaceuticals, 14 enterprises (9%) - agriculture and the food industry and scanty shares - 8, 5, 3, 2 units. (5.2%, 3.2%, 1.9%, 1.3%) –industrial zones and investment, information technology and communications, heavy industry and finance, light industry, mechanical engineering and electronics, respectively.

Analyzing the foregoing, the following conclusions can be drawn. The privatization

processes in the region are continuing, and there is a tendency to further sell the share of state property, both directly to the buyer with a certain set value, and at zero cost, with the condition of attracting the established volumes of investments and creating jobs at the enterprise.

To fulfill the established tasks, the Center for Coordination and Control of the Securities Market was transformed into a State Asset Management Agency, which was fully staffed by highly qualified personnel, their number was increased from 20 to 50 people.

In the region, together with the relevant authorities, the concept “Strategy for the development of the capital market” was developed. An interdepartmental Council for the development of the capital market was created. To develop a strategy



for the development of the capital market, technical assistance of \$ 700 thousand was attracted. US funds EBRD and ADB. Emissions were recorded - 14.7 trillion. sum

150 billion soums of shares and corporate bonds - Infinbank (100.0 billion soums) and Asia Alliance Bank (50.0 billion soums).

Based on government decisions, in 2019, work continued on the placement of -20 percent of the shares of Quartz JSC, at the first stage -5 percent, 25%, IPO Zhizzakh plastic, 12%, SPO UzRHAB and 10%, SPO Aloka Bank.

For only 7 months of 2019, the capitalization of the AO quotation list compared to the previous similar period increased by 10.1 5 and amounted to 25 trillion. sum.

In order to further improve the infrastructure, -1.8 billion soums were involved.

However, on the way to the development of the financial market there are a number of problems that need to be addressed. One of the problems is the lack of highly qualified personnel, investment intermediaries and consultants. To solve this problem, in our opinion, it is necessary to improve the qualifications of participants in the regional securities market by attracting experienced foreign investment intermediaries and consultants, streamline the procedure for participating in the stock market and issuing licenses for this activity.

Another problem in our opinion is the lack of free circulation, which is one of the standards of liquid instruments of government securities (treasury bonds and bonds) for investors in the capital market.

It is necessary to develop a draft regulatory documents providing for the participation of individuals and non-residents in this market.

Lack of JSCs meeting all listing requirements is also one of the existing problems. To do this, it is necessary to develop a system of effective communication and agreement between a strategic investor, participants in the securities market and the Agency for the Development of the Capital Market when compiling a list of companies with state ownership selected for sale.

The next problem holding back the further development of the financial market is the lack of a system of protection (hedging) from risks associated with currency risks. For this, it is necessary, together with the consultants of the EBRD and ADB, to develop proposals for the development of a Strategy for minimizing currency risks, proposals for the use of derivative securities and instruments, and the introduction of appropriate amendments to the legislation on the securities market.

The development of an effective system for the further development of the capital market and the further attraction of foreign investment, the expansion of private property and the formation of the capital market as one of the main sources of

financing the national economy is also one of the main directions for further improving the financial market.

## REFERENCES

1. *The Law of the Republic of Uzbekistan "On the Securities Market" dated 07.07.2008 with ait. Lex . uz*
2. *Law R. Uz. "On the activities of depositories in the securities market" dated 08/29/98 site. Lex . uz*
3. *Law of the Republic of Uzbekistan "On introducing amendments and addenda to the Law R.Uz . "On the securities market"*
4. *08.05.2014g.site . Lex . uz*
5. *In Kazakh President R.Uz . "On Additional Measures to Simplify Procedures for the Implementation of State -Owned Objects and Rights to*
6. *Land Plots by Business Entities" dated October 10, 2018, No. U P-5552*
7. *Decree of the President "On measures to improve state regulation of the production and turnover of alcohol and tobacco products, as well as the development of viticulture and winemaking" No. UP-5656 of February 5, 2019. Website. Lex . uz*
8. *Decree of the President R. Uz "On the organization of the activities of the Agency for the Development of the Capital Market of the Republic of Uzbekistan" No. PP-4127 dated 01.01.2019. Website. Lex . uz*
9. *Decree of the President of P of the Republic of Uzbekistan "On measures on further improvement of mechanisms to attract foreign direct investment in the country's economy" . No. P P - 4300 dated April 29 ,*
10. *2019 . website. Lex . uz .*
11. *Butikov I.L. Stocks and bods market. T: Konsauditinform 2001. , P. 175.*
12. *Butikov I.L. " By ontseptualnye direction of market integration of the securities have ZBEKISTAN in foreign and international capital markets." Proceedings of the international conference of BFA R. Ouse. 2019 year.*
13. *Galanova V.A., Basova A.I. Stocks and bods market. M. : Finance and statistics, 1996.S. 170.*
14. *Gafurov Sh.R. Securities. T. : "Shark", 1996., S. 50.*
15. *Gusev I.A. Stock markets of the CIS countries: status and prospects of integration: monograph ;, under the editorship of Dr. econ . sciences, prof. Bb Rubtsova. Moscow, 2015*
16. *Yu Idasheva El Financial Market of the Republic of Uzbekistan: script development © 2017 Financial University under the Government of the Russian Federation, Moscow .*
17. *The Tashkent Times "Uzbekistan's financial markets development concept proposed for public consultation"*
18. *2017.24.07. <http://tashkenttimes.uz/finances/1206-uzbekistan-s-financial-marketsdevelopment-conceptproposed-for-public-consultation>.*
19. *Official website of the Republican Stock Exchange " Toshkent ".<https://www.uzse.uz/abouts>*



## ATTITUDE TOWARDS ANAEMIA AMONG ADOLESCENT GIRLS

**M.Abirami \***

\*Ph.D Research Scholar (Full Time),  
Department of Home Science,  
The Gandhigram Rural Institute –Deemed to  
be University  
Gandhigram-624302  
Tamil Nadu.

**K.S.Pushpa \*\***

\*\*Professor,  
Department of Home Science,  
The Gandhigram Rural Institute –Deemed  
to be University  
Gandhigram-624302, Dindigul,  
Tamil Nadu, India

---

### ABSTRACT

*According to World Health Organisation, Adolescents are defined as the period of life spanning the ages between 10-19 years. It is a vulnerable period in the human life cycle for the development of Iron Deficiency Anaemia. According to National Family Health Survey-4, 51% of women aged 15 to 49 years are anaemic in Dindigul District. The main objective of the study is to estimate personal background of the adolescent girls and to measure the attitude towards anaemia. A cross sectional study was conducted with 30 adolescent girls from the selected Government school in Palani Block, Dindigul, Tamil Nadu, India. Data was coded, analysed and presented in frequency tables and inferential statistics through SPSS version 23. The attitude statements are significant at 1% level and the adolescent girls have positive attitudes towards anaemia. Thus the study concludes that still there is a need of intervention measures to improve anaemia prevalence and nutrition education to limit Iron Deficiency Anaemia and anaemia related problems.*

**KEY WORDS:** Anaemia, Adolescent girls, Attitude, Palani Block.

---

### INTRODUCTION

According to the World Health Organization (WHO), anaemia is defined as a condition in which the number of red blood cells or their oxygen-carrying capacity is insufficient to meet physiologic needs. According to the WHO global database, anaemia is estimated to affect 1.6 billion people. The highest prevalence is found in preschool-age children (47.4%), followed by pregnant females (41.8%), non-pregnant females (30.2%), school-age children (25.4%) [2]. The World Health Organization (WHO) defines “adolescent” as an individual between 10 to 19 years of age. Adolescent girls demanded special attention in their health and nutritional care [4]. Apart from that, this life cycle stages has been important from the preventive intervention point of view, as any intervention at this stage will have a lasting impact on the life cycle of an individual. Intervention at this stage can rectify the development defects of early child [3]. Making adolescence as a key to give effect (general

education and health) is a positive thing. It is one of the important steps taken to improve women's health [11].

The main nutritional problems identified in adolescents are micronutrient deficiencies in general and Iron Deficiency Anemia (IDA) in particular. Over 50% adolescent girls consumed less than 50% Recommended Dietary Allowance (RDA) for energy while over 70% girls consumed less than 50% RDA of iron. Thus, adolescents are at high risk of iron deficiency and anaemia [5]. Problem stated in the present study is: keeping in mind the current scenario in Palani block, there is a strong feeling that poor dietary habits and anaemia prevalence are found among the adolescent girls.

Poor nutrition among the adolescent girls resulting in short stature and low lean body mass is associated with many adverse health problems particularly in future during motherhood. In India, NFHS-4 estimates reveal the prevalence of anemia to be 53% in adolescent girls in rural area. Early detection



and effective intervention of anemia among the adolescent girls improves the future productive life in terms of maternal and child health [13]. School-based nutrition education research studies were based primarily on a knowledge-attitude-behavior approach, while disease reduction/health enhancement studies were behaviorally oriented and generally based on social learning theory. Likewise, previous research nutrition and education are closely interlinked [12].

Knowledge Attitude Practice (KAP) assessment tool is a suitable instrument to assess and evaluate target group's current knowledge, attitude, and practices towards a specific problem under investigation; and it gives an effective feedback upon needs, problems, and possible barriers among the target group. In recent studies upon nutritional assessment Knowledge Attitude Practice evaluation has been commonly used [15]. Knowledge Attitude Practice questionnaire derived from Food and Agriculture Organisation (FAO) to use as an evaluation tool of KAP among adolescents. Furthermore, questions on attitude and practice related to IDA were used to identify the level of right attitude and practice towards health [10]. Hence it was decided to measure the attitude of the adolescent girls towards anaemia prevalence.

### OBJECTIVES OF THE STUDY

- To elicit personal background of the selected adolescent girls.
- To assess the subjects attitude towards anaemia.

### METHODOLOGY

Methodology is the general research strategy that outlines the way in which a research project is to be undertaken and, among other things, identifies the methods to be used in it [8].

### RESEARCH DESIGN AND SAMPLING

Cross sectional research design was carried Cross-sectional study design is a type of observational study design. In a cross-sectional study, the investigator measures the outcome and the exposures in the study

participants at the same time [14]. The study population consists of 30 adolescent girls from Palani block which is located in Dindigul District, Tamil Nadu, India. Sampling is concerned with the selection of a subset of individuals from within a defined population to estimate characteristics of the entire population [8].

### Sampling technique

Convenient sampling technique was used by the researcher to select the subjects. In this method, the investigators enroll subjects according to their availability and accessibility. Therefore, this method is quick, inexpensive, and convenient. It is called convenient sampling as the researcher selects the sample elements according to their convenient accessibility and proximity [6].

### Data collection procedure

Permission was obtained from District Educational Officer and Head Master for requirement of study participants. The data was collected through Google forms with a close ended structured questionnaire to the adolescent girls.

### Tool for attitude test

A structured questionnaire was used to assess the attitude of anaemia among adolescent girls. Questionnaire is one of the primary sources of data. It is an observational technique which comprises series of items presented to a respondent in a written form, in which the individual is expected to respond in writing [1].

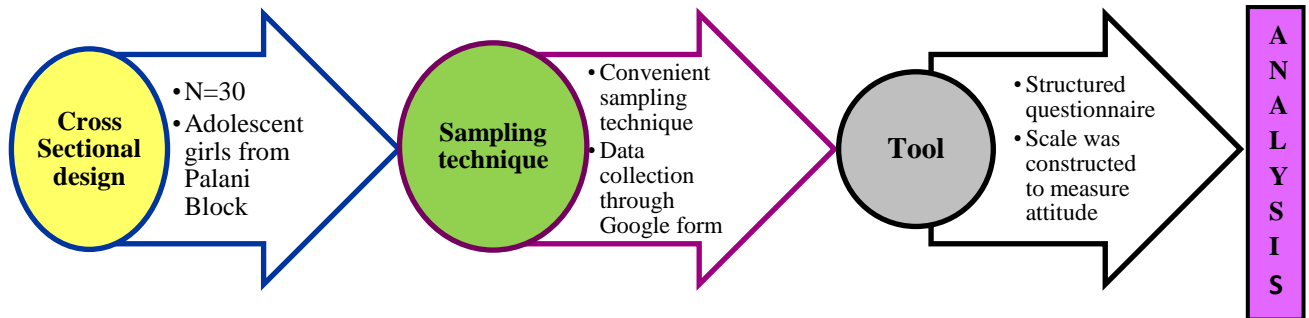
### Scale construction

Attitude scale was constructed and subjected to jury analysis by experts in the field of Nutrition and was refined based on their recommendations.

### Statistical analysis

The data were coded and analysed using SPSS version 23 to give clear picture of background information and to determine attitude level of school going adolescent girls. Quantitative data was analysed, tabulated and interpreted.

Fig.1 Research design of the study



RESULTS

Table 1 Personal background of the adolescent girls

Variables	No. of students (N=30)	Percentage (%)
<b>Age</b>		
15 years	12	40
16 years	4	13.3
17 years	6	20
18 years	8	27
<b>Class</b>		
9 <sup>th</sup> Std	12	40
10 <sup>th</sup> Std	4	13.3
11 <sup>th</sup> Std	6	20
12 <sup>th</sup> Std	8	27
<b>Residency</b>		
Urban	19	63.3
Rural	11	37
<b>Family Structure</b>		
Nuclear family	19	63.3
Joint family	11	37
<b>Educational status of the mother</b>		
Illiterate	4	13.3
Primary education	4	13.3
Secondary education	9	30.0
Higher Sec education	5	16.7
Degree	8	26.7
<b>Family income</b>		
Rs.5000/- Rs.8000/-	7	23.3
Rs.8001/- Rs.10,000/-	13	43.3
Rs.10,001 and above	10	33.3

Socioeconomic factors of the adolescent girls are represented in the Table 1. Out of 30 adolescent girls 12(40%) are in the age group of 15 years and they are in class 9, about 8(27%) are in the age group of 18

years and they are in class 10. Nearly 6(20%) are in the age group of 17 years and they are in 11<sup>th</sup> standard.



Majority of the adolescent girls 19(63.3%) belongs to urban area and nuclear family. Whereas 11(37%) belongs to rural area and joint family.

Out of thirty adolescent girls mother 9(30.0%) were educated upto secondary education, 8(26.7%) were degree holders, 5 (16.7%) were educated upto

higher secondary level. Only 4(13.3%) of the mothers were illiterate and educated upto primary level.

Most of the income 13(43.3%) was between Rs.8001/- to Rs.10, 000/-. Only 7(23.3%) of the adolescent girls family were below the poverty line. Those who are in the bracket of above Rs.10, 000/- constituted 10(33.3%).

**Table 2 Attitude of the subjects regarding anaemia**

S.No	Attitude Statements	Mean	SD	t value	P value
1.	Treatment of anaemia is expensive	2.00	.830	6.59*	.000
2.	Consuming deworming tablets will kill the worms.	1.07	.794	4.82*	.000
3.	Regular exercise helps in curing anaemia.	1.47	.730	3.50*	.002
4.	Food supplementation will prevent anaemia.	1.57	.728	4.26*	.000
5.	Drinking tea/coffee after meals will hinder the absorption of iron.	1.83	.531	8.60*	.000
6.	Consuming beet root and red meat gives red colour to the blood.	1.43	.679	3.49*	.002
7.	Anaemia in Adolescent Girls, increases susceptibility to infection and impairs learning ability.	1.40	.724	3.02*	.005
8.	Cheap/low cost fruits contain fewer vitamins.	1.77	.817	5.13*	.000
9.	Eating fish makes worms.	1.80	.551	7.95*	.000
10.	Drinking lime juice/orange juice will help in better absorption of iron.	1.87	.681	6.96*	.000

[Note: The values are considered statistically significant\* if the P value is less than or equal to 0.05 (P ≤ 0.05).]

Table 2 shows that the mean difference is significant for all the aspects Thus the analysis depicted that the statements have significant difference between the attitudes of the respondents towards anaemia.

## DISCUSSION

[9] Found that the main source of information for the students were family members and school teachers. The teachers and family members training will likely increase students' knowledge, influence their attitudes and motivate their practice. Health educators, therefore, should be involved in education of parents and teachers. The present study found that 40% of the subjects belong to the age group of 15 and they were in 9<sup>th</sup> standard. Majority of the respondents 63.3% belongs to urban and nuclear family. About 30.0% of the mothers were educated upto secondary level. Only 13.3% of the mothers were illiterate and they are educated upto primary level. The statements are significant towards anaemia. The attitudes are interconnected with knowledge and practices.

## CONCLUSION

School based nutrition education has potential to improve dietary practices that affect young persons' health, growth, and intellectual development. This health educational intervention will enhance adolescent girl's knowledge, skills and support to build positive attitudes towards preventing nutritional anaemia [7]. This particular age group helps the adolescent girls to grasp easily and helps in sharing their knowledge to

their peer groups. The GOI launched programme called "12 by 12 initiatives" addressing the problem of anaemia in adolescents, in collaboration with WHO and UNICEF, Federation of Obstetrics and Gynaecological Society of India. The programme is aimed to achieve haemoglobin levels of 12 g% by the age of 12 years by 2012. Under Rajiv Gandhi Scheme for Adolescent Girls-SABALA programme initiated in 2011, AGs are being received weekly supplementation of IFA tablets and biannual deworming (Albendazole) tablets. Despite all these programmes, the prevalence of anaemia among women and AGs is alarming [16]. Awareness to be strengthen to the Adolescent girls and their mothers regarding Anaemia Prophylaxis Programme, Anaemia Control Programme, ICDS Programme, Deworming Prophylaxis Programme etc.,

## REFERENCES

1. Ajayi, V. O. (2017). *Course Title : Course Code : Advance Statistical Methods in Education Course of Study : PhD Science Education Presentation Title : Distinguish between primary sources of data and secondary sources of data Candidate Names : Oluwatosin Victor Ajayi Lecturer. (September). Retrived from https://doi.org/10.13140/RG.2.2.24292.68481.*
2. Alli, N., Vaughan, J., & Patel, M. (2017). *Anaemia: Approach to diagnosis. South African Medical Journal, 107(1), 23-27. https://doi.org/10.7196/SAMJ.2017.v107i1.12148*
3. Athira, C., & Maneesh, P. (2016). *Adoloscence girls development and ICDS: A case study of*



- anganwadi centres in Kannur District , Kerala. *Indian Journal of Economics and Development*, 4(February), 1–5.
4. Bej, P. (2015). Adolescent health problems in India : A review from 2001 to 2015. 27(04).
  5. Chauhan, A., & Chauhan, S. (2016). Knowledge , Attitude , And Practices Of Adolescent Girls Towards Iron. I(Ii), 163–168.
  6. Elfil, M., & Negida, A. (2017). Sampling methods in Clinical Research; an Educational Review. *Emergency (Tehran, Iran)*, 5(1), e52. Retrived from <https://doi.org/10.22037/emergency.v5i1.15215>.
  7. Hossain M, T., & Khan Luies, S. (2017). Designing a School based Health Education Program to Prevent Nutritional Anaemia among the Adolescent Girls in a Rural School in Bangladesh. *Journal of Health Education Research & Development*, 05(03). <https://doi.org/10.4172/2380-5439.1000229>
  8. Igwenagu, C. (2016). *Fundamentals of Research Methodology and Data Collection*. LAP Lambert Academic Publishing, (June), 4. Retrieved from [https://www.researchgate.net/publication/303381524\\_Fundamentals\\_of\\_research\\_methodology\\_and\\_data\\_collection](https://www.researchgate.net/publication/303381524_Fundamentals_of_research_methodology_and_data_collection).
  9. Idonije, B., Oluba, O., & Otamere, H. (2011). A study on knowledge, attitude and practice of contraception among secondary school students in Ekpoma, Nigeria. *Jpcs*, 2(6), 22–27.
  10. Jalambo, M. O., Sharif, R., Naser, I. A., & Karim, N. A. (2017). Improvement in Knowledge, Attitude and Practice of Iron Deficiency Anaemia among Iron-Deficient Female Adolescents after Nutritional Educational Intervention. *Global Journal of Health Science*, 9(7), 15. <https://doi.org/10.5539/gjhs.v9n7p15>
  11. Patimah, S., Royani, I., Mursaha, A., & Thaha, A. R. (2016). Knowledge, attitude and practice of balanced diet and correlation with hypochromic microcytic anemia among adolescent school girls in maros district, South Sulawesi, Indonesia. *Biomedical Research (India)*, 27(1), 165–171.
  12. Perveen, R. (2017). Assessing the Influence of Nutrition Education among Adolescent Girls (13-16 Years). *Advances in Obesity, Weight Management & Control*, 6(4), 144–147. <https://doi.org/10.15406/aowmc.2017.06.00167>
  13. Saravanakumar, P., Muthusundari, A., Medicine, C., & Medical, G. S. (2017). Prevalence of Anemia Among the Tribal Adolescent Girls in Javvadu Hills in Thiruvannamalai, Tamil Nadu. (6), 25–27. Retrieved from <https://pdfs.semanticscholar.org/725b/104c194235529632ab034dbda7393c7eb759.pdf>
  14. Setia, M. S. (2016). Methodology series module 3: Cross-sectional studies. *Indian Journal of Dermatology*, 61(3), 261–264. Retrived from <https://doi.org/10.4103/0019-5154.182410>.
  15. Shahzad, S., Islam, K., Azhar, S., Fiza, S., & Ahmed, W. (2017). Impact of Knowledge , Attitude and Practice on Iron Deficiency Anaemia Status Among Females of Reproductive Age Group ( 20-21-year-old ) Studying in Government Home Economics College. 3(4), 31–36. <https://doi.org/10.21276/iabcr.2017.3.4.09>
  16. Upadrasta, V. P., Ponna, S. N., Bathina, H., S., B., Kapu, A. K. R., Sadasivuni, R., & Mitaigiri, C. (2019). Knowledge, attitudes and practices of adolescent school girls regarding prevention of iron deficiency anaemia. *International Journal Of Community Medicine And Public Health*, 6(6), 2694. <https://doi.org/10.18203/2394-6040.ijcmph201923462394-6040.ijcmph20192346>



## EYE CARE DURING COVID-19 SCARE: A REVIEW

**Kamal Pant<sup>1</sup>**

<sup>1</sup>Associate Professor & HOD,  
Department of Optometry,  
UP University of Medical Sciences,  
Saifai.

**Rajat Bansal<sup>2</sup>**

<sup>2</sup>Optometry Scholar,  
Department of Optometry,  
UP University of Medical Sciences,  
Saifai.

### ABSTRACT

*With the rise of COVID-19 cases, it becomes necessary and essential to have precautionary measures and also protective equipments during eye care as well as patient management in order to remain protected from any possible infection. All relevant latest research articles available on the PubMed related to the optometry point of view of the practice management were reviewed in order to summarize the ideal methodology of the optometric practice with standard guidelines and precautions in today's COVID-19 pandemic time. It has been realized that wearing glasses or a visor may reduce risk of contamination, but it does not protect against COVID-19 infections. Various other factors and aspects were considered for the formulation of standard operating procedures for the eye care during COVID-19 scare then standard guidelines and precautions were put forward by various eminent global organizations. These have been taken as gold standards and were incorporated to form a comprehensive guideline for the eye care with safety precautions for the Optometrists as well.*

**KEYWORDS:** Eye care, Optometrist, COVID-19, Contact lenses, Patient management

### INTRODUCTION

In January 2020, India also came in the grip of a new dreaded disease called COVID-19. This cluster of acute respiratory illness, now commonly known as Novel Corona virus – infected pneumonia (NCIP) originated in Wuhan, Hubei province of China during December, 2019. It rapidly spread out from Wuhan to other areas and even across various countries of nearly covering all continents.<sup>1,2,3</sup> This SARS-CoV-2 which causes Corona-virus disease 2019 (COVID-19) belong to a family of enveloped positive-sense single-stranded RNA viruses that are known to cause the common cold, influenza, and acute severe respiratory illness.<sup>1,4,5</sup> WHO (World Health Organization) on 30<sup>th</sup> of January, 2020 declared a public health emergency of International concern (PHEIC)<sup>6</sup> and later on 11<sup>th</sup> of March, 2020 COVID-19 declared the COVID-19 as a pandemic.<sup>7,8</sup> The new epidemic spread across the globe rapidly, affecting many countries especially Asian, European and American.<sup>6,9</sup>

COVID-19 not only affected the business and working of our government/ private offices but also hampered the whole educational system. The increase and spread of this pandemic resulted in many significant changes to the daily lives of the people as well as large number of deaths and significant

economic losses. As of 23<sup>rd</sup> August 2020, COVID-19 has been confirmed in nearly twenty three million people and resulted in just over 8,08,715 deaths<sup>7</sup> which is greater than caused by any other virus based disease globally in the past.

One of the first widely reported deaths due to SARS-CoV-2 was an ophthalmologist working at Wuhan Central Hospital in early January 2020, who reported that he had contracted COVID-19 from an asymptomatic glaucoma patient.<sup>7,11</sup> Subsequently, there has been a great deal of interest in the scientific literature as well as in the lay press about the association of SARS-CoV-2 with the ocular surface. This has resulted in speculation regarding the safety of contact lenses.<sup>7,12,13</sup> On realizing, the potential for transmission of the virus to and from the ocular surface, with implications for transmission among the general population and specifically in ophthalmic care, a set of recommendations for personal protective equipment (PPE) have been released based on the experience of MERS-CoV and SARS-CoV to counter the spread of infection amongst eye health workers. These recommendations include procedure and requirement of standard wearing goggles and/ or face shields for protection against ocular transmission of the CoV.<sup>6, 10</sup>





As the percentage of SARS-CoV-2-positive cases increases day by day, affected patients might frequently present to eye clinics or emergency departments.<sup>14</sup> When patients come to an ophthalmologist for an ocular examination, these patients have direct contact with examination equipment such as Slit lamp, Auto-refractometer, etc.<sup>15</sup> A recent report by Lu and colleagues<sup>16</sup> suggested that ocular surfaces may be a potential mode of SARS-CoV-2 transmission and that ophthalmologists are highly prone to getting infected. Lai *et al*<sup>17</sup> reported infection control measures which were based on a three-level hierarchy of control measures: the use of personal protective equipment (PPE), environmental control and administrative control. Eye care practitioners like Optometrists are also prone to these COVID-19 related risks during patient management.

## METHODOLOGY

In a previous observational study published in 2004, aimed at detecting corona virus in the tears by PCR, the investigators emphasized that the virus could be transmitted in tears – putting the ophthalmologist at risk of acquiring the infection.<sup>5,18</sup> Based on this, we have reviewed the current literature and understanding that ocular implications and transmission of corona viruses based on the limited and rapidly expanding knowledge regarding the recent pandemic COVID-19. We have gathered and referred the available recent literature from PubMed search. We finally compiled narrative review article having comprehensive approach that can be implemented in an Optometry facility during COVID-19 scare.

## CORONA VIRUS: STRUCTURAL COMPOSITION

The CoV name is a derivative from the Latin word corona which means crown. This is due to the characteristic structure of the virus whereby surface projections on the viral envelope, gives it an appearance similar to a crown. The diameter of virus is between 60 and 140 nm, capped by quite distinctive spikes, about 9 to 12 nm in length. The virus is a single-stranded positive-sense RNA virus with a genome of around 30 kb in length. This makes them the largest known RNA viruses.<sup>19</sup> The RNA genome codes for both structural proteins (SPs) and non-structural proteins (NSPs). All known CoVs share a similar structure made of four main structural proteins: spike (S), membrane (M), envelope (E), and nucleocapsid (N) proteins.<sup>20</sup> The S-protein is responsible for attachment to host receptors, M protein helps shape the virion particles and binding to nucleocapsid, E-protein

plays a role in the assembly and release of particles while N-protein aids with the binding of the genome to a replication-transcription complex which is required for the replication of genomic material.<sup>6</sup>

## TRANSMISSION OF VIRUS THROUGH OCULAR SURFACE

Many researchers have proved that SARS-CoV-2 is zoonotically transmitted.<sup>21</sup> Like other airborne viruses, SARS-CoV-2 also transmitted from an infected person via aerosolized droplets when talking, sneezing, or coughing or via contaminated surfaces by body fluids (like door handles).<sup>22</sup> Ocular surfaces possess ubiquitous viral receptor heparin sulfate, which is responsible for initial viral attachment. However, this is not sufficient for coronavirus infection. Furthermore, high concentrations of lactoferrin in tears (2mg/ml)<sup>23</sup> prevent viral attachment to heparin sulfate.<sup>24</sup> The ocular surface appears to possess the SARS-CoV-2, SAR-CoV and NL63 receptor ACE2, but may not possess the TMPRSS2 or Furin proteins, which is required for the spike protein of SARS-CoV-2 to bind to ACE2.<sup>7</sup> Furthermore, apart from 9-O-acetylated sialic acid, the other co-receptors for coronaviruses (CD209, CD26, CD13, CD66e), have been found either in fibroblasts and dendritic cells that lie in tissue under the surface corneal and conjunctival epithelial cells, or have not been reported in ocular tissues. It is possible that the 9-O-acetylated sialic acid associated with proteins in tears can act as a decoy receptor, binding to the viruses and preventing them binding to cell associated 9-O-acetylated sialic acid.<sup>25</sup> Therefore, the evidence to date suggests that coronaviruses are unlikely to bind to ocular surface cells to initiate infection.

SARS-CoV-2 enters a cell following binding with the human angiotensin-converting enzyme (ACE) 2 protein<sup>5</sup>. The human eye has its own intraocular renin-angiotensin system (RAS), a system that has been of interest for developing antiglaucomatous drugs<sup>26</sup>. The transfer of microorganisms along with the tears from the ocular surface into the nasal cavity and the upper part of respiratory tissues is because of the continuation of the mucous membrane via the puncta into the nasolacrimal duct and into the nasopharyngeal space can eventually deliver the virus into the lungs and the gastrointestinal tract, when swallowed, where it can bind to the ACE2 receptors<sup>5</sup>. The isolated surface protein S240 of SARS-CoV can bind to conjunctival epithelial and fibroblast cells and corneal epithelial cells, with this binding inhibited by soluble ACE2 indicating that the binding was being mediated through cell-surface ACE2.



Coronaviruses	Receptor	Role in human CoV disease	Ocular surface (cell types)	Lung
SARS-CoV SARS-CoV-2	ACE2	Host cell receptor and essential for infection	+ (conjunctival epithelium and fibroblasts; corneal epithelium)	+ (airway epithelia)
	TMPRSS2	primes spike protein for binding to ACE2	---	+ (airway epithelium)
	CD209	Cell-to-cell viral transfer	+(corneal dendritic cells)	+(alveola macrophages)
MERS-CoV	CD26	Host cell receptor and essential for infection	+/- (conjunctival vascular endothelium)	+ (lung epithelia and endothelia)
	CD66e	Co-receptor	+/- (palpebral conjunctiva)	+ (bronchial and alveolar epithelium)

+: the receptor has been found, -: there are no reports of the receptor on the ocular surface, +/-: found in tissue but only on non-virally-mediated inflamed tissue.

**Table 1. Comparison of SARS-CoV-2, SARS-CoV and MERS-CoV receptors on ocular surface and lung**

### ROLE OF OPTOMETRIST IN COVID 19

In this pandemic, Optometrists are not considered as frontline health care workers for COVID 19, but it does not mean optometrist are not crucial in health services. Optometrists are frontline workers in eye care services thus every possibility is there in which optometrists can be exposed to asymptomatic patients or their close contacts while examining them. Therefore, they need to take precautions to protect themselves and others in their practices. Many people wear face masks, but far fewer consider the need for eye protection. Although the eye is probably a less important gateway for the virus, in the last few days, evidence has emerged of the likelihood of transmission via the conjunctival epithelium.<sup>27,29</sup> Wearing glasses or a visor may reduce risk of contamination, but it does not protect against COVID-19 infections.<sup>28,29</sup> Depending on local regulations, it is a sensible precaution to check the temperature of anyone entering the practice, including staff, and for all present to wear a surgical mask, and use hand sanitizers. In addition, ophthalmic instruments should be shielded as far as possible to prevent contamination and wiped down with disinfectant or alcohol after each patient. Clients may try on several frames when choosing new spectacles, the items that come into contact with

potentially infected persons must be wiped with alcohol or equivalently effective method. This means that clients trying on frames must be supervised to ensure that frames tried by the clients can be identified for cleaning.<sup>29</sup> An ocular condition may be the first symptom of COVID-19<sup>29,30</sup> and it is considered that one of the first practitioners to draw attention to this new infection was Dr Li Wenliang, an ophthalmologist.<sup>31</sup>

### CONTACT LENSES WEAR WITH CARE

After covering the long journey we are in the middle of an ongoing outbreak of the coronavirus disease and according to the World Health Organization, it is already characterized as a pandemic.<sup>32,33</sup> In this pandemic, coronaviruses are capable of producing a wide spectrum of ocular disease, including anterior segment diseases such as conjunctivitis and anterior uveitis, and posterior segment conditions like retinitis and optic neuritis<sup>34</sup>. Contact lenses represent a highly effective form of vision correction for an estimated 140 million people worldwide, with a very low incidence of either microbial keratitis or symptomatic inflammatory keratitis in strict daily wear of contact lenses.<sup>35,36,38</sup>



Since, eye care practitioner play an active role in managing the patient and their ocular health as it relates to safe contact lens wear. But in contact lens (CL) practice, the impact of outbreak is massive because CL practitioners are exposed to the infection and need to consider how they can play a role in preventing the transmission<sup>33</sup>. The contact lens wearers in normal usage also need to touch their eyes when inserting and removing their contact lenses,<sup>33</sup> so it is common question among all CL wearers and practitioners that has been raised as a potential concern for increasing their risk of exposure to the virus.

But, according to a PubMed a search on 24th March 2020 found that there is no evidence that contact lens wearers are more likely to contract COVID-19 than spectacle wearers.<sup>37</sup> The likely belief for this being a concern relates to the fact that SARS-CoV-2 has been isolated in tears.<sup>37</sup> Infrequently, the virus is known to be transferred by hand contact, and thus could be transferred to contact lenses during their insertion and removal. In one report, positive tear and conjunctival secretions occurred in a single patient who developed conjunctivitis from a cohort of thirty patients with novel coronavirus pneumonia.<sup>37,38</sup> The study clearly mentioned that there is no evidence that contact lens wearer was more prone to Covid-19.

So, the best practice advice for contact lens wearers includes the same instructions that should be imparted under all situations, regardless of the COVID-19 pandemic. Every CL wearer should have kept one point in mind that when using contact lenses, careful and thorough hand washing with soap and water followed by hand drying with unused paper towels (generally known as 'kitchen roll' in the United Kingdom) is paramount. For contact lens wearers, this should occur before every contact lens insertion and removal, and such practice reduces the risks of infection and inflammatory responses and is highly effective.<sup>39</sup> It follows that as long as contact lens wearers are using correct hand hygiene techniques, they should be limiting any virus transmission to their ocular surface, and indeed, as already stated, there is currently no evidence that they are at any higher risk of developing COVID-19 infection than non-wearers.<sup>33</sup>

Research has also indicated that with appropriate rubbing of contact lenses, most contact lens care systems would likely prevent the chance of the lens transferring the virus to the eye.<sup>38</sup> The consistent, unambiguous advice to protect individuals from the virus is to employ frequent hand-washing with soap and water. Additionally, of particular concern for ophthalmic practitioners, it should be noted that SARS-CoV-2 has been detected in the tears and conjunctival secretions in COVID-19 patients with conjunctivitis.<sup>37</sup>

Unfortunately, CL practice can be particularly exposed to these modalities of transmission. Indeed, CL practice involves face-to-face communication, close examination of the patient (distance between patient and CL practitioner during a slit lamp assessment is approximately 50 cm), need to directly touch patient's eyelids (for example during CL insertion/removal or push up test or lid eversion). Finally, some CLs are still fitted using trial sets, which inturn need to be cleaned thoroughly between patients. Looking at available evidence in research papers, from the largest authorities in disease control and prevention around the world and from professional associations, there are at least 5 main areas of actions applicable in CL practice to minimize the transmission of COVID-19: patient management; personal protective equipment; disinfection of CL equipment and CL trial set; hands sanitization; CL practitioner and staff monitoring.<sup>40,41,42,43</sup>

Lai et al.<sup>44</sup> have just published a paper sharing the experience in Hong Kong to minimize COVID-19 infection in Ophthalmology in which they suggest the installation of protective shields on slit lamps. Similar advice to this was made in the European Society for Cataract and Refractive Surgery (ESCRS) publication Euro Times.<sup>45</sup>

## SPECIAL CARE DURING SPECTACLE USAGE

According to U.S. Centers for Disease Control and Prevention (CDC), "*personal eyeglasses are NOT considered adequate eye protection.*"<sup>46</sup> Part-time wearers of spectacles who only use their spectacles for occasional distance use or for reading, their assumed 'protection' is intermittent, and additionally their increased frequency of putting on and removing their spectacles adds to the potential of touching their face each time, possibly in the absence of hand washing. Another important point to ponder is that some viruses such as SARS-CoV-2 can remain on hard plastic surfaces (similar to those found in spectacle frames and lenses) for hours to days. Upon touching their spectacles, virus particles could potentially be transferred to the wearers' fingers and face and thus adequate hand hygiene practices should also be extended to the regular handling of spectacle and sunglass frames to prevent transmission of viral particles to the fingers and subsequently to the face. Spectacles should be regularly cleaned with soap and water and dried with paper towel to remove any adhered viral particles.

Hand hygiene is very important to prevent the risk of COVID-19 while using the spectacle some guideline given by CDC and WHO regarding hand hygiene are as follows<sup>38</sup>.



- Wash hands often with soap and water for at least 20 seconds especially after they have been in a public place or after blowing their nose, coughing, or sneezing. Otherwise use a hand sanitizer that contains at least 60% alcohol. They should cover all surfaces of their hands and rub them together until they feel dry.

- They should avoid touching their eyes, nose, and mouth with unwashed hands.

### COVID-19 GUIDELINES FOR OPTOMETRIC PRACTICES

Practitioners of course, are responsible for impressing upon their patients the importance of good hygiene, but some additional precautions are needed during this time of pandemic such as precaution in optical store and optometry clinic. The main aim of this is to safeguard both, the health and the wellness of our team members. Some of guidelines regarding optometry clinic and optical store are as follows-

Prior to and after patient care

1. Make sure that staff members are symptom free each day.
  - a. Have a non-contact thermometer available to assess temperature, as needed. (NOTE: Temperature alone does not assess or exclude disease.) The CDC defines a fever as a temperature at or above 100.4°F.
  - b. Ask if they are coughing.
  - c. Ask if they have shortness of breath.
  - d. Ask if they have red eye or eyes (conjunctivitis can be a presenting sign of COVID-19).
  - e. If staff report or appear ill, recommend that they seek medical care from their primary care physician or specialist.
2. Clean all equipment with best available disinfectant (best is diluted bleach solution or alcohol solutions having at least 70% alcohol).
3. Ask staff to thoroughly wash hands for at least 20 seconds when they arrive, before and after each patient, before eating and after using the bathroom.
4. Staff should use one phone and computer and maintain social distancing between the other staff members. Should they need to use the same phones or computers, have these disinfected in between uses.

During patient care

1. Share via email or post on office website and social media about guidance on coming to the office. But, in case experiencing cold or flu-like symptoms, do not come to the office.

2. Post a notice on your office door, advising patients not to enter if they are ill or were exposed to someone with the coronavirus, or have recently traveled to one of the affected countries.
3. On arrival, if patients are at risk, isolate them and call your local health department for instructions.
4. Instruct patients to call ahead if they feel sick, have red eyes (conjunctivitis) or have any concerns.
5. Instruct patients to limit the number of people who accompany them to the visit.
6. Offer to reschedule non-emergent patients 60 years and older, patients with co-morbidities or pre-existing conditions with decreased immunity. Consider setting aside blocks of time (e.g., the first two office operating hours) for older/ at risk patients for their safety and health.
7. Limit points of entry into the office.
8. Limit number of patients in waiting room.
  - a. Remove chairs/space out chairs (social distancing).
  - b. If sufficient room is not available, ask patients to wait in car/outdoors until doctor is ready.
  - c. If the patient has a cell phone, text patient to come in when ready. If not, ask staff to alert them to come into the office.
9. Utilize Personal Protective Equipment, as available and in accordance with recommendations from the CDC.
10. Maintain and practice social distancing as possible so as not to physically contact the patient outside of clinical necessity, including with regard to handshakes.
11. Instruct patients to wash hands in bathroom upon entering for at least 20 seconds or use alcohol-based hand sanitizer.

Clinic/exam rooms

1. Clean exam room/patient rooms with best disinfectant in between each patient. Utilize as much disposable equipment as possible.
2. Utilize a slit lamp "breath" shield/barrier (whether purchased or fashioned). Size should be as large as possible while not interfering with clinical care.
3. Examine for conjunctivitis. Conjunctivitis can be a presenting sign of COVID-19.

### CONCLUSIONS

Various factors and aspects were considered for the formulation of standard operating procedures for the eye care during COVID-19 scare then these standard guidelines and precautions were put forward



by various eminent global organizations like WHO & CDC. These have been regarded as the gold standard and were incorporated to form comprehensive guidelines for the eye care with safety precautions for the Optometrists as well with statutory and most important recommendation to wash hands thoroughly and as frequently as possible and use hand sanitizer. Caring for your patients during difficult times will always be remembered. Here are a few best practice tips: call your patients after hours of check up to know about their ocular or systemic health and consider making staff available to answer patient questions. Together and by taking these possible precautions, we can win this battle by defeating the CORONA Virus.

## REFERENCES

1. Wang D, et al. Clinical Characteristics of 138 Hospitalized Patients with 2019 Novel Coronavirus-Infected Pneumonia in Wuhan, China. *JAMA*. 2020; 323(11):1061-1069.
2. Lu H, et al. Outbreak of pneumonia of unknown etiology in Wuhan China: the mystery and the miracle. *J Med Virol*. 2020. Apr;92(4):401-402.
3. Wuhan Municipal Health Commission. Report of novel coronavirus-infected pneumonia in China. Published January 20, 2020. Accessed May 30, 2020.
4. Guan W-J, et al. Clinical Characteristics of Coronavirus Disease 2019 in China. *N Engl J Med*. 2020;1-13.
5. Soumen Sadhu, et al, (2020): COVID-19: Limiting the Risks for Eye Care Professionals, *Ocular Immunology and Inflammation*, DOI:10.1080/09273948.2020.1755442
6. Seah I, et al. Can the Coronavirus Disease 2019 (COVID-19) Affect the Eyes? A Review of Coronaviruses and Ocular Implications in Humans and Animals. *Ocul Immunol Inflamm*. 2020; 28(3):391-395.
7. Mark DP, et al. The ocular surface, coronaviruses and COVID-19. *Clin Exp Optom* 2020. DOI:10.1111/cxo.13088
8. World Health Organization. WHO Director-General's opening remarks at the mission briefing on COVID-19. 2020. Available at: <https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19-11-march-2020>.
9. World Health Organization. Coronavirus disease 2019 (COVID-19) situation report 32. <https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200221-sitrep-32-covid-19.pdf>. 2020.
10. World Health Organization. Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected. [https://www.who.int/publications-detail/infection-preventionand-control-during-health-care-when-novel-coronavirus-\(ncov\)-infection-is-suspected-20200125](https://www.who.int/publications-detail/infection-preventionand-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected-20200125). 2020.
11. Lai THT, et al. Stepping up infection control measures in ophthalmology during the novel coronavirus outbreak: an experience from Hong Kong. *Graefe's Arch Clin Exp Ophthalmol* 2020; 258: 1049-1055.
12. Jones L, et al. The COVID-19 pandemic: important considerations for contact lens practitioners. *Cont Lens Anterior Eye* 2020. <https://doi.org/10.1016/j.clae.2020.03.012>.
13. Zeri F, et al. Contact lens practice in the time of COVID-19. *Cont Lens Anterior Eye* 2020. <https://doi.org/10.1016/j.clae.2020.03.007>.
14. American Academy of Ophthalmology. Alert: important coronavirus updates for ophthalmologists. Available: <https://www.aao.org/nheadline/alert-important-coronavirus-context> [Accessed 27 July 2020].
15. Kruger JM, et al. Ophthalmology practice during the COVID-19 pandemic. *BMJ Open Ophthalmology* 2020; 5:e000487. doi:10.1136/bmjophth-2020-000487.
16. Wei LC, et al. 2019-nCoV transmission through the ocular surface must not be ignored. *The Lancet* 2020; 395:e39.
17. Lai THT, et al. Stepping up infection control measures in ophthalmology during the novel coronavirus outbreak: an experience from Hong Kong. *Graefes Arch ClinExp Ophthalmol* 2020;1-7.
18. Loon SC, et al. The severe acute respiratory syndrome coronavirus in tears. *Br J Ophthalmol*. 2004; 88(7):861-863.
19. Madhugiri R, et al. Coronavirus cis-acting RNA elements. *Adv Virus Res*. 2016; 96:127-163.
20. Chen Y, et al. Coronaviruses: genome structure, replication, and pathogenesis. *J Med Virol*. 2020; 92:418-423.
21. World Health Organization. WHO recommendations to reduce risk of transmission of emerging pathogens from animals to humans in live animal markets. 2020. <https://www.who.int/health-topics/coronavirus/who-recommendations-to-reduce-risk-oftransmission-of-emerging-pathogens-from-animals-to-humans-in-live-animal-markets>. Accessed in February 2020.
22. Sahin AR. 2019 novel coronavirus (COVID-19) outbreak: A review of the current literature. *Eurasian J Med Invest*. 2020; 4(1):1-7.
23. Willcox MDP. Tear film, contact lenses and tear biomarkers. *Clin Exp Optom* 2019; 102: 350-363.
24. Lang J, et al. Inhibition of SARS pseudovirus cell entry by lactoferrin binding to heparan sulfate proteoglycans. *PLoS One* 2011; 6: e23710.
25. Argüeso P, et al. Characterization of a carbohydrate epitope defined by the monoclonal antibody H185: Sialic acid O-acetylation on epithelial cell surface mucins. *Glycobiology* 2006; 16: 1219-1228.



26. Holappa M, et al. Many faces of renin-angiotensin system - focus on eye. *Open Ophthalmol J*. 2017; 11(1):122–142.
27. K.P.Y. Hui, et al., Tropism, replication competence, and innate immune responses of the coronavirus SARS-CoV-2 in human respiratory tract and conjunctiva: an analysis in ex-vivo and in-vitro cultures, *Lancet Respir Med* (May (7)) (2020), [https://doi.org/10.1016/S2213-2600\(20\)30193-4](https://doi.org/10.1016/S2213-2600(20)30193-4) pii: S2213-2600(20)30193-30194.
28. R.J. Roberge, Face shields for infection control: a review, *J Occup Environ Hyg* 13(4) (2016) 235–242.
29. Cho P, et al. COVID 19-An eye on the virus. *Cont Lens Anterior Eye*. 2020;43(4):313-314.
30. P. Wu, et al. Characteristics of ocular findings of patients with coronavirus disease 2019 (COVID-19) in Hubei Province, China, *JAMA Ophthalmol* (March (31)) (2020), <https://doi.org/10.1001/jamaophthalmol.2020.1291>.
31. K. Hu, et al. Ophthalmic manifestations of coronavirus (COVID-19) [Updated 2020 Apr 13], StatPearls Publishing, Treasure Island (FL), 2020 Jan.
32. World Health Organization, WHO Director-General's opening remarks at the media briefing on COVID-19 - 11 March 2020, (2020) <https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19-11-march-2020>.
33. Zeri F, et al. Contact lens practice in the time of COVID-19. *Cont Lens Anterior Eye*. 2020; 43(3):193-195.
34. I. Seah, et al. Revisiting the dangers of the coronavirus in the ophthalmology practice, *Eye (Lond)* In press (2020).
35. K.R. Steele, et al. Epidemiology of contact lens-induced infiltrates: an updated review, *Clin Exp Optom* 100 (5) (2017) 473–481.
36. F. Stapleton, et al. The epidemiology of microbial keratitis with silicone hydrogel contact lenses, *Eye Contact Lens* 39 (1) (2013) 79–85.
37. J. Xia, et al. Evaluation of coronavirus in tears and conjunctival secretions of patients with SARS-CoV-2 infection, *J Med Virol* In press (2020).
38. Jones, Lyndon et al. The COVID-19 pandemic: Important considerations for contact lens practitioners. *Contact lens & anterior eye : the journal of the British Contact Lens Association* vol. 43,3 (2020): 196-203.
39. D. Fonn, et al. Hand hygiene is linked to microbial keratitis and corneal inflammatory events, *Cont Lens Anterior Eye* 42 (2) (2019) 132–135.
40. T.H.T. Lai, et al. Stepping up infection control measures in ophthalmology during the novel coronavirus outbreak: an experience from Hong Kong, *Graefes Arch ClinExp Ophthalmol* (March) (2020), <https://doi.org/10.1007/s00417-020-04641-8>.
41. US Centre for Disease Control and Prevention. How COVID-19 Spreads. <https://www.cdc.gov/coronavirus/2019-ncov/about/transmission.html> [Accessed 15 May 2020].
42. European Centre for Disease Prevention and Control. Q & A on COVID-19. <https://www.ecdc.europa.eu/en/novel-coronavirus-china/questions-answers> [Accessed 15 May 2020].
43. The Department of Health and Social Care (DHSC) and Public Health England (PHE). COVID-19: infection prevention and control guidance. <https://www.gov.uk/government/publications/wuhan-novelcoronavirus-infection-prevention-andcontrol> [Accessed 15 May 2020].
44. T.H.T. Lai, et al. Stepping up infection control measures in ophthalmology during the novel coronavirus outbreak: an experience from Hong Kong, *Graefes Arch ClinExp Ophthalmol* (March) (2020), <https://doi.org/10.1007/s00417-020-04641-8>.
45. EuroTimes, Coronavirus and ophthalmology: what can ophthalmologists do to protect themselves, staff and patients from COVID-19? (Priscilla Lynch), 11 March (2020) [https://www.eurotimes.org/coronavirus-and-ophthalmology/?fbclid=IwARIATvYEIC\\_TwWU5PSEEW5ozBFKUQckH0weWtkl\\_FcuDEpME2yTBbGwfRU](https://www.eurotimes.org/coronavirus-and-ophthalmology/?fbclid=IwARIATvYEIC_TwWU5PSEEW5ozBFKUQckH0weWtkl_FcuDEpME2yTBbGwfRU).
46. Centers for Disease Control and Prevention, Interim Infection Prevention and Control Recommendations for Patients with Suspected or Confirmed Coronavirus Disease 2019 (COVID-19) in Healthcare Settings, COVID-19, (2020) Accessed 24 Mar 2020. <https://www.cdc.gov/coronavirus/2019-ncov/infection-control/control-recommendations.html>.
47. S.L. Warnes, et al. Human Coronavirus 229E Remains Infectious on Common Touch Surface Materials, *mBio* 6 (6) (2015) e01697–15.
48. N. Ikonen, et al. consortium, Deposition of respiratory virus pathogens on frequently touched surfaces at airports, *BMC Infect Dis* 18 (1) (2018) 437.
49. G. Kampf, et al. Persistence of coronaviruses on inanimate surfaces and their inactivation with biocidal agents, *J Hosp Infect* 104 (3) (2020) 246–251.
50. S.W.X. Ong, et al. Air, Surface Environmental, and Personal Protective Equipment Contamination by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) From a Symptomatic Patient, *JAMA* In press (2020).



## THE IMAGE OF AMIR TIMUR AND THE IDEAS OF HUMANISM IN THE DRAMA OF CRISTOPHER MARLOWE "TAMBURLAINE THE GREAT"

**Yakubov Muzaffar Kamildjanovich**

Research fellow  
Urgench State University,  
Uzbekistan

### ANNOTATION

*It is known that the first information about Amir Timur reached Western Europe through Venetian and Genoese traders operating in the Black Sea ports. The first written information about Sahibkiran and his kingdom, and in particular his military potential, began to appear at the same time, during the lifetime of Amir Timur. The annihilation of the Ottoman Turks by Timur the Great troops in the Battle of Ankara intensified the interest in his personality in Western Europe. Among numerous works about Timur, here, we speak about one of them – Tamburlaine the Great by Christopher Marlowe. This article is devoted to the analysis of this work of the English poet and dramatist, his tragedy "Tamburlaine the Great"; the image of Timur the Great and ideas of humanism are investigated and given the points of the author and views of different other researchers.*

**KEY WORDS:** *Tamburlaine, hero, tragedy, image, humanism, representative, ruler, power.*

### DISCUSSION

The main theme of our scientific research is – The personality of Amir Timur in English-speaking literature. The given article is a review article, which gives some kind of report about the second part of our investigation being done (Yakubov, 2020)

Christopher Marlowe (1564-1593) is one of the brightest representatives among other English playwrights. English poet dramatist and translator, one of the greatest writers who created before Shakespeare. Studying the biographies of known representatives of that period, we came into conclusion, that, there is no tragic figure like Marlowe, among his contemporaries, who gave the world such great legends about Timur and Faust, and became a legend himself after his death.

Born on February 26, 1564, in Canterbury, Marlowe received his first education in Canterbury and at the age of 16 entered the University of Cambridge. After graduating from university in 1583, he got a bachelor's degree and moved to London, where he began his literary career. At that time, he became a member of the "University wits" circle, as well as other poets, such as J. Lyly, T. Nashe, R. Greene, T. Lodge. It was these playwrights known as the "university wits," who had a profound influence on the development of 16th-century English theater.

They have mastered most of the features of medieval theater, intended for a large audience; in this theater the participation of many characters was natural, there was freedom of time and space, serious and funny events complemented each other in one performance.

It was during that period when Marlowe's first ten-act tragedy, Tamburlaine the Great, took the stage. Before starting his career as a playwright, it is said that Marlowe was an actor, but was forced to give up acting because of a broken leg. The first part of this tragedy may have been written by Marlowe, at that time, when he was studying at the University of Cambridge. "Tamburlaine the Great" which caused a great sensation and continued success, gave Marlowe the highest place among contemporary English playwrights.

The power of Tamburlaine to influence his contemporaries and, above all, the audience - the power of the dream - to achieve a fairy-tale greatness, in which only confidence in destiny and hatred of worldly and heavenly geniuses.

Various books have been written about Marlowe's life and work and scientific researches have been done on attitudes and views. But, anyway, we want to give our and other scientist's comments, thoughts and information on the given title.



"Marlowe " the first great dramatist," who had "no precedents... to follow as a professional playwright". In this sense, Marlowe opened up a new way for the development of English drama " says Hilton Della (Hilton, 1997).

In the drama prologue, the author's intention to introduce new styles into the art of drama is evident, i.e. to draw the viewer's attention to the details of historical events, scenes of the devastation of kingdoms and peoples.

William Long Della (William, 2003) also confirms our opinion in his book on English and American literature, saying that:

"He appeared in London sometime before 1587, when his first drama Tamburlaine took the city by storm."

Marlowe made great changes in English drama, abandoning scenes of previously popular bloody battles, clowns and crude jokes, trying to form a sequence of events and a holistic psychological direction in the drama. It is in the prologue, that Marlowe hints at the abandonment of traditional clown scenes and the creation of a new genre of great tragedy:

From jiggling veins of rhyming mother-wits,  
And such conceits as clownage keeps in pay,  
lead you to the stately tent of war,  
Where you shall hear the Scythian

Tamburlaine (Marlowe, 1980).

A similar view is put forward by Fletcher:

"The Prolog to 'Tamburlaine' makes pretentious announcement that the author will discard the usual buffoonery of the popular stage and will set a new standard of tragic majesty" (Fletcher, 2002).

Abandoning the poetic form of drama, Marlowe introduced the style of " blank verse". Literary critic William Long also says that he puts an end to the meaningless forms of verses (William, 2003):

"For the doggerel is substituted blank verse," Marlowe's mighty line "as it has ever been called, since he was the first to use it with power;"

Robert Fletcher says : "The distinction between the two sorts of drama was still further broken down in the work of Christopher Marlowe, a poet of real genius, decidedly the chief dramatist among Shakspeare's early contemporaries, and the one from whom Shakspeare learned the most (Fletcher, 2002)."

Here we find it necessary to dwell on another aspect of Christopher Marlowe, that is also very important. In the Middle Ages, Latin was used in the field of literature for the most part, not English. And Christopher Marlowe was one of the first to write his work in English. Literary scholar Ayshe Piril's thesis also commented on this (Eryilmaz, 2007):

"Christopher Marlowe can be considered a figure of Renaissance for having provided works with the simple and artistic use of the English language... In the Middle Ages, the English language was not a medium for the literary field, and works were produced in Latin; however, as many people became literate in Renaissance, works began to be produced in English which made it possible for the average reader to understand and enjoy a book. Marlowe also wrote his poems and plays in English. Hilton mentions that, "English-speaking theatre ... began with Marlowe".

Marlowe's heroes evoke both fear and pride at the same time. Christopher not only opposes the medieval people's habit of obeying the laws of nature to their principles of reasoning, but he argues that religion is a tool of this policy, invented by the monks to exploit the common people.

Marlowe died on May 30, 1593, at the age of 29, from murder. The author wrote a number of tragedies, including: "Dido, Queen of Carthage" (approximately 1583), "Tamburlaine the Great" (1587-1588), "Doctor Faustus"(1588-1589), " The Jew of Malta" (1589), " Edward II "(1592), " The Massacre at Paris "(1593) and the poems "The Passionate Shepherd to His Love" (1590) and "Hero and Leander" (1593). The genre of "mighty tragedy" that Marlowe had just begun and founded did not disappear after his death, but was continued by the greatest of the playwrights - Shakespeare.

Continuing this idea, we quote the views expressed in the doctoral dissertation of the Russian scientist A. Parfyonov:

"Being at the same age as Shakespeare, Marlowe before him acted as a playwright; he was the first to introduce humanistic ideological and aesthetic concepts into plays intended for performance in a public theater, created the type of titan hero and developed the poetic side of the English tragedy (all this was learned by Shakespeare and other playwrights of the late 16th- and early 17th century). ... The injustice of the world in relation to a gifted person, the injustice of a situation when wealth and power are in the hands of unworthy ones, is a constant theme of Marlowe's tragedies, especially sharply sounded in the play that brought him fame, in Tamburlaine the Great (Parfenov, 1964)."

In the tragedy Sahibkiran, according to the needs of the English humanistic literature of the XVI century, is described as a symbol of the dreams and hopes of the Renaissance.

Many works about Timur appeared in the XV-XVI centuries, not only because of the victory over the Turks, but also because Timur in the imagination of Europeans corresponded to the favorite ideals of the Renaissance. The main idea of the Renaissance period is that human value is in his actions and "courage", not in his lineage or in his





wealth. Until the 16th century, it was widely believed that Timur came from a poor family with no genealogy (shepherd or ordinary soldier, farmer, ordinary worker), and that the reason for the results he achieved was himself. A great general, a founder of a great empire and a statesman who never lost a battle, dies when he reaches the peak of his fame, which served as a clear reason to show that man has unlimited potential.

The legend of Amir Timur is reflected in Marlowe's play "Tamburlaine the Great" as a vivid depiction of the Renaissance. It should not be forgotten that this play is not a single work. In this two-part and ten-act drama, the experiences of the English poet and the legend of Amir Timur are presented in a holistic way.

In his skillfully structured speech, Timur says that he has a great and cosmic position: Jupiter, who drove his father from the throne of heaven, the laws of nature and psyche are cited as the main reasons:

Nature, that fram'd us of four elements  
 Warring within our breasts for regiment,  
 Doth teach us all to have aspiring minds:  
 Our souls, whose faculties can comprehend  
 The wondrous architecture of the world,  
 And measure every wandering planet's  
 course,  
 Still climbing after knowledge infinite,  
 And always moving as the restless spheres,  
 Will us to wear ourselves, and never rest,  
 Until we reach the ripest fruit of all,  
 That perfect bliss and sole felicity,  
 The sweet fruition of an earthly crown.

(Christopher Marlowe. Two Tragedies. Moscow. 1980. P.27. the next examples from this source ).

Ahmad Shirkhani, a researcher of Shiraz University, says (Shirkhani, 2002) the main style is that the protagonist pursues supernatural goals that are strange to humanity. They say that titanium individuals struggle with incomparable desires with every event of life:

"The principal pattern in Marlowe's plays is the gigantic lust of the central character for something strange and alien to the human experience. They are "towering figures who insatiably desire to wrestle with every experience."

Khosrow says with amazement:

The strangest man that ever nature made! (P. 27)  
 Hinting that a world has never seen such people.

There is nothing supernatural in Timur's words. His arguments reflected the ideas of the intellectuals of the Renaissance, that is, the idea of "courage" and the great chain of Being. Timur expresses his "aspiration" to the power of the king on the basis of the organic unity of man, society and nature.

According to Ribner, Timur as a man of destiny ascended to the top, with his unique ability to conquer the wheel of fortune and eventually build great empires:

"Tamburlaine is exalted as the man of destiny, the conqueror who, by his own unique abilities, can master fortune long enough to ... create empires" (Irving, 2007).

Continuing his thought, Ribner says that the hero in history is a person who can control this happy destiny and submit his desires to it. This hero is Timur, who is always victorious:

"Moreover, "the hero of history is he who can master Fortune and bend her to his will" (p. 355). This "hero" is Tamburlaine, who is always allowed to succeed ..."

Timur's personality, his character is based on a strong will. Note that although there are several battle scenes in the drama, no battle scenes are depicted, but only with the magical effect of Timur's will, it was as if a magical light was radiating from him. A clear example of this is his first battle, in which Timur wins without shedding a drop of blood, with his magic power of persuasion:

In thee, thou valiant man of Persia,  
 I see the folly of thy emperor.  
 Art thou but captain of a thousand horse,  
 That by characters graven in thy brows,  
 And by thy martial face and stout aspect,  
 Deserv'st to have the leading of an host?  
 Forsake thy king, and do but join with me,  
 And we will triumph over all the world:  
 I hold the Fates bound fast in iron chains,  
 And with my hand turn Fortune's wheel

about;

And sooner shall the sun fall from his sphere  
 Than Tamburlaine be slain or overcome.  
 Draw forth thy sword, thou mighty man-at-

arms,

Intending but to raze my charmed skin,  
 And Jove himself will stretch his hand from

heaven

To ward the blow, and shield me safe from

harm.

See, how he rains down heaps of gold in

showers,

As if he meant to give my soldiers pay!  
 And, as a sure and grounded argument  
 That I shall be the monarch of the East,  
 He sends this Soldan's daughter rich and

brave,

To be my queen and portly empress

The genealogy of the hero is clear from the name of the drama: "Tamburlaine the Great. Who, from Scythian Shepherd, by his rare and wonderful Conquestes, became a moft puissant and mightie Mornarch ..." Timur says about himself:

I am a lord, for so my deeds shall prove;



And yet a shepherd by my parentage (P. 10).  
 The hero himself is proud not only of the courage of the shepherd's son, but also of his companions Techelles and Usumcasane :

... these that seem but silly country swains  
 May have the leading of so great an host  
 As with their weight shall make the mountains quake, (P.11)

Why does Marlowe place so much emphasis on the fact that Timur with his companions and soldiers are of shepherd descent? In addition to being dependent on Renaissance ideas, there is another reason why, it is the struggle against social injustice i.e. the hero's revenge on society because this society hates their estate and poverty. At the end of the first part, Temur says with pleasure:

Emperors and kings lie breathless at my feet;  
 (P.62).

These words show both the joy of victory of the free titanic person and the wrath of the Creator and the idea of revenge against the pagan kingdoms.

Marlowe says that human value is determined not by his origin, but by his actions: Tamburlaine:

For virtue is the fount whence honour springs,

And they are worthy she investeth kings.

Those around him know that Timur is from the lower class and determine his inner and outer glory:

A Scythian shepherd so embellished  
 With nature's pride and richest furniture! (P. 13)

"... for thought the pastoral mode was one of the great literary conventions of the Renaissance, Tamburlaine is here choosing, just as every writer and every man had to choose, between this version of the good life and another which was equally important to Renaissance humanism: the heroic." says Harper, the image of a shepherd, a great literary discovery of the Renaissance, and here Timur was chosen to demonstrate this interpretation (Marlowe, 1971).

It means that it is natural for Amir Timur to be recognized as a real hero and to be rightfully worthy of the ideas, views and demands of the humanists and to appear in literature as an artistic figure.

Commenting on Marlowe's work, especially on the tragedy of Tamburlaine the Great, Battenhouse argues that the depiction of the lives and activities of great figures should be valued in the same way as Michelangelo's art:

"Since Marlowe's art in its attention to colossal figures bears obvious likeness to Michelangelo's, a somewhat similar approach

cannot, certainly, be inappropriate (Battenhouse, 1941)."

In the person of Amir Timur, Marlo represents the legendary man of the Renaissance and acts in accordance with European traditions - Sahibkiran is seen as a symbol of humanistic ideas. In the artistic structure of the drama, the medieval landscape is clearly visible. The playwright portrays the protagonist as a hero. Timur's appearance is described on the basis of humanistic ideas - according to humanistic theory, the perfection of the human body should reflect the beauty of the earth - His power and splendor are reminiscent of the Greek hero Achilles; even his hair is golden curly:

Of stature tall, and straightly fashioned,  
 Like his desire, lift upwards and divine;  
 So large of limbs, his joints so strongly knit,  
 Such breadth of shoulders as might mainly bear

Old Atlas' burden; 'twixt his manly pitch,  
 A pearl more worth than all the world is plac'd,

Wherein by curious sovereignty of art  
 Are fix'd his piercing instruments of sight,  
 Whose fiery circles bear encompassed  
 A heaven of heavenly bodies in their spheres,

That guides his steps and actions to the throne

Where honour sits invested royally;  
 Pale of complexion, wrought in him with passion,

Thirsting with sovereignty and love of arms;  
 His lofty brows in folds do figure death,  
 And in their smoothness amity and life;  
 About them hangs a knot of amber hair,  
 Wrapped in curls, as fierce Achilles' was,  
 On which the breath of heaven delights to play,

Making it dance with wanton majesty;  
 His arms and fingers long and sinewy,  
 Betokening valour and excess of strength;--  
 In every part proportion'd like the man  
 Should make the world subdu'd to  
 Tamburlaine.

(P 16-17).

Timur is not deprived of the feature of glory in the playwright's image. Marlowe adorns him with the qualities of a handsome, intelligent, genuinely loving, loyal friend. In his thirst for power, Timur sees a spark of divine fire, just like Jupiter, who overthrew his father Saturn. Timur's lofty monologue seems to have come from the mouth of the propagandist of Awakening humanism about the infinite possibilities of man. Even if he is an ordinary shepherd, he will reach unparalleled heights, and no one can beat him. It is not difficult to imagine how impressed this drama the common people, who made



up the majority of the theatrical spectators, the laughter of the nobles who knew Timur's inferiority, and the resulting scenes of Timur's victory over the nobility. Timur fully believes that man's courage is the source of his original nobility.

Kings of Argier, Morocco, and of Fez,  
You that have march'd with happy  
Tamburlaine

As far as from the frozen plage of heaven  
Unto the watery Morning's ruddy bower,  
And thence by land unto the torrid zone,  
Deserve these titles I endow you with  
By valour and by magnanimity.

Your births shall be no blemish to your  
fame;

For virtue is the fount whence honour  
springs,

And they are worthy she investeth kings.

(P.50).

In conclusion we want to add and ask why Timur the Great was chosen as a main hero? In our opinion, it was not a secret to the representatives of English humanism that the activity of Sahibkiran Amir Timur had a certain advantage over the activities of Julius Caesar and Alexander the Great as a mature politician, reformer, savior, staunch supporter of justice, patron of science and culture. And, indeed, Amir Timur was, firstly, a contemporary of the founders of Western European Renaissance (fourteenth and seventeenth centuries) humanism, and secondly, he entered the literature as a hero who can strike a blow to the religious scholasticism of medieval Europe. Finally, the representative English humanistic literature, in our example Christopher Marlowe, realized the fact that the creation of the literary image of Amir Timur as a symbol of humanistic ideals has become a "historical-cultural" necessity for 16th century English humanistic literature.

### Acknowledgements

In the memory of my masters, the people who are no longer with us, professor Umirbek Satimov gave me invaluable help and encouragement throughout the early stages of this work, I owe a great deal also to professor Ibrohim Jumaniyazov who insisted on my doing scientific research.

### REFERENCES

1. Yakubov M. (2020) *Substantiation report on the scientific research "The personality of Amir Timur in English-speaking literature" // Dynamics of the development of world science. Abstracts of the 9th International scientific and practical conference. Perfect Publishing. Vancouver, Canada. pp. 247-251. URL: <http://sci-conf.com.ua>.*
2. Hilton. D. (1997) *Second Unto None Marlowe and Early Drama. USA:Durham Academic Press, pp18.*
3. William J. Long. (2003) *Outlines of English and American Literature. The Elizabethan Age. pp.55.*
4. Christopher Marlowe.(1980) *Two tragedies. Moscow. Vyssaja Skola. pp. 5.*
5. Robert Huntington Fletcher (2002). *A History of English Literature.pp. 56.*
6. Ayse Piril Eryilmaz. (2007) *Features of Renaissance individualism and references to Machiavellian politics in Christopher Marlowe's The Jew of Malta, The Tragical History of doctor Faustus and Tamburlaine the Great. Thesis.METU. pp.74.*
7. Parfenov A.T. Christopher Marlowe. M., (1964). *Younger contemporaries of Shakespeare.*
8. Ahmad Shirkhani (2002). *Colonialist discourse in Marlowe's Tamburlaine and the Jew Malta.Thesis. Shiraz University, Shiraz, Iran.pp.1.*
9. Ribner, Irving. (2007) "Marlowe and Machiavelli." *Comparative Literature* 6.4. (1954): pp.348-356. <<http://www.jstor.org>>
10. *Tamburlaine Christopher Marlowe Edited by J.W. Harper. (1971) Ernest Benn Limited, London. pp12*
11. *Marlowe's Tamburlaine (1941). Preface VII. Vanderbilt University September, pp 42*



# CHANGING ROLE OF A TEACHER IN EDUCATIONALLY PROGRESSIVE MAHARASHTRA PROGRAMME

**Patil Sandip Diliprao**  
RESEARCH SCHOLAR  
Savitribai Phule Pune University,  
Pune

Article DOI: <https://doi.org/10.36713/epra5052>

## ABSTRACT

*This research paper discusses approaches and techniques which can assist teacher to improve their role in progressive education. It highlights use of new trends in teaching learning. Upon the practical study the paper diagnoses the drawbacks and limitations of current conventional teaching learning tools and methods. And suggests certain recommendations.*

**KEYWORDS-** Classroom environment, Educational quality development, age appropriate learning abilities lifelong learning, Skills.

## INTRODUCTION

Right to Education of Children's free and compulsory education came into existence and was implemented on 1<sup>st</sup> April 2010 through out the state, which focused on quality education of children in age group 6 to 14. Due to which there were some timely changes, these changes caused misunderstanding among the people such as bad effect on quality of education. It has been observed through survey that the achievement level of learners is different, diversified in different districts of the state. Hence there felt the need of supplementary guidance for those who were lagging in achievement level. Reading, writing numbers and operations etc, are very important to achieve the expected ability and to attain mastery. Keeping these things into consideration planned action programme had to be implemented of which "educationally progressive Maharashtra programme" resolution came into effect from June 2015. The programme focuses on helping teachers and educational quality development. So the implementation of this programme included gaining minimum expected learning abilities from all the regular students. No child should lag behind of these abilities. Hence the Government, administration, school management had to do effective trials but the main responsibility had to be shouldered by the teachers throughout the state. Hence taking into consideration all these things the researcher felt the

need of identifying the pre- prejudiced state of teachers and new trends and ways given in the government resolution to cope with the needs for changing the role of teacher in educationally progressive Maharashtra Programme.

When we think of the classroom; teacher's roles and responsibilities, most likely planning instruction, delivering instruction, assessing student learning, and managing the classroom environment come to mind (Stronge, 2007). These are typical ways we know how to think about what a teacher does in and outside of the classroom. Hence various experiences and practices help teachers to develop themselves to be a facilitator for learners as it is said that the learner himself learns at his own speed and pace.

## NEED AND IMPORTANCE

- 1) To give proper direction to learning of learner and the role of teacher as facilitator.
- 2) To know if the learner has gained expected abilities of age appropriate.
- 3) To attain mastery level by implementing action plan.

## METHODOLOGY

**Method-** Survey Method

**Sample-** 30 teachers of Zilla Parishad schools from Nandurbar district selected randomly.



**Data collection tool**-The Questionnaire was used.  
**Statistical tool**-The statistical tool Percentage was used.

### FINDINGS

- 1) 95% teachers use traditional methods of teaching and learning.
- 2) 58% teachers use technology for their daily routines but not in learning teaching process.
- 3) 65% teachers need help from other teachers and experts for use of technology.
- 4) 92% teachers believe that using new tools, ways will help them learn faster than other ways to be a facilitator.
- 5) 83% teachers believe that using new technology ways will be effective for T-L process.

### CONCLUSIONS

Thus, we visualize the aim of educationally progressive Maharashtra Programme therefore the role of a teacher is the development of knowledge, higher-order skills (such as the 4Cs of creativity, critical thinking, communication, collaboration), and character, as well as the establishment of lifelong learning habits and an ability to learn how-to-learn with technology as the central roles in the new picture of teacher effectiveness. New understandings about how children learn have informed reform efforts while at the same time challenging teachers to rethink their teaching practice. Teachers must have time and support to understand and accommodate these new visions with their experiences of practice. The reformation provides an opportunity, indeed the necessity, for teachers and others to re-examine and think deeply about teaching and learning in light of new research on learning and new perspectives on educational practice.

### SUGGESTIONS

- 1) Teachers must design instruction that motivates each student by providing experiential, authentic, and challenging experiences.
- 2) Teachers must plan to be facilitators who provide scaffolding to support students in developing their own personal ways of knowledge and thoughts.
- 3) Implementation of various classroom strategies will also enhance student motivation and decrease discipline problems.
- 4) Teachers will become more sophisticated in their analysis of their own teaching practice and needs for new professional learning experiences.

### REFERENCES

1. Government Resolution-EQD/2015/(80/15)S.D.6 dated 22/06/2015
2. Government Circular-EQD/2015/(80/15)S.D.6 dated 17/08/2015

### Books

1. Best John W. & Kahn James V.:*Research in Education*, New Delhi: PHI Learning Private Limited.

### URLS cited-

1. [https://mscert.org.in/documents/Pragat\\_Shaiksha\\_nik\\_Varta\\_English\\_Final\\_August\\_2016.pdf](https://mscert.org.in/documents/Pragat_Shaiksha_nik_Varta_English_Final_August_2016.pdf)
2. <http://timesofindia.indiatimes.com/home/education/news/Maharashtra-schools-to-focus-on-better-attendance-teaching-skills/articleshow/49614161.cms>
3. <https://orfcaser.wordpress.com/2015/08/29/towards-an-educationally-progressive-maharashtra/>
4. <http://www.p21.org/news-events/p21blog/1791-the-changing-roles-of-teachers-what-research-indicates-part-i-of-ii->



# LEXICAL SEMANTIC ANALYSIS “EDUCATIONAL ESTABLISHMENTS” IN THE ENGLISH AND UZBEK LANGUAGES

Ganieva Dilafroz Khasanovna

English Teacher  
Fergana State University,  
UZBEKISTAN

## ABSTRACT

*The article is focused on the problem of discrepancies LSG “educational establishments” in the English and Uzbek languages. It is dedicated to the lexical-semantic field of “education” and expressed with verbalizers that realize the field of “conceptual semantics of “educational establishments” compared in both languages. The distinctive features of constituents of analyzed LSG are illustrated with examples, supported with the opinions of scholars’ research work. The novelty of the article is the first comparative analysis of microfield “education” in the Uzbek and English languages*

**KEY WORDS:** *semantic field, lacunae, analogues, reciprocal equivalents, correlate pairs.*

## INTRODUCTION

Discrepancies of LSF “education” in the English and Uzbek languages arise from substantial conceptual diversity of the systems of education in the English speaking countries and from differences in the stages of development of their national systems of education. In order to effectively identify, components of LSF “education” are analyzed separately in each section. With the help of a contrastive-translational analysis of the constituents of LSF “education” of the English and Uzbek languages, three types of lexical correlate pairs of educational lexemes are distinguished. The constituent of the first type have similar phonographic structure and etymology. The first subtype of this type comprises words with absolutely semantic structures. The second subtype includes polysemantic lexemes which have similar meanings in terms of one lexico-semantic variant. The second type is represented by lexical pairs with different verbal expression of constituents: the senses of these constituents are partially similar. The third type consists of lexemes without adequate equivalents in the receptor language. The above mentioned analysis is a sufficient background for classification of the constituents of the LSF “education” in the English and Uzbek languages into lacunae, analogues and reciprocal equivalents.

Lacunae are words used to denote phenomena, concepts or objects absent in the culture of the receptor language, they demand the coinage of equivalents in the target language.

Analogues are words in the target language which have correlates of the source language with partially similar semantic units. They are often used as translation equivalents.

Reciprocal equivalents are words in the source language and target language denoting phenomena, concepts or objects similar in both languages.

## MAIN BODY

The organization of knowledge in schools refers to the various activities which includes the entire varieties of learning experiences, (curricular and co-curricular). It covers the syllabus, courses of studies, the teaching methods, the characteristics of the teacher and the students, the interactions taking place between the teacher and the taught, between taught and the environment, the textbooks, teaching aids, library, the system of evaluation, different co-curricular programs, such as morning assembly, prize giving ceremony, sports, competitions, dramas, observation of different religious or national festivals, etc. It specifies course outlines along with objectives, learning experiences, and evaluation tools and follow-up measures. It covers a wide and varied range of occupations, activities and experiences provided to the child for his/her integral development – physical, vital, mental, psychic and spiritual.

The process of education takes place in educational establishments. In the Uzbek language LSG of “educational establishments” (ta’lim muassasalari) includes following type of educational



institutions:

- boshlang'ich maktab - primary school (4years: I-IV class)
- umumiy o'rta ta'lim maktabi - secondary school (7 years V-XI class)
- Ayrim fanlar chuqur o'rganiladigan ixtisoslashgan maktab - specialized school (some of the subjects studied in depth training, period of 7 years: V-XI class)
- Ayrim fanlar chuqur o'rganiladigan ixtisoslashgan maktab internati - specialized boarding school (for 5 years: V-XI grades)
- Futbol bo'yicha ixtisoslashtirilgan maktab internati - football training of specialized boarding school ( for 5 years : V-IX grades)
- sanatoriy turidagi ixtisoslashtirilgan maktab-internat - sanatorium-type boarding school ( period of 9 years of education : grades I-IX)
- jismoniy yoki psixik rivijlanishda nuqsoni bo'lgan bolalar uchun ixtisoslashtirilgan maktab (maktab internat) - specialized school for children with physical or mental developmental delay (boarding school), training for 9(10)years)
- alohida sharoitlarda ta'minlash, tarbiyalash va ta'lim berishga muhtoj bolalar uchun ixtisoslashtirilgan maktab-internat - special conditions , to provide specialized school for children in need of education and training (training period is required).

According to the above , we can see that the constituents of umumiy o'rta ta'lim maktabi - secondary school ( 7years V-XI class), ayrim fanlar chuqur o'rganiladigan ixtisoslashgan maktab - specialized school ( some of the subjects studied in depth training , (period of 7 years: V-XI class) are synonymous in terms of providing general secondary education for children and "general secondary education" is analog for the English language.

Feature terms that make LSG of "educational establishments" in British English have usual seme for constituents of each semantic factor of public school. Content of constituents of this group may vary form extralinguistic reasons and it has three variants. First variant: *Infant school* – (school for young children from 5 years to 7 years old) - *junior school* – children for 7 to 11 years old. , another variant : *combined infant and junior school* – *mixed school education of young and junior children*, third variant : *first school - lower primary school ( for children 5 to 8 years) and middle school – intermediate school*.

Term-constituents that belong to the British primary school is defined implicit semantic factor belonging to the public sector and *infant school* is synonym for *infant classes*, *infants' department* and *junior school (for children 7 to 11 years old)*

As mentioned above, the analogue equivalent to primary school or elementary serves as a general term for Uzbek " boshlang'ich maktab" while this

analysis prove that in the LSG of Uzbek language no equivalent or matching terms for *infants school* and *junior school* . the term *first school (lower primary school ( for children 5 to 8 years) )* also has a semantic factor belonging to the public sector education and there is no similar term (analog) in the Uzbek language to this. Sememe " *middle school*" is next in this sequence belongs to and share microfield "primary education" and "secondary education" . The fact that implicit seme "age determinants" last constituents if " students' age" 8-12 or 9-13 years partially characterizes microfield "secondary education" .

The seme *belonging to private sector of education* (independent school) has following featured or marked terms: pre-preparatory school (younger preparation school for children 5to 7 years) and preparatory school or prep school - primary school for pupils between 7-13 years old, it prepares the children for the Common Entrance Examination to get them into a private independent secondary schools, including the prestigious English public schools . Unlike the UK in Uzbekistan we don't see such schools, we have pre-school education that is generally characterized as nursery or kindergarten. The results of investigation lead to the conclusion that analyzed LSG in the Uzbek language , the seme "belonging to private sector of education" in the LSG of British English affects nominational educational institutions as well as the Uzbek language , there is also seme " belonging to private sector of education" private educational institutions , including pre-school education, secondary education that is specialized for teaching foreign languages with other innovative courses for youngsters.

LSG "secondary education establishments" in the Uzbek language has the lowest number among the three constituents of LSG, in British NVE -22, American NVE – 25 constituents are found in the LSG of "secondary education establishments".

In the Uzbek language the lexeme " umumiy o'rta ta'lim maktabi (general secondary education) " includes two constituents: "boshlang'ich sinf (elementary school)" , "yuqori sinf(secondary school)" which distinguishes them from counterparts in the LSG of American NVE. Semantic multiplier *studying period* (5 years) in secondary school analogue has usual seme in the Uzbek LSG while in American NVE it depends on state law. Uzbek : "umumiy o'rta ta'lim maktabi" has three analogues in American NVE: *junior high school* (kichik o'rta maktab) , *intermediate school (oralik maktab)* and *middle school (o'rta maktab)*. "Yuqori sinf" is 5-9 classes of secondary school, while junior high school (middle school, intermediate school) is 6-8 or 7-9 classes, that makes them partially correlate to "yuqori sinf"

Analogue that is used as an equivalent translated term for *combined elementary and*



*secondary school* is “umumiy o’rta ta’lim maktabi” in the Uzbek LSG.

*Finishing school* - college of lower level, where more attention is paid teaching the humanities and the development of an internal culture – has no correlating counterpart in the Uzbek LSG.

Two constituents of “educational establishments” in the American NVE can share common sense with Uzbek lexemes “tayyorlov kurslari” va “tayyorlov maktabi”, but translated equivalents can’t be used: *academy* – maktab-internati (engaged in preparation for higher education institution) and *preparatory school* - tayyorlov maktabi (private school that prepares students for college).

Lacunae can be seen in the Uzbek language with English marked sense “consolidation” (mustahkamlash), that unites two or more school districts into one larger school district. *School district* – this area is a part of the state which includes one or several settlements with schools subordinate municipal school board. We can take “Ta’lim boshqaruvi (shahar, tuman)bo’limi” as a partial equivalent. Thus, the term referred to above, *area school* - united school district (school, where children comes from several districts), *consolidated school* –for pupils from different areas.

Extralinguistic reasons lead to the emergence of new terms in the American NVE (national variant education) that cause analogues lacking in Uzbek terminology: *gun-free school zone* – qurolsiz maktab hududi (an area in which the law prohibits carrying the weapons); *drug-free school zone* – narkotiklarsiz maktab hududi (an area which the law prohibits action of spreading drug substances); *drug-free schools* – narkotiksiz maktablar. Slang expression *blackboard jungle* (jungle school) come from the name of one of the novel Evan Hunter, schools for New-York and used to refer to urban schools with low student discipline that are located in the areas with high crime, etc.

A number of terms have the sense *religious affiliation* (diniy mansublik): parochial school, religious school – diniy maktab, catholic school – katolik maktabi, nonsectarian school – mazhablararo bo’lmagan maktab (school that accepts students regardless of religious affiliation). A similar LSG microfield “secondary education” in the Uzbek language do not have the sense that unites religious affiliation. In Uzbek we see only one kind of religious school “madrasa” – Islamic religious school.

One of the innovative tokens is *Charter school* – xartiya maktab -school focused on local needs (public school that has permission to provide alternative education programs to meet local needs). There is also a lacuna in the Uzbek language.

The sense “alternative education institution” unites such constituents in the LSG of American

NVE: *alternative school – muqobil maktab* – public or private high school with experimental multilateral forms of education; *street academy* - or *storefront school* – maktabdan chetlashtirilgan o’smirlar uchun muqobil maktab; shaharning chekka qarovsiz hududlarida ko’chaning salbiy ta’sirlarini kamaytirish maqsadida tashkillanadi (kind of alternative school for teenagers who have been excluded from school; organized in poor areas of cities to reduce the negative influence of the street); *magnet school* - magnit maktab (zamonaviy texnika va yuqori malakali o’qituvchular bilan ta’minlangan, iqtidorli talabalarni jalb qilishni maqsad qilgan, o’qishni davom ettirishga tayyorlaydigan maxsus maktab turi) - special school type, exemplary technical equipment and specially designed programs with highly qualified teaching staff, whose aim is to attract the most talented students, including from ethnic minorities to prepare for further education; can see following types of education or educational establishments).

In the LSG of “secondary education institutions” American NVE do not have lexemes with the sense “*specialization establishment with a certain profile*”, while the Uzbek language with this sense indicates such terms: *maxsus maktab (maktab-internat)* (specialist (boarding) school), litsey (lyceum), iqtidorli bolalar maktabi (gifted children school), aniq fanlar maktabi (specialized school for certain subjects).

*School for disabled pupils* have two constituents in the Uzbek LSG: 1) sanatoriy turidagi ixtisoslashtirilgan maktab-internat - sanatorium-type boarding school; 2) jismoniy yoki psixik rivijlanishda nuqsoni bo’lgan bolalar uchun ixtisoslashtirilgan maktab (maktab internat) - specialized school for children with physical or mental developmental delay (boarding school), while in the American NVE LSG only one term is used: *therapeutic school* (maxsus maktab)

Furthermore, we can see following types of education or educational establishments in the LSG of British English.

*Adult education – educational courses for adults that are often given in the evenings;*

*A well-rounded education* – an education that includes many areas, for example music, the arts and physical skill; coeducation, collegiate (mainly American) relating to colleges or intended for students at college; comprehensive – relating to a system of education in the UK in which students with different levels of ability are taught in the same school; *CPD-* (British) continuing professional development; *home schooling* – the process of educating your children completely at home instead of in a school; m-learning- methods of learning that involve the use of mobile phones and handheld computers; *tertiary education* – education at a college or university; special *education* – educational





services for people with disabilities and people who have difficulty at the visual rate;

There are over 700 colleges and other institutions in the UK which do not have degree awarding powers, but which provide complete courses leading to recognized UK degrees.

## CONCLUSION

Contrastive analysis of lexical semantic field “Education” in the English and Uzbek languages in synchronic aspect gives number of lexemes that can correlate to each other in the analyzed lexical semantic groups and subgroups. The analysis shows that discrepancies of LSF “education” of the English and Uzbek languages arise from substantial conceptual diversity of the systems of education in the English speaking countries, Uzbekistan and from differences in the stages of development of their national systems of education.

## REFERENCES

1. Bright. W. *International Encyclopedia of linguistics*. Cambridge: Cambridge University Press. 1995.
2. Djuraev, B. *Strukturno - semanticheskoe issledovanie mnogoznachnix slov sovremennogo uzbekskogo yazika*. - A.K.D. Tashkent, 1985.
3. *Encyclopedia of Modern Education*/Ed.by H.Rivlin and R. Schueler. -N.Y.: Philosophical Library of New York,1943.-902p
4. Kempson M.R. *Semantic Theory*.- Cambridge University Press,-1995.-977p
5. *Macmillan English Dictionary for Advanced Learners. New Edition*. – Macmillan Publishers Limited, 2007.556p
6. *Macmillan Essential Dictionary*. Midsomer Norton, Rasdstok, UnitedKingdom, London, 2007.
7. *Oxford Advanced Learners Dictionary*. Oxford University Press, 2000. 1428p
8. <http://www.canteach.gov.uk/help/glossary/htm>
9. <http://www.canteach.gov.uk/teaching/how/index.htm>



## ANALYSIS OF THE CHEMICAL COMPOSITION AND MICROSTRUCTURE OF WHITE CAST IRON

**Turakhodjaev Nodir**

Professor  
Head of Foundry Technologies  
Department,  
Tashkent State Technical University

**Saidmakhmadov Nosir**

PhD student,  
Department of Foundry Technologies,  
Tashkent State Technical University

**Odilov Furkat**

PhD student  
Department of Foundry Technologies,  
Tashkent State Technical University,

**Zokirov Ruslan**

PhD student,  
Department of Foundry Technologies,  
Tashkent State Technical University,

**Turaev Anvar**

Assistant  
Department of Foundry Technologies,  
Tashkent State Technical University,  
Uzbekistan

---

### ABSTRACT

*Low and medium alloy cast irons were considered. Those cast irons, silicon was the main alloying element, although others in small quantities were considered. However, in this chapter, cast irons with more than 10% in alloying elements will be presented, having as objective improving abrasion, corrosion and heat resistances in cast irons, as specific purposes.*

**KEYWORDS:** *white cast iron, alloyed, composition, abrasion-resistant, machine, chromium, corrosion-resistant, eutectic carbide, microstructure, material, silicon, graphite, structure, austenite, cementite, ledeburite.*

---

### INTRODUCTION

High-alloy white cast irons are an important group of materials whose production must be considered separately from that of ordinary types of cast irons. In these cast iron alloys, the alloy content is well above 4%, and consequently they cannot be produced by ladle additions to irons of otherwise standard compositions. They are usually produced in foundries specially equipped to produce highly alloyed irons [1].

High-alloy white cast irons are an important group of materials whose production must be considered separately from that of ordinary types of cast irons. In these cast iron alloys, the alloy content is well above 4%, and consequently they cannot be produced by ladle additions to irons of otherwise standard compositions. They are usually produced in

foundries specially equipped to produce highly alloyed irons.

The high-alloy white irons are primarily used for abrasion-resistant applications and are readily cast into the parts needed in machinery for crushing, grinding, and handling of abrasive materials. The chromium content of high-alloy white irons also enhances their corrosion-resistant properties. The large volume fraction of primary and eutectic carbides in their microstructures provides the high hardness needed for crushing and grinding other materials. The metallic matrix supporting the carbide phase in these irons can be adjusted by alloy content and heat treatment to develop the proper balance between the resistance to abrasion and the toughness needed to withstand repeated impact.



### High-alloy cast irons

The requirement of an alloying element – silicon – with the purpose of manufacturing grey cast irons was presented. The necessity of adjusting carbon and silicon contents to the different applications of lamellar graphite cast irons was also considered. Some aspects about composition of malleable (nodular) and spheroidal graphite cast irons were also indicated. The researcher has available some criteria for being able to establish relationships between composition, structure, properties and applications. In this way, for instance (see Table 1), diminishing the equivalent carbon content seems logical when mechanical strength and tightness are

pursued in lamellar graphite cast irons. A good castability requires high equivalent carbon contents. Silicon content should be increased if the parts are thin. It is also convenient a certain phosphorus content for achieving good wear resistance. However, in all these considerations, the sum of weight percentages of the different elements – excepting carbon because this element is always present in cast irons – is lower than 10%. Nevertheless, cast irons with an alloying percentage higher than 10% will be considered. These cast irons are known as high-alloy cast irons. High-alloy cast irons are used when looking for other additional properties such as *abrasion, corrosion and heat resistances* [2].

**Table 1. Composition of some cast iron parts of common uses [3]**

Type of part		Composition (wt%)				
		C	Si	P	S	Mn
High resistance		2.75	2.25	0.10	0.10	0.80
Ornamental		3.50	2.50	1.00	0.10	0.50
Machine equipment	Small thickness	3.25	2.25	0.25	0.10	0.50
	Average thickness	3.25	1.75	0.25	0.10	0.50
	High thickness	3.25	1.25	0.25	0.10	0.50
Ingot moulds		3.50	1.50	0.25	0.07	0.90
Mine waggon wheels		3.35	0.65	0.35	0.12	0.60
White heart malleable cast iron		3.00	0.75	<0.15	<0.20	0.50
Blackheart malleable cast iron		2.75	1.00	<0.15	<0.20	0.50
Ductile cast iron		3.50	2.50	<0.04	0.01	0.03–0.05 Mg

It seems logical to question about the advantages of employing these high-alloy cast irons (more expensive than the cast irons previously studied) instead of unalloyed or low-alloy cast irons. In relation to low and medium alloy grey cast irons, it was said that they have a good corrosion resistance. Moreover, it was also mentioned that cast irons with martensitic matrix are used when a good wear resistance is pursued.

However, it should be considered that all above mentioned is referred to some ferrous materials whose primary requirements are the general properties of grey cast irons, and that secondarily it would be interesting that they have another property of the three previously listed. On the contrary, in the case of high-alloy cast irons, the required properties – abrasive wear resistance, corrosion resistance to the chemical attack or inalterability at high temperature –

are pursued no matter they have grey or white structures.

On another note, the same high – alloy cast iron usually behaves satisfactorily faced to more than one of the requirements previously mentioned. In this way, high chromium alloy cast iron is almost always used because of its good abrasive wear resistance in the presence of very hard minerals (for instance, quartz), although has a good corrosion and heat resistances as well [4]. High silicon alloy cast iron has good corrosion resistance but also has good wear resistance. High nickel alloy cast iron is stable to heat and behaves well in front of corrosive conditions. As it will be seen, chromium, silicon and nickel are usually present – one or more than one of them – in high proportion in all high – alloy cast irons.

We usually use of the alloy that has the chemical composition mentioned below:

3:5%C-2:5%Si-0:5%Mn-0:1%P-0:12%S

First, the equivalent carbon should be calculated:

$$EC = C + \frac{Si}{3} + \frac{P}{3} = 3.5 + \frac{2.5}{3} + \frac{0.1}{3} = 4.37\% > 4.25 = EC_{\text{Grayiron}} \quad (1)$$

EC = 4.37%, so, this cast iron is hypereutectic. As applications, it is possible to mention low resistance ornamental parts (sculptures, lampposts, manhole covers, etc.) because of the low solidification interval and excellent castability. In ornamental applications, eutectic grey irons are

usually employed because of the nearly zero solidification interval. With the same finality, hypereutectic grey irons are used in ornamental parts because the hypereutectic graphite does not impair the castability and increases the thermal conductivity [5].

We choose chemical compositions for manufacturing grey cast irons with applications in thin parts with tensile strength, ingot moulds and elements with resistance to wear and thermal growth:

(A) 3.8% C-1.5% Si-0.9% Mn-0.2% P-0.07% S

(B) 2.75% C-2.25% Si-0.9% Mn-0.1% P-0.07% S

(C) 1% C-16% Si-0.4% Mn-0.1% P-0.012% S

The equivalent carbon of the cast irons is calculated:

$$EC^A = C + \frac{Si}{3} + \frac{P}{3} = 3.8 + \frac{1.5}{3} + \frac{0.2}{3} = 4.37\% \quad (2)$$

$$EC^B = C + \frac{Si}{3} + \frac{P}{3} = 2.75 + \frac{2.25}{3} + \frac{0.1}{3} = 3.53\% \quad (3)$$

$$EC^C = C + \frac{Si}{3} + \frac{P}{3} = 1 + \frac{16}{3} + \frac{0.1}{3} = 6.3\% \quad (4)$$

The manufacture of *elements with growth and wear resistances* requires a grey iron with high silicon content. For that reason, *Cast Iron C* has the suitable chemical composition. This cast iron is commercially known as Duriron. The high silicon percentage (16%) impedes the growth that cementite suffers when splits into iron and graphite at temperatures higher than 450 °C, and also improves the scaling resistance as a consequence of that reduces the propensity of ferrite to oxidation. Duriron is a grey cast iron of matrix thoroughly ferritic (stable cooling). Moreover, this cast iron has wear resistance due to the hardness conferred by the silicon.

The manufacture of *ingot moulds* requires a grey iron with high carbon content because the graphite is a good heat conductor. The main feature of the ingot moulds is its ability for heat dissipation, which is achieved by means of graphite, especially lamellar graphite. For that reason, *Cast Iron A* has the suitable chemical composition.

The manufacture of *thin parts with tensile strength* requires cast irons of low carbon content, because the lower the carbon contents, the lower the graphite presence. In this way, the notch effect is reduced, and the resistant cross section is increased (higher toughness), and consequently the tensile strength is improved. That is to say, low carbon

content is required. *Cast Iron B* has the suitable chemical composition.

### Non-alloyed White Cast Irons

Except for the former reference to the metastable solidification, it was not mentioned in previous sections neither the structure of white cast irons *nor their most typical property, the abrasive wear resistance*. Before talking about the categories of high-alloy cast irons whose abrasion resistance is the main feature, it is noteworthy to refer to non-alloyed white cast irons. Non-alloyed white cast irons are cheap materials with an excellent abrasion resistance and with a better wear resistance in comparison with grey irons and steels. On the contrary, white cast irons have a worse toughness. Even though the components of the alloy are essentially iron and carbon, their excellent wear resistance comes from the microstructure inherited from the metastable solidification [6].

For instance, it should be considered the evolution from the molten state down to the room temperature of a sand-moulded binary hypoeutectic white cast iron of 3% C balance iron. Its solidification begins at the temperature  $T_1$  of around 1280 °C. The primary constituent that solidifies (between  $T_1$  and 1148 °C) is austenite. In equilibrium cooling conditions, the solidification ends at 1148 °C. The structure is constituted by primary austenite



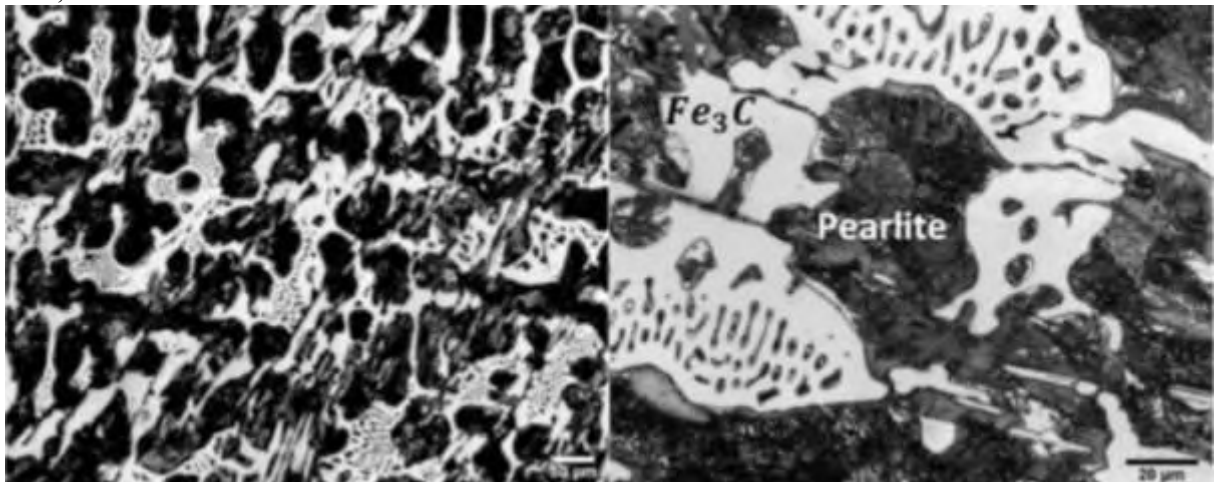
(2.11% C), and the ledeburitic eutectic matrix (52 wt% austenite (2.11% C) and, 48 wt% cementite, called ledeburite, where cementite is, in turn, the matrix constituent of this ledeburite).

During solid-state cooling, carbon solubility in austenite diminishes both in the primary austenite and in the austenite of the ledeburite. The carbon excess, which was rejected from the austenite cells, precipitates as cementite in either the boundaries of the dendrites or inside of the austenite.

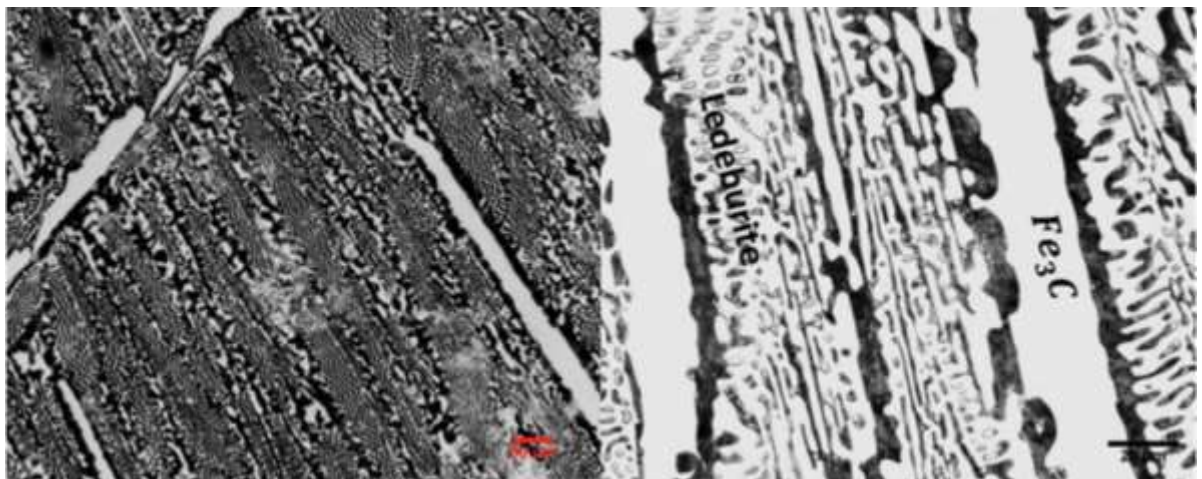
When the temperature of 727 °C is reached, the carbon content in the austenite is 0.77% C. At this temperature, 0.77% C austenite transforms into

pearlite (a lamellar eutectoid made of ferrite and cementite). This transformation affects the primary austenite and the eutectic austenite as well.

In Fig.1, it is possible to see the morphology of the disperse constituent, which was austenite formed before reaching 1148 °C and that has already been transformed into pearlite. It is also possible to see the eutectic matrix that is formed by cementite (white constituent) and dark points that belong to the eutectic austenite, which has also been transformed into pearlite. The same considerations can be made in the case of the hypereutectic white cast irons (Fig.2), but as distinct to



**Fig. 1. Hypoeutectic white cast iron. The matrix constituent is ledeburite (ledeburitic austenite - and also primary austenite - is transformed into pearlite)**



**Fig. 2. Hypereutectic white cast iron [7]**

The hypoeutectic white cast irons, they have as primary constituent needles of Fe<sub>3</sub>C that were formed previously to the eutectic solidification.

The microstructure of non-alloyed white cast irons, whose disperse constituent is pearlite, justifies their typical properties: all of them, both hypoeutectic and hypereutectic white cast irons, have *ledeburite as matrix constituent (and the matrix of the ledeburite is cementite)*.

According to the microstructure, a good model to explain the white irons' behaviour could be the *sponge of cementite* with hollows filled in by pearlite. These unalloyed white cast irons are ceramic matrix composites. Strictly speaking about hollows is not adequate because there are no void areas in white cast irons. In white cast irons, a coherency between the primary constituent and the ledeburitic matrix, which is obtained at the end of the solidification (just like between the eutectic cementite and the pearlite),



exists. Apart from the above comment, the *sponge's model* is suitable for explaining white cast irons origin: discloses the history of the non-alloyed white cast iron since the liquid state and explains its excellent *abrasion resistance*, at least against abrasive materials, whose hardness in the Mohs scale is lower than the pearlite hardness. The *sponge of cementite* will suffer the most part of the fretting, although the pearlite that fills the hollows results also affected, and because of that pearlite has lower hardness than cementite, it will suffer, in comparison, more wear.

The hardness of an abrasive material has marked influence in the abrasion speed of the material that frets with it. In any case, with the aim of calculating the superiority of one material with respect to other, both materials should be subjected to the same kind of abrasive effort. And their behaviour also depends on the way by which the abrasion is produced and the mode of application of this abrasion as well: wet, dry, by erosion, with grinding wheel, with gouge, etc.

The degree of abrasion resistance of a white cast iron can also change for the same composition depending on the solidification technology that was used. In this way, for instance, a *white iron chill moulded*, or in a graphite mould, which is better heat transfer, usually results in *more resistant to wear than the same cast iron sand moulded*. Chill moulding confers columnar structure, a finer eutectic, and because of the non-equilibrium solidification, a major proportion of ledeburite [8].

If the white cast iron had 6.67% C, and therefore cementite was its only constituent, without pearlite, the cast iron would have a higher abrasion resistance in comparison with the hypereutectic white cast irons and, obviously, than all hypoeutectic white cast irons. On the contrary, toughness would be very low. Because of the low toughness of white cast irons, logically the higher the carbon content, the lower the toughness, explains that the hypereutectic white cast irons are hardly used.

The *sponge* model also justifies the lack of elongation in these cast irons during the tensile test: the cementite matrix breaks without elongation, as corresponds to the ceramic nature of the Fe<sub>3</sub>C intermetallic compound.

The compromise between abrasion resistance, which grows with the carbon content, and toughness, which diminishes with the carbon content, advises the use of hypoeutectic white cast irons, and also justifies - as it will be seen afterwards - the utility of high - alloy cast irons. However, unalloyed white cast irons have limitations that make necessary the use of high-alloy cast irons. This happens, for example, when the abrasive mineral has hardness higher than that one of the pearlites [9].

With all that, because of the large number of mining uses, such as mill balls, jaws, wearing plates, etc., unalloyed, or lowly alloyed white cast irons

offer their possibilities in the abrasion resistance field [10]. Behaviour of white cast irons that, as can be easily justified if we compare their microstructures, is better than in hypereutectoid steels and in grey cast irons. Reciprocally, due to the excellent abrasion resistance, white cast irons cannot be machined with common tools.

## CONCLUSION

White cast iron is mainly composed of ledeburite structure. Ledeburite is a mechanical mixture of fine grains of austenite and primary cementite, consisting mainly of 4.3% C. It is mainly austenite 52% and cementite 48%. The structure of leduburite is in the form of rough graphite, which is hard and brittle, and can cause various cracks and internal stresses in the pressure-working shale. Therefore, for the use of white cast iron in machinery, it is recommended to work mainly with alloying elements.

## REFERENCES

1. Peter Beeley, "Foundry Technology", Butter Worth Heinemann, 2<sup>nd</sup> ed., 2001
2. José Antonio Pero-Sanz Elorz., Daniel Fernández González., Luis Felipe Verdeja "Physical Metallurgy of Cast Irons" ©Pedeca Press Publicaciones 2018. All Rights Reserved. ©Springer Nature Switzerland AG 2018
3. Nodir Turakhodjaev., Sarvar Tursunbayev., Sherzod Tashbulatov., Munira Kuchkorova "Analysis of technological solutions for reducing the copper concentration in slags from oxygen-flare smelting of copper sulfide concentrates" *Journal of Critical Reviews* 2020 year ISSN- 2394-5125 Volume 7, Issue 5, 2020 (Scopus indexed) <http://dx.doi.org/10.31838/icr.07.05.95> Tayvan Volume 7, Issue 5, 2020 (Scopus indexed) <http://dx.doi.org/10.31838/icr.07.05.95> TayvanTa shkent 2 p. pp 10
4. Tursunbaev Sarvar Anvarovich "An analysis of electrolytic in-process dressing (elid) grinding" *SCIREA Journal of Mechanical Engineering* <http://www.scirea.org/journal/> Mechanical October 6, 2019 Volume 2, Issue 3, June 2019 China
5. Sh.Bekmirzaev., N.Saidmakhamadov., M.Ubaydullaev "Obtaining sand-clay casting" *Theory and practice of modern. -Russia. - №4 (12) - 2016. - B.112*
6. John Campbell *Complete Casting Handbook first edition 2011 y.*
7. Dovgalevskiy Ya.M. *Cast iron with special properties. M.:Metallurgizdat.*
8. Samsanov V.I. *Investigation of the conditions for the appearance of macroscopic residual stresses in molded products. Abstract. dis. Cand. tech. sciences. M.*
9. Girshovich N.G. *Crystallization and properties of cast iron in castings. ML: Mechanical Engineering. Sipin I.I., Garber M.E.,*



- Mikhaylovskaya S.S. New abrasive-corrosion white cast iron //Foundry. Number 9*
10. *Nodir Djakhongirovich Turakhodjaev., Nosir Muysinalievich Saidmakhamadov., Ruslan Samadovich Zokirov., Furkat Umarbekovich Odilov., Kamola Utkurovna Tashkhodjaeva International Scientific "Journal Theoretical & Applied Science" Published: 30.06.2020 <http://T-Science.org>*



# THE ROLE OF PUBLIC CONTROL IN EFFECTIVE POLITICAL DECISION MAKING IN LOCAL GOVERNMENT REPRESENTATIVE BODIES

**Isabaev Maksad Bahodirovich**  
Teacher of Namangan State University

## ABSTRACT

*In this scientific article, international and national legislation on citizens decision-making processes has been investigated, to what extent is the importance of public control in the process of political decision-making, the implementation of citizens' participation in local government directly by itself or through elected representatives (political institutions). Also, practical proposals aimed at increasing the participation of public structures in decision-making were made.*

**KEY WORDS:** *public organizations, political decision, civil institutions, local council, Public Relations, E-Government, media.*

## DISCUSSION

Understanding local needs is often done through a process called “Public Relations”. English scientist Stuart argues that there is no bright definition of public involvement[1]. Attempts of the connections with public are mainly considered in the conditions of planning and decision making. This has to do with how the role of planning is being managed and of course, having the authority to make a final decision.

The best way to achieve citizen involvement is not to encourage paternalism in decision – making with respect to local community organizations, but rather to promote cooperation and self-awareness[2]. If the involvement of citizens and the joint efforts don't occur as thought, it will lead to the loss of established mutual relations. The phrase “citizen involvement” is based on four principles of local needs satisfaction and the origin of local government namely competence, cooperation, government and governance. In these four principles of local government, the link between citizen participation and decision-making at local level is direct and is usually described as “simple roots” or “bottom-up” relationships[3].

Today, the question of to what extent the general public takes part in the process of political decision-making is one of the controversial topics in the field of political science. As we analyze the theoretical approaches expressed in terms of public involvement in management, we find that they are different, and even opinions that are mixed – opposite to each other.

According to the first liked theoretical approach, the participation of the community through local government bodies is regarded as the result of the social development activities of the community. Local government as the smallest and most accessible unit in the public administration system, plays a major role in overcoming the invisible barriers between the individual and the society[4]. In order for the board members to have a result of their relations with the general public, they must also have a controlling role[5]. This allows democracy to participate more broadly and actively participate in government administration, political decision-making[6]. In political practice, decision-making by the elite is much more rational, less emotional and consistent than ordinary citizens[7]. It is believed that ordinary people have enough intelligence to make their own decisions, rather than giving political decisions to elite representatives[8]. In most cases, people do not think about the logical consistency of the decision-making process or the amount of information they use and in what order they use it. Instead of focusing on the process of making their own decisions, people are more interested in the expected results of making decisions and hope that their decisions (if implemented) will lead to better results[9]. In contrast to these points of view, supporters of the second approach noted that democratic public participation poses a number of important theoretical and political problems. Direct public involvement in discussions and decision-making through institutions of authorized democracy can reduce the role of officially elected





representatives (Deputies of local councils)[10]. Political decisions must be made not by a single citizen, but by a selected group that is considered competent. Because, public decision-making and reasoning skills are questionable. The fact that citizens make political decisions is a one-time job, which is carried out mainly through voting[11]. In modern times, such participation (except for voting) largely depends on the problem and the situation in it[12].

In our opinion, the elected representatives play an important management role at the local level. Because, they are responsible for ensuring that the activities of public organizations on behalf of the general public are fair, effective and that local needs are met. They are also responsible for the overall balance of results, public action and effective local collaboration. It should also be taken into account that those who have a high level of Education – elected officials-can use the information in a different way in their own interests. In such a process, teams and private organizations will have to take control of them. Therefore, it is necessary to ensure transparency, equality, indivisible communication and debate in achieving efficiency in activities.

Until now, several international documents on the decision-making processes of citizens have been adopted, in which the rights associated with political participation are guaranteed. In particular, Article 25 of the International Covenant on civil and Political Rights, adopted in 1966, states that every citizen has the right to participate in public affairs, the right to vote and access to the elected civil service. Also, the rights of citizens to participate in public affairs, to participate directly in the mass meetings held, and to make decisions on local problems or the affairs of a particular community are specified in Article 25 of the Convention on civil and social cooperation. The decision on equal participation in political and Public Affairs adopted by the Human Rights Council in 2015 year emphasizes the importance of citizens' participation in public affairs without legal and practical obstacles and their ability to participate in political life. Also, Article 8 of the Declaration on Human Rights Defenders of the United Nations General Assembly defines that everyone has the right to take part in the work of his government by carrying out state and public affairs, both personally and in conjunction with others.

The Orxus Convention (1998 year), which is one of the important international documents on the participation of the general public in the decision-making process, guaranteed the right to information, public participation in decision-making and their use[13]. During the preparation of various plans, programs and policies, the public will be given the opportunity to express their feedback and suggestions, as well as the results of the consultations held will be taken into account as much as possible.

In Uzbekistan, in recent years, effective results have been achieved on the participation and control activities of the general public in the spheres of Public Administration. Bunda of course, the strategy of action on the five priority directions of development in 2017 - 2021 years, adopted in due time, is important. Its 1.3.-the item is called "improving the public administration system", in which the issues aimed at increasing the role and role of the public institution are reflected. It will be necessary to pay special attention to the fact that the quality of state decisions aimed at "satisfying" the needs of the state and society in a timely manner, its expressiveness and effective control. "In the interest of our people, in making any decision that concerns his tomorrow's destiny, we must make a cut by measuring seven"[14]. It is important that this is the participation of the general public in all processes from the adoption of political decisions to the execution of it, to the introduction of transparent and effective methods of citizens' participation in this process[15].

Taking into account the fact that currently there are more than 9 thousand 200 the mass media, more than 1 thousand 400 media outlets and about 10 thousand neighborhoods in our country, this means that it is important and relevant. To this end, many legal documents were adopted aimed at further increasing the participation of the general public in the field of Public Power and management. In particular, in the new edition of the law "on public associations", "on trade unions, guarantees of their rights and activities", "on political parties", "on non-profit organizations", "on self-government bodies of citizens", "on environmental control", "on social partnership", "on openness of the activities of the bodies of state power and administration", "on parliamentary control" and "on public control" are examples.

In the law "on the openness of the activities of public authorities and management bodies", adopted only in 2014, it was important that the public was informed in detail about the activities of these bodies, the order and sources of information disclosure were clearly indicated, due to the openness and transparency of the information, the main principles of openness of the activities of the "Because, in a democratic and open society, public administration is carried out with direct and indirect participation of the population. After all, it will be possible for citizens to clearly understand what decisions and programs are being taken in the country, how they are being implemented, how responsible and officials are performing their duties, and, if necessary, express their attitude to these processes"[16]. Only then democratic values are formed and developed in all parts of society.

The wide participation of citizens directly or indirectly in the decision-making process is one of



the main components of the construction of civil society in the country. Therefore, the head of our state attaches particular importance to the participation of citizens in the management of political decisions. All conditions are provided for this in our country. The procedure for reporting and information is established in the state authorities, including economic, banking and financial departments, municipal services, internal affairs, foreign affairs, education and training, health, judicial and local councils, and people's control is being implemented in practice[17]. This shows that the principle of effective management is more dependent on the participation of citizens in the decision-making process. This will force institutions to increase transparency and accountability. When people know the way to make decisions, it will help them to foresee and develop laws. Although this can lead to a slight delay in decision-making.

But the fact that no similar positive cases are observed in local government remains problematic. Systematic work is being carried out to discuss the decisions taken by local authorities widely among the population and to study its implementation. Therefore, through effective organization of activities involving citizens, institutions of civil society, mass media, business entities and representatives of Science, the norm has been defined as the task of increasing the level of influence of public discussion on the process of creativity[18].

This in itself dictates further the role of non-profit organizations and other civil institutions in ensuring active participation of citizens in the life of the state and society. The wide participation of various public advisory councils, which are not state-owned, consisting of representatives of the "third sector" in decision-making, provides the basis for its full implementation. Therefore, the Advisory Council for the development of civil society under the president of the Republic of Uzbekistan; public councils under the bodies of Public Administration; Public funds for support of civil society institutions and non-profit organizations were established in the presence of the Jokargy Kenges of the Republic of Karakalpakstan, regional and Tashkent City Councils of people's deputies. The president also set up a people's reception and virtual reception. The establishment of such a new system of working directly with the citizens of the country has created many opportunities for citizens. We can only see this when more than 1,5 million appeals have been received by the population to this day from one virtual reception.

In fact, Information Communication Technology improves the policies of mass society. It increases the pragmatic political capabilities of the electronic age, which is used in relation to today's parliamentary democracy[19]. The use of ICT makes it possible to achieve the opinion of consumers. Acts

provide the freedom of information needed to ensure elite transparency[20]. The establishment of an E-government system will prevent time, bureaucracy and secondary spending. In our view, the fact that e-government can provide transaction efficiency, support a number of local government processes and invest heavily in infrastructure will help citizens to be provided more services.

The state bodies of power operate at the barges of decision-making - at the federal, regional and local level-through special press services created in cooperation with the media. They develop mutual cooperation with citizens in such forms as the creation of governance bodies, the establishment of relations between government and society[21]. In our opinion, today in the development of the Information Service of local authorities, the following several actors should be present: to inform the population about the activities of state bodies, to ask for public opinion, to adapt to it, to make recommendations on the implementation of local policies based on the like; to analyze public opinion and to formulate the attitude.

Today, having revised the execution of decisions in a more strict order, the improvement is demanded by the time itself. "It must be acknowledged that democratic institutions such as parliamentary control, public control, journalist control have not yet fully formed and taken a deep place in our lives"[22]. The legal basis for the implementation of broad public control over the execution of decisions was reflected in the law of the Republic of Uzbekistan "on public control" adopted on 12 April 2018. In the decisions taken by the law, as well as in the state and territorial programs of development, public interest, public opinion are taken into account, the legal strengthening is established. In this regard, we can observe that the socio-political activities of the citizens of our country have been somewhat revitalized in recent times. State programs are also put on the discussion of the general public from 2017 year, and then adopted. The main purpose of this study is to discuss important political decisions Komplex, to examine the views and suggestions of the public.

1310 proposals and comments on the results of the public discussion set out on the portal "system of evaluation of the impact of legislation" were received, on the basis of which 41 items of the state program for 2017 were reviewed[23]. As well as the draft State program for 2019 year 2019.strategy.uz. a total of 3399 comments were made by citizens when they were put on public discussion on the website. Regulation.gov.uz. through the website, 404 offers have been received. During the discussion of the draft State program for 2019, 4180 proposals were received, of which more than 340 proposals of citizens were used to improve the content of the draft State program. 30 editorial changes were made to the



relevant paragraphs while on the basis of proposals close suggestions[24].

In the appeal of the president to the Oliy Majlis, it was noted the necessity of wide involvement in the discussion of laws, introduction of modern information technologies, including the creation of special “fields” in the Internet Network, the introduction of electronic appeals as a community. On April 12, 2018, a joint decision of the Council of Chambers of Parliament was adopted, the regulation on the procedure for electronic collective application and their consideration through the web-portal “my opinion” was developed. The web portal “my opinion” was launched as a test from 20 April. The creation of this web portal provides citizens with the opportunity to participate in the management of state and public affairs as a subject of public control, openness of the activities of representative bodies of state power, the vital effectiveness of the decisions taken.

In our opinion, in order for decisions to be fully implemented in the regions, first of all, decisions must be taken in consultation with the broad masses of people and representatives of the relevant non-governmental sector, with a cut of seven measures. In the process, however, it is desirable that the draft resolution, which is planned to be adopted in the local representative bodies, was brought to the attention of the general public. Such a system is not fully resolved in the local representation management. Practice shows that the issues that will be included in the discussion of the Council of people's deputies before the session, in most cases, will not be discussed in advance among the existing interested organizations, specialists, representatives of Science and the population. Also in its activities, media outlets and the public almost do not work. The mass media have low participation in the development and implementation of socio-economic development programs and normative legal acts of the regions. In the preparation of decisions, practical dialogue between representative bodies and public institutions has not been systematically established.

This limits the possibility of fully taking into account the interests of the relevant stakeholders in the decisions taken. I'm sorry... how to make the right decision without talking openly with people and not knowing their problems?[25] Today, in Paragraph 8 of Article 25 of the law “on local state power” of the Republic of Uzbekistan “on the results of discussion of the report of the governor of the region, district, city” the decision of the Council of relevant people's deputies and the report of the governor must be published in official publications and on the websites of local state. It is important to attract the general public to the decision-making process, to raise their awareness, and not as soon as a decision is made. For this reason, we make the following suggestions:

One of them. After the discussion of the Council of local councils draft decisions texts and analytical materials on them, we propose to make an urgent announcement in the regional print media, as well as on official websites (not yet all local representative bodies' sites have been fully formed) on a legal basis. This serves to ensure that the activities of the local representative body are open and transparent.

2. The system of submission of the draft resolution to the attention of the general public has not found a legal basis for its adoption in local councils. Proceeding from this, we propose to add to Paragraph 3 of Article 12 of the standard regulation of the Regional, District, City Council of people's deputies that “the population will be informed in advance about the date, time, place and agenda of the sessions of the councils of people's deputies, meetings of the Permanent Commission”. Public opinion is taken into account on each issue that is included in the session discussion. Due to this, the norm determines its obligation in the preparation of each issue included in the discussion of the session;

3. To consult with public organizations and create an effective framework of use of their potential in the process of decision making projects. Article 24 of the standard regulation of the Regional, District, City Council of people's deputies “during the session brief opinions of the representatives of the relevant public Institute, which are related to the issue discussed in the process of consideration of issues, are listened to. We propose to add to the norm that the expressed opinions will be put on the discussion vote and the appropriate decision will be made”.

In place of the final opinion, it can be said that citizens represent their political will and interests. Citizens participate in the activities of public organizations or directly in the process of making political decisions. This will lay the groundwork for the implementation of the following socio-political changes:

participation of citizens in decision-making serves to realize their political and social interests, as well as the process of socialization of each citizen, that is, they are involved in the affairs of society and the state;

active political participation in decision making, which takes into account the interests and aspirations of ordinary citizens, gives them a sense of free human dignity, form a spirit of political responsibility as an active citizen;

the skills acquired as a result of the expression of the interests of citizens by means of various public organizations and political parties will make them more active, which will greatly contribute to the effective functioning of the councils as a result of mutual agreement of interests;

political participation creates conditions for every citizen to realize his / her identity, to take a



worthy place from society. This develop their national pride, forming a sense of ownership of his country and territory;

the process of achieving the expression of the interests of all social groups in their political decisions and their implementation in life, local authorities further strengthen it, take measures to implement decisions on the territory without any tension and voluntarily, as well as puddling;

conditions for the expression of the will of the majority of citizens in society are created, the basis for the functioning of society and state power on the basis of democratic principles is strengthened.

As a result, cooperation and cooperation takes place in the local councils through the practical expression of the interests of citizens and various social groups, on this basis, one of the main signs of local government is its expression in life.

## REFERENCES

1. Stuart G. 'Encouraging a broad understanding of community engagement, posted 13 October 2016 at Sustaining Communities: Families, communities, the environment, viewed 27 October 2016, <<https://sustainingcommunity.wordpress.com/2016/10/13/broad-understanding-of-ce/>>
2. Jayne Meyer Tucker. *Decision making at the local level – the missing link? A thesis submitted for the degree of Doctor of Philosophy of the Australian National University.* ProQuest LLC. 2017. Pp.237.
3. Lowndes V. and Sullivan H. 2008, 'How low can you go? Rationales and challenges for neighbourhood governance', *Public Administration*, vol. 86, no. 1, Pp. 53–74.
4. Richards P.G. *The Local Government System.* London: Allen & Unwin. 1983. P. 167.
5. Goss S. *Making Local Governance Work - Networks, Relationships and the Management of Change.* Basingstoke: Palgrave. 2001. P.134.
6. Putnam R. *Bowling Alone.* New York: Simon and Schuster. 2000.
7. Converse P. "The Nature of Belief Systems in Mass Publics." In D. Apter (Ed.) *Ideology and Discontent.* New York: Free Press. 1964.
8. Haskell J. *Direct Democracy or Representative Government?: Dispelling the Populist Myth.* Boulder, CO: Westview Press. 2001.
9. J. Yates, E. Veinott and A. Palatano. "Hard Decisions, Bad Decisions: On Decision Quality and Decision Aiding." In S. Schneider and J. Shanteau (Eds.) *Emerging Perspectives on Judgment and Decision Research.* Cambridge: Cambridge University Press. 2003.
10. Steven Halls. *The concept and practice of territorial representation in English Local Government: impacts of government policies.* Dissertation submitted in part fulfilment of the requirements of The Nottingham Trent University for the degree of Master of Philosophy. Published by ProQuest LLC. 2016. PP. 162.
11. Schumpeter J. *Capitalism, Socialism, and Democracy.* New York: Harper and Row. 1942.
12. Schumpeter J. *Capitalism, Socialism, and Democracy.* New York: Harper and Row. 1942.
13. W. Miller and D. Stokes. "Constituency Influence in Congress." *American Political Science Review.* 1963. 57 (1): 45-56.
14. *Participation of NGOs in the process of policy-and law-making. Comparative analysis.* Bulgarian Center for Not-for-Profit Law. Bulgaria // [www.bcnl.org](http://www.bcnl.org).
15. Karimov I.A. *Happiness and great future of our native country is the highest happiness.* –T. *The Republic of Uzbekistan*, 2015. –P.210.
16. "Decree of the president of the Republic of Uzbekistan on measures to further improve the Anti-Corruption System in the Republic of Uzbekistan" on May 27, 2019 // [www.uza.uz](http://www.uza.uz).
17. *The basics of Civil society: tutorial/ A. Jalilov, U. Muhammadiev, Q. Jurayev and others.* –T., 2015. – P.197.
18. Mirziyoyev Sh. *Parliament should become the school of true democracy, the initiator of reforms and the main executor of our negligence.* 2017 y. 12 July // [www.uza.uz/oz/politics](http://www.uza.uz/oz/politics).
19. *The norm is a concession to improve creativity activities. Appendix 1 to the decree of the president of the Republic of Uzbekistan № PF-5505 on August 8, 2018 // ICMMB: 06/18/5505/1639-number.*
20. Bellamy C. & Raab C.D. *Wiring up the Deck-Chairs.* *Parliamentary Affairs.* 1999. 52(3) July, 518-534.
21. Steven Halls. *The concept and practice of territorial representation in English Local Government: impacts of government policies.* Dissertation submitted in part fulfilment of the requirements of The Nottingham Trent University for the degree of Master of Philosophy. Published by ProQuest LLC. 2016. PP. 162.
22. Matveev A. A., Gushchina A. A. *Influence of informal practices on the process of making managerial decisions in state authorities and local self-government // Management consulting.* No. 7. 2016. Pp. 8-13.
23. Mirziyoyev Sh. *We will build our great future together with our brave and noble people.* - T. *The Republic of Uzbekistan*, 2017. –B. 49.
24. [http://uza.uz/oz/documents/On\\_further\\_development\\_of\\_the\\_Republic\\_of\\_Uzbekistan\\_-07-02-2017](http://uza.uz/oz/documents/On_further_development_of_the_Republic_of_Uzbekistan_-07-02-2017)
25. Mirziyoyev Sh.M. *We will continue our path of national development with determination and raise it to a new level.* 1-volume. - T.: "Uzbekistan", 2017. 439 p.



# THE CRITERION OF HUMAN INDICATORS IN DEVELOPMENT AND RENEWALS IN UZBEKISTAN

**Turdiyev Bexruz Sobirovich**  
Lecturer Bukhara State University,  
Bukhara,  
Uzbekistan

## ABSTRACT

*Human development is an event that is inextricably linked with the processes of spiritual renewal of society and the state. Spiritual renewal is very important and relevant not only for one person, but for all mankind, for the people and the nation, and for the development of society. This article is devoted to the analysis of human criteria in the process of spiritual renewal in Uzbekistan.*

**KEYWORDS:** *philosophy, nation, reform, development, Global Goals, humanity, spiritual renewal, Strategy, HDI, GDI, human factor.*

## INTRODUCTION

The question of the human criterion in the indicators of spiritual renewal has been one of the age-old topics of discussion in social philosophy. The emergence of mankind on earth, its differences from other living beings, its place in existence, its human qualities and personal characteristics have always been the subject of debate among philosophers. Therefore, today the main criteria of human development, including the main indicators of human well-being, which are inextricably linked with its socio-economic and spiritual maturity, are leading as one of the main objects of research and observation of social philosophy.

The development of a society, state, people and nation will increase only when the socio-economic and political development of human development is combined with cultural, spiritual, enlightenment change and development. For this reason, the most developed democracies in the world have paid great attention to the issues of human performance in the turning points of spiritual renewal, in which society has taken the path of raising its cultural potential, spirituality and culture.

## MAIN PART

If we summarize the path of independent development and progress of Uzbekistan, we see a dialectical fit to the idea of "Reform - not for the reform, but for the people". At the same time, the fact that man is at the center of all reforms in Uzbekistan, is considered as a criterion for all changes, and the work done to create a decent lifestyle for the people.

President of the Republic of Uzbekistan Shavkat Mirziyoyev says that all spheres of public life are intertwined primarily with the human factor: "To drastically improve the life of the people, we will accelerate large-scale social reforms that over the past three years have been carried out on the basis of the principle "Human interests first". First, improving the well-being of people and strengthening their social protection will remain among our most critical goals"[1].

Starting from 2013 the experiences of child and forced labour was stopped due to the high awareness of civil society, citizens and the commitment of the government of the Republic of Uzbekistan. Here the main partners were Uzbekistan, EC, Switzerland and International Labour Organization, World Bank Group[2]. This collaboration ended the practice of child labour and forced labour, created the decent working conditions positively affecting on the value chain worldwide.

In other words, it is no coincidence that today Shavkat Mirziyoyev has defined the development of the human factor, the spiritual and physical formation of man as one of the urgent tasks of the state and society. The importance of the factor of human development in the process of spiritual renewal of the life of a society is so important that it can never be secondary. It is also a complete mistake to think that the human criterion will be taken into account once other issues of public life have been resolved. Like other factors that accelerate society, the human criterion in the process of spiritual renewal is one of the most important factors in accelerating and enhancing the development of



society. It is a fact of socio-philosophical life that every state in the world, regardless of its size, pays attention to the human factor and goes on the path of its development.

Today, human development issues can be seen in research conducted by international rating agencies and organizations such as the United Nations Development Program, UNESCO, ISESCO, the Organization for Economic Cooperation and Development, the World Economic Forum, International Budget Cooperation, INSEAD International Business School and the Economist Intelligence Unit.

In particular, on September 25, 2015, the leaders of all countries agreed at the “Rio+20” Conference to adopt a program of sustainable development until 2030 in order to address the various challenges facing poverty, inequality and climate change in the world. After that, a meeting was held at the UN Headquarters in New York to move from these demands to concrete action, and the new development program was formally adopted at the historic UN Summit in September 2015, the Sustainable Development Goals[3].

This program of Sustainable Development Goals 2030 consists of 17 new Sustainable Development Goals, or Global Goals, which are considered a program that determines the direction of universal policies and investments in the next 15 years, in which the leaders of the countries of the world are supposed to completely eradicate poverty – in all points of the world.

The 17 Sustainable Development Goals and 169 targets which we are announcing today demonstrate the scale and ambition of this new universal Agenda. They seek to build on the Millennium Development Goals and complete what they did not achieve. They seek to realize the human rights of all and to achieve gender equality and the empowerment of all women and girls. They are integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental. The Goals and targets will stimulate action over the next 15 years in areas of critical importance for humanity and the planet[4].

<b>GOAL 1:</b>	No Poverty	<b>GOAL 10:</b>	Reduced Inequality
<b>GOAL 2:</b>	Zero Hunger	<b>GOAL 11:</b>	Sustainable Cities and Communities
<b>GOAL 3:</b>	Good Health and Well-being	<b>GOAL 12:</b>	Responsible Consumption and Production
<b>GOAL 4:</b>	Quality Education	<b>GOAL 13:</b>	Climate Action
<b>GOAL 5:</b>	Gender Equality	<b>GOAL 14:</b>	Life Below Water
<b>GOAL 6:</b>	Clean Water and Sanitation	<b>GOAL 15:</b>	Life on Land
<b>GOAL 7:</b>	Affordable and Clean Energy	<b>GOAL 16:</b>	Peace and Justice Strong Institutions
<b>GOAL 8:</b>	Decent Work and Economic Growth	<b>GOAL 17:</b>	Partnerships to achieve the Goal
<b>GOAL 9:</b>	Industry, Innovation and Infrastructure		

**Table 1. The 17 sustainable development goals (SDGs) to transform our world**

## THEORETICAL BACKGROUND

These goals are expected to be addressed by 2030 and to serve the capital of human development. Uzbekistan is not excluded from these global processes. On September 25, 2015, Uzbekistan joined the international agreement “Sustainable Development Goals” with 193 countries[5].

Today, the state policy in the field of human development in the spiritual renewal of Uzbekistan is in line with these goals and is recognized by foreign experts. In particular, the strategic goals set out in the Strategy Actions of Uzbekistan are in line with the UN Sustainable Development Goals. In the concept of development of the national idea at a new stage of development of Uzbekistan, one of the main tasks of the idea of national development is to make Uzbekistan one of the 50 most developed democracies in the world by 2030[6]. After all, these goals open the door to the development of our state, its wide and huge opportunities for its development,

the well-being of the people, the stability of Uzbekistan.

**Results.** President Shavkat Mirziyoyev said that “Our efforts to ensure human rights are fully consistent with the United Nations Sustainable Development Goals”[7]. In this regard, the Decree of the President of the Republic of Uzbekistan dated September 21, 2018 “On approval of the Strategy of innovative development of the Republic of Uzbekistan in 2019-2021”[8], Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated October 20, 2018 “On measures to implement national goals and objectives in the field of sustainable development until 2030”[9] and the joint resolution of the Legislative Chamber and the Senate of the Oliy Majlis of February 27, 2020 “On the establishment of a Parliamentary Commission to monitor the implementation of national goals and objectives in the field of sustainable development of the Republic of Uzbekistan until 2030”[10] are one of the important steps to confirm that Uzbekistan is



in line with the above-mentioned broad goals until 2030.

On the basis of these documents, the National Goals and Objectives in the field of sustainable development until 2030 have been approved, and a Coordinating Council for their implementation has been established in Uzbekistan. Also, the leading heads of the UN offices in our country today emphasize the importance of this program for the development of human development in the process of spiritual renewal in Uzbekistan.

The UN Concept of Sustainable Development Goals is, of course, aimed at achieving strategic goals, including the formation of an interconnected human health, its literacy, environmentally safe, economically prosperous,

socially protected and institutionalized lifestyle, taking into account the needs of human interests around the world. Throughout the global application of the concept of human development, indicators have been developed that represent the level of human development in a particular country and allow them to be compared with the situation in other countries. As the main indicator, the “Human Development Index” (Human Development Index–HDI) was adopted. It is a composite index that measures the country’s average achievement in three areas: health and longevity (life expectancy), quality and level of education (duration of education), and decent and prosperous living standards (Gross National Income per capita).

HDI rank	Human Development Index (HDI)	Life expectancy at birth	Expected years of schooling	Mean years of schooling	Gross national income (GNI) per capita (2011 PPP \$)	NI per capita rank minus HDI rank	HDI rank
	value	(year)	(year)	(year)		018	2017
	2018	2018	2018	2018	2018		
108. Uzbekistan	0.710	71.6	12.0	11.5	6,462	18	109

**Table 2. Human Development Index 2019 and its components (in Uzbekistan)[11].**

In the December 2019 UNDP Human Development Report 2019, Uzbekistan ranked 108<sup>th</sup> out of 189 countries. Although Uzbekistan is one of the most developed countries in terms of human development in this index, the strategy of spiritual renewal ultimately aims to be among the most developed countries. The system of calculation and comparison of human development indicators in a particular country also uses basic criteria such as Inequality-adjusted Human Development Index - IHDI, Gender Development Index - GDI and Gender Inequality Index - GII. Eliminate extreme poverty in Uzbekistan by 2030, halve the number of low-income people, ensure a healthy lifestyle, reduce the number of premature deaths by 30% as a result of measures taken in the framework of sustainable development goals and objectives in the country until 2030, To halve the number of road accidents by 2025, to provide quality education in the country, while increasing the number of teachers.

The spiritual renewal that is being carried out must serve to keep the human development index high. This is because the strategy of spiritual renewal must mobilize all the criteria and indicators that serve human development. Indeed, achieving high levels of human development is a testament to the country’s comprehensive maturity.

**Conclusion.** In conclusion, it should be noted that the greatest wealth of Uzbekistan is the human factor. At the heart of the large-scale reforms being carried out by our state is the goal of raising the living standards of the population, ensuring the

well-being of every citizen, creating all conditions for their happy life. In this sense, all the processes of spiritual renewal taking place in Uzbekistan within the framework of the Strategy of Actions serve the interests of the people. In this regard, the successful implementation of a number of important strategic measures for the future will ensure reaching the higher Human Development Index in Uzbekistan to the level envisaged.

**REFERENCE**

1. *Text of President Shavkat Mirziyoyev’s Address to the Oliy Majlis. //“Xalq so’zi” newspaper, 25<sup>th</sup> January, 2020. №19 (7521).*
2. [https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS\\_735883/lang-en/index.htm](https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_735883/lang-en/index.htm)
3. <https://www.uz.undp.org/content/uzbekistan/uz/home/post-2015.html>
4. *Transforming our world: the 2030 Agenda for Sustainable Development* [https://www.un.org/ga/search/view\\_doc.asp?symbol=A/RES/70/1&Lang=E](https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E)
5. *Saidova L. O’zbekistonda barqaror rivojlanish maqsadlarining bajarilishi va ta’lim sohasining istiqbollari. //Demokratlashtirish va inson huquqlari. №1, 2018. –P.19.*
6. *O’zbekiston taraqqiyotining yangi bosqichida milliy g’oyani rivojlantirish konsepsiyasi // https://regulation.gov.uz/uz/document/10558*
7. *Mirziyoyev Sh.M. Konstitutsiya – erkin va farovon hayotimiz, mamlakatimizni yanada taraqqiy ettirishning mustahkam*



- poydevoridir. //“Xalq so’zi” gazetasi, 2017 yil 8-dekabr. №247 (6941).
8. O‘zbekiston Respublikasi Prezidentining “2019 - 2021-yillarda O‘zbekiston Respublikasini innovatsion rivojlantirish strategiyasini tasdiqlash to‘g‘risida”gi 2018-yil 21-sentyabr, PF-5544-sonli Farmoni. // <https://lex.uz>
  9. O‘zbekiston Respublikasi Vazirlar Mahkamasining “2030-yilgacha bo‘lgan davrda Barqaror rivojlanish sohasidagi milliy maqsad va vazifalarni amalga oshirish chora-tadbirlari to‘g‘risida”gi 2018-yil 20-oktabrdagi 841-sonli qarori. // <https://lex.uz>
  10. “O‘zbekiston Respublikasini Barqaror rivojlantirish sohasidagi milliy maqsadlar va vazifalarning 2030-yilgacha bo‘lgan davrda amalga oshirilishini nazorat qilish bo‘yicha parlament komissiyasini tuzish to‘g‘risida”gi O‘zbekiston Respublikasi Oliy Majlisi Qonunchilik palatasi kengashining va O‘zbekiston Respublikasi Oliy Majlisi Senati kengashining 2020-yil 27-fevraldagi qo‘shma qarori. // <https://lex.uz/docs/-4773598>
  11. Human Development Report 2019. USA, New York. “United Nations Development Programme”, 2019. –P.301.
  12. Turdiyev Bexruz Sobirovich. *The strategy of renewal of the national spirituality of Uzbekistan.* // *International Journal of Applied Research* 2020; 6(5). P.147-151.
  13. Turdiyev Bexruz Sobirovich (2019) “The role of national harmony in the strategy of spiritual renewal,” *Scientific Bulletin of Namangan State University: Vol. 1 : Iss. 6 , Article 37.*
  14. Turdiyev Bexruz Sobirovich. *Ma’naviy yangilanishlar strategiyasining hayotbaxsh islohotlari: nazariya va amaliyot.* //O‘zbekiston Milliy axborot agentligi – O‘zA Ilm-fan bo‘limi (elektron jurnal). –Tashkent, UzA, 2020, April. P.1-12.
  15. Turdiyev Bexruz Sobirovich. *O‘zbekiston demokratik jamiyat taraqqiyoti rivojida ma’naviy yangilanishlar strategiyasining roli.* //Imom Buxoriy saboqlari, №2, 2020. –P.118-120.
  16. Turdiyev Bexruz Sobirovich. *O‘zbekistonning ma’naviy yangilanish strategiyasi.* //Buxoro: “Sadridin Salim Buxoriy” Durdona nashriyoti, 2020. –P.48.
  17. Turdiyev Bexruz Sobirovich. *Uzbekistan: from national revival to national progress.* //Modern scientific challenges and trends. № 27, 5. Warsaw, Poland, 2020. –P.136-140.
  18. Turdiyev Bexruz Sobirovich. *Spiritual renewal and interethnic relations in the Strategy of Actions.* //Teoriya i praktika sovremennoy nauki. Rossiya, Saratov: №3(33) 2018. Russia, Saratov. –P.85-89.
  19. Turdiyev Bexruz Sobirovich. *Ma’naviy yangilanish: yangi qaror va hayotbaxsh islohotlar strategiyasi.* //Buxoro davlat universiteti Ilmiy axboroti. Buxoro: 2018. - № 2 (70). –P.208-213.
  20. Turdiyev Bexruz Sobirovich. *Milliy ma’naviy yangilanishlar strategiyasida bag‘rikenglik masalalari.* //Buxoroning islom sivilizatsiyasidagi o‘rni va unga qo‘shgan hissasi. Xalqaro ilmiy-amaliy anjuman materiallari to‘plami. Buxoro: 2020 yil. – P.1097-1100.
  21. Turdiyev Bexruz Sobirovich. *Strategy of Renewal of National Spirituality of Uzbekistan.* //International Journal on Integrated Education, Volume 3, Issue VIII, August 2020. –P.122-126.
  22. Shirinov A.Q. *The implications of globalization in Central Asia: Centrifugal vs. Centripetal trends.* //Wschoednioeuropejskie Czasopismo Naukowe (East European Scientific Journal) No.2(54), 2020. P.4-11.
  23. Jurayeva Nafisa Olimovna. *Features of the Historical Topography of the City of Bukhara.* //Test Engineering & Management. November-December 2019. ISSN: 0193-4120 Page No. 1356 – 1360.
  24. Jurayeva Nafisa Olimovna. *Buxoro shahri tarixiy topografiyasining shakllanishida muqaddas ziyoratgohlarning o‘rni.* //Xorazm Ma’mun Akademiyasi Axborotnomasi – 3/2019. Pages.41-44.
  25. Jurayeva Nafisa Olimovna. *Muqaddas ziyoratgohlar Buxoro shahri topografiyasining tarkibi sifatida.* //Imom Buxoriy saboqlari. No.1, 2020. P.40-41.
  26. Makhmudova Nigora Baratovna. *The Problem of the legal status of the woman – Moslem in Turkestan on the material of the reports of senatorial auditing of K.K. Palen.* *Proceedings of the 3<sup>rd</sup> International Academic Conference. Applied and Fundamental Studies. Hosted by the Publishing House “Science and Innovation Center”, August 30–31, 2013. St. Louis, Missouri, USA. –P 205-209.*





# THE TERRITORIAL CHANGES IN THE TOPOGRAPHY OF THE CEMETERIES OF BUKHARA

**Jurayeva Nafisa Olimovna**

Bukhara State university,  
Senior Lecturer of the Faculty of History and Cultural Heritage

## ABSTRACT

*In the following article the fact that the territorial changes in the topography of the cemeteries of Bukhara related with the issues, were the holy sites considered during the process of the construction of the defence walls, were there any attempt not to affect them, did they affect on the expansion of the territory of the city or were they conserved in certain territorial extent analyzed and clarified based on the sources.*

**KEYWORDS:** *holy site, topography, defence wall, new guzar, social life, cemetery, tombs, architectural appearance, city walls, territorial volume.*

## INTRODUCTION

There is a specific historical topographic development of the Bukhara city cemeteries, which was directly related to the construction, reconstruction of the walls of Bukhara, the change of its individual parts and the relocation of some parts of it. Because, in most cases, the cemeteries appeared outside the city walls. As a result of demographic growth, there was a need to expand the city. The process of urban expansion was accompanied by the construction of urban defenses. As a result, there have been questions as to whether or not to move the cemeteries in order to implement these territorial changes, or to completely level the cemetery site or not to touch the cemetery site.

Therefore, were sacred shrines taken into account when building a defensive wall in the extended part of the city, tried not to touch the holy shrines, holy shrines to the expansion of the urban area, or, conversely, did it affect its preservation to a certain territorial extent?

## LITERATURE REVIEW

It is known that according to Narshahi's work "History of Bukhara" the city of Bukhara was repeatedly surrounded by a defensive wall [1.P.37].

In 849-850, in order to ensure the security of the expanded part of the city, another outer wall was built in Bukhara after the first wall of the rabot, which surrounded the rabod, the arch and the shahristan in a circle [5.P.106]. It is clear from this that Bukhara was surrounded by a single outer wall covering the three ancient parts. Researchers note that within this wall, the city was 5 times larger than

at the beginning of the 8<sup>th</sup> century [4.P.239]. So, if in the 50s of the 9<sup>th</sup> century the city of Bukhara was 5 times larger than at the beginning of the 8<sup>th</sup> century, did this process affect the topography of the holy shrines? As the population grew, the old wall was demolished, and after the construction of a new wall surrounding the expanded part of the city, some of the sacred shrines outside the old wall were preserved, not demolished, as evidenced by the opinions of some authors.

## MAIN PART

Researchers note that the first wall of the rabot has not been preserved, but the boundaries of the second rabot wall and its eleven gates can be traced along the circle of old cemeteries located inside the present city and once outside the gates of the first rabot wall [5.P.106]. New guzars, streets and mahallas were formed around this sacred sites. The holy shrine became a place of pilgrimage for every new guzar. Even the name of the new guzar became known as the holy shrine, pilgrimage sites, mausoleum, complex located in this guzar.

Which tomb remained inside the new wall in the 50s of the 9<sup>th</sup> century, and which cemeteries were formed outside the wall?

In the 50s of the 9<sup>th</sup> century, the cemetery of Khoja Nurabad was located inside the walled city of Bukhara.

In the 50s of the 9<sup>th</sup> century, the tombs outside the walls of Bukhara included Solori Haj, a large mausoleum outside the Maydan Gate, the famous Ismail Somoni Mausoleum, the Islamic



scholar Abu Hafis Kabir Bukhari, and the Mausoleum of Boboyi Poradoz (outside the Sallakhona Gate).

The Bukharian Rabat, which became an important part of the city, was surrounded by a defensive wall consisting of 11 gates. In the 1950s, historical-topographic maps depicting the city boundaries and the city wall showed that many cemeteries were located outside the city walls.

Social life in Bukhara continued, and over time, the city area expanded. Around it, outside the city wall, new topographic objects were erected: streets, guzars and mahallas established. This in turn led to the need to surround the city with another wall.

It is noted that at that time the Uzbek khans Abdulazizkhan (1504-1549), then Abdullokhan (1557-1598) were engaged in the reconstruction of the city. During the reign of Abdulazizkhan, new walls of rabat were built. Its walls correspond to the boundaries of the city wall of the last centuries, with the exception of the western part, which runs north from the gate of Khoja (Khojiyon). According to sources, the city of Bukhara was expanded during the reign of Shaybani Abdullokhan in the 16<sup>th</sup> century, it is noted that by the decree of the Khan the city wall and military fortifications were reconstructed, as well as madrasahs, caravanserais and New Rastas were restored in the city, Tim (Tim of Abdullakhan) on trade routes between cities, domes, hammams on street quarters, sardines, caravanserais, bridges on caravan roads were built. The western part of the Abdulazizkhan wall was demolished by Abdullakhan and replaced by Khiyaban street. In the 16<sup>th</sup> century, when the city boundaries were widened, Khiyaban street was formed in place of the old city wall that had been destroyed on the eastern border of Joybor. The new wall was pushed to the west, to the last wall boundaries (19<sup>th</sup> century), including the homes of the powerful Joybor sheikhs within the city.

Sheikh Jalal, Karakul, Shirgaran and Talipach gates were also built. Sheikh Jalal, Karakul, Shirgaran and Talipach gates were also built [5.P.106]. The Sheikh Jalal Gate has been preserved with 16<sup>th</sup> century mosaic ornaments, the remaining gates have been repeatedly renovated. In the 16<sup>th</sup> century, after the city was surrounded by another defensive wall, the tombs of Khoja Ghunjari, Sheikh Jalal, Sheikh Rangrez, Chashmayi Ayyub, Solori Haj were located along the inside wall.

Khoja Ghunjari Mausoleum - According to "Toohfat az-Zairin", the tombs of Hazrat Khoja Ghunjari are found when looking to the south of the tomb of Ismail Somoni. These days, the tomb of Hazrat Khoja Ghunjari is located on Mir Dustum Street in Bukhara.

The shrine of Sheikh Rangrez occupied the area adjacent to the city wall between the Qavola and Sallakhona gates in the southeastern part of the city.

The area became part of the city after the city wall was rebuilt in the 16<sup>th</sup> century [7.P.67].

In the Book of Mullahs (16<sup>th</sup> century), a tomb named Sheikh Rangrez is mentioned outside the city wall. Before the wall was rebuilt in the 16<sup>th</sup> century, the area of Sheikh Rangrez quarter was outside the city.

Solori Haj Mausoleum is the third mausoleum of Honaqo Guzar, known as Solori Haj. The cemetery was inside the city after the city wall was rebuilt in the late 16<sup>th</sup> century [7.P.108]. On the city map of Bukhara in the 9<sup>th</sup>-10<sup>th</sup> centuries, given in the work of historians A.M.Belenitsky, I.B.Bentovich, O.G.Bolshakov "Medieval city of Central Asia", the cemetery of Solori Haj is located outside the city walls [4.P.243]. So, this information confirms that the Solori Haj cemetery existed outside the city wall before the city wall was rebuilt in the 16<sup>th</sup> century. Mawlana Jalal ad-din al- the famous Solori Haj, the leader of the caravan of pilgrims, died in 771/1369-70 [2.P.92]. This date indicates that the cemetery existed before the 16<sup>th</sup> century. The cemetery of Solori Haj is located on the north side of the Karakul Gate Road on the qibla side of the cemetery of Abu Bakr Fazl. According to the data, this great man went on pilgrimage thirty-five times [2.P.47]. In the northern part of the city wall 16<sup>th</sup> century Talipoch gate was built. The cemetery of Chashmai Ayyub was outside the wall of the northwestern part of the city until the 16<sup>th</sup> century. When the Talipach Gate was built in the northern part of the 16<sup>th</sup> century city wall, the tomb was located along the inside of the city wall. The cemetery was not included when the wall was built. According to the plan in the Lerkh archives, the tomb is located along the wall between the gates of Shergiron and Og'lan. This part of the city had retained its appearance.

The grave of Ayyub alaihissalom is not in Bukhara, as it is written in the work "Toohfat az-zoirin". Chashmayi Ayyub is the shrine of alaihissalom Ayyub. Hazrat Said Poband Shrine - Said Abulhasan (Hazrat Said Poband) was buried in the cemetery near the Samarkand Gate. But twenty years later, his body was removed from the cemetery and reburied in the courtyard of Said Pobandkusho guzar in Bukhara. This is because one of the disciples had a dream in which he said, "Bury me in the courtyard of the city". In fact, this is also a prophecy. Because the tomb near the Samarkand Gate was destroyed during the former Soviet era. Since the courtyard was inside, the graves of Hazrat said Poband did not suffer from destruction [6.P.59].

The Nurabad cemetery is located on the northeastern border of the city, and with the construction of a wall in the 16<sup>th</sup> century, the city was expanded, and the Peskhona guzar outside the city was added to the city and not included in the cemetery area. Because Peskhona guzar was bordered



on the west by Nurabad cemetery. Undoubtedly, the Peskhona guzar was formed outside the city and was part of its territory during the construction of the city walls in the 16<sup>th</sup> century [7.P.254].

**Theoretical background.** Sheikh Jalal's Gate - Sheikh Jalal's cemetery is not well preserved, but what was the role of this tomb in the formation of Sahibzoda and Mirakon guzars near Sheikh Jalal's gate?

The cemetery of Sheikh Jalal - the name of one of the 11 gates of the ancient fortress in Bukhara is also named after Sheikh Jalal. Because Hazrat Sheikh Jalal was buried near this gate. There was also a guzar, a madrasa and a mosque named after Sheikh Jalal [6.P.217]. Later, Sahibzoda and Mirakan guzars were formed near the Sheikh Jalal Gate.

By the 16<sup>th</sup> century, the places outside the walls of Bukhara in the 9<sup>th</sup> century: the shrines of Khoja Solor, a large cemetery outside the Maydan Gate, the mausoleum of the famous Ismail Somoni, and the Islamic scholar Abu Hafis Kabir Bukhari were now located within the city walls. During the reconstruction of the city wall in the 16<sup>th</sup> century, part of the Turki Djandi guzar was almost unexpanded.

Thus, the architectural image of Bukhara in the 19<sup>th</sup> century was formed mainly in the 16<sup>th</sup> century. Also, each of these walls, like the city wall, had 11 gates, unfortunately the distances between the inner and outer walls were not given, otherwise we would have been able to determine how much the city's transformation had contributed to its development [3.P.382]. Indeed, when the distances between the gates of the inner and outer walls were given, the question of the participation of the cemeteries in the territorial change and reconstruction of the city also became much clearer. Because each time when the wall was built, the cemeteries served as orientation points, coordinating the city's territorial changes. For example, the walls were built in a circle along the cemeteries located outside along the city walls. According to military engineer I.T. Poslavsky, the location of the city walls did not come from a topographical point of view and was not based on any military trend, but was historically formed as a result of reconstruction, change of its individual parts and relocation of some parts of it [5.P.108]. So we can say that the encirclement of the city walls along the location of the cemeteries was also historically the result of reconstruction. Some authors note that the cemeteries, undoubtedly, clearly defined the boundaries of the city at some stage of its development, but this did not even mean the boundaries of its external rabot. [4.P.244].

## RESULTS

By the beginning of the 20<sup>th</sup> century, Bukhara had a total of 17 cemeteries within the city walls, in the market and residential areas, and seven more cemeteries outside the city sprawl. According to

scientific sources, in the Turki-Jandi cemetery in the center of the city, the graves were stacked on top of each other, and the graves, which were made "sagana" because they had several floors, remained only in the air [5.P.47].

## CONCLUSION

In summary, every time a new defensive wall was built in the expanded part of the city of Bukhara, new streets, guzars and mahallas were erected around the holy shrines. This is confirmed by L.I. Rempel's statement that "Thousands of graves are connected with human settlements, cemeteries can be found at every step in the city, and cemeteries outside the city walls are surrounded by all the major approaches to it" [5.P.47]. Thus, the holy shrines became an important topographic structure of the city, participating in the expansion of the city territory and the formation of a new territory of the city.

## REFERENCES

1. Abu Bakr Muhammad ibn Jafar Narshaxiy Buxoro tarixi / fors-tojik tilidan A.Rasulev tarjimasi. – Tashkent: Sharq bayozi, 1993. – P.37.
2. Ahmad ibn Mahmud Buxoriy Muin al-fuqaro. Tarixi Mullozoda / So'z boshi, fors tilidan tarjima, izohlar mualliflari Sh.Vohidov, B.Aminov. – Tashkent: Yangi asr avlodi, 2009. – P.47.
3. Bartold V.V. Raboti po istoricheskoy geografii. Soch. v 9- tomax. T.3, – Moscow.: Nauka, 1965. – P.382.
4. Beleniskiy A.M., Bentovich I.B., Bolshakov O.G. Srednevekoviy gorod Sredney Azii.- izdatelstvo "Nauka" leningradskoe otdelenie, 1973.-P.244.
5. Rempel L.I. Dalekoe i blizkoe. Stranisi jizni, bita, stroitel'nogo dela, remesla i iskusstva Staroy Buxari. Buxarskie zapisi. Tashkent, izdatelstvo literaturi i iskusstva, 1982.-P.106.
6. Sadridin S.B. Buxoroning tabarruk ziyoratgohlari. Bukhara.: Durdona. 2012.-P.217.
7. Suxareva O.A. Kvartal'naya obshina pozdnefeodal'nogo goroda Buxari. M., izdatelstvo "Nauka", glav'naya redaktsiya vostochnoy literaturi, 1976.-P.254.
8. Jurayeva Nafisa Olimovna. Buxoro shahri tarixiy topografiyasining shakllanishida muqaddas ziyoratgohlarning o'rni. -Khiva.: Vestnik Xorezmskoy akademii Ma'muna, 2019.-P.41.
9. Jurayeva Nafisa Olimovna. Features of the Historical Topography of the City of Bukhara.//Test Engineering & Management. 2019.-P.1356-1360
10. Jurayeva Nafisa Olimovna. Muqaddas ziyoratgohlar Buxoro shahri topografiyasining tarkibi sifatida.-Samarqand.: Imom Buxoriy saboqlari. 2020. №1. –P.40-41.
11. Jurayeva Nafisa Olimovna. The topography of the cemeteries of Pre- Islamic city of Bukhara International Journal of Applied Research 2020; 6(5): -P.368-371.



12. Turdiyev Bexruz Sobirovich (2019) "The role of national harmony in the strategy of spiritual renewal," *Scientific Bulletin of Namangan State University: Vol. 1 : Iss. 6 , Article 37.*
13. Turdiyev Bexruz Sobirovich. *O'zbekiston demokratik jamiyat taraqqiyoti rivojida ma'naviy yangilanishlar strategiyasining roli. //Imom Buxoriy saboqlari, №2, 2020. –P.118-120.*
14. Turdiyev Bexruz Sobirovich. *O'zbekistonning ma'naviy yangilanish strategiyasi. //Buxoro: "Sadridin Salim Buxoriy" Durdona nashriyoti, 2020. –P.48.*
15. Turdiyev Bexruz Sobirovich. *Uzbekistan: from national revival to national progress. //Modern scientific challenges and trends. № 27, 5. Warsaw, Poland, 2020. –P.136-140.*
16. Turdiyev Bexruz Sobirovich. *Strategy of Renewal of National Spirituality of Uzbekistan. //International Journal on Integrated Education, Volume 3, Issue VIII, August 2020. –P.122-126.*
17. Sayfillayeva D.K. *The history of ideological views that influenced the formation of the worldview of Abu Hamid Ghazali. Theoretical & Applied Science. Philadelphia, USA. 2019, - P.82– 84. (№2; 1,5. №22; ISRA: 4,971).*
18. Sayfillayeva D.K Al – Ghazali about the role and value of a woman in building the family //Volume 4(2019): *International Conference on World Science and Education. Case of Asia. (<https://press.umsida.ac.id/index.php/icecrs/article/view/427>).*
19. Makhmudova Nigora Baratovna. *The Problem of the legal status of the woman – Moslem in Turkestan on the material of the reports of senatorial auditing of K.K. Palen. Proceedings of the 3rd International Academic Conference. Applied and Fundamental Studies. Hosted by the Publishing House "Science and Innovation Center", August 30–31, 2013. St. Louis, Missouri, USA. –P 205-209.*
20. Makhmudova Nigora Baratovna. *The memoirs of K.K.Pahlen "Mission to Turkestan, being the memoirs of count K.K.Pahlen, 1908-1909". //Vostok. Afro-aziatskie obshestva: Istoriya i sovremennost. Volume 3. Moscow, 2017. –P.72-80.*



# AL-GHAZALI ABOUT THE ROLE AND VALUE OF A WOMAN AS A CRUCIAL MEMBER OF SOCIETY

Sayfullayeva Dilfuza Kaxramonovna

PhD,  
Department of the “National idea,  
Basics of Spirituality and Law Education”,  
Bukhara State University,  
Uzbekistan

---

## ABSTRACT

*Given article is dedicated to thoughts Abu Hamida Ghazali about woman and family, and about that role, which they play of welfare society. The Material of the article is founded on composition of the thinker “Nasihah ul – mulk”.*

**KEYWORDS:** *morality, thinker, Hadith, a good temper, religion, society, sciences, wife, woman, spiritual values, faith, family, development, heritage*

---

## INTRODUCTION

For each of us, morality is a necessary criterion for making us a worthy member of society. Today’s science characterizes morality as a synonym for the concept of “morality”. Morality covers all aspects of human life, regulating all our actions. The society does not tolerate immoral attitudes towards it. The morality of each one of us is determined by our inner spiritual world and is one of the forms of social consciousness. Issues of human morality today are among the main. The decline of morality in society leads to the death of many achievements of human civilization. The concepts of the moral attitude touched upon by Ghazali in his writings are relevant today.

The Thinker is a multifaceted scientist, the author of more than 70 works devoted to various fields of science. The concept and criteria of morality occupy a significant place in the works of the thinker. Basically, Ghazali in his writings examines the relationship of morality with religion. The morality of a Muslim and a Muslim woman is central to his writings.

The main sources that determine the morality of a person are, in the opinion of Ghazali, the Qur’an and the Hadith of the Prophet Muhammad, and bring his saying: “I am sent only to improve the nobility of morality”. Ghazali quotes Muhammad’s speech to show the role that the prophet played in the lives of Muslims. The formation of morality among Muslims Ghazali

connects with the religion of Islam. After all, people are not born with a good temper, but become so gradually. And the thinker sees the reason in the Qur’an, in the instructions of Muhammad, in religious rituals.

A true believer and a moral person is one who is executable in these teachings. “But some of those who refer themselves to Islam can be frivolous about the performance of acts of worship, demonstrating to their society their strong desire to observe these rituals, but at the same time, accomplishing very much of what is not compatible in any way with a noble disposition and true faith”. If you perform all religious rituals, give people good advice, and do not control your actions, then you cannot be considered a true believer. The ethic of Ghazali follows from the Muslim religion: “The role of morality is more than important, therefore it is necessary to constantly instruct others and give them advice so that in their minds and hearts the fact that faith, piety and morality are consistent and interrelated elements of one chain, links which are inseparable”.

The thinker clearly indicates that morality cannot exist separately from religion. Ghazali elevates morality to the degree of certain insight emanating from the side of Islam. “One of the Prophet Muhammad’s hadith sounds like this:” A person who does not lean towards my morality and does not remember me will lose the way to paradise”.



## MAIN PART

The Prophet managed to create a whole body of moral norms, following which the Muslim could, maybe sure of his place, prepared in paradise. After the unification of the Arabs under one religion, Muhammad wanted to control society. Islam was to be the main regulator of human relations. It is a religion based on moral norms, and closely interrelated with morality, that determines the behavior of each member. Abu Hamid Ghazali managed to create a set of moral norms, by returning to the sources of Islam, which distinguished him from other theologians of his time. "It is the duty of every Muslim to begin with his soul, correct it by strictly enforcing the regulations and refusing the forbidden actions, then teach the inhabitants of his house, then, having done this, turn to neighbors, then to the inhabitants of his quarter, then to the inhabitants of the city.....".

As V.V.Naumkin, according to Ghazali, a man in his natural constitution has a certain set of "natural inclinations", except for this, and the higher instinct, which is the basis of high human morality. Those the moral qualities of each person are laid by nature, but this does not mean that they cannot be improved or changed. The thinker divides the human soul into three kinds. Under the first, Ghazali has in view of the animal soul (an-nafs al ammara bi-s-su), which unites all bad attributes in a person, and it must be combated. The second human (an-nafs al-lavvama) and the third divine (annafs al-mutmainna) manifestations of the same inner higher principle in man, only the human soul is what prevents the animal soul, fights it, and the divine soul is "the soul pacified by the divine command", which is the peak of the moral state of man. Each person has a certain kind of soul, but at the same time, in our opinion, manifestations of each of these species exist in man.

And from how much more qualities of one of these kinds of souls, so this person has morality and corresponding spiritual qualities. But all people need certain moments in improving the moral qualities that are the basis of social relationships. In addition, according to the thinker, not all actions of a person are predetermined from above, and in the perfection of one's soul, one must sometimes rely on free will, "according to which the person's responsibility is limited by the fact that he" assumes "the commission of this or that act". Since the entire system of Ghazali is based on the principles of the Shari'ah, while expressing the role of religion and morality, he quotes the words of the Prophet "the most perfect faith of that believer who has the most good character and who is most affectionate with his loved ones", once again emphasizes that the morality of a Muslim is closely intertwined with his religion plays a crucial role in building relations between members of society.

Speaking about education, the thinker is sure that morality is developed over the years in education. "And the body is not perfect from birth, it is improved in the process of growth and development, which is promoted by food, so the soul is created with shortcomings, but it is improved through education, character improvement and nutrition by its sciences". The thinker is sure that moral qualities are not always given by nature, but are earned by the person himself. Similar to many great thinkers of the past, Al-Ghazali, a great scientist theology's, analyst of foundations of Islam, the person who regarded the issues concerning the human social being from the position of Islamic doctrines, could not walk past the socio-philosophical concept of the issue that is topical even today.

Theoretical analyses Al-Ghazali discusses the role of a woman in the society, explains the important role that she plays in social life and in the sphere of education particularly in his work "Instructions to the Rulers". In doing so, while considering politics, he considers that it (politics) includes such diverse sides of human existence as family, slaves, raising children, choosing a wife and treating her.

At the same time the cardinal postulate in his reflections about the role and place of women in the society is his assertion of the absolutely objective truth that a woman is an important and basic member of the society without whom there is no development and function of the society, education in the family and continuation of human kind. With an eye to this he emphasizes that "the building of the civilized world and the continuation of Adam's generation is possible owing to women"[1].

Thereby, he doesn't regard a woman as being whose purpose is to bring sensual pleasure, but he estimates her role highly in the society. According to the socio-philosophical concept of Ghazali a woman is a wife legitimate by shariah, vital partner of a man, the person who gives birth and together with her husband is responsible for fulfilling family duties and upbringing of children, for building prosperity and favorable climate in the family, and for carrying out a range of social and economic duties.

In Al-Ghazali's time, naturally moral norms of the society were dictated and regulated by then dominating Islamic religion and they (norms) served as a basis of the relationship between a man and a woman, marital relations, criterion of the social behavior and spiritual image of a woman. He asserted that "religion is a foundation of morality and a source from where virtues and high models of behavior are drawn; and if a woman follows them, she will keep her nobleness, show her humbleness to her husband and his relatives; whereas an unbelieving woman follows her passions in her deeds; pays no attention to her husband and doesn't look after him, treats him



with contempt and flings away his money and property”[2].

Al-Ghazali disapproved of marriage with a non-Muslim woman, as it contradicted shariah. In his opinion, customs and tendencies of a non-Muslim woman were not suitable for Islam, and her behavior and basis contradicted Islamic morale. According to Al-Ghazali's conviction, she won't raise children in Islamic spirit, is not able to provide with sacredness the home and as a result the family will fail. These principal reflections of Al-Ghazali were the answer to the winnowing of time, when the cult of getting pleasure by material goods started to flourish, the rich wanted luxuries, people started buying slaves from overseas, who introduced the society to alien to Islam customs, norms of behavior. Under their influence morality started to decrease, and vices and different sorts of perversions started to spread. The morality of the Muslim society was in a critical state.

As it can be seen, by considering exactly a woman as one of the efficient factors of overcoming the weakening of the morality of the society, strengthening moral level of the society, strengthening social importance and effects of noble families, he creatively proved his opinion of a woman in creating and functioning of a family. With all his intellectual strength, persuading, he called on the society to follow those spiritual values and social qualities, necessary for a woman, proven by him clearly, understandably and reasonably.

As the above-mentioned shows Al-Ghazali considers the social morale enlightened by Islam as the aggregate of the best spiritual values, as an important condition of becoming an orderly woman, a true keeper of the home and as the foundation of creating a virtuous family that corresponds with the social requirements of that time.

While considering the creation of a happy, healthy family which corresponds with the interests of the society as of the most important task of the society, Al-Ghazali draws our attention to the initial side of its organization – the issue of choosing a future wife with the most necessary characteristics. In his reflections of women with the best qualities, he refers to a Hadith that “the best and most blessed of the women are those who are beautiful, and who can bear many children...”, i.e. in his social understanding of the world the woman's beauty and health are of the highest priority. He simultaneously told that if one who wanted good behavior could not find a beautiful woman to love, he then “needs a faithful woman, as that that has faith is better and even more blessed. And if there is faith, there will be wealth, because a woman, who has no faith, no foundation, will never bring welfare.”

Marriage, a man and a woman's starting a family is characterized by him as conscious mutual relationship between the two sexes, whose purpose of starting it is to fulfill the requirements of the shariah

and to provide with the continuation of the human race. The most important criteria, which he singled out, of the relationships in the family which must be inherent to and followed by a woman, serve, in his opinion, as a basis of mutual respect and love between spouses and strengthening the family. They are actual and rational in many ways. “And the woman - he wrote, - becomes dearer to her husband and his love increases towards her, if she treats him with respect and obedience..., thinks of his interests and refrains herself from anything that harms him, raises his child, ... if she is pure in her heart, patiently deals with the hardships, cares whether he eats in time, ... receives him tenderly and happily and doesn't make him do the impossible, ...”.

With the help of amusing, instructive stories he advises a woman to be generous and good in heart, welcoming, friendly, and not to show hostility towards guests. According to Al-Ghazali the level of the happiness of a family directly depends on a range of other qualities of a woman, which are defined by her social status. In his opinion, a Muslim's wife must also possess the status of a free person, as a free woman is more preferable to a slave woman. Here he mentions a Hadis of the Prophet, “A free woman is better for you, as a she is cleaner and more blessed for you.”

Theoretical reflections of Al-Ghazali about a free woman, about the rights of man and woman allow us to come to a conclusion that he in some degree accepted the emancipated state of a woman, adequate to the level of development of social relations of that time. Al-Ghazali has a negative view of marrying or creating a family on the basis of a contract and he does not conceal his disgust towards a man who wishes to marry for the riches and high position of the woman in the society. He says, “Don't look for a woman who has popularity and wealth, because the wealth will turn into evil and your wife will not give it to you”.

Al-Ghazali by exalting the role of Islamic belief as a condition of becoming a blessed woman, provision of a strong healthy family, high family welfare, certainly, first of all, meant the influence of an embodied step of the development of human moral. This asserts the idea that the stronger the faith oriented at creativeness, in particular, if it is scientifically proven and reflects vital democratic interests of the society in the belief of future developed society, the stronger its moral side and its influence not only on the personality of a woman, on the development of her social potential and role, on a family, but certainly on the whole society as well.

From ancient times mankind has been trying to thoroughly comprehend its social being, as well as such an actual issue as woman and society, woman and family, woman and man and their socio-structural interrelation and functioning.



## CONCLUSION

Learning a range of ideas of Al-Ghazali about a woman, her role and place in the society makes us come to a conclusion that in accordance with the historical time, he not only as a scholar, but as a socially concerned person, citizen formulated an originally conceptual approach, imbued with tireless care for preservation and strengthening of morality of the society, about improvement of the role of a woman in the creation and strengthening of a family as an important social institute which improves the state of the society. His suppositions and conclusions are a worthy contribution to the modern spiritual heritage and they are still actually in our days. And this serves for us as one of the conditions of objective scientific understanding of today's reality and purposeful manifestation of active life position.

## REFERENCES

1. Abu Hamid al-Ghazali. *Guidance to rulers and other works. Per. from Arabic, Persian.* A.A.Khismatullina. M.: Ansar, 2005., p. 160
2. G.M. Kerimov. *Al-Ghazali: Religious and philosophical views. Published from the book of G.M. Karimova Al-Ghazali and Sufism.* Baku. 1969. P.235
3. *Im Gazzali. Ulanish approve.* J.Eshbek – Toshkent: "Toshkent Islom Universities", 2009. B.214.
4. *Dictionary of philosophical terms.* Moscow. 2007. Powered by TCPDF (www.tcpdf.org).
5. Sayfillayeva D.K. *The history of ideological views that influenced the formation of the worldview of Abu Hamid Ghazali. Theoretical & Applied Science.* Philadelphia, USA. 2019, -P.82– 84. (№2; 1,5. №22; ISRA: 4,971).
6. Sayfillayeva D.K *Al – Ghazali about the role and value of a woman in building the family //Volume 4(2019): International Conference on World Science and Education. Case of Asia.* (<https://press.umsida.ac.id/index.php/icecrs/article/view/427>).
7. Sayfillayeva D.K. *Istoriya ideynix istokov, okazavshix vliyaniye na formirovaniye mirovozzreniya Abu Xamida Gazali / O'zMU xabarlar.* -Tashkent, 2015., № 1. -P. 140 - 143 (09.00.00; №14).
8. Sayfillayeva D.K. *Abu Xamid Gazali o duxovnom oblike pravatelya i o roli sovetnikov i pistsov v upravlenii gosudarstvom //O'zMU xabarlar.* - Tashkent, 2016., № 1/3. -P. 190-193. (09.00.00. №14).
9. Sayfillayeva D.K. *Rol Abu Xamida Gazali v splochenii musulmanskogo obshchestva pod yedinim ideynim nachalom// Nauchniy vestnik Namanganskogo Gosudarstvennogo Universiteta.* - Namangan, 2019., №2. -P.166-170 (09.00.00; №15).
10. Turdiyev Bexruz Sobirovich. *The strategy of renewal of the national spirituality of Uzbekistan. // International Journal of Applied Research* 2020; 6(5). P.147-151.
11. Turdiyev Bexruz Sobirovich (2019) "The role of national harmony in the strategy of spiritual renewal," *Scientific Bulletin of Namangan State University: Vol. 1 : Iss. 6 , Article 37.*
12. Turdiyev Bexruz Sobirovich. *Ma'naviy yangilanishlar strategiyasining hayotbaxsh islohotlari: nazariya va amaliyot. //O'zbekiston Milliy axborot agentligi – O'zA IIm-fan bo'limi (elektron jurnal).* –Tashkent, UzA, 2020, April. P.1-12.
13. Turdiyev Bexruz Sobirovich. *O'zbekiston demokratik jamiyat taraqqiyoti rivojida ma'naviy yangilanishlar strategiyasining roli. //Imom Buxoriy saboqlari, №2, 2020. –P.118-120.*
14. Turdiyev Bexruz Sobirovich. *O'zbekistonning ma'naviy yangilanish strategiyasi. //Buxoro: "Sadriiddin Salim Buxoriy" Durdona nashriyoti, 2020. –P.48.*
15. Turdiyev Bexruz Sobirovich. *Uzbekistan: from national revival to national progress. //Modern scientific challenges and trends. № 27, 5. Warsaw, Poland, 2020. –P.136-140.*
16. Turdiyev Bexruz Sobirovich. *Spiritual renewal and interethnic relations in the Strategy of Actions. //Teoriya i praktika sovremennoy nauki. Rossiya, Saratov: №3(33) 2018. Russia, Saratov. –P.85-89.*
17. Turdiyev Bexruz Sobirovich. *Ma'naviy yangilanish: yangi qaror va hayotbaxsh islohotlar strategiyasi. //Buxoro davlat universiteti Ilmiy axboroti. Buxoro: 2018. - № 2 (70). –P.208-213.*
18. Turdiyev Bexruz Sobirovich. *Milliy ma'naviy yangilanishlar strategiyasida bag'rikenglik masalalari. //Buxoroning islom sivilizatsiyasidagi o'rni va unga qo'shgan hissi. Xalqaro ilmiy-amaliy anjuman materiallari to'plami. Buxoro: 2020 yil. –P.1097-1100.*
19. Turdiyev Bexruz Sobirovich. *Strategy of Renewal of National Spirituality of Uzbekistan. //International Journal on Integrated Education, Volume 3, Issue VIII, August 2020. –P.122-126.*
20. Shirinov A.Q. *The implications of globalization in Central Asia: Centrifugal vs. Centripetal trends. //Wschodnioeuropejskie Czasopismo Naukowe (East European Scientific Journal) No.2(54), 2020. P.4-11.*
21. Jurayeva Nafisa Olimovna. *Features of the Historical Topography of the City of Bukhara. //Test Engineering & Management. November-December 2019. ISSN: 0193-4120 Page No. 1356 – 1360.*
22. Jurayeva Nafisa Olimovna. *Buxoro shahri tarixiy topografiyasining shakllanishida muqaddas ziyoratgohlarning o'rni. //Xorazm Ma'mun Akademiyasi Axborotnomasi – 3/2019. Pages.41-44.*
23. Jurayeva Nafisa Olimovna. *Muqaddas ziyoratgohlar Buxoro shahri topografiyasining tarkibi sifatida. //Imom Buxoriy saboqlari. No.1, 2020. P.40-41.*
24. Makhmudova Nigora Baratovna. *The Problem of the legal status of the woman – Moslem in Turkestan on the material of the reports of senatorial auditing of K.K. Palen. Proceedings of the 3<sup>rd</sup> International Academic Conference. Applied and Fundamental Studies. Hosted by the Publishing House "Science and Innovation Center", August 30–31, 2013. St. Louis, Missouri, USA. –P 205-209.*





# SHARIA LAW, CUSTOMARY LAW OF ADAT, PROBLEMS AND ATTEMPTS TO ADDRESS THEM IN THE MATERIALS OF THE REVISION OF SENATOR K.K.PALEN (1908-1909)

**Makhmudova Nigora Barotovna**

Doctor of Philosophy (PhD) in Historical Sciences,  
Associate Professor  
Bukhara State University  
Bukhara,  
Uzbekistan

## ABSTRACT

*This article analyzes the legal norms of marriage relations among the indigenous population of the Turkestan region, both according to Sharia And Adat, in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries, based on the primary source – the materials of the revision of Senator K.K.Palen.*

**KEY WORDS:** *Sharia, Adat, revision, senator, marriage, woman, law, Muslims, “makhr”, “baldyz”, “ayb”, “kalym”, congress, family.*

## INTRODUCTION

As you know, the tsarist government has preserved unchanged legal relations among the indigenous population of the region, based on the laws of Sharia. Having tried to check the activities of the people’s courts, the kazis, the audit of Senator K.K.Palen in 1908-1909, faced such facts when their decisions on similar cases were not only not united, but, on the contrary, most often contradicted each other. This has led reviewers to conclude “that the reason for this lies in addition to procedural imperfections of the vessels, the properties used by them and protected by our laws under the authoritative name of “custom” substantive law, confused and not understanding how the population and local administrative and judicial authorities and judges” [1.-P.5.]. Among the indigenous population leading a sedentary lifestyle, “local customs” were completely subordinated to the rules of Islamic law - Sharia.

Senator K.K. Palen was the first of the Russian officials in the shortest possible time (in just a year) to prepare and published in Russian a set of laws of the indigenous population of the region on family, inheritance and property law, i.e. Sharia laws.

## LITERATURE REVIEW

Let us analyze the legal provisions set out in the revision report entitled “Legal life of the

indigenous population”: in the chapter “On marriage”, in order to understand what a huge difference there was in the two Sets of legal relations, and why Adat was eventually replaced by Sharia.

According to Sharia, chapter I- “On marriage, redemption (makhra) and on the rights and obligations of spouses, consists of 41 articles, in Adat the same chapter, of 19 articles, but there is no information about either the ransom or the obligations of spouses.

Article 1 of the Sharia, reveals the concept of “marriage” – “The parties between whom legal relations are established in a marriage contract are those persons whose sexual relations are legalized by this contrac” on “marriage contract”, Article 3- “Persons who have reached the age of majority can conclude a marriage contract, at their own request, without the intervention of parents or their substitutes (wali), as well as solicit the dissolution of a marriage concluded without their consent”, according to Adat, Article 1, “Marriage is a contract concluded for the purpose of acquiring a woman for marriage with her”, Article 3 “The marriage contract is concluded by the groom’s senior closest relatives or by himself, if he is an independent owner”.

## MAIN PART

Today, many are interested in, so, when was the coming of age considered and it was allowed to



marry according to Sharia. Adults were considered to be young men who reached the age of 12 and 9, if there were signs of sexual maturity. According to other sources, the age of majority was determined by the age of 15.

The set of legal relations also touches upon issues of religious affiliation, i.e. Sharia was more tolerant of creating families where spouses belonged to different religions, specifically, Article 24 "A Muslim can marry a woman who believes in Holy Scripture, which is also considered sacred by Muslims, that is, a Christian or a Jewess", but again, the advantage was on the side of men, Muslim women, this was not allowed, and according to Adat, such a marriage was generally prohibited. As before, so today incest, and marriage with foster sisters and brothers was prohibited both under Sharia And Adat [1. - P.88].

With regard to the question of the right of women to have two or more husbands, the unity of views is simultaneously traced, both in the Sharia and in Adat - its impracticability, i.e. a ban, but a man "has the right to have no more than four wives at a time. He can marry the fifth after a divorce from one of them or after the death of one of them"[1.- P.16]. (Article 16); according to Adat, in article 12. "It is forbidden to have two wives at the same time who are related" [1.- P.88].

There is a difference in the chapters "On marriage" in relation to the existing sections "on redemption (makhr)" and "On the rights and obligations of spouses" under the Sharia, which is not the case under Adat. According to Sharia, a woman has the right to demand "ransom" or "makhr" in the form of a reward for marrying him, and the most interesting thing is expressed in money (in the amount of 2 rubles), in property or in the harvest. However, as noted by representatives of the clergy, at the congress, each locality had its own customs regarding the method of paying the makhr. For example, in Tashkent, they often gave in the form of a terry one room and a terrace with a courtyard or only a room with a terrace (today we can still observe a residual manifestation of this type of terry in Tashkent), in other places the terry was paid in goods or movable property, worth 2 rubles [1.- P.19]. And according to Adat, there was no makhr for the bride, but there was a payment (kalym) for the bride, the girl's relatives, and even under Article 4 "The groom has the right to demand the extradition of the bride for cohabitation with her, only after paying the entire agreed amount and not before reaching brides of 15 years of age", however, according to article 5, if the groom does not pay the agreed amount no later than the bride reaches the age of 20, after which the marriage contract expires, he loses the right to both the bride and to receive back all the money.

Regarding the section "Rights and obligations of spouses" in the chapter "On marriage" there are

articles where, according to Muslim law, a woman, like a man, starting from the 7<sup>th</sup> century, was endowed with certain rights and obligations: this is the protection of life, honor, property and dignity. For example, a wife is obliged to live in her husband's house, respect, obey him, but if under Art. 40 there are "... cases of violence, by the husband's actions, beatings, abuse of force, coercion, imprisonment, etc., a woman has the right to seek protection from a judge", and even more, according to article 38 "... in the event of the husband's refusal from marriage", the wife can also "turn to the people's judge ...", and according to Adat, the opinion and consent of both the bride and the groom do not matter, since they are in complete submission to the will of the parents, especially the father. A girl was often given in marriage before reaching "marriageable age", i.e. puberty, if the marriage seemed particularly advantageous to the head of the family or the Council of relatives. According to Adat, a woman absolutely does not have any rights and freedom of choice, this is proved by Article 7, according to which "in the event of the death of the bride, instead of her, the next non-enlisted sister (baldyz), if any, intercedes; otherwise, the bridegroom is returned the kalym"[1.-C.87], in case of "death of the groom, the pre-emptive right to the bride is acquired by the brother of the deceased, immediately after him the next or closest relative. If there are no such persons, or they do not wish to exercise their right, the parents of the deceased shall be returned 1/2 of the paid kalyma"[1.- P.87].

And under Sharia law, a woman could have legal protection.

In the chapter "On divorce", the very concept of "divorce" - "talak", committed at the request of the husband, is considered in the Sharia; divorce by mutual will - "khulg" or "mubaraat", depending on whether the parties give each other any reward (meaning a property transaction - N.M.); ways of divorce; divorce for violation of the terms of the marriage contract - Article 49 "if the wife in the marriage contract includes a condition on the right to divorce, if the husband takes a second wife". Moreover, the division of property is taken into account in the divorce proceedings. According to Sharia, there was also a divorce by court (tafrik): if the marriage was concluded for minors or insane; with the sexual impotence of the husband; when the wife is unfaithful [1.-P.26]; if the wife, having not reached the age of majority, falls ill with an incurable disease, madness, leprosy; if the husband slandered his wife for treason. But at the same time, the husband must, until the court's decision, support his wife - Article 58, unless she filed a lawsuit.

According to Adat, "the husband has the right at any time to divorce his wife, stating this in a letter of divorce, sealed by two witnesses", and the children remain with the husband or his relatives, except for



infants, they remain with the woman's support during feeding. According to Adat, a woman was also not protected from a tyrant-husband, and in matters of divorce, unlike Sharia, the wife's desire was completely disregarded. Although the husband abused his wife and even tortured her, she has no right to demand a divorce. At the suit of the wife's parents and relatives, the husband could only be fined for this, but he still could not let his wife go. Thus, the woman had only one option-to run away to her family or with another person, but this flight was equated to "stealing someone else's wife" and was punished by a fine in favor of the husband. Even in the case of proven "torture or self-harm", if the husband demands his wife, and her relatives protect her and don't give her to her husband, the husband receives a fine from the relatives, minus only "aiba" for the health disorder inflicted on his wife"[1.-P.91]. This explains why women leading a nomadic lifestyle left their husbands in exceptional cases, if they found protection from their parents or relatives.

In the chapter "On Parents and Children" 11 articles are presented on Sharia, and 32 articles on Adat. Such a difference in the number of articles lies in the fact that according to the Sharia, only the issues of recognition and establishment of paternity are considered, the responsibilities of parents and children are not considered, and "adoption" is not recognized as a way of establishing paternity [1.-P.30], when, according to Adat, the following are considered: questions of sole ownership of the wife's property by the husband; the responsibilities of parents are to bring up, educate, marry sons and allocate them a share of the property, except for the younger one (he remains to live with his parents - N.M.), to marry daughters with dowries. Moreover, according to Adat, children, although they are adults always must obey their father, and moreover, he could punish them, and for insulting a father, a son could be sentenced to pay a fine, but at the same time, the allocated sons could demand allotment in the order of seniority if they were married and they were 20 years old. It is necessary to note in Adat the following position: 1. in relation to a divorced daughter (although, divorce was extremely rare) - the father is obliged to take her into his home; 2. ten articles out of 32 (from article 45 to article 54) are devoted to the issues of adoption, and this requires the consent of the wife or, if there is, the father of the adopted child, since it was possible to adopt children from a kind as for a while, upon reaching the age of 15, the adopted child could return to his genetic parents, retaining all property rights; to be adopted forever, with the right to transfer to the name of the adoptive parent [1.-P.93-95]. The remaining four articles are devoted to the issues of the father's rights about the transfer of his daughter with her husband to his home (at the same time, the father was exempted from giving the dowry to his daughter), while none of

the family members had the right to object to this decision, but the son-in-law had no right to allotment or any property, and all income from the moment of transfer to the father-in-law was considered not his. If the son-in-law decides to leave home, then he had the right to do so, just as the father-in-law had the right to demand that the son-in-law leave. The articles reviewed show how wide the scope of possible life situations was according to Adat, which was not observed in the Sharia.

Regarding the articles presented in the chapter "On guardianship", there are more of them according to Sharia than according to Adat, 34:20. If according to Adat there are only two types of guardianship, and then this is over minors and over the insane, then according to Sharia there are three of them - for marriage; over the personality of an underage; over the property of a minor, however, it must be borne in mind that, according to Adat, a woman had already belonged to a man from childhood by contract and had no rights to property, and after the death of her first husband, she usually passed as an inheritance to his brother or another close relative; juvenile - orphans, along with the property passed to the next of kin, before reaching the age of majority - 15 years or before marriage [1.-P.96-99]. According to Sharia, guardians could be appointed by the person himself during his lifetime (father) or a kazi. The judge must take into account the interests of the ward, the degree of kinship with him-article 77. A distinguishing feature of Sharia law on guardianship is reporting guardians before the judge, and in front of family members and by a ward in adulthood-article 68,69,70,71, but he has the right to pledge, sell real estate ward with the permission of the judge for a period of 3 years [1.- P.37] or until adulthood. Moreover, according to article 96, he can be "released from responsibility for the consequences of his actions", it is this kind of undefined statements that gave people's judges not always decently perform their powers. The next chapter on Sharia is chapter 5. "On the maintenance of relatives", there is no analogous to it according to Adat. In the first article under the chapter - Art. 106, states that "with the exception of the wife, none of those who have the opportunity to derive a livelihood from their own property has the right to demand that it be maintained", thereby expressing respect for the woman. The chapter contains the following norms: the father's obligation to support his minor son, daughter, until marriage, and if she is divorced or a widow, regardless of her legal capacity and age; contain poor relatives; children should support their poor parents, except for their stepmother and stepfather, and if the son cannot allocate money for the maintenance of his parents, then he should allow his parents to live and eat at his house, and this relationship lies with the grandchildren in relation to their grandfathers and grandmothers, and both on the



paternal and maternal side, and if there are several children, then the costs are distributed equally among the children; even if the husband changes his faith, and in this case he is not released from the obligation to “support his wife and children during the iddi”.

Of the remaining chapters similar to each other - Chapter 5. “On inheritance”, Chapter 6. “On property” according to Adat and Sharia - Chapter 6. “On inheritance”, the last Chapter 11 “On property, about contracts”, and such chapters as Sharia as, Chapter 5 “On the maintenance of relatives, Chapter 7 “On the procedure of inheritance by law”, Chapter 8 “On Will and Gift on the Deathbed”, Chapter 9 “On donation”, Chapter 10 “On the right of pre-emptive purchase (shivaat)” according to Adat no.

## THEORETICAL BACKGROUND

If we analyze Chapter 6 “On inheritance”, according to Sharia, then it examines the facts about the division of property between the heirs, with the deduction of funeral expenses, for the debts of the deceased - Article 120. Interesting are the facts about who distributes the inheritance - by the judiciary or by agreement - Article 119. According to Sharia, the interests of the widow were even taken into account: “if the widow of the deceased receives possession of his indivisible property at a time when the makhr or part of it that she follows has not yet been paid, then she has the right to retain such possession until the remuneration due to her will be paid” [1.-P.44]. Chapter 7 “On the procedure for inheritance by law” is logically connected with this chapter, where rules are presented explaining who and how manages the inheritance of the deceased, who has the right to inherit property or money. It turns out that according to Sharia, almost all male relatives, up to the grandparents, have the right to be heirs, if they are alive, that is, “father’s father”, “father’s father’s father” - Article 158, but first of all “inherit” equity participants, they include the following male relatives: father, father’s father, brother, husband; female: wife, daughter, daughter of a son, natural sister, sister from one father, sister from one mother, mother, mother of mother, mother of father... If a pregnant wife remains, then the child who has a birth is recognized as a son, to whose share a part of the inheritance is counted”-Art.148 [1.- P.50]. Although even here we can observe the advantage of the male sex in receiving inheritance, for example, “the daughter and the son receive: the son is two parts, the daughter is one” - Article 152.

The shares of parents are also indicated if one of their children died - one sixth each, if the deceased have no sons or sons, i.e. grandchildren. If there is no heir, then the property of the deceased without a will goes to the treasury. The rights of illegitimate children are also protected, who also inherit after the mother and her relatives according to the same system as described above. A person belonging to

another faith could also become the heir. According to Adat, Chapter 5 “On Inheritance” consists of two subparagraphs: a) a will and b) according to custom, i.e. this is tantamount to two chapters of the Sharia - on inheritance and on the order of inheritance according to law, with a difference in the number of articles, if according to Adat in Chapter 5 “On inheritance” there are 25 article, then according to the Sharia in the chapter “On Inheritance” -28, “On the order of inheritance according to law” 48 in total 76 articles in two chapters.

It should be noted that the chapter “On inheritance”, according to Adat, includes articles relating to the will, and according to Sharia - a separate chapter 8 “Will and gift on the deathbed”. In chapter 9 “On donation” of the Sharia, articles are recorded that explain such provisions as: the record of the act of donation from the people’s judge is not required; the donor must be capable and legally capable; the gift passes from the moment of the announcement; a gift to an underage can be made through a guardian and there are even articles that establish the donor’s right to income from the gift.

The penultimate chapter 10 on Sharia – “On the right of pre-emptive purchase (shafaat)”, consists of 24 articles devoted to the right to acquire land property to the co-owner, the owner of the property associated with the common rights to water use or the use of a common road being sold, to the owner of adjacent real estate and arising from them provisions and conclusions. The last chapter 5 “On property” according to Adat is identical in name with chapter 11 according to Sharia “On property”, but not in content: according to Sharia it consists of 16 articles, which include paragraphs on property and contracts; according to Adat from 86 articles, which includes 13 paragraphs.

## RESULTS

All of the above information was clarified by the revision at the congress, where it was also noted that the original “Kyrgyz Adat of ancestors did not survive and was transformed into a law representing a mixture of the rules of Adat and Sharia”. Thus, the revision of Senator K.K. Palen first of all combined the disparate legal provisions of Muslim law on family and marriage and property relations for the sedentary population of the region into uniform Sharia laws and recreated the full text of the Customary Law of Adat, and thereby contributed to streamlining the activities of local legal scholars [2], as well as, for the supervision of their activities by the regional administration, “Sharia articles...” were published. The results of the audit of Senator K.K.Palen contributed to the development of not only Russian oriental studies and Islamic studies, but also to the development of world history on issues of Muslim law.



## REFERENCES

1. *Pravovoy bit tuzemnogo naseleniya. Otchet po revizii Turkestanskogo kraya, proizvedennoy po visochayshemu povelenyu Senatorom Gofneyerom grafom K.K.Palenim.*- SPb.: Senatskaya tipografiya, 1910. –P.125.
2. *Shariatnie stati s perevodom na russkiy yazik o pravovix omosheniyax musul'manskogo naseleniya Turkestanskogo kraya, izvlechyonnie iz korenogo, deystvuyushogo arabskogo izlojeniya, po voprosam, predlojennim Senatorom grafom K.K.Palenim na obsujdenii komissii uchyonix tuzemsev, sozvannix iz tryox oblastey kraya v Tashkente.* – Tashkent: 1910. –P.79.
3. *Turdiyev Bexruz Sobirovich. The strategy of renewal of the national spirituality of Uzbekistan.* // *International Journal of Applied Research* 2020; 6(5). P.147-151.
4. *Turdiyev Bexruz Sobirovich (2019) "The role of national harmony in the strategy of spiritual renewal," Scientific Bulletin of Namangan State University: Vol. 1 : Iss. 6 , Article 37.*
5. *Turdiyev Bexruz Sobirovich. Ma'naviy yangilanishlar strategiyasining hayotbaxsh islohotlari: nazariya va amaliyot.* // *O'zbekiston Milliy axborot agentligi – O'zA Ilm-fan bo'limi (elektron jurnal).* –Tashkent, UzA, 2020, April. P.1-12.
6. *Turdiyev Bexruz Sobirovich. O'zbekiston demokratik jamiyat taraqqiyoti rivojida ma'naviy yangilanishlar strategiyasining roli.* // *Imom Buxoriy saboqlari, №2, 2020.* –P.118-120.
7. *Turdiyev Bexruz Sobirovich. O'zbekistonning ma'naviy yangilanish strategiyasi.* // *Buxoro: "Sadridin Salim Buxoriy" Durdona nashriyoti, 2020.* –P.48.
8. *Turdiyev Bexruz Sobirovich. Uzbekistan: from national revival to national progress.* // *Modern scientific challenges and trends. № 27, 5. Warsaw, Poland, 2020.* –P.136-140.
9. *Turdiyev Bexruz Sobirovich. Spiritual renewal and interethnic relations in the Strategy of Actions.* // *Teoriya i praktika sovremennoy nauki. Rossiya, Saratov: №3(33) 2018. Russia, Saratov.* –P.85-89.
10. *Turdiyev Bexruz Sobirovich. Strategy of Renewal of National Spirituality of Uzbekistan.* // *International Journal on Integrated Education, Volume 3, Issue VIII, August 2020.* –P.122-126.
11. *Jurayeva Nafisa Olimovna. Features of the Historical Topography of the City of Bukhara.* // *Test Engineering & Management. November-December 2019. ISSN: 0193-4120 Page No. 1356 – 1360.*
12. *Jurayeva Nafisa Olimovna. Muqaddas ziyoratgohlar Buxoro shahri topografiyasining tarkibi sifatida.* // *Imom Buxoriy saboqlari. No.1, 2020. P.40-41.*
13. *Makhmudova Nigora Baratovna. The Problem of the legal status of the woman – Moslem in Turkestan on the material of the reports of senatorial auditing of K.K. Palen. Proceedings of the 3<sup>rd</sup> International Academic Conference. Applied and Fundamental Studies. Hosted by the Publishing House "Science and Innovation Center", August 30–31, 2013. St. Louis, Missouri, USA. –P 205-209.*
14. *Makhmudova Nigora Baratovna. The memoirs of K.K.Pahlen "Mission to Turkestan, being the memoirs of count K.K.Pahlen, 1908-1909". //Vostok. Afro-aziatskie obshchestva: Istoriya i sovremennost. Volume 3. Moscow, 2017. –P.72-80.*



## ETHICAL LITERACY OF EFL TEACHERS IN PRESCHOOL EDUCATION

Mirjalol Mirzaahmedov  
The Student of Foreign Language Faculty,  
Fergana State University

### ABSTRACT

*This article examines not only the important facts which teachers should pay attention to when teaching English as a second language in the preschool education system, but also proves that it is possible to provide moral education to young learners by teaching English. In this way, the research is also conducted on the level of moral knowledge of English teachers teaching in the preschool education system and pedagogical tact.*

**KEYWORDS:** *incident methods, preschool education, teacher training, didactic materials, moral norms, analytical reading, moral outlook.*

## ЭТИЧЕСКАЯ ГРАМОТНОСТЬ УЧИТЕЛЕЙ АНГЛИЙСКОГО ЯЗЫКА (EFL) В ДОШКОЛЬНОМ ОБРАЗОВАНИИ

### АННОТАЦИЯ

*В этой статье не только исследуются важные факты, на которые учителя должны обращать внимание при обучении английскому как второму языку в системе дошкольного образования, но и доказывается возможность нравственного воспитания молодых учащихся, преподавая английский язык. дано. Таким образом, было проведено исследование уровня моральных знаний и педагогического такта учителей английского языка, преподающих в системе дошкольного образования.*

**Ключевые слова:** *методы инцидентов, дошкольное образование, подготовка учителей, дидактические материалы, моральные нормы, аналитическое чтение, моральное мировоззрение.*

### DISCUSSION

The main difficulty in teaching and educating young people in modern preschools is not only the mastery of facts, but also the mastery of learning methods, taking into account the specifics of the subject being studied. In choosing the forms and methods, first of all, it is necessary to pay attention to the level of knowledge and preparation of young people, their moral upbringing, attitude to the subject under study and the real contingent of youth. In recent times, progressive methods such as business games, 1/1 digital games, engaging through color materials, incident methods, and coping with difficult situations have become increasingly common.[1]. Successful sessions, trainings, engaging in targeted activities, shortening the time of ethical experience that students receive, simplifying the path to moral values, teaching free decision-making, acting on the basis of unattainable ethical choice by making and

choosing the right direction towards ethical goals, teachers have exactly the same high potential.

By providing moral education to kindergarten-age children throughout the lesson, the teacher uses the most effective forms of educational influence. The science of modern pedagogy considers individual, group and collective forms of education - the main forms of education. The most common form of education in a public education setting is group learning. But keep in mind that moral education is effective only when the teacher is able to find the most effective methods of influence for each student: practical, visual, verbal means, and maximize individualization of forms of education. Teachers call work, study, and play the primary means of education. The emphasis in parenting should be on the student being both an expert in the future and a future English translator. In order to have an effective impact on education, the educator must first have a



sense of humor and have the information provided by the teacher to keep young people interested in ethical issues. A positive form of acquaintance with moral norms can be properly formed on the basis of the coordination of mind and emotions.

The upbringing of a highly spiritual person is carried out with a holistic and integrated approach to management and teaching methods.[2].

Moral education of a person is not possible without the use of methods of organizational influence and methods of moral stimulation. It is important to use a complex of different methods, taking into account specific conditions. In order to choose teaching methods, to master the techniques, you need to be well aware of all their diversity, to be able to use each of them effectively.

The method of direct observation, including audio lingual and audiovisual methods, is of particular importance in educating students. The beauty of the sound of speech in English, the clarity of colors in the process of teaching a foreign language, the contribution of modern technical means to the aesthetic perception of a foreign language form the perfect basis. The ethical and educational significance of these methods is that when learning a foreign language, students become acquainted with the culture of the peoples they are learning, and if they learn the language in practice, they will also have the opportunity to put such culture into practice.

First of all, the comparative method, based on didactic principles, the principle of consciousness, as well as methodological principles, has a special educational value: comparison, reliance on positive and negative experiences, different assimilation of language materials, parallel development of different types of speech activities. By comparing a foreign language with their mother tongue, students begin to understand, comprehend and appreciate their mother tongue more deeply, begin to feel all the richness, beauty and poetry of their mother tongue, its structure and style more deeply strive to learn, contribute to the development of philological thinking.

The moral upbringing of the student's personality can reach the level of perfection when a certain moral criterion emerges for him to strive for. An ethical criterion is a student's idea of moral character, a set of moral qualities that he or she seeks to develop. In the progressive experimental method, the works of English and American writers were originally given for analysis by students, as well as a general analysis by reading, then began to analyze both classical and modern literature samples by interpreting it as home reading, individual reading.

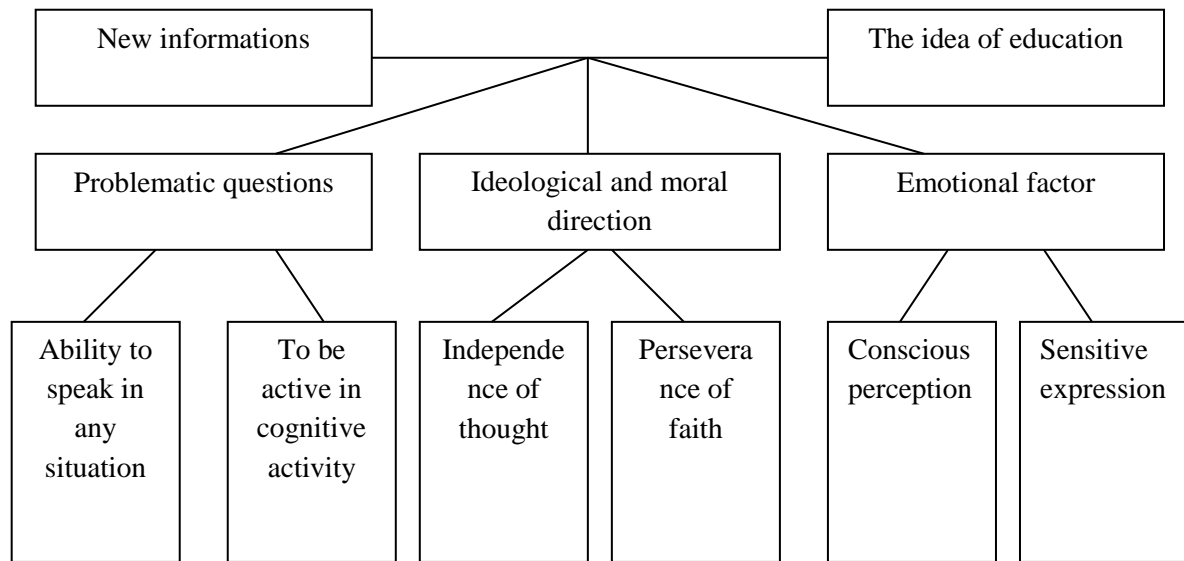
Art shapes the viewer, and at the same time, it is shaped by the opposite influence of the viewer. "The object of art," writes K.Marks, "- as in any other product - is created by the spectator who understands art and enjoys beauty. Therefore, art not only serves as the main theme for the subject, but also the theme created by the subject becomes the main theme for the development of art". Y.B. Borev argues that art is a means of communication of the following ethical views: 1) between members of a society; 2) between generations; 3) between peoples, between representatives of different cultures.

Art (in the process of learning - literature, cinema) develops the student's ideas in its audience (in our case) and forces the recipient to perfect their artistic ideas in a personal form. This means that the artistic idea is immutable and diverse: the same artistic idea is manifested in different ways in different styles.

One aspect of the ambiguity of the image is this misunderstanding; E. Hemingway compared a work of art to an iceberg; he said a small portion of the iceberg is visible on the surface of the water, while the bulk is hidden underwater. The same is true in the works. It encourages the reader to be mentally active, the process of perceiving the work, co-creation, thinking, complementing the image, while reading the work of art the student receives the initial information for his thoughts, it is emotional the situation and the data processing program are given, but it retains both the will and the scale for creative imagination. The low level of definition of the image that evokes the student's mind provides the basis for a complete representation of the unfinished image. From this we can conclude that a creative approach to the study of texts presented to students for analysis on the topic of "analytical reading" provides a basis for the expansion of both moral and creative activities of this student.

Using his story "The Old Man and the Sea", E.Hemingway revealed the logical infinity of the work of art: "In my work, I tried to give a real old man and a real child, a real sea and a real fish and a real shark. And if I can do that enough and honestly, they can be interpreted in different ways, in different imaginations.[4]. The image is in keeping with the complexity, spiritual and aesthetic richness and versatility of life.

The system of moral education in the process of teaching a foreign language can be shown in the following diagram.



In the process of working on a literary text in a foreign language class, the attention of young people should be drawn to the writer's own style of writing. For example, while Charles Dickens describes all the details in detail, E. Hemingway's writing style has a simple and understandable look and deep semantic meaning. The attention of children in the preschool system is drawn to the surprising simplicity of artistic images in the works of famous American realist writers. These images look like real life people. They also rejoice and cry, are born and die, suffer, in a word, live in their own worlds. If the student is in active contact with the literary text, then this interaction becomes a one-way, not two-way communication, a communication between the text and the reader. The second, on the other hand, achieves high results from the text only because he is able to give meaning to this text because of his cultural preparation.

In the process of artistic communication the following relations take place: the author - reality, the author - the reader, the author - the creative process. These relationships in artistic communication are complemented by interrelationships: the reader - the work, the reader - the author, the reader - the truth.

The interpretation of a literary text is closely related to its understanding. Simple reading, deep understanding of a literary text, and translation without analysis do not have the desired impact on the education of young people. M.M.Bakhtin considers four aspects in the process of understanding the literary text: 1) psychophysiological perception of the sign; 2) its recognition; 3) understand the meaning of the sign in a particular context; 4) active-dialogic understanding.[5]. The final division, especially based on the type of dialogic communication, is important in understanding a literary text. The

author-reader dialogue takes place only if the text is understood. "Understanding means mastering the meaning, discovering the spiritual state of the author in the process of creative movement, and the reader himself experiencing this reality". Enrichment of the student's life experience, general cultural literacy is of great importance in the deep understanding of the literary text.

## REFERENCES

1. *Bespalko, V.P. Fundamentals of the theory of pedagogical systems / V.P. Not a bit. - Voronej: Ed. Voronezh University, 1977. -- 211 p.*
2. *Efimov V.N. The didactic foundations of building a control system in classroom studies at the university: author. diss ... cand. ped sciences / V.N. Efimov. - M., 1984. - 86 p.*
3. *Borev Y.B. The didactic foundations of building a control system in classroom studies at the university: author. diss ... cand. ped sciences / - M., 1984. - 17 p.*
4. *E.Hemingway "The oldman and the sea" - M., 1952. - 4 p.*
5. *Kudaev, M.R. Corrective control in the educational process. Problems, methods of construction and implementation of his system / M.R. Kudaev. - Maykop, 1997. -- 194 p*





## THE USE OF READING IN MAKING LANGUAGE CLASSES INTEGRATED AND STUDENT-CENTERED

**Mahliyo Kukiboyeva**  
Independent Researcher,  
Namangan State University,  
Uzbekistan

**Olimkhon Isakov**  
Master student,  
Namangan State University,  
Uzbekistan

### ANNOTATION

*Current article outlines the use of reading in language classes to make the process elaborate, integrated and student-centered. There specified the application of reading and incorporation into other language aspects and skills in English language instruction.*

**KEY WORDS:** *Reading, language aspects and skills, integration, segregation, behaviourist, structuralist, student-centeredness, teacher-centeredness*

### INTRODUCTION

Current trends in language education demand from language educators and materials developers focusing on integrating all language skills and aspects in organizing language teaching process rather than teaching them in segregation.

In the experience of Uzbekistan, there are fundamental enhancement and reformations are being implemented into all spheres of life including educational system. In particular, language education is experiencing great transitions and enhancement. The presidential decree on the measures of the enrichment of the higher educational system and development of foreign language teaching which deeply concerns both language teachers and young specialists of universities who need professional growth in harmony with modern demands of improving the quality of education in the country. For that the initiatives should be started with teachers themselves.

### MATERIALS AND METHODS

As the requirements and standards for learning and teaching foreign languages are becoming elaborated today, the demand for development of new effective methods and approaches in language teaching, creating updated materials for modern classroom teaching and for new specialists fine-tuning the way they are teaching is also becoming a preliminary task to fulfill.

In the example of Uzbekistan, classroom teaching in language instruction is experiencing a

transition from traditional teacher –centeredness to student-centered classes and enhancements focusing on integrated approach to language teaching , where they try to make the process student-centered and communicative, much more active with student participation and interactive, still there is huge need for enrichment of the faculties in terms of ELT concepts, methods and modern trends.

Famous English Scholar Jack C.Richards who is internationally renowned specialist in second and foreign language teaching, an applied linguist and an educator, the author of numerous professional books for English language teachers, highlights in his book named “ Communicative language teaching today “ that best modern language instruction is specified with the following key categories:

- In teaching process the integration of language skills and aspects are encouraged rather than their segregation
- developing communicative competence takes privilege over linguistic competence
- Mostly authentic (and semi-authentic) materials are used in foreign language instruction i.e classroom activities, tasks and assignments are developed for students on the base of genuine resources
- New lexical and grammatical materials are presented in context
- Grammar instruction is presented not only with isolated sentences and rules but also in context they are retrieved in students’ mind by meaningful and engaging tasks. Initially,



the views and ideas of students about the task are asked while counting on them in presenting a new theme

- Grammar should be taught implicitly rather than explicitly
- The knowledge of language is in harmony with intercultural, socio-linguistic and pragmatic awareness raising activities in classroom environment
- It emphasizes the freedom of students over the dominancy of a teacher in the classroom and stresses to shape the ability of learner autonomy of students.
- Real reasons for communication are promoted, grammar rules and structures are taught by exposing them to real communication, not by making the students learn by heart a grammar rule itself.
- It stresses to improve both the knowledge of language and fluency in speech at the same time.
- Teachers lessen their “talk time” by engaging learners in discovering new elements of real communication and language awareness themselves
- Language is learned more effectively by discovering, experimenting, by doing as it is a skill

As mentioned above the general language teaching is becoming a preliminary task in all education establishments, the role of each skill in language learning can be considered a worthwhile matter to consider. Thus, the significance of reading in general language learning course also has aroused a lot of interest lately. So, possible answers to the question “Why should learners read in a foreign language?” may be the following.

- So that the learner can have additional practice of what he learnt through listening and speaking before.
- So that the learner can practice his knowledge in language before re-using it in writing.
- So that the learner can enhance his reading comprehension so as to extract needed information from it.
- So that learners can find pleasure through reading.
- So that the teacher can relax occasionally.

Those who consider suggestions 1 and 2 as the most principal purpose of reading think that they are one way of “stamp”ing the language into the learner. And this approach in language learning is called structuralist/behaviourist approach. Structuralist means that the language content is organized from simple to more difficult language structures, containing more common and widely-used

vocabulary. Behaviourist means that the carefully selected language is taught, while the stress is on repetition of the content. For example, the same selected content presented in listening is practised through speaking, reading and finally writing. Although this approach gives an opportunity for a learner to practice more and move from an unknown to a known language area, still it has some demerits that should be pointed out.

- It pays too little attention to reading as a skill that needs to be developed in different ways for many purposes.
- It creates more opportunity to develop the passive knowledge of students than the active knowledge.
- Working on the same language content through the four different skills may not alert students to the stylistic differences between written and spoken language.
- The structuralist/behaviourist approach does not motivate students to help themselves, as it has more emphasize on teaching rather than learning.

## RESULTS AND DISCUSSIONS

### *Reading through language.*

As other suggestions pointed, the purpose of reading may be either obtaining necessary information or taking pleasure through reading. But since reading for enjoyment is more similar to the aim of a fluent native-speaker, learning language through reading may possibly be the target for learners. In that case helping the learner to manage the text is where the teacher comes in. However, the most important thing is that the learner should want to read regardless of reading for data or enjoyment. It is the main task of a teacher to arouse motivation through handling the text in classroom with the help of appealing texts or interesting tasks. It should be pointed out that this task may be rather challenging for a teacher as a class may not have the same tastes. It is the communicative approach that comes in handy in that case. Rather than seeing the reading the way of “stamp”ing the language into a learner, the communicative approach sees language learning as the development in the learner’s ability that happened as the result of doing different relevant tasks. Whichever approach is preferred, there are some points for teachers to keep in mind. Firstly, the text should not contain a large amount of language or new vocabulary that is difficult for most of the class. In addition to that the content should not be too difficult as it either slows the lesson causing boredom in classroom or increases the pace of a lesson resulting frustration in class. Advertisements and instructions may be the right choice here having been written in quite simple language. Furthermore, the texts written



imitating authentic texts may be a good source for a teacher.

#### *Objectives in reading*

The ultimate objectives in reading for learners are that they:

- Should be able to read with good comprehension;
- Should be flexible in reading according to their purpose;
- Should be able to learn both language and content through reading;
- Should read with critical awareness;

Even though these aims will vary according to the learners' ages, interests and their language levels, these are reasonable targets for a general language course to work towards.

- Reading with good comprehension. It means that the learner is able to identify the main purpose or function of the text together with its sense. Also, he is able to handle new vocabulary in the text by guessing their meanings and learning to tolerate uncertainty.
- Reading flexibly. This refers the way in which the learner can skim, scan and read intensively or extensively according to his purpose in reading.
- Reading for language and content. It means the learner is able to pick out the relevant information or evidences from the text recognizing the main point and details. At the same time he learns vocabulary by guessing and using a dictionary.
- Reading with some critical awareness. This means that the reader should be able to stand back and analyse the text objectively.

Building objectives into the program

Building these objectives in to a general program needs a teacher to plan and prepare suitable materials beforehand. So, there should also be taken into consideration access to different materials and the time for preparation of a teacher. A very effective way of working towards the aims is arranging the content topic by topic as the basis of program organization (eg. Food education, weather) Each topic can include a variety types of texts and tasks so that a learner can practice broadly this language area together with its relevant vocabulary.

## CONCLUSION

As the program goes on the texts can become more complicated in language and structure, so that the learner is undergoing a real progression. There is no strict limit in choice of topics. So, a teacher can arrange the list of topics according to the learners' needs, classroom environment and the availability of

material. However, it is a good idea to move from the more familiar to the less familiar.

## REFERENCES

1. Jalolov. *Methods of teaching foreign languages. "Teacher" Publishing House, 19962.*
2. Jack C.Richards.*Communicative Language Teaching Today.Cambridge University Press, 2006*
3. Eddie Williams,*Reading in the language classroom, London Macmillan publishers LTD,1984*
4. Widdowson H G,*Teaching Language as Communication , London:Oxford University Press,1978*
5. Kukiboeva Mahliyo Mahmudjanovna, "The Use Of Short Stories In Communicative And Student-Centered Approach To Language Instruction From An Uzbek Perspective", *The American Journal of Applied Sciences, JULY 2020 Page No.: 60-64, Volume-II Issue-VII*
6. DOI: <https://doi.org/10.37547/tajas/Volume02Issue07-11>
7. Sarimsakova Dilafruz Muhamadjonovna. (2020), *The key concepts of forming sociolinguistic competence of future English language specialists; Asian journal of multidimensional research doi: 10.5958/2278-4853.2020.00157.3*
8. Sarimsakova, D. (2019), *Communicative competence as a result of EF teaching and learning ISJ Theoretical & Applied Science, 12 (80), 166-169* <https://dx.doi.org/10.15863/TAS.2019.12.80.32>



# IMPROVING THE METHODOLOGICAL PREPARATION OF THE FUTURE TEACHER OF FINE ARTS

**Bekmuratova Shohida Nematjonovna**

Free Researcher  
Andijan State University

## ANNOTATION

*This article was put forward to answer the question of what should be the result of the methodological training of teachers. And methodical preparation teaches to get out of the problematic situation caused by the conflict between ensuring the quality of education and the fact that this is not solved by means of traditional methods, that is, increasing the volume of information to be mastered. In addition, the role of language education in the development of professional competences and communicative competences the issues of solving the issues of communication that are relevant in the domestic, educational, production and cultural life of a foreign language medium, achieving the objectives of communication with the help of language and speech tools are considered.*

**KEYWORDS:** *future teacher, methodology, educational work, knowledge, information, qualification.*

## DISCUSSION

Today, all the work carried out in the world through the development of education is evaluated as an investment in the future. The implementation of socio-linguistic strategies in society creates opportunities for all people to live in comfortable conditions by acquiring knowledge, studying a profession, making a worthy contribution to the development of the country.

From the first steps on the way to independence of our country, it attaches great importance to the purpose of restoring and further raising our great spirituality, improving the national education and training system, strengthening its national ground, bringing it to the level of world standards and skills on the basis of harmonization with modern requirements.

The success of the reforms carried out in our country is to change the educational system, raise it to the level of modern requirements, develop methodical preparation of future teachers of fine arts living in this society.

The future teacher of fine arts primarily performs the task of teaching and educating students in their subjects as a subject of a general nature. Also, the school fine arts teacher teaches students to pay attention to things on the basis of teaching this educational science, to analyze the shape, color and essence of subjects. The visual art reader teaches the reader to observe, perceive, pay close attention to things and events.

The future teacher of Fine Arts organizes a lesson and lessons in fine arts. It is necessary to make

weapons with different content visually. Because the fine art is what the reader perceives according to the content of the science of reading, it is necessary to draw a picture of what he saw. I can say that again, the school fine arts lesson is organized in 5 rounds, 5 types, 5 characters. Such a variety creates much more difficult to organize and conduct lessons.

Therefore, the complexity of the lesson materials requires a thorough preparation of the teacher for the lessons. An experienced teacher will have time for all the work. The future teacher, starting from the organization of the lesson, carries out it with his own activity to the end. The teacher, starting from the preparation for the lesson, tries to convey it to the reader an easy, short, justifiable. The future teacher must conduct an independent work with each student in the course of the lesson. A good drawing of the teacher should be shown to represent it on the class whiteboard or in step-by-step drawings prepared at home. The future teacher should pay attention to all the things in the organization of the lesson and correct all the shortcomings from the very beginning of the lesson. When taking the lesson, it is necessary to follow each step correctly. It is necessary to use fertile every minute allocated. It is necessary to carry out all educational work without achieving it, starting from the examination of the knowledge of students, to the assignment to the house.

The main task of the future teacher of fine arts is to cultivate the ability to depict what is now being



formed in children, the first person who teaches them to put a notebook on the surface of the part, on which they draw a picture, to observe what is being painted and what is happening, to draw the received impressions on.

He is also a teacher who leads the reader to work independently in drawing, from him to initiative and from him to creativity. The teacher, along with teaching drawing, gives the students a beauty-aesthetic education. He teaches to be in love with labor, creativity, his native land, his homeland, his people. Fine art schoolchildren begin to immerse themselves in the feelings of being honest, pure, pious, truthful, talkative to children, raising them great spirituality. It operates on the personal initiative of the grower in the performance and implementation of these.

During this period, children embody the whole floor of knowledge and receive primary education in all subjects. Children learn to see the material world in this period, to observe, to check the impressions they receive from them. These skills are carried out on the basis of the lessons of behavioral sciences that we learn in the primary classes. Therefore, the responsibility for educational sciences, which are grown in primary classes, is very great. The educational science of fine arts, which is studied in primary classes, is also of great importance in the educational spheres of today's children. School fine art gives children the first concepts of the laws of nature and society, their form, structure, color, interconnectivity. This made them form a materialistic worldview from a very young age and developed it. It is known that a science in school does not teach the student the nature and its elements in terms of shape, structure, color and content. This is done only by the subject of the study of fine arts. Therefore, from the very young age of 7-6, fine art opens its educational spheres to children.

To the 1-th class reader, the fine art consists of what is a simple line, how to draw it, what is the shape, what is it a candle stick is depicted, take the shape from the nature, how to draw it on the surface of the scythe, leaves, plants, trees, birds and animals, give them initial scientific information about their structure and colors. Seeing objects as similarities in the form of things, differences, their formation and development, their color, similarities in colors, they receive information about something and events that the child does not know, about their appearance and development. This process continues to grow, improve and develop in classes II-III and finally IV. The program of fine arts in primary classes includes such types as drawing depending on the object, working on thematic compositions, artistic-applied art, sculpture, perception of works of art. But the program did not provide a separate class hour for studying works of art for I-II classes. This is quite true, the reason the main task in the elementary class

will be to improve the skills of working with a picture of things in pencil and paint.

In conclusion, the analysis, observation and research prove that the basis of the acquisition of secrets of improving the methodological preparation of the teacher in the subject of fine arts today is a positive effect in the process of studying in higher and secondary special educational institutions, the availability of opportunities in it, the assimilation of theoretical and practical knowledge, skills and skills. Therefore, the improvement of the methodical preparation of the teacher on the subject of the future fine arts imposes a high responsibility on higher and secondary specialized educational institutions that train such specialists.

## REFERENCES

1. Н.Н. Ростовцев, С.Е. Игнатьев, Е.В. Шорохов. "Рисунок. Живопись. Композиция" Москва просвещение-1989.
2. Б.Тожиев, Н.Орипова. "Рангасвир ва композиция дастури" II-курс Тошкент-1995.
3. Г.Абдурахмонов "Рангасвир ва композициядан методик тавсиялар". Iкурс. Тошкент-1995.
4. С.М. Даниэль. "Искусство видеть" Искусство Ленинградское отд. 1990.
5. Е.В. Шорохов "Основы композиции" Издательство "Просвещение", 1979 г.
6. Н.М. Сокольникова "Изобразительное искусство и методика его преподавание в начальной школе". Москва "АКАДЕМИА" 1999 г.
7. С.Д. Левин "Беседы с юным художником" М-1988.
8. Н.П. Бестчастнов и др. "Живопись" М- "Владос"-2001.



## HISTORICAL ROOTS AND SOME ARTISTIC FEATURES OF FOLKLORE AND BLESSINGS IN ENGLISH AND UZBEK LITERATURE

D.S.Urayeva  
Professor

Niyazova Mokhichekhra Khayatovna  
Teacher of English Literature Department  
Bukhara State University

---

### ANNOTATION

*The article dealt with some common features of English and Uzbek folk blessings. First of all, it addresses the issue of the genesis of the word blessings in English and Uzbek literature. At the same time, analyzed comparatively the similarities and differences of their place in folklore and entry into the written literature.*

**KEYWORDS:** *blessings, folklore, good wishes, English literature, Uzbek literature.*

---

### DISCUSSION

The works of English folklore have been created, polished, and enriched in terms of subject matter and ideology over the centuries. Moved from tongue to tongue, from heart to heart, from hand to hand. The life, struggles and dreams of this people are highly expressed. English folklorists such as Mary MacLeod Banks, Vinifred Susan Blackman, Estella Canziani, George Reginald Carline, Edward Clodd, Frederick Thomas Elvorth have studied the history of English folklore and contributed to it.

Blessings, which takes place in the folklore of world peoples, attracts our attention with its historicity and tradition, as well as general folklore properties. Revealing the role of blessings in artistic creation, their aesthetic significance is important in the study of the historical development of poetic thinking.

Blessings comes on the basis of their belief of ancient people in the magic of the word, the mystical world, the world of spirits, their mythological ideas and concepts associated with cult patrons, religious and moral views, and to this day continues to exist in our life as one of the important art forms folk art. Almost all the peoples of the world have blessings, which is sounded under conditions associated with certain everyday needs, everyday life, human activities, or in the process of some kind of religious ceremony.

Blessings, which in its meaning means good wishes to a person, is spoken for good intentions, is one of the independent genres of folklore of all

peoples. They serve to raise the spirituality of a person.

The name of the genre in the Uzbek language comes from the root word "al" in the language of the Altai Turks, which means to praise, glorify, dignify. The phrase "olqish" is created by adding the imperative suffix "qi" and the gerund suffix "sh" to the given root word. However, blessings is often referred to as "dua", "fatiha", "blessing", "wish" [1,156]. For example, in a family setting, often after dinner, elderly family members or the head of the family are addressed, saying: "Make dua for dastarkhan, please, and we would collect it." After that, the most senior or authoritative among those sitting around the dastarkhan makes dua, and applauds in honor of the food consumed, and expresses good wishes to those people who prepared and ate food [1,157].

The people always call on young people to do good deeds and get blessings for them. Similar propaganda can also be seen in folk proverbs. Including, in proverbs one can find "Do not get gold, but get dua. Isn't dua gold ?!" This imparts the value and usefulness of the dua, even more than gold and wealth. Since blessings gives a person psychological vigor, spiritual help. If a person's psyche and mood rises, then he can do many things.

There are many such proverbs in Uzbek folklore that express the importance and spiritual power of blessings. For example, we can cite several such moral and didactic proverbs: "A slave can work to death for the sake of the word" Well done "," With the help of dua, the people prosper, with the help of



rain, the earth flourishes "," A person who receives a dua is healthy, a person who has received a curse is doomed "," A patient person lives in abundance, a person who receives blessings - lives a long time "," White is blessings, black is a curse "," A good word is a balm for the soul, a bad word is a black spot in the soul "," Good intentions - half of the wealth ".[2,3]

Primitive people believed that the impact of good words, good wishes emanating from the lips of people to encourage other people on the human body does not consist in the psychological state of the receiving party, but in a direct and incredibly supernatural power that lies within the words.

Some people use the phrase "fatiha" instead of the phrase "blessings" (in dialect it sometimes sounds like "potiya", "potya"). In such cases, people open their palms for dua and wish each other and the whole world peace and harmony, as well as applaud in honor of the consumed food and water, praise them. [3,63]

As B. Sarimsokov rightly noted, the genre of blessings among the population is mainly called with the help of phrases such as fatiha, dua, which is why, in the minds of many, this genre seems to be a phenomenon associated with religious belief, in particular, Islamic traditions. Indeed, in the applauding words existing in our people, religious, especially Islamic elements are encountered quite often. These elements appeared among the people immediately after the Arab conquest and their significance was entrenched in the consciousness of the people.

The blessings genre is also found in English folklore. In English, this genre is also called phrases such as "blessing", "good wishes", "praise". However, we cannot deny the fact that they are all different from each other. For example, "blessing", that is, "to bless" means the meaning to make dua, to bless. John Tweddle, in his article entitled "Blessing," interprets this word as follows: The word "Blessing" comes from the biblical word "berakah," which in many ways means and is used to express the goodwill and good qualities of God. Also, the root meaning of the verb "baorak" (to pray) means "bow down", which is used to represent the prayers of those people who are humble and submissive in relation to the will of Allah.

In dictionaries and encyclopedias, the word "blessing" means a prayer, worship of Allah. Consequently, the word "blessing" takes on a more religious meaning.

In English literature, the word "good wishes" is the word which close to the word "blessings". In dictionaries and encyclopedias said that it is derived from the German word "wunschen", which means "wun" - wish, "schen" - wishing.

The word "presier", derived from the ancient French word "praise" - meaning reward, praise, applaud, means "blessings".

It is well known that blessings is created in sync with the realities of social life and is performed in sync with them. There is no life reality that a person does not applaud in a way that is relevant to him. Accordingly, the blessings of the English and Uzbek peoples is divided into several thematic groups according to their place and function of performance. For example, in Uzbeks, when a boy or a girl is married, an old and a once married man come out to congratulate the bride and groom, as well as their parents and relatives, and express good wishes like: "May Allah give happiness to two young people, may they grow old with the spouse, may the sand taken by him turn into gold".

Another type of Uzbek blessings is dedicated to those who are going on a journey or journey, pilgrimage, service. At the same time, older, experienced people or parents approach the person (child) who is on the way, open their hands for dua looking at him and express good wishes by saying: "May your journey be safe, may we are see each other again, may God become your traveler and the elders become a patron, may God protect you, may the holy spirits be with you, go well and come back in health. Good luck, take but do not miss, may all your limbs be healthy".

In addition to the blessings for the trip, there is also the blessings to welcome those returning from the trip. For example, people returning from a place, city, village, country, trip, and pilgrimage are expressed wish, "May your pilgrimage be accepted! In response, a person returning from a journey or pilgrimage says " Let it be as you said".

When someone step on someone's doorstep and enter to the house, he is usually rub his face with his hands saying the expression: "May Allah grant peace and tranquility, let there be prosperity. The steps have reached, let adversity not reach.

When a person sees that someone is wearing new clothes, he says: "It suits you", "Congratulations, greetings, compliments, wear kicking and kicking, keep you from the evil eye".

When a someone goes to see a patient, it is usually said, "Have you recovered? Fortunately, your complexion is in good condition. On the way back, saying goodbye to people make dua looking to the patient "May the God who gave the pain cure him," or "May God heal you", "May the God who gave the pain also heal you, be wider, be patient, much is behind, just a little bit left, you will even become as if nothing had happened".

In general, when Uzbeks marry a son or a daughter, when a new child is born, when he is tied to a cradle, when he is named, when his hair or nails are taken for the first time, when he sees his first step, when wearing new clothes, when starting a new business, when seing a new moon. – everywhere, of course, is applauded and well-intentioned.



Accordingly, blessings creates diversity, thematic scale.

Blessings comes from a specific situation. Accordingly, they are divided into several thematic areas, as described above.

It is noteworthy that when the English and Uzbek blessings are compared in meaning, most of them are similar in content. For example, blessings is common in both Uzbek and English. For example, to say “Good to meet you” and “Wish you to have a good day” in the content of nice to meet you and have a good day.

Table blessings has a special place in Uzbek folklore. They occur in three cases: it is customary to do this a) when they gather around the table to eat; b) after eating; c) while shaking the leftovers, the breadcrumbs remained on the table. Table prayer is also said among the English people. But the difference between them and the Uzbek table blessings is that the English people say the table prayer before the meal. “Giving thanks, for food in a world where many walk in hunger,” they say, thanking Allah for providing food for them.

It is also known that the Uzbek people applaud after eating melons. Prayers such as “Sweet juice or freedom, prosperity, blessings to the prophets and gods, thanks to the father of the sower, Allahu akbar” also met. We find similar blessings in the English people. For example: “Blessing of gardens and Gardeners service”.

People try to get the white blessing of old grandparents before going on a trip somewhere. The blessings of the trip is still well preserved. Before leaving, they wish good luck, return to their destination safe and sound, and return to their lives safe and sound. The British also applaud the trip, for example: “I wish you safereturn!”, “Bonvoyage!” (Arrive safely and have a safe trip)

Anyone passing by the cemetery will, of course, applaud the spirits of the deceased. This is one of the behaviors that has become a moral norm among our people. In this case, it is said, “The souls of the dead rejoice, and the place of the dead is good”. The English people also make wishes like “May your estinpeace” (i.e. lie quietly and peacefully in your place of dead).

In short, there are some thematic similarities between the Uzbek and English people’s blessings. Patterns of the genre of blessings associated with the magic of words have survived for centuries as an inexhaustible source of artistic and aesthetic thought and folk art.

## REFERENCES

1. Safarov O. *O'zbek xalq og'zaki ijodi. Musiqa nashriyoti, Toshkent, 2010.-B. 156-157.*
2. Jumanazarov U. *Tarix haqiqati va xalq ijodi badiiyati. – T.: “Elmus Press Media”, 2007. – B. 3-28.*
3. Katash S.S. *Alko'sh sos (bogopojelaniya) – drevniy janr altayskogo fol'klora // Ulagashevskiy chteniya. Rev. 1. – Gorni-Altaysk, 1979. – S. 63-77.*
4. Murodov M. *Qarg'ish va olqish // Sarchashmadan tomchilar. – T.: G'afur G'ulom nashriyoti nomidagi Adabiyot va san'at nashriyoti, 1984. – B.123-133.*
5. Sarimsoqov B. *Olqish va qarg'ishlar // O'zbek fol'klori ocherklari. Uch tomlik. 1-t. -T.: «Fan», 1998. – B.143-152.*
6. *O'zbek xalq maqollari. To'plam. O'zbek qalq ijodi. Ko'ptomlik. To'plovchilar: T.Mirzaev, B.Sarimsoqov, A.Musaqulov. – T.: Adabiyot va san'at nashriyoti, 1989. – B.79-90.*





## THE IMPORTANCE OF FORMING YOUTH LIFE STRATEGY IN AN INFORMED SOCIETY

**Ismoilov Temurbek Islomovich**

Director of the Center for Joint Education Program of  
the Namangan State University and Russian State  
Pedagogical University named after A.I. Gertsen

### ANNOTATION

*The concept of "youth" or "youth" is a special concept inherent in any society and covering certain demographic periods. Although modern researchers do not deny that young people are active in all spheres and industries in the new century, which is the information society, they note that the current development creates certain social, political, economic, legal and, of course, spiritual problems.*

**KEY WORDS:** *youth, youth, youth life strategy, creativity, youth leisure, unorganized youth.*

### DISCUSSION

Young people are a unique social group with a special place in society. The main feature that characterizes them is the transition from childhood to adolescence, which in turn occurs in connection with the formation of social responsibility among representatives of this group. Some scholars define and classify young people as a socio-demographic group with an opportunity for social recovery and development. Because society, on the one hand, provides young people with different benefits. However, on the other hand, this imposes certain restrictions on their active participation in a number of spheres of public life. The age groups that make it possible to identify people as young differ depending on the internal politics and mentality of each state. For example, in Uzbekistan, the minimum age for young people is 14-16 years old, and the oldest is 25-30 years old. Thus, adolescence is the most important stage in a person's life and in the formation of his worldview. It is at this stage that their emotional, personal and cognitive activity becomes more developed. That is why the President of Uzbekistan Shavkat Mirziyoyev said that at the IV Congress of the Kamolot youth movement, which has undergone historical changes, it is important for young people to get acquainted with thoughts, goals and, if necessary, unattainable intentions. it was indicated.

First of all, in the study of social attitudes, behaviors, interests, worldviews and other aspects of young people, it is necessary to evaluate them based on the specifics of a particular period, situation. Second, to analyze and study the specific lifestyles of young people. It is a theoretical and empirical study

of the social status of young people, their lifestyle and its development. Third, to study and analyze the comprehensive spiritual progress of young people. Dynamic study of the current socio-economic conditions, the constant connection between generations due to changes in the environment. Indeed, young people are considered to be the largest and most active part of society. Their constant study is one of the current issues of the time.

The role of the mahalla in the development of the spirituality of the youth, especially the unorganized youth, is enormous. Through the pandu advice of the elders, the personal example of the elders, the unity of the community, the ideas of goodness are instilled in the minds of the people. First of all, the neighborhood is a healthy socio-spiritual, moral environment. Public opinion, which has a strong influence in the neighborhood, regulates the behavior of the people of the neighborhood on the basis of justice and moral criteria, whether they are big or small, official or ordinary worker, craftsman, rich or helpless. There are great opportunities for the effective organization of ideological, spiritual and educational work among the general public in the neighborhood. Especially, the role of the mahalla in the development of such qualities as national values, kindness, solidarity, humanity, struggle for the honor of the people, mutual assistance in the hearts of every young person is invaluable.

Young people are an invaluable resource with creativity. However, in order for this important stratum to become the main force determining the fate and future of the country, the state must first of all support them in social, moral and material terms,



freely exercise their rights and obligations, create favorable conditions and opportunities for finding a worthy place in society. The policy of work in our country is, in fact, a policy for the future. Any state and people striving to secure their future must, first of all, pursue a correct policy in relation to youth. The same is happening in Uzbekistan. The maturity of the younger generation is directly related to its spirituality. This contributes to the self-improvement of boys and girls. Today our youth have a growing propensity for initiative, organization and creativity. Let the President of the Republic of Uzbekistan Shavkat Mirziyoyev equally lead all young and old, urging all leaders to pay attention to the problems of youth organizations: we will appreciate. For this reason, it is strictly forbidden in our country to force employees and students of budgetary organizations to pick cotton. "During the cotton season, the International Labor Organization introduced systematic monitoring to prevent child labor and forced labor. Thanks to our strict control, no negative situation has been identified".

Regardless of the sphere of life in our country today the process of renewal is taking place, economic, political, social, spiritual and educational, as well as democratic values in the minds of people are in line with historical experience, scientific and philosophical heritage, advanced traditions and customs of our people ... we see it. At the same time, the constant attention of the head of our state is paid to the upbringing of our youth spiritually and physically mature, highly intellectual people who have thoroughly mastered modern knowledge. The purpose of this creative work is the well-being of our people. In doing so, we, of course, count on the strength of our youth. Our national customs and traditions, which have been formed by our people for centuries, today are reflected in harmony with universal human values. The material and spiritual heritage of our people is recognized throughout the world. That is why each of us should feel the descendants of what great people we are, and carefully pass this priceless wealth left to us from them to the next generation in its purest form. This process is reflected every day, in everything we do, in our contribution to the development of our country.

The role of the mahalla in the development of the spirituality of youth, especially unorganized youth, is enormous. Mahalla, which is a national model of self-government, carries out a great spiritual education based on the ancient customs, traditions and customs of our people. Thanks to the advice of the pandu elders, the personal example of the elders, the unity of the community, ideas of good are instilled in the minds of people. Neighborhood is, first of all, a healthy social, spiritual, moral environment. Public opinion, which has a strong influence in the area, regulates the behavior of the residents of the area on the basis of justice and moral criteria, whether they are big or small, officials or ordinary workers, artisans, wealthy or helpless. There are great opportunities for the effective conduct of

ideological, spiritual and educational work among the population in the microdistrict. The role of the mahalla in the development of such qualities as national values, kindness, solidarity, humanity, the struggle for the honor of the people, and mutual assistance in the hearts of every young person is especially invaluable. Today the media: radio, television, periodicals, electronic media play an increasingly important role in shaping human spirituality. At the same time, they serve as both an information space and a socio-political, spiritual and educational platform, as well as a place that provides people with cultural, artistic, aesthetic, spiritual food and recreation. Among the important means of developing the spirituality of unorganized youth, the role of public organizations, especially the Youth Union of Uzbekistan, is huge. Because the Youth Union is an organization that unites all the country's youth and finds solutions to their problems. Another opportunity of this organization in the formation and development of youth spirituality lies in the fact that young people take initiative in the relevant fields, based on themselves, their abilities, intellectual potential and needs, which allows them to act on a large scale.

Strengthening the spiritual and educational foundations of society in the socio-economic development of our country, the complete restoration of the mentality of the people, the implementation of programs and principles of national independence, an increase in the sense of responsibility and responsibility for the fate and future of our country, ideological immunity. The strengthening of the advocacy system is effective. In this process, the Republican Center for Spiritual Propaganda, its local structures and the National Research Center for Ideas and Ideology are doing some work. However, today in the countries of the world the processes of globalization are intensifying, new threats and dangers to peace and stability are growing. This situation calls us directly to greater awareness.

Analyzing the analysis of such difficult and dangerous situations, it can be stated that the positive work carried out in the regions and their activities are developing in accordance with modern requirements. The policy pursued by our government demonstrates its real achievements and prospects in the social sphere. However, the upbringing of young people in the family, district and educational institutions, targeted ideological and educational work with unorganized youth in remote areas and districts, superficial involvement in crime, religious extremism and terrorism, disregard for national values, early marriages, the family is seen that advocacy efforts to prevent such negative situations as divorce, in most cases, do not give the expected results. Serious attention must be paid to resolving these issues. It can be seen that a number of decrees and decrees issued at the initiative of the President in order to improve the efficiency of the process are directly aimed at eliminating these cases.

The construction of Kamolot houses in the regions and providing them with modern housing in



order to further support young families actively participating in the social life of our country has shown how true our economic path is. Today it is necessary to develop and implement various action plans to improve the efficiency and effectiveness of activities aimed at educating the younger generation, increasing their spirituality and culture. Thus, as a result of the consistent policy pursued in our country, the decrees, decisions and programs adopted in the interests of the people have borne fruit and have the opportunity to take high positions among the countries of the world, showing that all our youth should be leaders in carrying out reforms.

In short, world experience shows that the process of marginalization and lumpenization begins among unemployed and uneducated youth. Marginalization comes from the Latin word "margo", which means edge, edge, outside. The word lumpen comes from the Latin word uvada, which means the vow of society, not the vow of clothing. The characteristic features of the marginalized and lumpen are depreciation of values, insecurity and indifference to others, suicidal tendencies and a quick susceptibility to alien influences. In order to prevent such cases and prevent them from deepening, it is better to work with unorganized youth, especially with their peers, who are activists of the Youth Union of Uzbekistan. It is desirable that such activists be among their relatives, classmates, neighbors, classmates. This is due to the fact that in psychology and sociology there is the concept of a "reference group". According to this concept, young people are often more susceptible to peer influence than adults, teachers, and sometimes parents.

## REFERENCES

1. *Collected Legislation of the Republic of Uzbekistan, 2016, No. 37, Article 426; 2017 No. 24, article 487; National database of legislation, 24.07.2018, No. 18.03 / 486/1559*
2. <https://president.uz/uz/lists/view/730>
3. *Mirziyoyev Sh.M. We will resolutely continue our path of national development and take it to a new level. - Volume 1. Tashkent: Uzbekistan, 2017.-- 514 p.*
4. *Mirziyoyev Sh.M. The Constitution is a free and prosperous life, a solid foundation for the further development of our country. Tashkent: Uzbekistan, 2018.-- 19 p.*
5. *Resolution of the President of the Republic of Uzbekistan "On increasing the efficiency of spiritual and educational work and bringing the development of the industry to a new level", July 28, 2017. No. PQ-3160*



# PROBLEMATIC ASPECTS RELATED TO THE USE OF EDUCATIONAL TECHNOLOGIES AND INTERACTIVE METHODS IN THE CLASSROOM

**Shakhlo Isamiddinovna Botirova**

Docent of "Uzbek language and literature"

Chirchik State Pedagogical Institute of the Tashkent Region,

Doctor of Philological Sciences (PhD)

## ANNOTATION

*This article describes the problematic aspects associated with the use of pedagogical technologies and interactive teaching methods in the classroom, the improvement of the native language programs and literature of secondary schools, the application of the principles of "lifting" and "lowering" in education.*

**KEYWORDS:** *pedagogical technologies, interactive methods, the principle of "lowering", the principle of "lifting", integration.*

## DISCUSSION

Until now, our national pedagogy has considered teaching students the existing knowledge that humanity possesses as the most optimal way. In this case, knowledge is absorbed into the mind and consciousness of the finished reader. At the same time, knowledge will be readily available in the literature, and mastery of it will be considered satisfactory for both students and teachers. But this does not imply a creative approach to understanding the essence of issues and phenomena among students, only remembering existing knowledge, putting it into practice is considered as the main goal of this type of pedagogy. With this approach, depending on how much knowledge the student has memorized, conclusions are drawn about their knowledge.

This is true, but given that the learning process consists of two stages, the first stage is the acquisition of knowledge, the second stage is to draw conclusions from it, it becomes clear that this method does not justify itself. As long as knowledge does not serve knowledge, it is no different from ordinary information. That is, if the existing knowledge it does not serve as a basis for the discovery of new knowledge, if there is no chain reaction phenomenon in this process, then there is no development and progress, as expected in science and production. To do this, students will need to understand the essence of the issue, understand the causes and consequences, and be able to draw conclusions. But several generations of students, thanks to the above-described "rapid method", could not go further than to memorize the knowledge available in literature,

memorize it blindly, apply the knowledge in practice. The talents of many gifted students, whose memory is full of knowledge and information, were not realized and "disappeared" in the production process. Nevertheless, during the course, students will be able to understand the phenomenon and essence, cause and effect, understanding of interdisciplinary interactions, relationships and balances, the ability to compare and draw logical conclusions in each subject, if necessary. This shows how serious and unique the lesson is in the creative process.

For these and other reasons, the teaching field is constantly updated and continues to adapt over time. Our national pedagogy is going through a period of serious changes. In the last decade of the last century, our pedagogy has included processes related to the organization of a lesson based on pedagogical technologies (PT) and interactive methods. The concept of pedagogical technologies is a multi-faceted phenomenon, and experts' opinions on its description differ. For example, G. K. Selevko believes that pedagogical technologies are a model of pedagogical activity, which includes providing conditions created both for the teacher and for designing, improving and conducting the educational process, which are thought out in all their details. [1] V.P. Bepalko understands this concept as a set of tools and methods for the implementation (or implementation) of theoretically justified educational processes that successfully achieve the educational goals. [2]

Today PT cannot be considered a novelty. In fact, the basis of such non-standard experiments is



the teacher's approach to learning using new, effective methods and tools, a look at learning as a creative process. New methods and tools, methods and approaches, if correctly selected and applied in accordance with the specifics of science and subject, will undoubtedly increase the effectiveness of the lesson. But can we say that all currently used PTs and interactive methods also increase the effectiveness of the lesson? Unfortunately no. More precisely, there are also cases of misunderstanding and lack of a correct interpretation of PT and interactive techniques. According to our observations, as a result of an incomprehensible approach to this phenomenon, many teachers (especially in the system of public education and secondary specialized, vocational education) turn the lesson into a game, a kind of entertainment. Some teachers approach this issue blindly and do not notice that they are leaving the essence of the lesson and retreating from the goal. [3] Indeed, unverified, non-guaranteed approaches cannot be applied in the educational process. Since the fate of students in educational institutions, their constitutional right to education are events that affect the future of this nation, and the teacher is not given the right and authority to "experiment" on it.

In our opinion, the expected result cannot be achieved without strengthening integration processes between types of education in the education system, especially in the system of teacher education, without reaching certain conclusions about its optimal solutions. Integration processes between types of education vary from the country's educational structure to governance mechanisms and research programs. This is a very complex and systematic process. Although much has been said about this process in training sources, but when it comes to performance, a lack of systematicity and inconsistency of theory and practice are noticeable.

We see that in the programs for studying the native language and literature of secondary schools, the question of cohesion in the following years is to some extent provided.

However, when it comes to content, there is a tendency to lengthen and reduce the content of the program, rather than membership. For example, in the textbook of the 6th grade "Native language" we see that a certain topic is present in later classes. This is not wrong from the point of view that in subsequent classes the subject will be given deeper and more detailed. But in practice this is not so. In practice, theoretical knowledge in the 6th grade is repeated even in the following classes and is slightly stretched. No new theoretical information specific to the new grammatical norms specific to this topic is given.

In general, the issue of teaching students theoretical knowledge of linguistics should be radically revised. The level at which grammar norms should be given to students should be strictly defined,

in our opinion. In other words, fluency in human speech does not depend much on thorough mastering of theoretical knowledge of linguistics, good mastery of grammar. Since the purpose of learning a language is to bring the idea to the listener in a quality manner, and while grammar knowledge does not serve this purpose, it is also advisable to lower the level of grammar learning. Mother tongue curricula in secondary schools should be reviewed from the same point of view. The program, which is expected to be improved, will focus on practical aspects associated with a sharp reduction in the provision of theoretical information to students, rather than improving oral skills. For example, the textbooks "Native language" in the 6th grade are devoted to topics such as "Journey to the property of words", in the 7th - "The artistic breath of the word", in the 8th - "The classical magic of the word", and students work on words in this regard. [4]

The curricula of pedagogical universities should also be reviewed in terms of time requirements. At the same time, it is advisable to develop general education and secondary special educational institutions of vocational education in accordance with the number of hours allocated for subjects indicated in the curriculum. The integration process between types of education takes place here. In general, there are two cross-cutting issues in this process:

1. What should high school students learn?
2. How to teach students topics available in science programs?

As a result of the first of these questions, scientific programs are being formed, and the second is aimed at improving the methodology. These two questions fully reflect the content of the educational process. Thus, we can logically conclude that although scientific programs express the content of education, its quality determines the quality of education.

Until now, scientific programs have been applied in a **downward** fashion. That is, scientific programs are developed in the ministry and sent to educational institutions. In our opinion, this scheme has not fully justified itself in practice due to the lack of a single important component. In our opinion, scientific programs should be developed according to the "bottom-up" and "top-down" schemes. For example, educational institutions should develop and submit curriculum projects based on the level and needs of modern students and present them to educational authorities. Shortening to achievement provides a complete scheme for creating fan programs. [5]

Another important aspect is related to the stratification of scientific programs. Because in the classroom, along with a gifted student, there are students who find it difficult to master subjects. This



is a natural state. The ability of the student is important for the quality organization and effectiveness of the learning process.[6] Therefore, science programs should be stratified. Currently, as a result of the implementation of a unified scientific program, the teacher sets himself goals on the basis of a student with disabilities. Today, simplification of lessons using interactive methods and their transformation into games, in our opinion, allows us to educate students with disabilities, to focus their attention on lessons. As a result, the educational process does not rise to the level of education of gifted students, but rather decreases to the level of education of incompetent students. As a result of this inverse principle, the development of the abilities of gifted students does not reach the level of satisfaction of their needs. State educational standards have a minimal concept. It sets the minimum requirements for the level of knowledge of students who have completed the educational stage. As a result of the inverse principle, our education system wraps around these minimum requirements, even lower levels. Here we would like to make a comparison: although education is informal, it has already been proven in life that it is one of the most effective methods in education. Interestingly, tutors rarely resort to gaming technology. First of all, teachers group students according to their level of knowledge and organize lessons in accordance with the needs of the most gifted child in the classroom. This is an incentive for other students in the group, which leads to the emergence of new aspirations and, ultimately, to qualitative changes in the educational process. In fact, tutoring is one of the most effective forms of training, because it adheres to the principle of **elevation**, not **lowering**.[7]

In the pedagogical literature there are no records of such principles of "rise" and "decrease" in the educational system. We conditionally named two different opposite trends that exist in the system. Perhaps these are not events of a fundamental level. Maybe you give them different names, but that doesn't matter. The important thing is that these two reverse phenomena coexist in our education system. **But we must not forget that in an education system based on the principle of unloading, the expected result, effectiveness, cannot be achieved.** This is one of the most pressing problems in the education system at the moment.

## REFERENCES

1. Selevko G. K. *modern educational technologies*. - M.: Pedagogy, 1980, - 146s.
2. Bepalko V. P. *terms of pedagogical technology*. - M.: Education, 1989. - In 231s.
3. Botirova, S. (2020). *The Role of Artistic Psychology in the Metaphorical Harmony of Man And the Reality of Life*. *Asian Journal of Multidimensional Research*, 9(4), 16-20.
4. Toshtemirova, S. (2020). *Factors Affecting the Quality of Education and the Importance of the Education Cluster to Address Them*. *European Journal of Research and Reflection in Educational Sciences*, 8(4), 151-156.
5. Khodjamkulov, U., Botirova, S., Shofkorov, A., & Abdirimova, I. (2020). *Bases of Organizing Cooperation between Educational Institutions through Clusters (on the Example of the Education System of Uzbekistan)*. *Journal of Critical Reviews*, 7(12), 166-169. <https://dx.doi.org/10.31838/jcr.07.12.47>
6. Mardonov, S., Toshtemirova, S., Ahmadjonov, B., & Koshanova, N. (2020). *Structure and Mechanisms of Action of The Educational Cluster*. *International Journal of Psychosocial Rehabilitation*, 24(07), 8104-8111. <https://doi.org/10.37200/IJPR/V24I7/PR2700786>
7. Mukhamedov, G., Khodjamkulov, U., Shofkorov, A., & Makhmudov, K. (2020). *Pedagogical Education Cluster: Content and Form*. *ISJ Theoretical & Applied Science*, 1(81), 250-257.
8. Mardonov, S., Khodjamkulov, U., Botirova, S., & Shermatova, U. (2020). *The Need to Educate Young People with the Spirit of Patriotism in the Context of Globalization*. *Journal of Critical Reviews*, 7(12), 243-247. <http://dx.doi.org/10.31838/jcr.07.12.29>
9. Khaytmetov, R., Madalimov, T., & Akhatov, L. (2020). *The Problem of Human Psychological Crises in the Views of Emil Durkheim*. *Наука, образование и культура*, 6(50), 50-57.
10. Хайтметов, Р. (2020). *Мавлоно Румийнинг "Маснавийи Маънавий" асарига амалий ахлоқ масаласи*. *Тамаддун нури*, 1, 76-79.
11. Khaytmetov, R., Madalimov, T., & Akhatov, L. (2020). *The Problem of Tolerance in Oriental Philosophy*. *Multidisciplinary Peer Reviewed Journal*, 6(7), 130-133.
12. Khaytmetov, R., Madalimov, T., & Akhatov, L. (2020). *The Problem of Tolerance in Oriental Philosophy*. *Multidisciplinary Peer Reviewed Journal*, 6(7), 130-133.



## ELECTORAL SYSTEM AND SELECTION OF JUDGES IN TURKESTAN AT THE LATE OF THE XIX AND BEGINNING OF THE XX CENTURIES

**Karimov Kakhramon Sodikovich**

Deputy Dean for Youth Affairs of  
The Faculty of Preschool and Primary Education,  
Kokand State Pedagogical Institute,  
Uzbekistan

---

### ANNOTATION

*The article reveals the problems and tasks of the elections under the leadership of the Governor-General of the Turkistan Territory, when the elections of the head of the regional district, district district were held, the judge-kazievs, aksakals of local government in villages were elected, how these issues were eventually resolved.*

**KEY WORDS:** *elections, ballot paper, principles of law, procedure for holding elections, closed voting, choose a judge-kaziyev, judge, sharia kazy.*

---

## ИЗБИРАТЕЛЬНАЯ СИСТЕМА И ВЫБОР СУДЕЙ В ТУРКЕСТАНЕ В КОНЦЕ XIX И НАЧАЛЕ XX ВЕКОВ

**Каримов Кахрамон Содикович**

*Заместитель декана по делам молодежи факультета дошкольного и начального образования.*

*Кокандский государственный педагогический институт,  
Узбекистан*

**Аннотация:** В статье раскрываются проблемы и задачи выборов под началом генерал - губернатора Туркистанского края, когда были проведены выборы начальника областного округа, районного уезда, выборы судей-казиев, аксакалы местного правления в селах, как эти вопросы были в итоге решены.

**Ключевые слова:** выборы, баллотировочный лист, принципы закона, порядок проведения выборов, закрытое голосование, выборы судей-казиев, судья, шариатские казы.



Сегодня в развитии национальной государственности Республики Узбекистан начинается новая эпоха. Изучение многовековых традиций узбекского народа и богатого опыта развитых демократий положило начало дальнейшему развитию правовой системы.

Особенно в избирательной системе. Сегодня Олий Мажлис Республики Узбекистан создает Центральную избирательную комиссию Республики Узбекистан, основными принципами которой являются независимость, легитимность, коллегиальность, прозрачность и справедливость.

Выборы Президента Республики Узбекистан, Законодательной палаты Олий Мажлиса Республики Узбекистан и Жогорку Кенеша Каракалпакстана, представительных органов государственной власти областей, районов и городов проводятся на срок конституционного периода.

Организация выборов или референдумов, нарушение тайны голосования должностными лицами, представителями политических партий или органов самоуправления граждан, инициативными группами или членами избирательных комиссий или комиссий референдума, фальсификация документов выборов или референдумов, внесение фальшивых записей в листовки о выборах или референдуме[1], Умышленный просчет голосов наказывается в порядке, установленном законом.

Наше исследование истории выборов направлено на выявление важности выборов в системе управления генерал-губернатора Туркестана, избирательного процесса, установленных правил и их выполнения, негативных событий и работы, проделанной для их устранения. В этой статье мы хотели бы прокомментировать некоторые интересные сведения на примере генерал-губернаторов Туркестана и Ташкента, Ферганской и Самаркандской, Сырдарьинской областей, Ташкентского, Шымкентского, Авлийтинского районов, выявленных в ходе исследования.

В исторически сложившейся системе правления наместники и главы территориальных подразделений назначались из членов ханской семьи, близких к нему групп, представителей высшего сословия и вождей ведущих племен.

Например, в период правления Худоёрхана семью княжествами управляли ханские сыновья и близкие родственники. В свою очередь, губернаторы разделили территории провинции между своими детьми и родственниками. Бек (правитель, наместник) и его заместитель занимали особое место в административно-территориальной системе Кокандского ханства. Правитель и судья, назначенные ханом, обладали множеством полномочий.[2]

Титулы и чины в Кокандском ханстве делились на высшие титулы и должности после ханского титула в зависимости от обязанностей и званий их исполнителей: воинские, военно-административные, дворцовые чины, дворцовые административные, религиозные и религиозно-казиханские чины и титулы.[3]

Вторым лицом в Кокандском ханстве был премьер-министр, решавший важные государственные дела по согласованию с ханом. В центральном правительстве служили такие официальные лица, как Кушбеги, Олалик, Девонбеги, Минбоши, Шейхулислам, Газикалон, Парваначи, Шиговул, Саркор, Инок, Дастарханчи, Амин, Ясовулбоши. При дворце существовал особый совет, в который входили высшие сановники.[4]

Как и во всех средневековых мусульманских государствах, мусульманское духовенство Кокандского ханства представляло собой социальный класс с особыми привилегиями. Их мнение играло важную роль в управлении ханством, в образовании, в судебной системе и в различных сферах общественной жизни.

Из III отдела канцелярии генерал-губернатора Туркестана направлено письмо военным губернаторам Сырдарьинской, Ферганской и Самаркандской областей от 31 декабря 1904 года № 15, в котором содержится призыв принять утвержденные правила для строгого руководства и выполнения «Положения о порядке избрания местных чиновников».

Согласно «Положению о порядке избрания должностных лиц органов местного самоуправления»[5]:

- Губернаторы уездов или их заместители сначала проверяют личность подчиненных волостных губернаторов или их заместителей для избрания кандидатов. Затем кандидаты будут добавлены в список в





течение пятидесяти дней. После подписания списка действующий губернатор волости составляет акт. Если будет не менее двух третей голосов избирателей, то можно будет начать выборы;[6]

- выборы должностных лиц, указанных в части первой настоящих Правил, проводятся тайным голосованием;[7]

- Выборы губернаторов и народных судей волости ни при каких обстоятельствах не проводятся тайно, иногда по возможности в общественных местах.

- Избранный лидер занимает особое место, отделенное от чиновников. В режиме письма (слева направо) должно быть отдельное пространство внутри полукруга и пространство рядом с ящиком запертой элитной урны (выполняющее роль стационарной урны[8] для голосования), чтобы накрыть их и накрыть стол тканью.[9]

- Перед голосованием избиратели на собрании, посвященном выдвижению кандидатов, перед губернатором района или его заместителем постепенно произносят имена и фамилии тех, кто хочет быть избранным на должность нового администратора и судьи. Кандидаты могут быть из числа назначенных на текущую должность. В таком случае во время регистрации А объявляет о своем назначении судьей от одной судебной системы к другой;

Перед началом голосования всем участникам, и особенно избирателям, разъяснили, что значение белых и черных линий для голосования в урне для голосования, то есть белого шара (шара) для кандидата, за которого голосует избиратель, а черный шар означает обратное. Они должны полностью соответствовать своему назначению по цвету и текстуре. Затем шары распределяются по тарелкам выбранными, выбранные по одному попадают в коробку, затем мяч кладется и возвращается на свое место.

Процесс определения бюллетеней для зарегистрированных лиц осуществлялся по очереди. Их включение в список избирательных бюллетеней и избирательных бюллетеней должно было быть объявлено вслух, а выборы должны были быть проведены открыто во всей нынешней полной форме. По окончании голосования все участники будут немедленно уведомлены о том, что все бюллетени набрали наибольшее количество баллов, и будут отправлены на утверждение губернатору.

- Все избранные кандидаты через бюллетени для голосования должны были быть подписаны или опечатаны на собрании избирателей и немедленно подписаны губернатором провинции или его заместителем.

Все заявления, связанные с выборами, должны быть немедленно расследованы губернатором округа или его заместителем, который обязан уведомить губернатора в порядке, указанном в бюллетенях для голосования.[10] Фигура 1[11].



П Р А В И Л А

О ПОРЯДКЕ ПРОВЕДЕНИЯ ВЫБОРОВ ДОЛЖНОСТНЫХ ЛИЦ ТУЗЕНТАГИ ЭПРАЖЕНІЯ  
(ВОЛОСТНОГО) И СУДА.

1) После собрания волостных управителей и народных судей, Уездный Начальник или лицо его замещающее, представляет, по приглашению у него бывшему, кандидатури кандидатов, а объ означенном составляет акт за подписью судей, а также и за подписью присутствующаго на сезде старша волостного управителя, при чем если число выбранных не имеет 2/3 общего их числа по волости, то следует приступить къ выборамъ.

2) Выбраніе упомянутых въ п. 1 кандидатов сражня должностных лиц надлежит производить открытым голосомъ, посредствомъ Баллотировки таранки.

3) Выборы Волостныхъ Управителей и народныхъ судей, производятся отсюда же въ закрытой таранкѣ, если это возможно, и на открытой площадке, въ виду всего народа, по возможности торжественно и такимъ образомъ, чтобы выборы (интервалы), присутствуя къ избранію должностныхъ лицъ, выходящая отдѣльно отъ прочаго участка схода, шаркарутся, по почуду знаковъ иль, и чтобы вслѣдъ Баллотировочнаго акта, установленнаго на отаѣ, покрытіе сужающъ, оставалось свободное место.

4) Выборы должностей Баллотировки, когда по одному къ Уездному Начальнику или лицу его замѣняющему, указъ покорать именъ и фамилій лицъ, которыхъ они желаютъ Баллотировать на должности волостного управителя и судей, при чемъ кандидаты могутъ быть и изъ числа выбранныхъ лицъ, означенныхъ на таранку при снѣ дождостей, вносимыхъ Уезд-

нымъ Начальникомъ или лицомъ его замѣняющимъ, а также именъ, а означенныя на должности судей въ друге.

5) Предъ началомъ Баллотировки необходимо таранку, указать время присутствующимъ и въ особенности лицамъ, назначеніе обѣихъ и черной стороны Баллотировочнаго представлять рый по окрестъ и установити должныя знаки по таранкѣ, своей снѣ. Затѣмъ время разнесется выборнымъ и обѣмъ. Выборы производятся въ явку одинъ за другимъ, и снѣ, означеннаго акта, означеннаго въ явку, производится по очереди кандидатовъ иль въ списокъ. Члены избирательнаго иль избирательнаго схода, выходящая таранку и вообще выборы должны производиться открыто, въ виду у всего присутствующаго. По окончаніи Баллотировки всѣ присутствующіе должны быть немедленно поставлены въ каждаго, - кто получилъ болѣе всего избирательнаго именъ и следовательно будетъ представлять на утвержденіе Губернатору.

6) Баллотировочныя акты должны быть подписаны, или означены, также вслѣдъ выборовъ, производившихъ Баллотировку и снѣ-же удовлетворены подписью Уезднаго Начальника или лица его замѣняющаго.

7) Все означеннаго по поводу выборовъ Уезднымъ Начальникомъ или лицомъ его замѣняющимъ относятся-же области проверить, при чемъ состоятъ-же акты и данности установленнаго порядкомъ Губернатору, вслѣдъ же представленийъ Баллотировочнаго схода.

*Възвѣст. Изъ Губернаторскаго Канцелярск. Департамента*

*Свѣдѣн. Нам. Губерн. Канцелярск. Департамента*



Подготовка и проведение выборов осуществлялись по вышеуказанным правилам. Местные чиновники несут ответственность за общественные дела, такие как выборы и их дату, а также за определение места (участка) и проведение подготовительных работ. Местные жители имели право участвовать во всех мероприятиях, связанных с подготовкой и проведением выборов, а также в процессе голосования в день выборов.

В качестве примера мы сосредоточимся на исторических свидетельствах. Информационное письмо № 6067, направленное главой Кокандского района военному губернатору Ферганской области 15 октября 1903 года, содержит сведения о кандидатах на должность 25 народных судей, избранных в соответствии со статьей 83 Устава Туркестанского территориального управления.[12]

20 сентября 1903 г. в выборах на должность двух народных судей Кокандского городского управления репрессий (часть) приняли участие 40 старших избирателей. Согласно бюллетеням, главными аксакалами города Коканда и старейшиной Катаганского района были утверждены Ахмад Ходжа Эшон Бузрук Ходжа из махалли Исфара Гузар и Зокир Ходжа Эшон Азизшер из махалли Офтов Ойим и назначены народные судьи.[13]

Из приведенных выше правил можно сделать вывод о:

- Влияние избирателя
- узнать, за кого они голосовали, или оказать какую-либо помощь избирателям в регистрации кандидатов в бюллетень;
- Вмешательство в избирательный процесс, в том числе при печатывании, вскрытии ящиков для голосования и подсчете голосов, запрещено.

Избиратели имели право подавать заявления губернатору района или его заместителю, если на избирательном участке имелись основания полагать, что были нарушены требования Положения о порядке избрания местных должностных лиц.

### Ссылки:

1. Сборник избирательного законодательства Республики Узбекистан. Т., «Узбекистан», 2019, с.9.
2. Б.Я.Ешов, А.А.Одилов. История Узбекистана. Том I (С древнейших времен до середины XIX века) (Учебник для студентов высших учебных заведений), Т., 2013, с. 433.
3. Шодмон Вохидов. Историография (генезис, функции, представители, труды) в Кокандском ханстве. «Академнашр», Т., 2010, с.81.

4. Хамдам Садыков, Назрулла Джораев. История Узбекистана. Туркестанский царизм - это колониальный период. Книга 1, Шарк, 2011, с.60.
5. ЦГА РУз И-18 фонд, 1 лист, 1800 дело, 1 л.
6. ЦГА РУз И-18 фонд, 1 лист, 1800 дело, 2 л.
7. ЦГА РУз И-18 фонд, 1 лист, 1800 дело, 2 л.
8. <sup>1</sup> Урна для голосования, используемая для голосования при количестве избирателей от 20 до 1000.
9. ЦГА РУз И-18 фонд, 1 лист, 1800 дело, 2 л.
10. ЦГА РУз И-18 фонд, 1 лист, 1800 дело, 2 л.
11. ЦГА РУз И-19 фонд, список 1, дело 8171, страницы 5-6.
12. ЦГА РУз Фонд I-19, список 1, дело 7910, стр. 26.
13. ЦГА РУз Фонд I-19, список 1, дело 7910, стр. 41.



# THE CREATION OF “ONE THOUSAND AND ONE NIGHTS” AND ITS ORIGINAL SOURCES

Zebiniso Axmedova

Teacher

Navoi State Pedagogical Institute  
Uzbekistan

## ANNOTATION

*This article considers the history of creation of the compilation of folk tales “One thousand and one Nights”. The author also makes some suppositions that this book were created on the basis of ancient Greek and Indian folktales, as well as the Persian compilation of tales “Hezar Efsan” and its translations into arabic language.*

**KEY WORDS:** *Greek folktales, Indian literature, “Tutinoma”, Sasanids, “Hezar afsane”, “One thousand nights”, Jahshier, Egypt.*

## INTRODUCTION

Study of the history of the complex “One thousand and one nights” began with the XVIII century, when the work was translated in world folklore. This book, known all over the world as “Arab tales” or “Alf Leila and Leila”, has a very ancient historical root. The origin and origins of the “thousand nights” have been scientifically investigated by scientists around the world and have caused controversy. Given that this book was created in ancient times, it is difficult to draw strict conclusions about the origin and sources of this complex, about where exactly it was created.

## THE MAIN PART

Here are some of the oldest sources that will help us study the creation of the “thousand and one nights” - A. Gorster, A. krymskikh's Article “To the literary history of” tisychi and one night “[1] (“literary history” One thousand and one nights”), the famous bayrut Arabic scholar and translator A. the Word “one thousand and one nights” salhani [2], the scientific work of the Danish scientist irme Estrup “Research on” 1001 nights”, I composition, Ascension and development ” [3] (research “One thousand and one nights”: its composition, origin and development”), A. Scientific and literary essay “with an introductory historical and literary essay ” [4] (historical and literary essay “One thousand and one nights, the Dutchman Olymp Gerhard millot wrote the book “Spanish stories. Literary research # 1001 ” [5] (“the art of storytelling. Literary history ” one thousand and one nights”) book, W.To the famous

masterpiece of MIA ya. m. Filshtinsky “Historical soil” 1001 nights ” [6] (“historical land” One thousand and one nights”), a more famous Russian scientist I.M.Filshtinsky “Arabic classical literature ” [7] (“Arabic classical literature”) and the Russian scholar M. These are dictionaries that Saleh wrote in “One thousand and one nights” [8]. These scientists in their articles and scientific works tried to tell more deeply about the origin and sources of the “Thousand and one nights”.

Based on the above-mentioned articles and scientific works, the dictionary “One thousand and one nights”, we came to the conclusion that the first source is ancient Greek folk tales. A. Gorster, A. In the article “literary history” One thousand and one nights”, written in 1900 by the Crimean writer A. Word, which salkhani wrote in “One thousand and one nights”, translated as. According to the Arabic bibliographer Abu Yaqub al-Warraaq, who died at the end of the Tenth century, Muhammad Ibn Isaac an-Nodim wrote: “...in my opinion, and indeed, Alexander the great had a long conversation, he had his own interests and specially appointed storytellers. Alexander the great listened to these stories not only for entertainment, but also for the purpose of self-defense-getting a way out of life. This tradition was continued by the Persian kings, and the Book “Khazar legend” (An-Nodim) was created. Fahne. Edition of Flugel and Rediger, 1871-1872, Lipsig, p. 304) in Greece, since the time of Alexander the great, there has been a tradition of storytelling. Thanks to the same tradition, fairy tales of many peoples were formed, the motif composition of which was



interchangeable, and various folk tales were formed and improved. It is for this reason that fairy tales with a similar plot appeared in different peoples. E. A. Kostyukhin in his book "Alexander the Great in the literary and folklore tradition" [9] using the example of fairy tales, proves that the image of Alexander was widely spread in the West in the oral works of Eastern peoples. It is established that fairy tales written on ancient Egyptian papyri are similar to the tales of modern European peoples, or the themes of fairy tales written on clay boards in Babylon are also present in Greek and Roman folk tales [10]. In the era of the Egyptian and Assyrian and Babylonian civilizations, which were the ancient cradles of spirituality and culture, folklore developed widely. But from this only fragments have come down to us. From the oldest sources created by the Sumerians, the poem "Bilgamish" has a motif that the hero of the work goes on a journey in search of the secret of immortality. Dunno goes down to the bottom of the sea and takes out the magic grass that rejuvenates the old people, but the Snake appears opposite and takes the grass [11]. This motif was also transmitted to Persian and Arabic fairy tales through Greek sources. The thousand and one nights also has a fairy tale "Hasib and the Queen of serpents". In this tale, the "Tale of the Queen of the serpents" is given. Obi is combined with the motif of traveling in search of the prophet Muhammad [12], who goes on a journey in search of life. The motive that the prophet Muhammad-the prophet-is the prophet of the end of time, and in order to see him, it is necessary that Obi came to life, proves that the motives that he transmitted from the most ancient sources in the "thousand nights" are many. The fact that the motifs in other ancient fairy tales were reworked and passed into this work is evidenced by the fact that its roots go back to antiquity.

The second main source is Indian fairy tales. The reason is that India is one of the oldest countries, whose history dates back to the second Millennium BC. "Even earlier than our era, Indian writers wrote Folk tales, from which they created collections of fairy tales" [13]. One such source is "Tutinina". Its main source is an ancient Indian collection written in Sanskrit called "Shukasaptati", i.e. "seventy Tuti", or "seventy stories of Tuti". The reworking of folk tales also remained with Indian writers. These writers changed the plot of fairy tales, introduced poems, Proverbs and sayings to fairy tales, and created new fairy tales. They often combined several fairy tales into one collection, put them in a form and created a unique compositional technique. At the same time, works that do not have an internal connection were united and surrounded by a plot of main events. Obviously, this compositional method was used in the "Thousand and one nights". This is why we also feel that we have the right to mark these Indian tales as a second source. Later books appeared"

Panchatantra", "Kalila and Dimna", "Sambodrome". It is not surprising if the "Khazar legend" arose from the translation of these ancient sources. Here Hazar means thousand, "Cucinone" seventy tales. So, the tradition of telling a fairy tale at night, the number of fairy tales begins with this work. If in "One thousand and one nights" the wise Sharizod tells a thousand and one night's tale that all women who think she is unfaithful will return to Sharia and get rid of their old man, then in "Tutinom" Tuti tells the story of seventy nights to the wife of his master, who went on a journey to prevent a woman from meeting her lover and betraying him. The mold is a frame made of "Talinay". Obviously, the "thousand nights" also used the same form. Created the original collection of folk tales "Tutinina" later became the reason that the tales have become polished and rich. According to historical data, in the VI century BC, Pahlavi also includes works of Hindus "Panchatatra", "Kalila and Dimna", "Sinbodnoma". The sources also mention that the famous work of the Indian peoples "Sinbodnoma" was originally a separate book in Sanskrit. Subsequently, this work was included in the book "one Thousand and one nights" by Arab storytellers, which became a tradition in the way of creating a complete work in a compositional way, combining fairy Tales on various topics of the Hindus into one collection.

The third main source is the book "Khazar legend", which originated from Greek, Indian and Iranian fairy tales. In Chapter 8 of pride, an-Nodim writes: "the first to write these tales and collect them were the ancient Persians. This was done by the Ashkenazi kings, who later became the 3rd dynasty of Persian kings. During the Sassanid era, these tales became more and more common. The translation of these stories into Arabic was attended by well-known writers and skillful speakers. The first of these revised books is the Khazar legend, which means "a thousand tales". It is said that the book is dedicated to Bahman's daughter Humayu" (An-Nodim. Fahne. Flugel and Rediger's edition, 1871-1872, Lipsig, p. 304) also wrote that an-Nodim repeatedly saw this collection of "Khazar myths" in Chapter 8 of his book "Fahrnoma", which contains less than 200 stories.

According to historical data, the Byzantine ruler Justinian in 529 issued a decree prohibiting the teaching of philosophy and forbidding philosophers to leave their lands. The Danish scholar Estrup in his book gives information that according to this decree, many wise philosophers went to Persia, concluding a Treaty with the Iranian king Khusrav I Justin in 549, according to which the philosophers agreed not to touch or touch even the Byzantines [14]. This phenomenon is causing the development of science in the Persian Gulf and increasing relative attention to ancient sources. During the Sassanid period, as a result of the wide attention to science and translations, many Greek-Roman, surian, Jewish, and



Indian sources were translated. For this reason, both Greek, Indian, and Persian fairy tales and fairy tales are collected together and the book "Khazar legend" is created. Of the Sasanian kings during the reign of Khusrav I Anushirvan (531-579) they began to translate many of which have reached the sources of Islam. We understand old French when we speak Pahlavi. Here it should be clarified that the language of the times of the Iranian kings Cyrus and Achaemenids was considered an ancient Persian language. Of the Ashkenazi kings in the Sassanid era, the language was called Pahlavi. It was during this period that many works were translated.

The fourth main source is the translation into Arabic of the "Khazar legend" of the eighth century. Since we express different opinions as a researcher, the goal is actually to identify the sources of the thousand and one nights. One of the main scientific sources that helps in this is G. Gorster, A. in 2006, an article was published in the magazine "the New York Times", entitled "Tysyachi and one night" [15]. This article "the literary history of the Thousand and one nights" was published in the collection in honor of the anniversary of Miller's Veselovod in 1900. This article provides information that there are two lines that determine the origin of the product "One thousand and one nights." Supporters of the first direction believe that the basis for the emergence of the "thousand and one nights", according to Gummer, are Indian or Iranian fairy tales, as well as the Arabic translation of the collection "Khazar legend" ("thousand tales"), written in the Pahlavi language. In an article published in 1827 in the magazine "Asia", Gummer fully supports the idea of belonging to the "thousand and one nights" Indo-Iranian and Arab peoples. He writes that the "Khazar legend" was translated into Arabic by the best literary scholars of the Abbasid period, enriched with new ones and supplemented individual works such as "Symbolname". And a second-line supporter, Sylvester de Sacy, claims that the spirit and worldview of asar-nig are authentic Arabic, since it reflects Arabic morality and life in a later period, and implies the use of a simple folk language. Sylvester de Sacy concludes that "The thousand and one nights" belongs entirely to the Arabs. The scholar denies that this book arose gradually, and writes that it was compiled by a Syrian author in the middle of the XV century. The author claims that the book was not finished because of death, and the followers added other tales to it (the adventures of Sinbad, known at that time among the Arabs, the Persian "Khazar legend"). Both the Arabic scholar Salhani and Filshtinsky claim that there are two versions of this book. The first version is a translation into Arabic of the Persian book "Khazar legend" of the VIII century. The dictionary of the Arabic scholar Salhani "one Thousand and one nights" provides information about the Arab historian and Geographer Imam

Masudi, who was born at the end of the IX century and died in 956, from his work "Golden meadows": "the list of works translated by the Arabs from Persian and Greek also includes the book "The Khazar myth." Forsha means a fairy tale, and in Arabic means "a thousand tales". (this work was published in Paris in 1861-1874, volume 4, page 89)

This version of "one thousand and one nights", which originally appeared, has lost its originality. Only a few large fragments have survived, which were published in 1949 by the American Arab scholar Nabi Abbot under the title "alpha Leila". We got this information from Viktor Bochman's article "Jews and the Thousand and one nights", published in December 1996 in the magazine "Ariel" [16]

The second version, according to Muhammad Ibn Nodim, was compiled by the Baghdad scholar Yahshier, who lived in the X century. Salhani writes that Yahshier, who was the author of the book "Ministers", collected all the rhymes known at that time and collected from them the most original Arabic, Indian, Greek and Persian legends. He wanted to tell a thousand stories, but because of his death in 942, he wrote one story for four hundred nights, each night being fifty pages long. & Filshtinsky also fully confirms this information and says that he was able to collect not four hundred, but four hundred and eighty fairy tales. [17] he also writes that Muhammad Ibn Isaac an-Nodim saw with his own eyes many parts of this book, which he wrote in 987, that this collection of stories was translated by Abu Tayyib, in which only the form of a Persian fairy tale remained. I. M. Filshtinsky left very valuable information about this in the book "Arabic classical literature" [18]. The second version, according to Muhammad Ibn Nodim, was compiled by the Baghdad scholar Yahshier, who lived in the X century. Salhani writes that Yahshier, who was the author of the book "Ministers", collected all the rhymes known at that time and collected from them the most original Arabic, Indian, Greek and Persian legends. He wanted to tell a thousand stories, but because of his death in 942, he wrote one story for four hundred nights, each night being fifty pages long. & Filshtinsky also fully confirms this information and says that he was able to collect not four hundred, but four hundred and eighty fairy tales. [17] he also writes that Muhammad Ibn Isaac an-Nodim saw with his own eyes many parts of this book, which he wrote in 987, that this collection of stories was translated by Abu Tayyib, in which only the form of a Persian fairy tale remained. I. M. Filshtinsky left very valuable information about this in the book "Arabic classical literature" [18].

## CONCLUSION

According to scientific ideas of world scientists, "the Thousand and one nights" originally



appeared in Persian fairy tales based on Greek and Indian fairy tales, was processed by talented Arab poets and writers and became a rare monument of the Arab people.

## REFERENCES

1. Gorster A., Krymsky A. *To the literary history of "one Thousand and one nights"*. Anniversary collection in honor of Vsevolod Miller. - M., 1900
2. Article about A. Salhani. (translated by A. Horster). Anniversary collection in honor of Vsevolod Miller. 1892.
3. I. Estrup. *Research on "1001 nights", its composition, origin and development*. Moscow, 1904.
4. A. Krymsky. *With an introductory historical and literary essay*. - Moscow, 1904
5. Gerhard MIA. *"The art of storytelling. Literary research of 1001 nights"*. - Moscow, 1984.
6. Filshinsky. *Historical soil "1001 nights"*. - M., 1984.
7. I. M. Filshinsky. *Arabic classical literature*, Moscow, 1965.
8. *the Caliph for an hour. New fairy tales from the book "one Thousand and one nights .The forgotten pages of 1001 nights. Preface and notes by M. Salye*. - M., 1961
9. U. A. Kostyukhin. *Alexander the great in the literary and folklore tradition*. - Moscow, 1972.
10. I. Estrup. *Research on "1001 nights", its composition, origin and development*. - M., 1904, page 58
11. Abdurahmanov A. *Turki of aduating adimy devri*. -T., "Yangi ASR avlodi". 2005, 174-bet
12. *Ming bir kecha*. - T., 1963.121-bet
13. *And hall of ortaklari*. M. Kalyagin-Kondratieff than ssbase. T., 1956, a 3-bet
14. I. Estrup. *Research on "1001 nights", its composition, origin and development*. - M., 1904. - Page 61
15. V. Bohman. *Jews and the Thousand and one nights*. Ariel Magazine, December. - M., 1996
16. *The thousand and one nights. Volume I*. - Ashgabat. Publishing House "Turan-I". 1993. Introductory article by I. M. Filshinsky. page 8.
17. I. M. Filshinsky. *Arabic classical literature*, Moscow, 1965, pp. 268-295.



# SEMANTIC-ASYMMETRIC INTERPRETATION OF THE "FOOD" FRAME (Using synonymy as an example)

**Khasanov Akbarjon Abdurashidovich**

Docent

Candidate of Philological Sciences

Kokand State Pedagogical Institute

---

## ANNOTATION

*The semantic-asymmetric study of the "food" frame in the article was carried out on the example of a synonym series of the food lexeme. The phenomenon of semantic asymmetry in the range of synonym units was analyzed using the frame method. In the process of analysis, under the notion of a linguistic person, the awareness of a person belonging to a particular society from the language belonging to that society, the degree and ability to use opportunities were proved through practical examples. Also, in this article, the linguistic realization of semantic acuity in the semantic structure of the synonymic lexemes was studied within the framework of the thought activity and mental structures of the linguistic personality. Rather than onomasiological and semasiological studies conducted on synonyms, it was proved that the application of the cognitive-conceptual method of frame analysis to them was an effective method of analysis.*

**KEYWORDS:** *frame, frame semantics, frame analysis, synonymy, semantic acuity, language and thought, mental structures.*

---

## DISCUSSION

Since the emergence of mankind, language has always been developing and improving under its influence. But admittedly, language based on different paradigms of different eras (comparative-historical, traditional, system-structure), the study took the human factor away from the research object. Currently interpretation based on the anthropocentric paradigm has set itself the goal of eliminating some gaps in the field of language research. "The anthropocentric paradigm is the shift of the researcher's attention from the object of cognition to the subject, that is, the human man is studied inside the language and the language is studied in the structure of man." [4; 53] therefore, anthropocentric linguistics cooperates with cognitive linguistics, which is an integral part of cognitology, and assimilates the one that propels the language system and deals with the issues of regulation of the rules of their use. [9; 75]

One of the supporters of the system-structure paradigm suggests that "today, with the development of anthropocentric directions of linguistics, areas of integration with other sciences, pure linguistic investigations in the interpretation of the semantic structure and conclusions from its results have decreased due to the emphasis on its surface aspects in the interpretation of hidden, internal features of the language, whereas" [14; 69]. The author is right in

one place: it is true that in the world linguistics it is necessary to study the hidden, internal features of the language in a cognitive-discursive direction on the basis of anthropocentric paradigm, but such studies in Uzbek linguistics cannot be said to have been studied sufficiently. But joining the author's confession in the style of "semasiological problems cannot be solved on anthropocentric grounds" is somewhat difficult. Because anthropocentric linguistics, in a certain sense, also includes cognitive-mental activity, which is able to analyze mental processes such as perception, thinking, understanding, categorization of perceived reality. One of the mental structures that exist independently separately for the analysis of meaning in solving semasiological problems is the frame analysis famous phylogenic Ch. Filmor had recorded. [16; 115] "In the interpretation of the film," says Sh. Safarov, – frame model-understanding semantics model. This model should allow a full, detailed understanding of the information content that the speaker is referring to and the listener is seeing." [10; 246-247] in the frame analysis, all characters in the meaning of language units are covered in the most subtle aspects, so the frame analysis is more detailed and more accurate than the structural line analysis results. Exactly the implementation of this article on the basis of frame analysis is aimed at the actual importance of the above points.





It is known that the meaning is not an element of object existence or a conditional symbol of human consciousness, it is an image that is abstract in the mind of a person, a generalization is a perception.[8; 44]

Of course, the meaning will be attached to the sign (Form). But on the lexical level, as on all levels of the language, there arises a form and meaning inconsistency (acetretry). In the world linguistics, the formal and meaningful asymmetry of linguistic units has been sufficiently studied, and in Uzbek linguistics studies have also been carried out in a monographic plan in this regard.[2,3,5,7] Including, M.Mahmudov and M.Mirtojiev in the research, if the acuity of the form and content between high-level units (syntax and its units) is studied, either. In Odilov's research, the occurrence of form and content acetretry in enantiosema, which is a special manifestation of polysema in the range of lexical units, was analyzed by the example of lexical and phraseological units. In other studies, including monographs, scientific treatises, articles, theses, there are opinions about the form and content acuity, but in these studies the form and content acuity has not become an object of special study. In many studies on the asymmetry of the linguistic character, more emphasis was placed on one aspect (structural side) of the issue, not deviating from the principle of linguistic form and content. Personality and character attitudes were kept away from the research center. Therefore, it was limited to one-sided views on the study of hidden, internal features of the language, the interpretation of spiritual contradictions, meaningful inconsistencies. F.Jumaev in the monographic work of on the study of synonyms and antonyms semas in the framework of polysemaic lexemes, the issues of spiritual conflict were also carried out in the semasiological plan.[1] It investigated the relationship between lexeme, sememe, and sema internal content in the relationship of nausea and conflict.

The meaning structure of the language has a variable character. It will continue to improve in accordance with the intellectual and social thinking of society and the individual. As a result, in the semantic structure of lexemes, there are cases of spiritual silences, cases of spiritual proportionality and disproportionality, which correspond to the mental activity of the linguistic person. The issue of spiritual asymmetry should be carried out on the basis of a two-plan. If at the first stage the emphasis is on the form and content acuity of the linguistic sign, then at the second stage the question of semantic acuity in the semantic structure of the lexeme should be studied in connection with the activity of the linguistic person in accordance with the principles of language and speech, language and thought dialectics. To carry out the second stage of semantic acuity, undoubtedly, the first stage will

serve as a base. In this article, the events of semantic acuity in the semantic structure of synonyms lexemes are studied within the framework of the thought activity and mental structures of the linguistic personality.

Synonyms are linguistic units that indicate the seriousness of the language, wealth, subtleties of meaning, the breadth of the style of expression. Synonyms are phenomenon of language that occurs on the basis of various social pronouns. This phenomenon is meeting between all the surface units of the language, and they are a special object of research. In recent studies, attention was paid to the study of synonym semas in the composition of non-synonymous lexemes. In Particular, F.Jumaeva polisememe specially studied the semantic synonyms in the framework of lexemes in her monographic study.[1;44-82]

All units in the series of synonyms are equally important for the expression of meaning, for the understanding of meaning. Therefore, the frame analysis of the series of synonyms looks more detailed and more convenient for understanding the meaning than the approved analyzes in the direction of structural semantics.[10;247]

The synonymic range of the food lexeme is described in the "O'zbek tili sinonimlarining izohli lugati": "Ovqat, taom, oziq, tomoq, xo'rak, yemish, ne'mat." A person, an animal, creature in general, is a liquid or dark, in which eat.

Food means what a person or animals eat. The food is used only to represent the food that people eat, and the food has a slightly artistic coloring in relation to the word. Food means "food that man and other animals, even plants receive". The word food and food basically refers to what is in the ready-to-eat state, the food generally refers to what is in the ready-to-eat or raw state it is necessary to eat. The abscess, sucking is used very rarely. The blessing is inherent in the artistic style.[15; 253] The "food" frame merges with all members of the above synonymic series under the guise of "A person, an animal, creature in general, is a liquid or dark, in which eat.". Apparently, a single expression was defined by several demonstrators, telling the asymmetry of form and content. Now let's focus not on the form and content acuity, but on the inner essence of the meaning, the interpersonal meaningful acuity. The food lexeme and its synonyms are described in the "O'zbek tili sinonimlarining izohli lugati" as follows:

Ovqat1. Rizqlanish, yeyish-ichish uchun tayyor narsa; yemish, taom, yemak.

Ovqat2. Ovqatlanish.

Ovqat3. Uy hayvonlarining yem-xashagi; oziq; ozuqa.

Ovqat4. Yeyish, ichish, tirikchilik uchun darkor narsalar; oziq.[12;82]



Taom1. Pishirilgan, yeyish-ichish uchun tayyorlangan narsa; ovqat.[12;671]

Oziq1. Ovqat bo'ladigan mahsulot, ovqatli don-dun; yemish.

Oziq2. Hayvonlar ovqati, yem-xashak.

Oziq3. O'simliklar o'sish jarayonida yerdan oladigan moddalar.[12;94]

Tomoq1. Buyinning engak osti qismi.

Tomoq2. Qizilo'ngach bilan kekirdak boshlanadigan yer; bo'g'iz.

Tomoq3. Taom, ovqat, ovqatlanish.[13;144]

Xo'rak1. Yeyish mumkin bo'lgan narsa; yemish, ovqat.

Xo'rak2. Mol, hayvon, paranda ovqati (em, don va sh.k.).

Xo'rak3. s.t. Xo'ra.[13;436]

Yemish1. Oziq-ovqat bo'ladigan narsa; ovqatlik.[11;9]

Ne'mat1. Tabiat in'om etgan yegulik, narsalar; noz-ne'matlar.

Ne'mat2. Ezgu ish, yaxshi narsa.[12;36]

Policy, sema, sememe get integrated and mutually a certain food leksema, semantic template according to "food" in the form of frames lace: «ovqat» ↔ «taom» ↔ «oziq» ↔ «tomoq» ↔ «xo'rak» ↔ «yemish» ↔ «ne'mat».

If the frames have a complex structure, they are again divided into smaller frames (subframes, categories). "Ovqat" frame consists of a set of several categories, such as «egulik», «taom», «rizq», «tansiqlik», «harorat belgisi (sovuq, iliq, issiq)», «maza-ta'm», «makon-zamon», «tirikchilik», «darmon, quvvat», «ro'zg'or, kundalik turmush», «harakat (emoq, ichmoq)», «tayyorlanadigan yoki pishiriladigan», «holat (tayyor yoki chalatayyor)», «em-xashak». The complex course of the events of everyday life shows that our mental knowledge of reality is also formed in a complex frame system.[9;46] Frame lines and categories in the mental thinking of the individual are modeled through linguistic units.

The semitic structures of lexicon sememes move from consciousness, thinking, that is, from the begin, as well as in the process of communicative discursive activity. For example, when the "food" frame is reused in the speech process with the categories "edibles", "temperature mark (cold, warm, hot)", the food lexeme is in a state of spiritual symmetry, proportionality with all members of the synonym row. But in some semas of the lexeme, semantic acuity is manifested. Sememe "male" in the composition of food sememe formed a sema-sememic relationship with the food lexeme, and between the sema and sememe of the lexeme there was a state of semantic acuity. The food lexeme is methodically neutral, while the food lexeme is artistic and, in part, specific to the publicistic style. The stylistic neutrality of the food lexeme allowed the application of the latter in place of one of these

lexemes, spiritual symmetry: the evangelical dish is an evangelical dish. At the same time, the lexicon of the blessing also takes place in a synonym for food – meal – blessing with the ownership of artistic coloring. On the contrary, if the blessing lexeme is actualized in a certain pragmatic semen, then between the members of the synonymic series there is a semantic asymmetry. Example: here is the blessing of knowledge. Is there a more delicious sweet blessing than science in the world? (Hamza. "Tanlangan asarlar") Eating in place of the blessing question in this place, will not support the lexemes of food – there will be meaningful asymmetry. "Food" frame stands in a synonymous line under the category of "delicacies": delicacies dish – delicacies store – delicacies meal, even when characterized by "delicacies" sememe.

There is a state of spiritual proportionality between the members of the following synonymic series, united under the category "fodder" of the "food" frame:

Ovqat3 – immerse the food in the cow.

Oziq2 – prepare food for winter for animals.

Xo'rak2 – give the colt to the sheep.

Yemish1 – if you give the cattle suckling, look after you summer-winter (proverb)

Since the other members of the "food" frame network do not combine the "meal", "throat", "blessing" frames with the "fodder" category, they are in a relationship with the members of the above synonymic series, and it is impossible to apply the second one in place of the other: to give a pet to the sheep, to give food to the sheep.

Based on the generality of the categories of "food" frame "action (eat, drink)", "prepared or cooked", "Status (Ready or half ready)", the semesters of food1, male1, store1, throat3, dish1 form a mutually symmetrical relationship. It does not combine with other sememas under one general category, it remains with them in the relationship of semantic acuity.

The "space-time" category of the "food" frame is reflected when it is represented by speech-guided assistants[12;82]: 1. Sidikjon had newspaper on his hand after a meal, half an article without gasping. (A.Qahhor. "Qushchinor chiroqlari") 2. On the dish, no one spoke superfluous. The examples presented show the possibility of using a food lexeme, which is its synonym in place of a food lexeme, a symmetrical balance is maintained. If you pay attention to the stylistic coloring of the dish lexeme – functional coloring, the imperfect condition is reflected. Naturally, among other members of the synonymic series, the state of semantic acuity is stagnated.

"Food" frame also merges with the category "space" in colloquial speech: – it would be if you sat down for food... This is represented by the sememe "place", using the lexeme of food in a metonymic



sense. In this place, too, it becomes impossible to apply its synonym options in place of food lexeme.

The "food" frame is a colloquial event with several more categories in colloquial language. For example:

With the category "sustenance": – do not leave food, my child.

With categories "household, Daily living", "living":

– You had time to look at the food, now you would have earned money from the manufacturer...

With the category "medicine, power": – do not look, when you chew pepper with bread, pepper also eat porridge?!

With the category "Age measure" (the degree of maturity to a certain age): – a sweet boy! You're getting sick of eating?!

From the given examples, it can be understood that what signs of an object are the main ones, what kind of associations a person can evoke in his mind, is an extreme process of pre-planning. To do this, it is necessary to rely on information about reality, the social environment, as well as all kinds of activities of a person.[10; 265] in this respect, when removed, the speech applications of the "food" frame, even in the above examples, were carried out depending on the language ability of the linguistic person, the situation of speech. After all, " under the concept of speaking ability, the awareness of a person belonging to a particular society from the language belonging to that same society, the ability and level to use its capabilities are understood. And speech is the result of recruitment or application by some individual for a specific purpose of communication on the basis of language skills.[6; 9] therefore, the subtleties of the meaning of the categories that are mentioned in the colloquial speech of the "food" frame do not exist in other members of this frame. And this is the way of manifestation of semantic acuity between them.

In summary, we can say that the approach to language units on the basis of cognitive-conceptual aspect – frame analysis serves the framework of semasiological and onomasiological methods of analysis carried out in the direction of structural semantics kengaytirishga the results of the mental activity of the linguistic person – the results of cognitive characteristic activity. Because the frame analysis is more detailed and more accurate than the structural line analysis results. In particular, the application of the frame analysis method among the synonymic units contributes not only to the development of semasiological and onomasiological research, but also to the theoretical and practical improvement of Uzbek lexicography.

## REFERENECESES

1. Jumaeva F. *Polisemem leksemalar doirasidagi sinonim va antonim semalar tadqiqi.* – Toshkent: *Qaenus*, 2019.
2. Maxmudov N. *Odilov Yo. So'z ma'no taraqqiyotida ziddiyat.* – Toshkent: *Akademnashr*, 2014.
3. Maxmudov N. *Semantiko-sintakticheskaya asimmetriya v prostom predlojenii uzbekskogo yazyka.* *Diss.dokt.filol.nauk.* – Tashkent, 1984
4. Maxmudov N. *Til tilsimi tadqiqi.* – Toshkent: *Mumtoz so'z*, 2017.
5. Mirtojiev M. *O'zbek tilidagi gap bo'laklarida semantik-sintaktik nomutanosiblik.* –Toshkent: *Universitet*, 2008.
6. Ne'matov H. *Bozorov O. Til va nutq.* – Toshkent: *O'qituvchi*, 1993.
7. Odilov Yo. *O'zbek tilida leksik va frazeologik enantiosemiya.* –Toshkent: *Tafakkur*, 2015.
8. Rasulov R. *Umumiy tilshunoslik.* – Toshkent, 2006.
9. Safarov Sh. *Kognitiv tilshunoslik.* – Jizzax: *Sangzor*, 2006.
10. Safarov Sh. *Semantika.* – Toshkent: *O'zME*, 2013.
11. *O'zbek tilining izohli lug'ati. II jild.* – Toshkent: *O'zME*, 2006.
12. *O'zbek tilining izohli lug'ati. III jild.* – Toshkent: *O'zME*, 2007.
13. *O'zbek tilining izohli lug'ati. IV jild.* – Toshkent: *O'zME*, 2008.
14. Xasanova D. *Semasiologiya muammolariga doir / O'TA.* – Toshkent, 2018 №2.
15. Hojiev A. *O'zbek tili sinonimlarining izohli lug'ati.* – Toshkent: *O'qituvchi*, 1979.
16. [www.brenocon.com](http://www.brenocon.com). *Fillmore Ch. Frame semantics // Linguistics in the morning calm.* Seoul, Korea 1982.



## PROBLEMS AND SOLUTIONS IN THE DEVELOPMENT OF KNOWLEDGE OF THEOLOGY: THE PAST AND THE PRESENT

**N.Z.Madaminova**

Senior lecturer

Department of Theory and Practice of  
Building a Democratic Society in Uzbekistan  
Tashkent State Pedagogical Institute named after Nizami

---

### ANNOTATION

*In the past, the system of the "Red Empire" was alienated from its historical and cultural roots by making the Uzbek people among all the peoples of the Union compatible with the past history, traditions, customs and religious values, which were also a source of national self-awareness.*

**KEY WORDS:** *knowledge, solution, development, theology.*

---

### DISCUSSION

Taking the original assessment of our past history from the attention paid to the restoration of our national values, traditions and traditions at the state level, the courage, enthusiasm, patriotism of the children of the East, such as Jalaliddin Manguberdi, Amir Temur, Abdulla Avlani, Abdulla Qadiri, Makhmudkhuja Behbudi and Chulpan, began to serve as an example for us. In the development of the world, the intellectual activity of every nation, nation and nation is a contribution to the development of the world.

We have taken from our past the "inheritance" of the intensity and irreversible level of genius (atheism), which reigned in the scientific and philosophical world in the middle of the XIX century, the basis of the ideology of the former era of Soviets, which most individuals "indelibly" integrated into their consciousness.

In this regard, it should be noted that mankind has existed since ancient times as a "genius" worldview, which denies the views of God and about him, as he tried to acquire (theological) knowledge about theology. In the XVIII century, due to the modernization in Europe in the field of science, natural, exact and technical sciences developed. Thanks to this change, which was known in history as the "new era", radical reforms were made in the economic, cultural, educational, social and political spheres in society.

Such changes as Bbu did not bypass the science of philosophy either. In Europe, a new wave of the spread of this ideology began, when such materialist philosophers as Deni Didro, Baron Golbach and David Yum promoted the ideas of atheism that in nature there is nothing but matter.

"The scientific basis of the ideology of genius, put forward by the British amateur naturalist Charles Darwin, denied that the creator of the universe was God, developed his theory of evolution on a broad front. In the XIX–XX centuries, New materialist philosophers such as Feyerbach, Marx, Engels, Nisshe continued their work.

The ideology of the former Shuro, developed from the teachings of Karl Marx and Frederick Engels the materialist (materialist), broke the worldview of the "genius" into all sciences as a doctrine.

In eliminating this "ignorant" look, the initiator of the use of the spiritual heritage of the ancestors of the past is E.Yusupov, J.Tulenov, M.Kheyrollaev, A.Fayzullaev and S.Shermukhammedovs gnoseology, ontology and dialectics put forward the teaching of axiology in their scientific considerations and gave impetus to the evolution of such a field of science as philosophy, culture, sociology and spirituality in our country. The development of these disciplines plays an important role in the recovery of the moral and moral environment [1; 24 pp.].



Until independence and in the early years of independence, various conflicts and clashes took place, causing religious xenophobia among people of different religions and nationalities in the former Union countries. In Uzbekistan, attention was paid to the creation of all necessary conditions for the preservation of national and religious values and for the free implementation of self-confidence in our citizens, taking into account such negative circumstances at the level of public policy. Along with this, we have found opportunities to solve any conflicts, disagreements, unrest in the religious and educational way, which is inevitable due to Islamophobia (fear of Islam, wrong attitude towards Islam) and religious xenophobia (fear towards religion, uncompromising attitude), religious xenophobia in our country. Such threats also cause social threats in families" [2; 33-35.].

In the global environment, attention is being paid to the development of knowledge in the field of religious studies. Because now it is necessary to prevent behavior on the path of merciless goals under the guise of religion, to develop healthy religious enlightenment. In turn, religious enlightenment is carried out through the development of religious knowledge. Of course, education is the product of consciousness, but at the same time it is the most important factor that determines the level of consciousness and its development, that is, it forms and enriches the spirituality of the people. Consequently, there will be no development of spirituality without changing the system of education and on this basis consciousness. Philosopher scientist M.Kahhorova noted that religious enlightenment in her research work is an important factor in achieving national-moral perfection [3; 90-b.].

In a democratic, that is, secular state, religion is separated from the state, but in the era of globalism, destructive forces have made religion a "weapon" in many countries of the world, distracting the minds of young people who do not understand the original meaning and essence of religion and calling for their own mercenary "calling". The indigenous population of Uzbekistan is Uzbek, and Kazakh, Kyrgyz, Turkmen, Karakalpak and Tajik, who are close to them in ethnic terms, also follow the Islamic religion.

The number of Muslims also makes up the majority when considering adding Christian (orthodox, catholic and protestant), Buddhism, Judaism and other similar religious confessions. In order to avoid conflicts between different religions and denominations, students should pay attention to such issues as the content and essence of religion, religious tolerance (tolerance), religious relations, national and religious values, faithfulness, purity, honesty, humanity, modesty, chastity and decency.

According to the strategy of action, close cooperation in various spheres with the countries of

Kazakhstan, Turkmenistan, Kyrgyzstan, Tajikistan and Afghanistan, Japan, China, South Korea, in the East, Russia, Germany in the West and so on will lay the groundwork for the future of the country. Such prosperity does not arise in itself, in order for it to be more sustainable, development in all respects is required, for which it will be necessary to analyze and critically evaluate the 29-year-old historical path.

The first and most important step in the history of our country on June 14, 1991 was the adoption of the law "on land of conscience and religious organizations".

In order to further strengthen the organizational, legal, spiritual and educational foundations of the religious sphere, to improve it based on modern requirements, to ensure the freedom of religion of more than 130 representatives of nationalities and nationalities living in our society, the new edition of the law "on the land of conscience and religious organizations" was adopted in 1998.

In addition, during the years of independence, the organization and development of the religious education system in Uzbekistan in accordance with the world standards has been carried out and is being carried out.

Now the phrase "religious education" is beginning the process of gaining its status as a scientific concept. In particular, religious education within the framework of theology is understood not only as a set of knowledge about theology, but also as a system aimed at shaping the specific nature of the human soul, which is achieved through more spiritual experience, deepened religious education. Religious education is also "a process aimed at achieving a specific goal that takes place through the acquisition of levels of education established by the organization" [4; 25-C.], as explained in another source, religious education is an activity aimed at conveying information related to the content of a concrete religious doctrine or the formation of a corresponding attitude to the position of that religion in relation to events in extracurricular spheres in the recipient of knowledge [5; 132-c.], described as. K.Kamilov said that "religious education is an activity aimed at systematically communicating religious knowledge, value, way of life and understanding of the world to students by persons with special professional training. It is necessary to understand the process of religious education as a phenomenon that is inextricably linked with religious enlightenment, religious education, which depends not only on the distribution of religious knowledge, but also on" [6; islamcenter.uz.], that determines. In our opinion, religious education is a process of systematizing religious knowledge, the formation of skills and abilities. And "religious knowledge" is the sum of scientific, practical information, concepts related to the existing religions in people.



Therefore, since our independence, our religious and national values have been restored in full, the memory of our nationalities has been respected, opportunities have been created to study the religious, scientific and spiritual and educational heritage left by them.

The religious education system in Uzbekistan has its centuries-old and rich traditions. Samarkand, Bukhara, Khiva, Tashkent madrasahs served as universities of the Middle Ages. In the Middle Ages, Bukhara gained fame with its madrasahs and scribes and was rightly awarded the title of "the power of the Islamic world". The study of the scientific heritage, carrying out scientific research, continuation of the traditions of the scientific directions and schools they have created are among the actual tasks facing the present generation, created by our great ancestors, who founded the Muslim renaissance, that is, the period of scientific and educational awakening.

At the same time, it is necessary to prepare specialists with a high level of scientific and religious potential, capable of maintaining the purity of our religion in a rapidly changing period, bringing its original essence, consisting of peace and humanism, to members of society and, in particular, to young people.

In order to provide highly qualified scientific personnel of the higher and secondary special religious educational institutions operating in the Republic, to increase the scientific and professional potential of the specialists being trained, to train masters in the fields of koran studies, tafsir and fiqh, hadith studies, word science, mature scientific and scientific-pedagogical personnel: The Office of Muslims of Uzbekistan, the center of Islamic civilization of Uzbekistan and The Tashkent Islamic Institute named after Imam Bukhari were established.

In the case of only two Islamic religious educational institutions (Tashkent Islamic Institute and the madrasah "Mir Arab") up to independence, over the past years their number has increased by more than 10. In particular, the Tashkent Islamic Institute named after Imam Al-Bukhari, the "Mir Arab" High School in Bukhara, the "Kokaldash" in Tashkent, the "Muhammad Al-Beruni" in Karakalpakstan, the "Hidoya" in Namangan, the "Fahriddin Ar-Roziy" in Khorezm, the "Sayyid Muhyiddin Maxdum" in Andijan, the "Khoja Bukhari" in Kashkadarya, the "Khadichai Kubro" in Tashkent and a holistic religious education system consisting of women's secondary special Islamic educational institutions "Juybori Kalon" in Bukhara was created, training was introduced on the basis of State educational standards and curriculum. Simply put, the continuity of religious and secular education was ensured in educational institutions.

The development of the religious education system in our country at the level of modern requirements is one of the strategic tasks on the path

of our noble goals, such as the proper formation of the religious consciousness and culture of our enlightened people, the protection of the younger generation from the influence of currents under the guise of religion. After all, education, including religious education and upbringing is one of the most basic conditions for the prosperity of the nation.

Therefore, in the period of independence, radical reforms were carried out in all areas of our country, including the possibility of a new look and attitude to religion. As a result, the science of "Theology", which is new in content, came into being. This science was put on the agenda for the purpose of criticizing religion in contrast to the previous "scientific atheism", not for the purpose of depriving it of society, but for the purpose of treating it as a part of the national spirituality, an objective study of it.

The subject of "Theology" began to be taught in higher and secondary special educational institutions. As a result of teaching the science of "Theology" to students of academic lyceums and vocational colleges, a sense of respect for religion is formed in the students instead of a phenomenal, that is, fear, gift or "old nonsense" relationship to religion. First of all, the earlier a person is given a certain amount of insight into religion, the less likely the situation of misleading him correctly.

While we live in a century of information and communication technologies and various ideological conflicts, first of all, we should educate students as strong-willed, intelligent, faithful, free and independent thinkers, educated and wise person. In order to form a strong immune system that protects them from external ideological influences and attacks, to prevent the emergence of ideological emptiness in the minds of students and young people, we must arm ourselves with the knowledge of religion and the world, the consciousness and soul of the invaluable scientific and spiritual heritage, the foundation of which is the history, religious

## REFERENCES

1. Qaxxarova, M., Tuychieva, H. (2019). *SPIRITUAL-MORAL ENVIRONMENT AND ITS BASIC INDICATORS. The Light of Islam, 2019(4), 24.*
2. Тургунова, А. Т. (2018). *Социальные угрозы и социальная безопасность. In Психология: традиции и инновации (pp. 33-35).*
3. Қаҳҳорова, М. М., and С. М. Йўлдошева. *"Миллий-ахлоқий камолотга эришишнинг ўзига хос жиҳатлари." FORMATION A CULTURE OF INDEPENDENT THINKING IN THE EDUCATIONAL PROCESS (2015): 90.*
4. Куницын И.А. *Правовой статус религиозных объединений в России. – М.: Отчий дом, 2000. 25-с.*
5. Козырев Ф.Н. *Религиозное образование в светской школе. Теория и международный*



- опыт в отечественной перспективе: Монография. – СПб.: Апостольский город, 2005. 132-с.*
6. Камиллов К. Глобализация шароитида диний таълимнинг ривожланиши тенденциялари. <http://islamcenter.uz/globalashuv-sharoitida-diniy-talimn/>.
  7. Хужаев, М. И. (2015). Некоторые особенности этических взглядов Ахмет-Заки Валидова. *Credo new*, (2-2), 3-3.
  8. Хужаев, М. И. (2018). АХМАД-ЗАКИ ВАЛИДИЙ ИСЛАМСКАЯ КУЛЬТУРА. Теория и практика современной науки, (1), 531-533.
  9. Saifnazarov, I., & Xujayev, M. I. (2018). AXMAD ZAKI VALIDIY ISLAMIC CULTURE. *Экономика и социум*, (2), 55-57.
  10. Туйчиева, Х. Н. (2014). Основы повышения правовой культуры в Республике Узбекистан. In *Педагогическое мастерство* (pp. 139-141)..
  11. Туйчиева, Х. Н. (2015). Актуальные вопросы совершенствования высшего образования. *Высшая школа*, (8), 21-23.
  12. Qaxharova, M., & Absattorov, B. M. (2020). EVOLUTION OF VIEWS ON ETHICS, ETHICAL CRITERIA AND ETHICAL STANDARDS. *The Light of Islam*, 2020(1), 110-115. 4 ma
  13. Qaxharova, M., & Tuychieva, H. (2019). SPIRITUAL-MORAL ENVIRONMENT AND ITS BASIC INDICATORS. *The Light of Islam*, 2019(4), 24.
  14. Yusupova, N. J. (2018). THE ROLE OF THE FAMILY IN THE SPIRITUAL EDUCATION OF MODERN YOUTH.
  15. Юсупова, Н. Ж. (2018). Основные принципы исламского права в укреплении семейных отношений. *Россия и мусульманский мир*, (4 (310)).
  16. Rashidov, F. T. (2020). TOLERANCE, INTERNATIONAL AND RELIGIOUS RELATIONS IN UZBEKISTAN: HISTORY, PRESENT AND PROSPECTS.
  17. Turgunovich, R. F. (2020). Religion and state relations in the legislation of the countries of central asia. *Asian Journal of Multidimensional Research (AJMR)*, 9(4), 181-185.
  18. Turgunova, A. (2019). GERONTOPEDAGOGY-EDUCATION, PRACTICE, PROBLEMS AND SOLUTIONS. *European Journal of Research and Reflection in Educational Sciences Vol*, 7(12).
  19. Turgunova, A. T. (2018). Main Indicators of Social Danger Elimination. *Eastern European Scientific Journal*, (2).
  20. Мадаминова, Н. З. (2018). ДИНИЙЛИК ВА ДУНЁВИЛИК КОНВЕРГЕНЦИЯСИ. *Современное образование (Узбекистан)*, (9).
  21. Madaminova, N. Z. (2018). Peculiarities of Teaching Social Subjects at High Educational Pedagogical Organizations. *Eastern European Scientific Journal*, (2).



# RELIGIOUS ORGANIZATIONS IN THE SYSTEM OF INSTITUTES OF CIVIL SOCIETY IN UZBEKISTAN

**Rashidov Firuz Tuygunovich**

Senior Lecturer

International Islamic Academy of Uzbekistan

Independent Researcher of Tashkent State University of Law

## ANNOTATION

*This article focuses on the concept of religion and religious organizations as an institute of civil society, the role of religious organizations in maintaining peace and stability in the era of globalization and their interaction with other organizations, the attitude to religion in the secular state, the work carried out in the field of Islamic enlightenment in the Republic of Uzbekistan, the problems*

**KEYWORDS:** *civil society, religion, conscience, land, human rights, globalism, tradition, religious views, religious feeling, special observation, special rapporteur, resolution, experience.*

## DISCUSSION

Since scientists approach the concept of religion from the point of view of secularism, science, and religious figures on the basis of a certain religious instruction, this concept is given a different tariff. Religion in a general way (Arabic. "e'tiqod", "ishonch", "itoat", Latin – "religio" – "faith", "worship", "relegere" – "return", "religare" – "bind") is one of the forms of social consciousness [1].

In any society, religion performs certain social, spiritual and spiritual functions. In most states that have chosen the path of secular development, religion is separated from the state, but not from society. His role and influence in social life is great. Each religion has its own teaching, conviction seeking tries to unite, rule the believers on the basis of this doctrine. Religious ceremonies and holidays, it is mandatory that the rituals are performed in strict order. Special attention is paid to the unity of the people, the interaction of society and the individual. Religion is the creator of mankind, destiny, the essence of life and living, the purpose-provision, it is the world and it provides information on the issues of the world. It has a great influence on the development of culture and helps to preserve universal and national values and to bring them from generation to generation.

Especially in today's globalization era – at a time when various information attacks have increased in society, the impact of "mass culture" and the virtual world, the missionary and "conviction

hunters" actions rising, religion and its beliefs support one – on-one in their own interests, at a time when the number of recipients of its weapons is growing-self-awareness, not to be given.

It is important to understand national identity, to preserve and develop traditional religious values in multinational Uzbek society, having gained independence, chose the path of development.

Despite the fact that Uzbekistan is a secular state and religious organizations are separated from the state, it is impossible to imagine them without a fork from society. Although the role and importance of citizens participating in legal relations related to religion and the state are somewhat obvious, having information about religious organizations, their status and functions, their activities contribute to the increase of knowledge and skills in the field of conscience land[2].

In the teachings of the holy Islamic religion "...Eat and drink of the sustenance of Allah, and do not make mischief in the land." ("Bakara", 60), "... we have made nations and tribes so that you can get to know each other...The reflection of such concepts as ("Hujurot", 13)[3] is also of particular importance in the maintenance of tolerance in the multiconfessional Uzbek society, the development of religious dialogue.

As the legal basis for the formation of institutions of civil society, during the past period, the Republic of Uzbekistan has adopted the following resolutions: "On public associations", "On trade unions", "On political parties", "On non-profit organizations", "On public funds", "On financing





political parties", "On guarantees of the activities of non-profit organizations", "On sponsorship", "On self-governing bodies of citizens", "On elections of the chairman (oqsoqol) of the about sponsorship", Laws "On social partnership", "On parliamentary control" and "On public control", as well as "On land of conscience and religious organizations" were adopted.

Democratic reforms carried out on the basis of existing laws became the legal basis for the activities of trade unions, political parties, societies of scientists, women's, veterans and youth organizations, creative associations, mass movements, self-governing bodies and other associations of citizens, as well as about ten thousand non-profit organizations.

With the increase in religious and religious rituals, traditions, human rights and the need for freedom of conscience, it was important to establish a balance of relations between the state and religion, to ensure mutual harmony.

Relations between the state and religion in Uzbekistan are based on the following principles:

- Respect the religious feelings of the pious;
- Recognition of religious beliefs as private work of citizens or their associations;
- Equal protection of the rights of both citizens and non-citizens acting on religious views and Prevention of their persecution;
- the need for ways to communicate with them in order to take advantage of the opportunities of various religious associations in the work of spiritual revival, decision-making of universal moral values;
- recognizing that religion should not be used for corrupt purposes[4].

The normative-legal acts adopted in recent years were aimed at demonstrating civil initiatives, improving the social structure of society, increasing the sense of responsibility of the authorities and public organizations for their activities. At present, religious organizations, from the point of view of the interests of the increasingly developing civil society, have a constructive cooperation with other public organizations in solving issues of interaction and cooperation in the social, cultural and political spheres of the state and society. In this process, it is important that the state acquires a secular character, religion is separated from the state, the state does not interfere in the work of religious organizations, does not give priority to the activities of a religion or religious organization, at the same time, the principle that religious organizations do not interfere in the affairs of the state. It provides an opportunity for the development of national and religious values along with maintaining stability in society and ensuring the rule of law.

In his speech at the 72nd session of the UN General Assembly, President of the Republic of Uzbekistan Shavkat Mirziyoyev touched upon one of

the most pressing issues of the present day related to the preservation and correct interpretation of the enlightenment Islamic teachings left by our great ancestors: "We value our sacred religion as an expression of the embodiment of our strongly condemn those who put our holy religion in a row with violence and bloodshed, and we will never be able to reconcile with them. The religion of Islam encourages us to be kind and peaceful, to preserve the original human qualities[5]," he said, and insisted on the high pulpit and offered to adopt the resolution "enlightenment and religious tolerance".

The proposal of the president of the Republic of Uzbekistan was unanimously approved by the international community, and a special resolution "enlightenment and religious tolerance" by the author of the Republic of Uzbekistan was adopted at the plenary session of the UN General Assembly on December 12. This:

- That the initiatives of the president and people of the Republic of Uzbekistan in the religious and educational sphere are actively supported by the international community;

- As a solution to today's acute problems of terrorism, extremism and violence, which concern the world public, Uzbekistan is promoting a scientific and peaceful policy;

- As an important condition for ensuring a stable spiritual environment in society, it means that representatives of different religions are formed in our country to understand each other and live in harmony.

One of the most important principles of establishing peace in the world in the age of globalism is religious tolerance. This, in turn, requires the study of other religions, other religions and traditions, while being firmly established in the belief of each person [6].

Achievements in the religious and educational sphere, the fact that President Sh.Mirziyoyev's initiatives to promote enlightened Islamic ideas are welcomed by the world community, along with the satisfaction of our people, bear the responsibility of continuing the reforms in this field in our country, unconditionally ensuring the freedom of conscience and the inherent inalienable rights of man, eliminating the existing mistakes and shortcomings.

The visit of Ahmad Shahid, special rapporteur of the UN Human Rights Council on religion and land, to Uzbekistan on the invitation of the Government of the Republic of Uzbekistan in 2017 was welcomed by the people of Uzbekistan with great interest. During the visit, Ahmad Shahid met with the president of the Republic of Uzbekistan, members of the government, chairman of the Supreme Court, heads of ministries and departments, religious organizations and other public organizations. Also, as in the regions, he talked with



the prisoner of the penal execution institutions, in particular in the "Jaslig" colony.

During his visit, the special rapporteur made his recommendations on the recognition of the reforms carried out in the country and subsequent years in the field of ensuring religious freedom, as well as on the elimination of a number of shortcomings.

To date, further improvement of legislation in the religious-educational sphere in Uzbekistan at the level of international standards and achieving their unconditional implementation by developing new normative-legal documents; taking into account that more than 60 percent of the population of Uzbekistan are young people, improving the conditions of obtaining quality secular and religious secondary-special and higher education in an; we think that it is worthwhile to eliminate the existing problems in the field of mutual stability of the social environment of the population and senior staff; to further improve the knowledge and skills and skills of the responsible persons in the religious and educational sphere, who are in direct contact with the population; to identify and eliminate the existing problems.

Following the results of the visit of the UN special rapporteur Ahmad Shahid to Uzbekistan on May 4, 2018, by a joint decision of the Legislative Council of the Oliy Majlis of the Republic of Uzbekistan and the Senate Council approved a "Road map" to ensure freedom of religion or belief. Within the framework of the road map, certain works were carried out, meetings and conferences were organized.

Despite the fact that certain positive changes have been made in the sphere, on December 18, 2019, the USA department of state adopted a decision to leave the Republic of Uzbekistan on the Special Watch List on violation of religious freedoms.

There is still a lot of work to be done in Uzbekistan to guarantee human rights and freedoms, in particular, the provision of religion and freedoms. Accordingly:

First of all, taking into account the fact that the main part of the population of our country is young people, the future is connected with them, improving the state policy on youth;

Secondly, along with further increasing the coverage of higher secular and religious education, they provide quality education by introducing international and national legal foundations of human rights, freedom of conscience into their curricula;

thirdly, raising the efficiency of open communication of the central and local leadership with the representatives of the public, increasing their knowledge of human rights, conscience and land, ensuring the achievement of the legitimate interests of the population, carrying out a serious fight against the ills that are being corrected and achieving the stability of the social environment;

fourthly, the organization of vocational training for neighborhood consultants, profilactics, imams and relevant employees of law enforcement bodies "on issues of religious enlightenment and spiritual and moral education", which will communicate directly with them in order to further improve the socio-spiritual environment among the population;

fifthly, it is required to accelerate such work as "the study of the experience of developed democratic states in the field of organizing open dialogue between the state and society, the development of civil society institutions, establishing re-links with the population, the development of optimal approaches to solving the actual problems of citizens, assistance to civil society institutions in the development of international" [7].

The main difference of civil society from the state structures is that it is based mainly on competition in horizontal relations and on mutual relations between free subjects with equal rights. One of the advantages of civil society is that it contributes to the strengthening and development of democratic institutions through the transfer of state power to certain public organizations and self-government bodies.

The formation and development of a legal state largely depends on the level of development of civil society. And this, in turn, is the object social basis of a democratic state. Religious organizations are associations created and functioning to meet the religious needs of people whose worldview and values are close to each other. They carry out charitable, educational and other activities and have a significant impact on society. It should also be noted that while the state does not create equal conditions and opportunities for their activities and worship land regardless of the number of members or recipients of existing religious associations, in addition to its unifying function, religions with different religious dogmas, religious associations can adversely affect the development of civil society, bringing about national, ethnic intolerance. Therefore, it is worthwhile to effectively use the advantages of religious organizations as an institution of civil society in modern Uzbekistan. In the legislation of the Republic of Uzbekistan "Voluntary associations (religious societies, religious educational institutions, mosques, churches, synagogues, monasteries, etc.) established for the purpose of joint implementation of religion, worship, rituals and rituals of citizens are recognized as religious organizations" [8].

At present, the types of possible system of state and religious relations are not fully defined. Relations between the state and religion can also be developed on the basis of social partnership. Social partnership is understood primarily as a system aimed at setting and implementing the priority objectives of mutual relations between state bodies



and religious organizations, solving the most important social problems. Among the most important types of social activities of religious organizations are programs aimed at promoting enlightenment, working with children, youth, helping people with low needs, carrying out various cultural programs and charitable activities, strengthening families. The activities of religious organizations on the basis of self-financing are attractive for public authorities. These are evidence of the unique role and role of religious organizations in ensuring peace and stability in the system of developing civil society institutions.

In conclusion, it can be said that while the statehood of the Republic of Uzbekistan is developing on the basis of sequential prints, along with the norms of international law, which have been universally recognized in the formation and development of civil society, it is desirable to make fruitful use of the values of the holy Islamic religion, which has been polished for centuries,

## REFERENCES

1. Хасанбоев Ў. Ўзбекистонда давлат ва дин муносабатлари: диний ташкилотлар оқимлар, мафкуравий курашнинг долзарб йўналишлари Т.: “Тошкент Ислам университети”, 2014.- Б.11.
2. Давлат ва дин Д. Рахимжонов, Н. Исмаилов ва бошқалар, -Т.: “Complex print”, 2019. Б.101-102
3. Шайх Муҳаммад Содиқ Муҳаммад Юсуф. Тавсири ҳилол, Бақара сураси 188-оят (электрон)
4. Каримов И. А. Ўзбекистон буюк келажак сари. – Т.: Ўзбекистон, 1999.- Б.448.
5. Ў.А. Ўзбекистон Республикаси Президентининг БМТ бош ассамблеясининг 72-сессиясида сўзлаган нутқи. . 20.09.2017й.// [www.uza.uz](http://www.uza.uz)
6. Саидов А. Диний жамоалар ва муайян эътиқодларга амал қиладиган жамоаларнинг ҳуқуқ субъектчилигига доир раҳбарий принциплар. – Варшава: Poligrfaus Jacek Fdamiak, 2019.-716.
7. Фуқаролик жамиятини ривожлантириш маркази фаолиятини қўллаб-қувватлаш чоратadbирлари тўғрисидаги Ўзбекистон Республикаси Президентининг 2019 йил 30 октябрдаги ПҚ- 4501-сон қарори// [www.lex.uz](http://www.lex.uz).
8. Ўзбекистон Республикасининг Виждон эркинлиги ва диний ташкилотлар тўғрисидаги 1998 йил 1 май қонуни. 8- модда// [www.lex.uz](http://www.lex.uz)
9. Ўзбекистон Республикаси Конституцияси. 08.12.1992й // [www.lex.uz](http://www.lex.uz)
10. Ўзбекистон Республикасининг Виждон эркинлиги ва диний ташкилотлар тўғрисидаги қонуни. 1.05.1998й // [www.lex.uz](http://www.lex.uz)
11. Яҳё, Муҳаммад Амин. Интернетдаги таҳдидлардан ҳимоя: Ёрдмчи ўқув қўлланма, - Т.: “Мовароуннаҳр”, 2016.-672б
12. Хужаев, М. И. (2020). Влияние научно-просветительской сферы эпохи Ахмада Заки Валиди на религиозно-философское творчество мыслителя
13. Hojaev, M. (2019). THE RELIGIOUS-PHILOSOPHICAL LEGACY OF AHMED ZAKI VALIDIY. *The Light of Islam*, 2019(4), 26.
14. Saifnazarov, I., & Xujayev, M. I. (2018). AXMAD ZAKI VALIDIY ISLAMIC CULTURE. *Экономика и социум*, (2), 55-57.
15. Туйчиева, Х. Н. (2014). Основы повышения правовой культуры в Республике Узбекистан. In *Педагогическое мастерство* (pp. 139-141)..
16. Туйчиева, Х. Н., & Каххарова, М. М. (2020). Повышение правовой культуры в системе образования Республики Узбекистан. 3 та
17. Qaxharova, M., & Absattorov, B. M. (2020). EVOLUTION OF VIEWS ON ETHICS, ETHICAL CRITERIA AND ETHICAL STANDARDS. *The Light of Islam*, 2020(1), 110-115. 4 та
18. Qaxharova, M., & Tuxchieva, H. (2019). SPIRITUAL-MORAL ENVIRONMENT AND ITS BASIC INDICATORS. *The Light of Islam*, 2019(4), 24.
19. Юсупова, Н. Ж. (2018). Особенности семейных отношений в исламском праве. *Россия и мусульманский мир*, (1 (307)).
20. Юсупова, Н. Ж. (2014). НЕКОТОРЫЕ АСПЕКТЫ СЕМЕЙНЫХ ОТНОШЕНИЙ В ИСЛАМСКОМ ПРАВЕ. *Paradigmata poznání*, 70.
21. Turgunovich, R. F. (2020). Religion and state relations in the legislation of the countries of central asia. *Asian Journal of Multidimensional Research (AJMR)*, 9(4), 181-185.
22. Тургунова, А. Т. (2019). ОИЛАЛАРДА ИЖТИМОИЙ-МАЪНАВИЙ МУАММОЛАРНИ ҲАЛ ЭТИШНИНГ ГЕРОНТОПЕДАГОГИК ИСОСЛАРИ. *Современное образование (Узбекистан)*, (8 (81)).
23. Тургунова, А. Т. (2018). ЎЗБЕКИСТОНДА ГЕРОНТОПЕДАГОГИКАНИНГ ШАҚЛЛАНИШИ ВА ТАРАҚҚИЁТ ИИСТИҚБОЛЛАРИ. *Современное образование (Узбекистан)*, (9).
24. Turgunova, A. (2019). GERONTOPELAGOGY-EDUCATION, PRACTICE, PROBLEMS AND SOLUTIONS. *European Journal of Research and Reflection in Educational Sciences Vol*, 7(12).
25. Turgunova, A. T. (2018). Main Indicators of Social Danger Elimination. *Eastern European Scientific Journal*, (2).
26. Тургунова, А. Т. (2013). ГЕРОНТОПЕДАГОГИКА В ВОСПИТАНИИ ДЕТЕЙ. *SCIENCE AND WORLD*, 54.
27. Мадаминава, Н. З. (2018). ДИНИЙЛИК ВА ДУНЁВИЛИК КОНВЕРГЕНЦИЯСИ. *Современное образование (Узбекистан)*, (9).
28. Madaminova, N. Z. (2018). Peculiarities of Teaching Social Subjects at High Educational Pedagogical Organizations. *Eastern European Scientific Journal*, (2).



## “A STUDY OF PURCHASING ATTITUDE OF CONSUMERS TOWARDS ORGANIZED RETAIL FORMATS IN INDIA”

**Ms. Pooja Pandey<sup>1</sup>**  
Research Scholar,  
Barkatullah University,  
Bhopal (M.P.)

**Prof. (Dr.) Simrina Singh<sup>2</sup>**  
Sagar Institute of Research & Technology,  
HoD Management,  
Bhopal

### ABSTRACT

*In the day by day growing market scenario, retail marketing has become one of the major emerging trends in the entire economic cycle. Retail market provides consumer a basic platform to encounter with variety of goods. Retail marketing is the range of activities undertaken by a retailer to promote awareness and sales of the company's products under one roof. This is dissimilar from other types of marketing because of the components of the retail trade, such as selling finished goods in different quantities to the consumer or end user, usually from a fixed locality. Retail marketing consists of five basic pillars, first is saving the precious time of the customers, second is setting the precise prices of the goods for different quantities, third is establishing a connection with the emotions of the customers, fourth pillar is paying the right respect to the customers and lastly solving the problems of the customer is another pillar of retail. Retail marketing even focuses on satisfying the customers and maintaining a proper profit margin for the owner of the goods. India is currently the 9<sup>th</sup> largest retail market in the world. The Indian retail market is estimated at US\$ 350 billion and organized retail accounts for merely 2% to 3% out of the total retail market in India. This, more than anything underlines the tremendous scope for growth in organized retailing in the years to come. The purpose of this study is to examine the impact of credibility, customer loyalty and service quality on the purchasing attitude of consumers towards retail formats. Through application of regression, the findings disclosed that these aforesaid factors have impacted the purchasing attitude of consumers.*

**KEYWORDS:** *credibility, customer loyalty and service quality, purchasing attitude.*

### INTRODUCTION

Over the past few years growth in Indian retail has been driven by the country's economic fundamentals. Rising the number of nuclear families, trouble-free financing options, increase in the population of financially independent women as they are preferring to be work and emerging opportunities in the service sector during the past few years have been the prime growth drivers of the organized retail sector in India. Consumers are now interested towards growing preference for organized retail, resulting in increased penetration of market. Following are the factors that have and will continue to drive growth of the organized retail sector.

Consumers are motivated by a variety of factors when contemplating a purchase decision. While there are consumers that might simply view price as the most important factor to consider when choosing between competing products or services, there are also consumers that view factors other than those related to pricing as being crucial to the purchase decision Kotler (2008). Consumers generally prefer to choose a product that can offer

value-added benefits and are often willing to pay for these types of products. Some stores might choose to differentiate their products through innovation, superior quality and quick turnaround time (Doyle 2002).

According to Garvin (1987), 8 attributes and features: These are additional features which also known as the bells and whistles of the product.

**Product Quality** – It means to incorporate characteristics that have a capacity to meet consumer needs/wants that gives customer satisfaction by improving products, goods and making them free from any imperfections or defects.

**Performance** - This refers to products prime operating characteristics.

**Conformance** - This described as the degree to which a product will operate properly over a specified period of time under stated environment of use.

**Reliability:** the possibility that will activate properly over a specified period of time under settled conditions of use.



**Durability:** It is the amount of use a customer gets out of use of a product before it bodily deteriorates or until replacement is preferable.

**Serviceability:** the hustle competency and courtesy of repair and renovate.

**Aesthetics:** How a product appeals to all the 5-senses of a human being.

**Customer perceived quality:** Customers perception towards a products quality based on reputation of the firm/organization.

**Variety** – If a retailer gives larger variety in product categories, it can improve the convenience of purchase in this way greater than ever customer satisfaction. Range of product selection can also help to diminish the perceived costs like effort and travel time.

**Reliability-** It refers to how much trust can be afforded by the supermarket staff and organization for example -accurate billing, Product quality, assured products etc. “Reliability refers to the promises certain by the store. If the store cannot keep the promises, it dissatisfies customers and results leads to depressing word-of-mouth. In distinction, when the company is able to maintain its promises, it increases customer self-belief in the store and creates customer satisfaction and lead to faithfulness”, (Yuen & Chan 2010).

**After sales services** – After sales services or the customer services refer to the number of the processes that make sure that customers are satisfied after buying the product from the store. Good customer services encourage positive worth of mouth which is important in current scenario of the market. C-stores though not established on the large scale make sure that their customers get the proper support after they buy the product. For example they offer free repairing of the product if it gets damaged in a week. This makes sure that customers develop faith in the store and remain loyal to it. The main question which has to be answered in case of after sales service is- Whether the customer is happy or not after buying the product?

**Value for Money** – Customer satisfaction is driven by perceived price or value. Though the concept of value is relative and has several dimensions to it, Zeithaml (1988) considers customers value as the overall assessment of the utility of a product is based up on perception of “what is received and what is given”. According to Dodds et al (1991), that customers perceptions of value represent a trade-off between the quality or benefit they receive in the product comparative to the sacrifice they supposed by paying the price. The perceived value process involves a trade-off between what the customer pay-off such as price/money, sacrifices, perceived risk, opportunity cost, and learning cost in exchange for what he/she receives such as benefits , quality, utilities (Yongui Wang & Hing-Po Lo, 2002). One

of the most recent researches in the work of Hume & Mort (2008) confirms that value or price quality is a positive predictor of satisfaction.

According to Ciavolino & Dahlgaard (2007), value for money is the perceived level of quality in compare to the price paid for a product or services. For customers value for money is based on competitive pricing of products, discounts awarded and promotions. Cronin & Taylor (1992) claimed that customer satisfaction is not only affected by customer services but also by price of the product and convenience towards the store and product. Additionally, numerous researches have been done on the value for money and the value attached to it by customers. These studies also point out the difference between price and quality and how they influence perceived cost, customer satisfaction and customer behaviour. Furthermore, Zeithaml (1988) asserted that, “customer value for money is the overall assessment of the utility of a product based on perceptions based on what is received and what is given”.

**Staff Behaviour** – Employees are core for any organized retail stores’ marketing strategy. In this paper, the authors make use of 2-elements namely friendly helpful workforce and knowledgeable & speedy performance to describe the personnel dimension. According to Gwinner et al (2005), the victorious implementation of stores marketing concept is to an vital degree dependent on the frontline employees because of their direct customer interaction.

**Personnel Service** – Quality will be measured using variables like personnel service, friendly staff, courteous and knowledgeable staff. The speed of solving problems is also an important variable. We also keep in mind the aptitude of personnel to propose personalize service such as being able to recognize frequent customers visit and even greet them by name.

**Service quality** – Service Quality is an important strategy for every organized retail store to survive in the competition in recent era. Because of the inherent nature of the service, customers perceive service quality differs in many ways. For this reason, many organizations consider service quality as a valuable tool since it has impact on organization’s strategic and financial performance (Paradise-Tornow,1991). Customer perceived service quality helps organized retail store to retain and attract new customers, boost productivity and market share, reduce operating cost, and reduce employee turnover through improving staff morale that ultimately enhance financial performance and profitability. Customer satisfaction has been a game changer for all organizations that work on business to consumer (B to C) model in this extremely competitive market, where there is cut throat competition with respect to every product. The organized retail formats is all set to become the next



boom industry in the upcoming years. As the per capita income is increasing so as the consumer spending budget which gives a boost to all the companies to remain in the market for the longer time period. The 8% of the retail sector which forms the organized part makes the service quality as their first priority. Service quality is defined as comparison of perceived expectations with the perceived performance. Service quality impacts the customers at different levels depending on the factors like tangibility, reliability, responsiveness, assurance, empathy etc.

Quality service has been given a lot prominence as a major ingredient of customer satisfaction. In order to provide quality service the retail store should first of all understand customers and their expectations. Quality consists of a number of dimensions, which were categorized for services into 5-dimensions by Parasuraman et al (1988) within the SERVQUAL measurement instrument. Finding was - Customers are valuable asset for any company that must be appropriately kept satisfied.

### RATIONALE OF THE STUDY

The most significant aspect of this study is that all the necessary information from consumers having different types of demographic characteristics like age, income, education, occupation etc. regarding their preference towards quality, price, credibility, customer loyalty, facilities, discounts, loyalty, location etc. and above all service quality were collected. Further, these major parameters are tested. The association between various elements in form of variables is considered for the study. The term shopping frequency, for the purpose of this study means the number of times the customer visits the organized retail formats. An attempt has been made to study the association between these parameters as the retail stores is trying to enter the Indian organized retail industry to make the present Indian consumers more brand conscious because at present 60% of the Indian store basket consists of non-branded items.

### LITERATURE REVIEW

Naik et. al. (2010) also applied SERVQUAL model in retail environment to identify the customer perceived service quality and satisfaction. The authors found that customers have Policy, Physical Aspect, Personal Interaction, Assurance, Problem Solving, Reliability, Product, Service Quality, Customer Satisfaction highest expectations on the promptness of service, accuracy of transactions, security issues and concerns; the customer's lowest expectations are cleanliness, ambience, etc. while staff performance was found to be satisfactory. The research also demonstrated that customers' satisfaction is highest for promptness and speed of service along with accuracy of transactions at cash

counters. They were also satisfied with the processing of transactions and efforts to expedite processing whenever the traffic at the counters increased. The lowest satisfaction levels were reported at the willingness of staff to assist customers in accessing facilities, assortments, information on products, stock positions etc.

Mukherjee, S. (2011) examines regarding the government policies of different countries including India in respect of unorganized and organized retail sector. The study examines whether, for the small and an unorganized retailer to sustain in this big fight the government provides a tight legal framework along with economic support. The study finds that small as well as big domestic retail chains had been helped by the governments of different countries (including India) through formulating appropriate policies over time, by providing capital support and/or formulating strict legislations to restrict entry of foreign retailers in their respective countries. In India, all the regulations regarding retail sector varies across states and their impacts are also heterogeneous since these regulations are still in state level and are being influenced by the existing political parties of different states.

Bernardo Balboni (2011) demonstrated the crucial role of retail service quality in his study as a key activator in the formation of customer loyalty to the store; the latter is understood in a conative and action sense. The results prove that customers consider retail service quality as a second-order dimension and recognized the main contribution of physical aspects and reliability first-order dimensions. The present study is the first to apply a specific RSQS scale to the Italian national context. Moreover, it provided useful information on the relationship between service quality and loyalty in organized retailing.

Daniella Ryding (2011) suggested the relative importance of service quality across two convenience store formats. The study indicated that within the store formats, customers expect value for money in terms of product quality, nutritional value and service quality. If these attributes are met in relation to the customers' perceived risk, it is more likely that customer satisfaction and retention will occur. In difficult competitive, social and economic circumstances, some sources indicated that there will be a trading down in customer shopping habits, with more customers expecting higher levels of service provision across a wider range of store formats, including the discounters. This study examined the relative importance of service quality for a quality-led retailer, compared to a discounter. Research findings demonstrated that despite the fact between the levels of service provided across quality-led stores, compared to discounters, is still evident that consumer expectations are rising in relation to the



overall shopping experience, distinctions in relation to customers' expectations.

Bernardo Balboni (2011) demonstrated the crucial role of retail service quality in his study as a key activator in the formation of customer loyalty to the store; the latter is understood in a conative and action sense. The results prove that customers consider retail service quality as a second-order dimension and recognized the main contribution of physical aspects and reliability first-order dimensions. The present study is the first to apply a specific RSQS scale to the Italian national context. Moreover, it provided useful information on the relationship between service quality and loyalty in organized retailing.

Reza and Barua (2012) discussed that organizations are facing pressure to deliver quality service to satisfy customers. In the retail business, intense competition forces organizations to differentiate their services through quality. This is why it is essential for the business to identify and measure the key service quality features that leads to customer satisfaction. In light of that, this study attempted to measure the impact of customer perceived service quality on customer satisfaction of the superstores in Bangladesh. Items of service quality were identified based on literature review. It was found that Reliability is the most important quality factor that has significant impact on customer satisfaction followed by Personal Interaction, Problem Solving, and Policy. Physical Aspect, Assurance, and Product have no significant effect on customer satisfaction. Therefore, superstores should increase their service quality focusing on physical aspect of the store and customer need.

Motwani D. (2013) has focused in his study that service quality is an important aspect for retailers to know about customers' satisfaction and SERVQUAL model is the root way to measure the effectiveness of service quality. In his research he was identified a gap between expectation and perception of customers towards the organized retail outlets of Udaipur, which revealed dissatisfaction among customers. Z-test results projected the insignificance of differences it means gaps can be easily removed by improving the level of service quality.

Parikh (2016) concentrated on the assessing the internal reliability of the retail service quality instrument by evaluating the validity of the scale. Further, for improvements in retail service quality the study has concentrated on the gap analysis and identification of areas. The study found that the gap

mode of service quality in terms of its factor structure does not perform as well as the perceptions based performance measures of service quality. The author has opined in order to compete successfully in the global market place, the retail stores in India will have to improve the quality of their services significantly.

Hisam et al. (2016) focused on shopping in India has undergone a revolution with the introduction of modern formats, multiple channels and huge shifts in consumer buying behaviour. Modern retailing has brought all the products under one roof and it is easy for customers to make their choices. Several studies have shown that customer satisfaction in retailing depends to a large extent on the perceived quality of service offered by the retailer. This study aimed to understand the importance and impact of service quality on the satisfaction of customers in selected retail stores in 3 Indian cities using SERVQUAL and GAP models. The study also looks at the various service quality models and tries to assess their relative importance in successfully measuring service quality. Weighted averages and analysis of variance is applied in relevant places in order to critically examine the customers' perception towards service quality which will ultimately contribute information for the growth of performance of the organized retail outlets.

## OBJECTIVES OF THE STUDY

- To examine the impact of credibility of products, customer loyalty and service quality on the purchasing attitude towards organized retail formats.

## RESEARCH METHODOLOGY

**Research Design:** The research is descriptive.

**Sampling method:** Convenient sampling method was used.

**Sample Size:** 598 consumers were selected.

**Instrument Scale:** Through self-constructed questionnaire data was collected.

**Sample Area:** The population for the study was included all the four districts as Gwalior, Bhopal, Indore and Jabalpur of Madhya Pradesh.

**Statistical Tool:** Correlation & Regression on SPSS 20.0



## RESULTS AND FINDINGS

H<sub>01</sub>: Credibility of Products does not relate to the purchasing attitude towards organized retail formats.

**Table 1: Model Summary<sup>b</sup> On Credibility of Products and Purchasing Attitude towards Organized Retail Formats**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.397 <sup>a</sup>	.158	.156	1.96856	.158	111.764	1	596	.000	1.825

a. Predictors: (Constant), Credibility of Products

b. Dependent Variable: Purchasing Attitude

The above table exhibits the correlation between credibility of products and purchasing attitude towards organized retail formats. The correlation value is .397 between credibility of products and purchasing attitude towards organized retail formats indicating moderate correlation and is significant at  $.000 < 0.05$ . Hence, it is accepted that the consistency between credibility of products and purchasing attitude towards organized retail formats is significant. The value of regression is .158 means that 15.8 per cent variance is explained in purchasing attitude by credibility of the products. The value of

Durbin Watson is 1.825 higher than the tabulated value (1) so both variables are auto correlated means that a unit increase in credibility of products (independent variable) resulted into increase in purchasing attitude towards organized retail formats (dependent variable). Therefore, the hypothesis namely; 'Credibility of Products does not relate to the purchasing attitude towards organized retail formats' is rejected and concluded that Credibility of Products relate to the purchasing attitude towards organized retail formats positively.

H<sub>02</sub>: Customer Loyalty does not relate to the purchasing attitude towards organized retail formats.

**Table 2: Model Summary<sup>b</sup> On Customer Loyalty and Purchasing Attitude towards Organized Retail Formats**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.150 <sup>a</sup>	.022	.021	2.12110	.022	13.628	1	596	.000	1.826

a. Predictors: (Constant), Customer Loyalty

b. Dependent Variable: Purchasing Attitude

The above table exhibits the correlation between Customer Loyalty and purchasing attitude towards organized retail formats. The correlation value is .150 between Easy Return Policy and purchasing attitude towards organized retail formats indicating weak correlation and is significant at  $.000 < 0.05$ . Hence, it is accepted that the consistency between Customer Loyalty and purchasing attitude towards organized retail formats is significant. The value of regression is .044 means that only 2.2 per cent variance is explained in purchasing attitude by Customer Loyalty. The value of Durbin Watson is

1.826 higher than the tabulated value (1) so both variables are auto correlated means that a unit increase in Customer Loyalty (independent variable) resulted into increase in purchasing attitude towards organized retail formats (dependent variable). Therefore, the hypothesis namely; 'Customer Loyalty does not relate to the purchasing attitude towards organized retail formats' is rejected and concluded that Customer Loyalty relates to the purchasing attitude towards organized retail formats positively.





H<sub>03</sub>: Service Quality does not relate to the purchasing attitude towards organized retail formats.

**Table 3: Model Summary<sup>b</sup> On Service Quality and Purchasing Attitude towards Organized Retail Formats**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.292 <sup>a</sup>	.085	.084	2.05180	.085	55.504	1	596	.000	1.881

a. Predictors: (Constant), Service Quality

b. Dependent Variable: Purchasing Attitude

The above table exhibits the correlation between Service Quality and purchasing attitude towards organized retail formats. The correlation value is .292 between Service Quality and purchasing attitude towards organized retail formats indicating weak correlation and is significant at  $.000 < 0.05$ . Hence, it is accepted that the consistency between Service Quality and purchasing attitude towards organized retail formats is significant. The value of regression is .085 means that only 8.5 per cent variance is explained in purchasing attitude by Service Quality. The value of Durbin Watson is 1.881 higher than the tabulated value (1) so both variables are auto correlated means that a unit increase in Service Quality (independent variable) resulted into increase in purchasing attitude towards organized retail formats (dependent variable). Therefore, the hypothesis namely; 'Service Quality does not relate to the purchasing attitude towards organized retail formats' is rejected and concluded that Service Quality relates to the purchasing attitude towards organized retail formats positively.

### DISCUSSIONS & CONCLUSION

The findings indicated that these factors credibility, customer loyalty and service quality have contributed in the attitude of consumers towards organized retail formats. Consumers prefer to buy from the retail store because of certain store attributes like Display/Visual Merchandise and store ambience. It is also seen that merchandising affects the perception of consumers towards retail format. The findings revealed that Customer Loyalty programs/club membership attracts me, availability of well known branded merchandise and Shopping from organized retails format provides a utility and psychological satisfaction in terms of, high self-esteem.

The study found that Service Quality is also related to the purchasing attitude towards organized retail formats. Regarding ranked by the consumers, the study found that convenience is given first ranked followed by time saving, attractive offers, product delivery, return policies, security, mode of payment and personal information privacy. All these

dimensions have significant impact on their purchasing attitude towards retail formats.

Yadav et al (2016) explained the growth and transformation of retail market in India, on one side creating a better shopping experience and other side it is creating a lot of pressure on unorganised retailers. The result of the study showed that small *neighbourhood* kirana shop owner perceived that their profit is negatively affected, their operational cost is increased to meet the higher service quality expectation of the customer but the result do not show significant negative impact on their employment due to growth of convenience organized retail stores such as Big Bazaar, Reliance, Supermarkets.

### SUGGESTIONS

- Product quality is of prime importance and the consumers look towards store brands for good quality. Therefore the retailers should strive to maintain good quality standards in the store brand merchandise. It can be lead to increase in customer loyalty.
- Pricing is a major determinant for differentiating from competing brands and to generate preference towards store brands. This is because consumers expect to get good quality at a fair price when they buy store brands.
- The retailers should therefore set the price at a level where the consumers feel that they are getting much more than what they are paying for. Promotion of store brands is vital for their success.
- The retailers should promote their store brands, especially at the selling points, in order to create awareness as to why customers should purchase them in preference over national brands.
- Proper placement of store brands in the store and on the shelves is quite important for drawing the attention of consumers. Significantly the central position is more effective in both vertical and horizontal display of merchandise.



- The Marketing strategies of retailer's are very important tools for improving the value of retail business and to enhance the sales of organized retail outlet. Strategies of retailers are: Retention strategies like understanding the consumers, customer delight, store image better environment, attractive merchandising and loyalty programs and customized technology.
- Promotional strategies like customer segmentation, personal selling, advertising, entertainment facilities and after sales service.
- Image improvement strategies like franchise/joint venture and training sales personnel.
- To increase customer loyalty, like free gifts, discounts options and festival offers should be promoted. Competitive strategies like competitive pricing and public relation. Retailers might have to be patient and make consistent investments in terms of both money and effort to sustain and grow their store brand business. The dominance of national brands demands extra effort on the part of retailers to successfully promote their store brands.

*Review of Management and Marketing*, 2016, 6(4), 851-856.

10. Zeithaml, V.A. (1988) – "Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence", *Journal of Marketing*, Vol. 52, July, pp. 2-22.

## REFERENCES

1. Naik and Gummesson, E. (2010). *Service management: An evaluation and the future*. *International Journal of Service Industry Management*, 4(1), 77-96.
2. Mukherjee, S. (2011) *Indian Economy under Reforms: An Assessment of Economic and Social Impact*, Bookwell, New Delhi
3. Bernardo Balboni (2011). *A Dynamic Process Model of Service Quality: From Expectations to Behavioural Intentions*. *Journal of Marketing Research*, Vol. 30, 7-27.
4. Daniella Ryding (2011) *Expectations, performance evaluation, and consumers' perceptions of quality*. *Journal of Marketing*, Vol.57, No.4, p.18-34
5. Bernardo Balboni (2011). *A Dynamic Process Model of Service Quality: From Expectations to Behavioural Intentions*. *Journal of Marketing Research*, Vol. 30, 7-27.
6. Reza and Barua (2012) *Impact of Service Quality on Customer Satisfaction of the Superstores in Bangladesh*.
7. Motwani D. (2013) "Globalization of Business: Future Challenges", *Third concept, An International Journal of Ideas*. Vol.8, No.4, pp.136-143.
8. Parikh (2006) *Assessing the retail service quality in Convenience Stores*. *International Journal of Marketing*. Vol. 5 (7), pp. 89-98.
9. Hisam et al. (2016) "The Impact of Service Quality on Customer Satisfaction: A Study on Selected Retail Stores in India." *International*



# EFFECT OF YOGA AND EXERCISE ON HEALTH: A REVIEW

<sup>1</sup>**Mahendra Singh Rajawat**

<sup>1</sup>Department of physical education,  
OPJS university, Churu,  
Sadulpur, Rajasthan,  
331303

<sup>2</sup>**Dr. Vijay Singh**

<sup>2</sup>Department of physical education,  
University of Kota,  
Rajasthan, 324005

## ABSTRACT

*In 21<sup>st</sup> century everyone needs to fit and healthy. According to WHO (world health organisation) health may refer to complete physical and mental well-being. There are two things which can make a person healthy: - Yoga and Exercise. In this the suppression of all activity of body, minds and make them in order for distinction and liberations. It includes breathing control, meditation and adoption of specific portion of the body. By the yogic method person can obtained control on latent power and self-realization. In modern time, yoga is used for the medication and therapeutic purpose. It can help patients to reduce their medications and slow down the disease spread. It also helps to maintain the body activity and enhanced the physical activity of a person. Improve strength and growth, cardio-vascular system. Exercise and yoga have some advantages and disadvantages.*

**KEYWORDS:** - *yoga and exercise, medications and therapeutic purpose, advantages and disadvantages*

## INTRODUCTION

In 21<sup>st</sup> century everybody needs to be totally fit and fine. For this yoga and yogic practise is the most important one.<sup>1</sup> Yoga can originate from Sanskrit root which means the suppression of all activity of body, minds and make them in order for distinction and liberations. It includes breathing control, meditation and adoption of specific portion of the body.<sup>2,3,4</sup> By the yogic method person can obtained control on latent power and self-realization. In modern time, yoga and exercise is used for the medication and therapeutic purpose.<sup>5,6</sup> It can help patients to reduce their medications and slow down the disease spread.<sup>7</sup>

Some yoga practises like asanas and pranayama help to improve the oxidative stress and glycaemia of diabetes patients by neuro endocrinal mechanism. Yoga can reduce the cholesterol level.<sup>8,9</sup> By the help of yoga, the body can be connected to its solar plexus and batteries where the energy is stored.<sup>10</sup> When it's done or in mid-session of yoga this energy can be release may give the useful effects on their mental, physical and spiritual rejuvenation.<sup>11,12</sup> Regular practise of yoga removes the obstructions and flow of energy is more and bring back the harmony and health to the system.<sup>13,14</sup> Daily practise of yoga (pranayama) increases the lungs capacity, breathing capacity, blood circulation and cardiovascular efficiency. It also helps to normalized

the blood pressure, increases strength, increases the tone of nervous system, improve sleep etc.<sup>15,16</sup>

Yoga helps to synchronizes the function of mind, muscles, eliminate the stress and stain which can improves the mental and physical fitness. Physical fitness gives support to body to perform daily activity without any fatigue. It prepares the mind to face tough challenges and task.<sup>17,18,19</sup>

Yoga gives benefits to all ages of peoples. It gives direct effects on physical, physiological and the regeneration of strength process.<sup>20</sup> It can also use for warm up, cool down, regeneration and synthesis of mind and body. It also used for the relief from lower and upper extremities of pain.<sup>21,22</sup> It included stretching the different part of body like spine cord, backbone. Yoga helps to maintain the health of endocrine gland it maintains the overall functions of different system of body.<sup>23,24</sup> Seriously, daily practise of yoga can improve your health and cardio-respiratory efficiency.

## TYPES OF YOGA

Yoga is the most important heritage of India. In modern era, world depend on yoga for their various answers. It is the art of living and it may affect various part of the body. Yoga may help to maintain the mental, physical health and may help to develop the moral and intellectually.<sup>25,26,27</sup>



Different types of yoga are: -

- Bhakti yoga
- Hatha yoga
- Swarayoga
- Asthanayoga
- Mantrayoga
- Raj yoga
- Trantra yoga
- Karma yoga

### IMPORTANCES OF YOGA

Daily practising of yoga makes you happy and free from body problems. It helps to maintain the physical and mental discipline to achieve a peaceful mind and soul. Yoga can help in many ways like<sup>28,29,30</sup>

- Yoga helps to improve the old and new injuries
- Yoga helps to improves overall organ functioning
- It helps to reduces the stress and enhance the relaxation
- It helps in healthy and glowing skin
- Yoga helps to reduces the pain and enhancing mental clarity
- It helps to Boost the physical strength, stamina, flexibility and immune system
- Yoga helps to enhance the posture and muscles tones and improve the blood circulation
- Yoga help to improve the power of concentration and also self-control

### BENEFIT OF YOGA AND EXERCISE

Now a day, everyone needs to be fit. Yoga and exercise are one the best way to get fit. It has both therapeutic and preventive benefits.<sup>31</sup> Yoga and exercise may help to connect mind and body. It also helps to improve health and well-being. Yoga has several types of positions which help them to connect with meditation.<sup>32,33</sup> Yoga help to control the breath throughout the practise it will help to clearing the mind. Regular practise of yoga and exercise gives health benefits. There are some benefits of yoga and exercise are: <sup>34,35</sup>

#### 1. Stress and anxiety management

Yoga and meditation help to reduce the stress level. It also helps to reduce the blood pressure and cardiovascular diseases.<sup>36,37</sup>

#### 2. Fitness and flexibility

Now a day, everyone is busy with their life. Most of the work are on the office bench, it lead to reduces the muscle mass, fitness and flexibility and raises the neck pain, shoulder pains by bending over computers all the time. Possess of yoga may help to stretching and elasting the muscles. Around the globe many athletes may doing yoga in their practises.<sup>38,39,40</sup>

### 3. Emotions

For overall well-being, yoga and medications are help to improve the focus of mind. Yoga practisurs are happy, calm and focused on their daily life style. Meditations may lead to deep relaxation.<sup>41,42</sup>

### 4. Diabetic health

Meditation and yoga are used to decreases the sugar level in the blood and also reduces the blood pressure. It also reduces and lower the symptoms of diabetes.<sup>43,44</sup> Stress is the main reason for sugar level increasing. Daily practising of yoga and meditation can help to reduces the stress level which in turn reduces the level of glucagon and also reduces the insulin levels.<sup>45,46</sup>

### 5. Better health and diet improvement

In modern era, the life is full of stressful, persons are busy with their schedules. It can exhaust for long hours and sleep less, hypersensitivity and anxiety disorder.<sup>47</sup> Yoga and meditations are helps to reduces these problems and improve the value and possibilities of the life. Yoga help to improve the health benefit and leading to better habit of eating.<sup>48</sup>

### HISTORY OF YOGA

It is been believe that yoga is developed or originate thousand year ago. Many scientists and Indologists believe that yoga is been develop in late 500 B.C.<sup>49,50</sup> Now Archaeology survey and scientists confirmed that yoga is been 5000-year-old. This yoga practices came from Harrapan cultures. Vedas are the oldest scriptures.<sup>51,52</sup> Veda means “Knowledge”. Rig Vedas is the praise of higher power. Yajur Ved, Sama Ved, and Atharva Ved another three vedas. Archaic yoga another name of vedic yoga, peoples are believed in ritualistic way of life. Rituals means the connection to spirt world. For illumination people turn into rishis or Vedic yogis. There are lots of yogic positions which were used by Indian yogic now a days.<sup>53,54,55</sup>

#### Vedas

In India, Vedas are the foundation of cultures by philosophy and religion. Major and important Vedas are Rigveda, Yajurveda, Samaveda and Atharvaveda. Rig Veda is the collection of hymns.<sup>56,57</sup> It is a praise of higher power. There is no direct explanation of word yoga are mentions in any types of Veda but a word ‘dhira’ is mention in every Vedas means self-realized. Vedas explains every sitting position like Asana, the Pranayama, the Mudras, Meditation techniques, the cleanliness Yama and Niyama, the Dharanas. Asanas are mainly used for meditations.<sup>58,59,60</sup> In every morning sun salute is the routine activity. Pranayama is done by daily basis. Vedas explain some meditation technique also. Vedas also give information about the Tapas, Vratas and Moksas. Vedas are the oldest scriptures. By Vedic yoga, persons are believed in rituals, sacrifices and ceremonies which means connections to spirit world. For this illumination peoples are turn into rishis



munis. These rishi munis is blessed with the supreme hymns speaks in their marvellous intuitions.<sup>61,62,63</sup>

#### Upanishads

Philosophy of yoga was based on Upanishads. It said that when the fire is produced by rubbing, where the air is controlled, then mind takes perfection.<sup>64,65</sup> According to Katha Upanishad, yoga is a chariot, reasoning consciousness is the driver and the body is like a cart. Upanishads shows the true knowledge of reality and essence of Vedas.<sup>66,67</sup> It is also used for the treatment of diseases. Samadhi were explained by Kathopanishad. It can also explain the qualities of soul. Kenopanishad, Ishavasya Upanishad, Shwetavatara Upanishads these three gives detail about yoga.<sup>68,69,70</sup>

According to Katha Upanishad, yoga is holding of the senses. According to Maiti Upanishad, yoga is breath, mind and sense oneness.<sup>71</sup>

#### Smriti

Smriti is a text and it deal with disciplines. Manusmrti, Yajavalkya Smrti, and Harita Smriti this three gives detailed about the yoga.<sup>72</sup> According to Smrti, Brahmacharya, Grhastha, Vanaprastha and Sanyasa are the four stages of life. The muse of asanas is myths and legends. Asanas and text are the parallel tracks to self-realization.<sup>73,74</sup>

#### Jainism

Yoga is very well explained in Jainism. According to Jainism, yoga may be defined as the movement of mind and body towards soul. Liberation of spirit is also explained in Jainism.<sup>75,76</sup>

### TEACHINGS OF BUDDHA

Yoga was also found in Buddhism. Study of yoga was first done by lord buddha. Buddhism teaching was similar to yoga. Yogachara was the first school which taught about yoga and Buddhist. Now it can open throughout the world. Buddhism include meditation and physical postures. Suksma dhyana and Nirhara Dhyana types of meditation.<sup>77,78</sup>

#### Panini

According to Panini, yoga is union with the supreme. It is also a grammarian. lessons of grammar, Astadhyayi were written.

#### The Epics

Detail of yoga, were also written in Ramayana and Mahabharata. Yoga Vasishtha were return in this time. Yama and Niyama were explain in Ramayana. Definition of dharma were defined in this book. Mahabharata and Bhagavad-Gita also show the details of yoga.<sup>79</sup>

According to yoga sutra, yoga helps to control the mind. Some puranas give detail about yoga. Bhagavata purana show the bhakti yoga. Yama, Niyama and Pranayama are shown by Linga purana. Purana also show the details about Pratyahara, Dharana, and Dhyana.<sup>80,81</sup>

### EVOLUTION OF YOGA

#### 1. Pre-Vedic period (before 3000BC)

According to western scholars, it was believed that yoga was originated in 500BC it was the time of Buddhism. Depiction of yoga were found at Harappa and Mohenjo-Daro. This shows that yoga was originated around 5000 years ago but there is no evidence about that.<sup>82,83</sup>

#### 2. Vedic period (3000 BC to 800BC)

According to Vedic period, yoga was ritually, concentration development and transcend to mundane. This practise is very much different present yoga.<sup>84,85</sup>

#### 3. Preclassical (Upanishad) period (800 BC to 250 BC)

According to Upanishad, yoga can be explained in Mahabharata and Bhagavad Gita. According to Bhagavad Gita, Jnana yoga, Bhakti yoga, Karma yoga and Raja yoga are the form of yoga. during the Gitopadesha, Krishna explain that at higher state of consciousness, person seek their reality with humility and reverence.<sup>86,87</sup>

#### 4. Classical period (184 BC to 148 BC)

According to classical period, Patanjali has 195 yoga sutras. It is also known as raja yoga. Some classical limbs of yoga are: - Yama (social conduct), Niyama (personal conduct), Asana (physical postures), Pranayama (breathing regulation), Prathyahara (withdrawal of senses), Dharana (concentration), Dhyana (meditation) and Samadhi (transcendence). Postures and breathing regulation were added by Patanjali for the regulation of yoga it was used as secondary practises after Dhyana and samadhi. It also hasn't any name of asanas and pranayama.<sup>88,89,90</sup>

#### 5. Post classical period (800 AD to 1700 AD)

The followers of Patanjali gave very impotence to every yoga practises like asanas, kriyas and pranayama, can help to stable or maintenance of body and mind. Body and mind purification can help some practitioners to reaches at higher level like samadhi it is called hatha yoga.<sup>91,92,93</sup>

#### 6. Modern period (From 1863 AD onwards)

At the parliament of religions Chicago, swami Vivekananda introduces yoga to the world. He wrote four paths: raja yoga (meditation), karma yoga (selfless action), bhakti yoga (devotion), and jnana yoga (metaphysics).<sup>94,95</sup> In 20<sup>th</sup> century yoga become most popular around the world. Scientist of kaivalya Hama yoga institute and yoga institute Mumbai have initiated systemic practice and research in yoga and it were spread worldwide. It includes teaching set and practitioners in yoga. Now a day, swami Ramdev from India makes yoga more popular and done research on it and make it effectiveness in health care.<sup>96,97</sup>



## FOUNDATIONS OF YOGA PRACTICE

In modern era everyone needs to healthy and fit. Yoga makes that possible. It works on mind, emotion and energy level. Yoga will be classified into following groups:<sup>98,99</sup>

1. karma yoga- utilization of body
2. bhakti yoga- utilization of emotions
3. Gyana yoga- utilization of mind and intellect
4. kriya yoga- utilized energy

All are practicing the yoga under these four classifications. For ancient times, yoga was directed under the guidance of Guru. Only guru can mix these four-fundamental paths. Guru can give yoga education to daily practiser persons. This education imparted with knowledge, experienced and seers (Rishis/Munis/Acharyas),<sup>100,101</sup> Yoga education, helps to take care individual. In modern era, yoga education is been given to Yoga Institutions, Yoga Colleges, Yoga Universities, Yoga Departments in the Universities, Naturopathy colleges and Private trusts & societies. Many yoga clinic, preventative health care unit of, yoga therapy etc has been stabilised in hospital, medical institutions.<sup>102,103</sup>

## PHYSICAL ASPECTS OF YOGA

In modern era, yoga and exercises can be a game changer. Physical molding and cantered fixation both are the striking component of yoga. Daily yogic practise makes the person healthy and physical wellness.<sup>104</sup> Yoga asanas gives the development of spine, for control breath, focus on daily schedules. Dur to muscular and physical stress, body imbalance is occurring which may lead to different aches and pains. Asana is done by smooth, control movement to provide the maximum stretch to body.<sup>105,106</sup>

## PHYSIOLOGICAL ASPECTS OF YOGA

Yoga helps to improve the legitimate working of the body. Yoga nourishes the endocrine gland which is useful for development and advancement. It has been proved that yoga can increases the capacity of processing and breathing.<sup>107,108</sup> It helps to blood flow to the mind and improve the mental health. Yoga can improve muscle strands and nerves for physiological work. Legitimate can be improve the joints, breath and blood pressure.<sup>109,110</sup>

## YOGA IMPROVES HEALTH

### 1. Improves your flexibility

Flexibility is the first and most beneficial of yoga. Normal person cannot touch his feet's but continuous practices of yoga can help them. Continuous using of yoga can remove or decreases the pain and aches.

### 2. Muscle strength

Strong muscle help to protect us from arthritis, back pain etc. strength is made up by yoga.

### 3. Protect your spine

Crave movement help the spine to take their nutrition. Some asana practices may keep this disk supple.

### 4. Blood flow

Yoga helps to increases the blood flow in the body. it helps to circulate the blood specially hands and feet. Yoga boots the haemoglobin and red blood cells level; it carries oxygen to cells and helps to increases the blood flow in heart and may reduce the swelling in kidney or heart problems. Blood clot is responsible for heart attack and stocks, yoga may help to remove or dilute theses clots and make person healthy.<sup>111,112,113</sup>

### 5. Focusing

Now a day, focus is much more important then everything. For any kind of work focus is important. Yoga helps to improve your focus, reaction time, memory and IQ.

### 6. Improve system and balance

Yoga can encourages relax, slow your breath, focus and sift the balance the sympathetic nervous system. This improve the blood flow to intestine and reproductive organs, decreases the blood pressures. Regular practices of yoga exercise improve body balance. It removes or decreases the back pain, knee pains and other body problem.<sup>114,115,116</sup>

### 7. Immune system

Yoga (asana and pranayama) can improve or boost the immune system. Meditation is the important way of boosting immune system.

### 8. IBS and other digestive problems

Now a day, everyone suffers with many kinds of diseases or problems. Some are ulcer, irritable bowel syndromes and constipations. Some yoga practices may help to improve the constipation problems and also lower the risk of colon cancers. In physical practises body can move which help in digestion and removes the waste product from the body.<sup>117,118,119</sup>

## PHYSICAL FITNESS

Physical fitness is defined as the combination of qualities it enables to perform physical activity. Physical fitness is the ability of aspects of sports, occupation and activity.<sup>120,121</sup> It can be achieved by proper nutrition, physical activity and sufficient rest. In modern era, fitness may be defined as the person and machine's ability to perform a function and ability to perform various activity. Physical fitness may help in to reduces the many types of heart disease.<sup>122,123</sup>

## CATEGORIES OF PHYSICAL FITNESS:

It can be sub-divide into 5 categories: -



### 1. Cardiovascular fitness: -

On a sustained period of time, the body is able to deliver the oxygen and nutrition to the tissue and to remove the waste product. Aerobic exercise can be used to improve this cardiovascular fitness. This may moderate the level of intensity over a long period of time.

### 2. Muscular strength

It may define as the ability of the muscle to exert force for a long period of time.

### 3. Muscular endurances

In which a muscle, a group of muscles continue to apply the force against the objects. Weight training may help to develop the strength and it may increase the size of skeletons.<sup>124,125</sup>

### 4. Flexibility

It may be defined as the ability of the muscles to roll over and to move the joints in full motions.

### 5. Body composition

Composition means the lean mass and fat mass. Body/mass index help to optimized the ratio of fat to lean mass. It may also help to determine whether the person is healthy in their body type.<sup>126,127</sup>

## IMPORTANCE OF PHYSICAL FITNESS

Physical fitness may produce the positive effects on body's blood pressure. It may also help in making a stronger heart. There is some importance of physical fitness are: <sup>128,129</sup>

#### 1. Health booster

Regular exercise can boost your health and maintain whole body. It can also help to maintain the lungs and heart. It can reduce the chronic illnesses. It is used for better sleep, immune booster, increase stamina.

#### 2. Improve mental health

Physical fitness can also help to improve the mental health of the person. It can help to improve the concentration, increases memory and also increase the learning capacity. It can reduce the stress, anxiety, depression and fatigue.<sup>130,131</sup>

#### 3. Social benefits

Physical fitness can increase the cohesion with families and community. It helps to improve the social and community networks with others. It can reduce the sense of isolation and loneliness.

#### 4. Strength and stamina

Physical fitness increases the bone density, flexibility and muscular strength. It helps to bones stronger and muscle grow. It can give better balance and better protective against the injuries.<sup>132,133,134</sup>

## REFERENCES

1. Matthews M, Comfort P. Crebin Complex training in ice hockey the effects of a heavy resisted sprint on subsequent ice-hockey sprint performance.

2. Srinivasan, Ramakrishna. Effect of weight training and interval training on selected motor fitness and psychological variables of men handball players. *Pesy Quarterly International Journal of Physical Education Sports Management and Yogic Sciences*. 2013; 3(1):10-14.
3. Jayaraman. Effects of Different Depth of Aqua Training on Selected Physical Fitness Variables among College Men. *Horizon Palaestra International Journal of Health, Sports and Physical Education*. 2012; 1(2):67-71.
4. Croucher Paul E. Effects of an assisted jump training stimulus on explosive performance. *Master's thesis, Wintec 2010*.
5. Singh. Effect of Speed, Agility and Quickness (SAQ) Based Soccer Drill on Fitness and Skill Abilities of Football Players. *Horizon Palaestra International Journal of Health, Sports and Physical Education*. 2012; 1(2):43-48.
6. Allen Phillips D, James E, Horuak. *Measurement and evaluation in physical education*, New York: Hon Wiley and Sons, Inc, 1979.
7. Barrow Harold M, Rosemary Gree Mc. *A practical approach to measurement in physical education (3rd ed.) Philadelphia, Complex Training Lea and Febiger, 1979*.
8. Frank W, Dick. *Sports Training Principles*, London: The A & C Black Publishers Ltd, 1980, 189.
9. Grosset Dunlop. *Enjoying Track and Field Sports*, London: Paddington Press Ltd, 1979, 82.
10. Haerricecil F. Wyed Eric, Patride H. *Wenstar UIniversal Dictionary Bombay, the Tulsisash Enterprise, 1970, 712*.
11. Hardayal Singh. *Science of Sports Training*, New Delhi: D.V.S. Publications, 1991, 2.
12. Ahilan R, Nathan, Senthil. Effect of Asana and Pranayama on physiological variables. *Internet. J. Phy. Edu.* 2012; 5(1):24-26.
13. Anis Chaouachi et al. Anthropometric, physiological and performance characteristics of elite team-handball players. *Journal of Sports Sciences*. 2009; (27):151-157.
14. Chidambara Raja S. Effect of Yogic Practice and Physical Fitness on Flexibility, Anxiety and Blood Pressure. *Indian Journal for Research in Physical Education and Sports Sciences*. 2010; 5:1.
15. Komathi R, Kalimuthu M. Effect of Yogic Practices on Abdominal Strength among School Boys" *Recent Trends in Yoga and Physical Education*. 2011; 1:51.
16. Madanmohan et al. Effect of Yoga Training on Reaction Time, Respiratory Endurance and Muscular Strength. *Indian Journal of Physiology and Pharmacology*. 1992; 30(6):22.
17. Rajakumar J. The Impact of Yogic Practices and Physical Exercises on Selected Physiological Variables among the Inter-Collegiate Soccer Players. *Journal for Bloomers of Research*. 2010, 2(2).



18. Sekarbabu K, Kulothugan P. *Effect of Yogic Practices on Selected Physiological Variables of Men Hockey Players, Recent Trends in Yoga and Physical Education.* 2011; 1:321.
19. Tran et al. *Effects of Hatha Yoga Practice on the Health Related Aspects of Physical Fitness, Preventive cardiology.* 2001; 2:165.
20. Serwah N, Marino FE. *The combined effects of hydration and exercise heat stress on choice reaction time. J Sci Med Sport* 2006; 9: 157–164.
21. Yokesh TP, Chandrasekaran K. *Effect of yogic practice on selected physical fitness among overweighted school boys, Recent Research in Science and Technology.* 2011; 3(9):43-45. ISSN 2076-5061.
22. Fan JT, Chen KM. *Using silver yoga exercises to promote physical and mental health of elders with dementia in long-term care facilities. International Psychogeriatrics* 2011; 23:1222-1230.
23. Fazelifar S. *A comparative study of physical fitness in 11-13-year old male students of Amol City. Iranian Journal of Motion* 28 107-126. Gaurav V (2011). *Effects of Hatha Yoga training on the health-related physical fitness. Journal of Sports Science and Engineering* 2007; 5:169-173.
24. Hittleman R. *Yoga for Health (Ballantine Books).* Mirghafouri H, Touranloo H and Mirfakhrudini H. *An analysis of the barriers to women's participation in sport activities: A case study of female students of Yazd University. Iranian Journal of Sports Management.* 2009; 183-100, 2013.
25. Olufemi AJ, Aadaeze N. *Effectiveness of an eight-week low impact aerobic dance programme on the management of osteoarthritis. International Journal of Humanities and Social Science* 2013; 2:286-291.
26. Roma MF, Busse AL, Betoni RA, Melo AC, Kong J, Santarem JM, Jacob Filho W *Effects of resistance training and aerobic exercise in elderly people concerning physical fitness and ability: a prospective clinical trial. Einstein (Sao Paulo)* 2013; 11:153-7.
27. Sadeghi H. *An Introduction to Sports Biomechanics (Tehran: SAMT).* Shahana A, Nair US, Hasrani SS. *Effect of aerobic exercise programme on health-related physical fitness components of middle-aged women. British Journal of Sports Medicine.* 2010; 44:19-23.2006.
27. Bangsbo J, Nørregaard L, Thorsø F. *Activity profile of competition soccer. Can J Sport Sci* 1991; 16: 110–116.
28. Berch DB, Krikorian R, Huha EM. *The corsi block-tapping task: methodological and theoretical considerations. Brain Cogn* 1998; 38: 317–338.
29. Byrne C, Lim CL. *The ingestible telemetric body core temperature sensor: a review of validity and exercise applications. British Journal of Sports Medicine* 2007; 41: 126–133.
30. Cian C, Barraud PA, Melin B, et al. *Effects of fluid ingestion on cognitive function after heat stress or exercise-induced dehydration. Int J Psychophysiol* 2001; 42: 243–251.
31. Cousins MS, Corrow C, Finn M, et al. *Temporal measures of human finger tapping: effects of age. Pharmacol Biochem Behav* 1998; 59: 445–449.
32. Crandall CG. *Heat stress and baroreflex regulation of blood pressure. Med Sci Sports Exerc* 2008; 40(12): 2063–2070.
33. Crandall CG, Wilson TE, Marving J, et al. *Effects of passive heating on central blood volume and ventricular dimensions in humans. J Physiol* 2008; 586: 293–301.
34. Draelos MT, Jacobson AM, Weinger K, et al. *Cognitive function in patients insulin-dependent diabetes mellitus during hyperglycemia and hypoglycemia. Am J Med* 1995; 98: 135–144.
35. Edwards AM, Mann ME, Marfell-Jones MJ, et al. *Influence of moderate dehydration on soccer performance: physiological responses to 45 min of outdoor match-play and the immediate subsequent performance of sport-specific and mental concentration tests. Br J Sports Med* 2007; 41: 385–391.
36. Ekblom B. *Applied physiology of soccer. Sports Med* 1986; 3: 50–60. Havenith G, Heus R, Daanen HA. *The hand in the cold, performance and risk. Arctic Med Res* 1995; 54(Suppl. 2):37–47.
37. Hogervorst E, Bandelow S, Schmitt J, et al. *Caffeine improves physical and cognitive performance during exhaustive exercise. Med Sci Sports Exerc* 2008; 40: 1841–1851.
38. Lieberman HR. *Hydration and cognition: a critical review and recommendations for future research. J Am Coll Nutr* 2007; 26: 555S–561S.
39. Maughan RJ, Shirreffs SM, Watson P. *Exercise, heat, hydration and the brain. J Am Coll Nutr* 2007; 26: 604S–612S.
40. Nunneley SA, Martin CC, Slauson JW, et al. *Changes in regional cerebral metabolism during systemic hyperthermia in humans. J Appl Physiol* 2002; 92: 846–851. Nybo L, Nielsen B. *Hyperthermia and central fatigue during prolonged exercise in humans. J Appl Physiol* 2001a; 91: 1055–1060.
41. Nybo L, Nielsen B. *Middle cerebral artery blood velocity is reduced with hyperthermia during prolonged exercise in humans. J Physiol* 2001b; 534: 279–286.
42. Owen AM, Herrod NJ, Menon DK, et al. *Redefining the functional organization of working memory processes within human lateral prefrontal cortex. Eur J Neurosci* 1999; 11: 567–574.
43. Racinais S, Gaoua N, Grantham J. *Hyperthermia impairs short-term memory and peripheral motor drive transmission. J Physiol* 2008; 586: 4751–4762.





44. Shirreffs SM, Merson SJ, Fraser SM, et al. The effects of fluid restriction on hydration status and subjective feelings in man. *Br J Nutr* 2004; 91: 951–958.
45. Sternberg S. High-speed scanning in human memory. *Science* 1966; 153: 652–654.
46. Sternberg S. Memory-scanning: mental processes revealed by reaction-time experiments. *Am Sci* 1969; 57: 421–457.
47. Szinnai G, Schachinger H, Arnaud MJ, et al. Effect of water deprivation on cognitive-motor performance in healthy men and women. *Am J Physiol* 2005; 289: R275–R280.
48. Warren RE, Frier BM. Hypoglycaemia and cognitive function. *Diabetes ObesMetab* 2005; 7: 493–503. Wilson MG, Morley JE. Impaired cognitive function and mental performance in mild dehydration. *Eur J Clin Nutr* 2003; 57(Suppl. 2): S24–S29.
49. Anjali Joglekar (1999), “A Study of the Effect of Yogic Exercises for the promotion of Physical Fitness and Badminton skills of College Girls of Age between 18 to 20 Years.” Masters’ Dissertation in Physical Education, BPCA’s College of Physical Education, University of Mumbai, pp.1- 138.
50. B K Acharya, et. al. (2010), “Effect of Pranayama (voluntary regulated breathing) and Yogasana (yoga postures) on lipid profile in normal healthy junior footballers *International Journal of Yoga*, 3(2): P 70.
51. B. Donohue, et.al. (2006), “Effects of brief yoga exercises and motivational preparatory interventions in distance runners: results of a controlled trial” *British Journal of Sports Medicine*. January; 40(1): Pp 60–63.
53. Bandelow S, et.al. (2010) “The effects of exercise, heat, cooling and rehydration strategies on cognitive function in football players.” *Scandinavian Journal of Medicine and science in Sport* .” Oct; 3: Pp 148-60.
52. Brechue W.F and Mayhew J L. Upper -body work capacity and IRM prediction are unaltered by increasing Physical fitness in college football players. *Journal of Strength and Conditioning Research*. 2009; 23(9): Pp 2477 - 86.
53. Cowen, V.&Admas t. (2005). “Physical and perceptual benefits of yoga asana practice: results of a pilot study”. *Journal of Bodywork and Movement Therapies*.9:3:211-219.
54. Ledoux, M. et al., (1997), “A Comparative Analysis of Weight to Height and Waist to Hip Circumference Indices as Indicators of the Presence of cardiovascular Disease Risk Factors”, *Canadian Medical Association Journal*, 157(S-1), pp.32-38.
55. Petrofsky JS., et al., (2005), “Muscle Activity during Yoga Breathing Exercise Compared to Abdominal Crunches”, *The Journal of Applied Research*, 5(3), pp.501-507.229.
56. Tran, M.D., Holly, R.G., Lashbrook, J. et al. Effects of Hatha yoga practice on the health-related aspects of physical fitness. *Preventive Cardiology*. 2001;4:165–170.
57. 59. Anderson, S. & Sovik, R. (2000). *Yoga: Mastering the basics*. Honesdale, PA: Himalayan Institute Press.
- Aranya, H. (1983). *Yoga philosophy of Patanjali*. Albany, NY: State University of New York Press.
- Bhatt, (2004). *The Forceful yoga: Being the translation of Hathayoga-pradipika, Gheranda-samhita and Siva-samhita* (P. Singh, R. Bahadur, & S. C. Vasu, Trans.). New Delhi, India: Motilal Banarsidass Publishers.
58. Bhavanani, A. B. (2007). *Swarodaya vigyan: A scientific study of the nasal cycle*. *Yoga Mimamsa*, 39, 32–38.
59. Bhavanani, A. B. (2008). *A primer of yoga theory*. Pondicherry, India: Dhivyananda Creations.
60. Bhavanani, A. B. (2013). *Yoga chikitsa: Application of yoga as a therapy*. Pondicherry, India: Dhivyananda Creations.
61. Bhavanani, M. D. (2012). *The history of yoga from ancient to modern times*. Pondicherry, India: Satya Press.
62. Bryant, E. (2009). *The yoga sutras of Patanjali*. New York: North Point Press.
63. Feuerstein, G. (1996). *The Shambala guide to yoga*. Boston, MA: Shambala Publications Inc.
64. Feuerstein, G. (2001). *The yoga tradition: Its history, literature, philosophy, and practice*. Prescott, AZ: Hohm Press.
65. Feuerstein, G. (2003). *The deeper dimension of yoga theory and practice*. Boston, MA: Shambala Publications Inc.
66. Giri, G. S. (1976). *Yoga: Step-by-step*. Pondicherry, India: Satya Press.
67. Giri, G. S. (1999). *Ashtanga yoga of Patanjali*. Pondicherry, India: Satya Press.
68. Goswami, S. S. (1999). *Laya yoga: The definitive guide to the chakras and kundalini*. From the preface by G. Feuerstein.
69. Nikhilananda, S. (1931). *Vedantasara*. Almora, U.P., India: Swami Vireswarananda, Advaita Ashram.
- Panikkar, R. (1977). *The vedic experience*. New Delhi, India: Motilal Banarsidass.
70. Rama, S. (1990). *Wisdom of the ancient sages: The mundaka upanishad*. Honesdale, PA: Himalayan Institute Press.
- Saraswati, S.S. (1999). *Four chapters on freedom*. (Commentary on yoga sutras of Patanjali). Munger, India: Bihar School of Yoga.
71. Saraswati, S. M., & Saraswati, S. S. (1985). *Hatha yoga pradipika*. Munger, India: Bihar School of Yoga.
- Schweig, G. (2007). *The bhagavad gita*. New York: HarperCollins Publishers.
72. Tignait, R. (2008). *The pursuit of power and freedom: Katha upanishad*. Honesdale, PA: Himalayan Institute Press.
73. Tignait, R. (2014). *The secret of the yoga sutra: Samadhi pada*.
74. Honesdale, PA: Himalayan Institute Press.
- Venkatesananda, S. (2007). *The supreme yoga:*



- Yoga  
Vashishta. Delhi, India: Mothilal Banarsidass.
75. Walker, M. (2015, February 11). Yoga gains popularity with adults, children. *MedPage Today*.
76. Radhakrishnan S, Moore CA, A Sourcebook in Indian Philosophy, 1967.
77. Dasgupta, Surendranath A History of Indian Philosophy. I. Delhi, India: 1975; 226.
78. Dass, Baba Hari the Yoga Sytras of Patanjali, A Study Guide for Book I, Samadhi Pada; Translation and Commentary. Santa Cruz, California: Sri Rama Publishing. 1999; 5.
79. Aranya, Swami Hariharananda, Yoga Philosophy of Patanjali with Bhasvati. Calcutta, India: University of Calcutta. 2000, 1.
80. Stephen Phillips Yoga, Karma, and Rebirth: A Brief History and Philosophy. Columbia University Press. 2009, 28-29.
81. Patrick Olivelle the Early Upanishads: Annotated Text and Translation. Oxford University Press. 1998.
82. Satish Chandra Historiography, Religion, and State in Medieval India, Archived from the original on 4 February 2013. Retrieved 29 August 2012, 135–136.
83. Satish Chandra Historiography, Religion, and State in Medieval India. 2007; 135-136.
84. Matilal BK, "Perception. An Essay on Classical Indian Theories of Knowledge", Oxford University Press, 1986.
85. Rethorst CD, Wipfli BM, Landers DM. The antidepressive effects of exercise: a meta-analysis of randomized trials. *Sports Med* 2009; 39:491–511.
86. Wipfli BM, Rethorst CD, Landers DM. The anxiolytic effects of exercise: a meta-analysis of randomized trials and dose-response analysis. *J Sport Exercise Psychol* 2008; 30:392–410.
87. Breus M, O'Connor P. Exercise induced anxiolysis: a test of the "time out" hypothesis in high-anxious females. *Med Sci Sports Exercise* 1998; 30:1107–1112.
88. Abrantes AM, Strong DR, Cohn A, Cameron AY, Greenberg BD, Mancebo MC, Brown RA. Acute changes in obsessions and compulsions following moderate-intensity aerobic exercise among patients with obsessive-compulsive disorder. *J Anxiety Disorders* 2009; 23:923–927.
89. Smith MA, Schmidt KT, Iordanou JC, Mustroph ML. Aerobic exercise decreases the positive-reinforcing effects of cocaine. *Drug Alcohol Depend* 2008; 98:129–135.
90. Taylor AH, Ussher MH, Faulkner G. The acute effects of exercise on cigarette cravings, withdrawal symptoms, affect and smoking behaviour: a systematic review. *Addiction* 2007; 102:534–543.
91. Williams DM, Dunsiger S, Whiteley JA, Ussher MH, Ciccolo JT, Jennings EG. Acute effects of moderate intensity aerobic exercise on affective withdrawal symptoms and cravings among women smokers. *Addict Behav* 2011; 36:894–897.
92. Ussher M, Sampuran A, Doshi R, West R, Drummond D. Acute effect of a brief bout of exercise on alcohol urges. *Addiction* 2004; 99:1542–1547.
93. Kessler RC, Angermeyer M, Anthony JC, De Graaf R, Demyttenaere K, Gasquet I, De Girolamo G, et al. Lifetime prevalence and age-of-onset distributions of mental disorders in the World Health Organization's World Mental Health Survey Initiative. *World Psychiatry* 2007; 6:168–176.
94. Degenhardt L, Hall W. Extent of illicit drug use and dependence, and their contribution to the global burden of disease. *The Lancet* 2012; 379:55–70.
95. Hasin DS, Stinson FS, Ogburn E, Grant BF. Prevalence, correlates, disability, and comorbidity of DSM-IV alcohol abuse and dependence in the United States: results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Arch Gen Psychiatry* 2007; 64:830–842.
96. Compton WM, Thomas YF, Stinson FS, Grant BF. Prevalence, correlates, disability, and comorbidity of DSM-IV drug abuse and dependence in the United States: results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Arch Gen Psychiatry* 2007; 64:566–576.
97. Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatry* 2005;62:593–602.
98. Kessler RC, Chiu WT, Demler O, Walters EE. Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatry* 2005;62: 617–627.
99. Kessler RC, Wang PS. The descriptive epidemiology of commonly occurring mental disorders in the United States. *Annual Review of Public Health. Palo Alto: Annual Reviews, 2008:115–129.*
100. Schuckit MA. Comorbidity between substance use disorders and psychiatric conditions. *Addiction* 2006; 101:76–88.
101. Adrian M, Barry SJ. Physical and mental health problems associated with the use of alcohol and drugs. *Subst Use Misuse* 2003; 38:1575–1614.
102. Schuckit MA. Alcohol use disorders. *The Lancet* 2009;373: 492–501.
103. McLellan AT, Lewis DC, O'Brien CP, Kleber HD. Drug dependence, a chronic medical illness. *JAMA* 2000; 284:1689–1695.
104. Ramo DE, Brown SA. Classes of substance abuse relapse situations: a comparison of adolescents and adults. *Psychol Addictive Behav* 2008; 22:372–379.
105. Connors GJ, Maisto SA, Donovan DM. Conceptualizations of relapse: a summary of



- psychological and psychobiological models. *Addiction* 1996;91: S5–S13.
106. Hallal PC, Andersen LB, Bull FC, Guthold R, Haskell W, Ekelund U. Global physical activity levels: surveillance progress, pitfalls, and prospects. *Lancet* 2012; 380:247–257.
107. Carlson SA, Fulton JE, Schoenborn CA, Loustalot F. Trend and prevalence estimates based on the 2008 Physical Activity Guidelines for Americans. *Am J Prevent Med* 2010;39: 305–313.
108. Lee IM, Shiroma EJ, Lobelo F, Puska P, Blair SN, Katzmarzyk PT. Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. *Lancet* 2012;380:219–229.
109. Liangpunsakul S, Crabb DW, Qi R. Relationship among alcohol intake, body fat, and physical activity: a population-based study. *Ann Epidemiol* 2010; 20:670–675.
110. Berrigan D, Dodd K, Troiano RP, Krebs-Smith SM, Barbash RB. Patterns of health behavior in U.S. adults. *Prevent Med* 2003;36: 615–623.
111. French MT, Popovici I, Maclean JC. Do alcohol consumers exercise more? Findings from a national survey. *Am J Health Promot* 2009; 24:2–10.
112. Smothers B, Bertolucci D. Alcohol consumption and healthpromoting behavior in a U.S. household sample: leisure-time physical activity. *J Stud Alcohol* 2001; 62:467–476.
113. Vickers KS, Patten CA, Lewis BA, Clark MM, Ussher M, Ebbert JO, Croghan IT, et al. Binge drinking in female college students: the association of physical activity, weight concern, and depressive symptoms. *J Am Coll Health* 2004; 53:133–140.
114. Lisha NE, Sussman S, Fapa F, Leventhal AM. Physical activity and alcohol use disorders. *Am J Drug Alcohol Abuse* 2013;39: 115–120.
115. Kwan M, Bobko S, Faulkner G, Donnelly P, Cairney J. Sport participation and alcohol and illicit drug use in adolescents and young adults: a systematic review of longitudinal studies. *Addict Behav* 2014; 39:497–506.
116. Schuit AJ, van Loon AJM, Tijhuis M, Ocke MC. Clustering of lifestyle risk factors in a general adult population. *Prevent Med* 2002; 35:219–224.
117. Weinstock J, Barry D, Petry N. Exercise-related activities are associated with positive outcome in contingency management treatment for substance use disorders. *Addict Behav* 2008; 3:1072–1075.
118. Ussher MH, Taylor AH, Faulkner GEJ. Exercise interventions for smoking cessation. *Cochrane Database of Systematic Reviews*. New York: John Wiley & Sons, Ltd; 2014.
119. Zschucke E, Heinz A, Strohle A. Exercise and physical activity in the therapy of substance use disorders. *Scientific World J* 2012.
120. Hoffman MD, Hoffman DR. Exercisers achieve greater acute exercise-induced mood enhancement than nonexercisers. *Arch Phys Med Rehabil* 2008; 89:358–363.
121. Roberts V, Maddison R, Simpson C, Bullen C, Prapavessis H. The acute effects of exercise on cigarette cravings, withdrawal symptoms, affect, and smoking behaviour: systematic review update and meta-analysis. *Psychopharmacology* 2012; 222:1–15.
122. Haskell WL, Lee IM, Pate RR, Powell KE, Blair SN, Franklin BA, Macera CA, et al. Physical activity and public health: updated recommendation for adults from the American College of Sports Medicine and the American Heart Association. *Med Sci Sports Exercise* 2007; 39:1423–1434.
123. Nelson M, Rejeski W, Blair S, Duncan P, Judge J, King A, Macera CA, Castaneda-Sceppa C. Physical activity and public health in older adults: recommendation from the American College of Sports Medicine and the American Heart Association. *Med Sci Sports Exercise* 2007; 39:1435–1445.
124. Martin C, Church T, Thompson A, Earnest C, Blair S. Exercise dose and quality of life. *Arch Internal Med* 2009; 169:269–278.
125. Hillman C, Erickson K, Kramer A. Be smart, exercise your heart: exercise effects on brain and cognition. *Nature Rev Neurosci* 2008; 9:58–65.
126. Sparling P, Giuffrida A, Pilmelli D, Roskopf L, Dietrich A. Exercise activates the endocannabinoid system. *Neuro Report* 2003; 14:2209–2211.
127. Dunn AL, Trivedi MH, Kampert JB, Clark CG, Chambliss HO. Exercise treatment for depression: efficacy and dose response. *Am J Prevent Med* 2005; 28:1–8.
128. Blumenthal JA, Babyak MA, Doraiswamy PM, Watkins L, Hoffman BM, Barbour KA, Herman S, et al. Exercise and pharmacotherapy in the treatment of major depressive disorder. *Psychosomatic Med* 2007; 69:587–596.
129. Trivedi M, Greer T, Grannemann B, Chambliss H, Jordan A. Exercise as an augmentation strategy for treatment of major depression. *J Psychiatric Practice* 2006; 12:205–213.
130. Daley AJ. Exercise and depression: a review of reviews. *J Clin Psychol Medical Settings* 2008; 15:140–147.
131. Rethorst CD, Wipfli BM, Landers DM. The antidepressive effects of exercise: a meta-analysis of randomized trials. *Sports Med* 2009; 39:491–511.
132. Wipfli BM, Rethorst CD, Landers DM. The anxiolytic effects of exercise: a meta-analysis of randomized trials and dose-response analysis. *J Sport Exercise Psychol* 2008; 30:392–410.



# THE CONTRIBUTIONS OF CHRIST APOSTOLIC CHURCH STUDENTS' ASSOCIATION (CACSA) TO THE GROWTH AND EXPANSION OF CHRIST APOSTOLIC CHURCH NIGERIA, 1971-2015

**Afolabi Samuel Oluseyi Ph.D.**

*Biographical Sketch of the Author*

**AFOLABI, Samuel Oluseyi** holds a Ph.D. in Religious Studies from the University of Ibadan, Nigeria.

He is a Lecturer in Church History, Church Planting and Growth at Michael Olowere College of Theology (MOCOT), Ashi, Ibadan, Oyo State, Nigeria.

He is an alumnus and a lecturer of Missions and Exposure Training - MET (Pentecostal Assemblies of Canada), Pretoria, South Africa.

He is the Senior Pastor of Christ Apostolic Church All Nations Assemblies, Ibadan, Nigeria.

Article DOI: <https://doi.org/10.36713/epra5053>

## ABSTRACT

*Christ Apostolic Church was the foremost African Indigenous Church in Nigeria and its history dates back to 1918. The growth and expansion of the church in Nigeria was aided by the activities of its youth organisations, prominent among which is the Christ Apostolic Church Students' Association. This article examines the origin of the Association, its vision, administration and programmes. The article also highlights the various contributions of the society to the growth and expansion of the church via evangelism and church planting, music ministry, establishment of Campus Fellowship Centres, promotion of Christian/formal education, career development and leadership development. The study adopted Matthew Seebach's theory which is based on active forms of participation of youths in which the involvement of young people results in an impact on a process, influences a decision, or produces an outcome.<sup>1</sup> Data were gathered through the use of structured oral interview, questionnaire, archival materials and bibliographical search.*

**KEYWORDS:** *Christ Apostolic Church, Association, Youths, Growth and Expansion.*

## INTRODUCTION

The period from the 19<sup>th</sup> century to the present has been characterised by the establishment and growth of numerous indigenous Churches and prayer groups in Africa. These groups have not only taken root but they have proliferated and shown phenomenal growth particularly in Sub-Saharan Africa.<sup>2</sup> One of the Churches in this category is the Christ Apostolic Church which started as an indigenous prayer group in 1918 and later went through many stages before it finally adopted its present name.<sup>3</sup> The activities of the Christ Apostolic Church Student Association, among

many other factors, have contributed to the growth and expansion of the church in Nigeria.

## The origin, vision and spread of Christ Apostolic Church Students' Association (CACSA)

Sometime in April, 1970, at the C.A.C Bethel, Abadina, University of Ibadan, a group of undergraduate students, led by Bro. Samuel Oluwabusuyi, Arogundade, a Political Science student, was praying. During the prayer, the Lord showed Bro. Arogundade a vision in which he saw that a torrent was sweeping away the youths. He related this vision to his



mates after the prayer session. With further prayers for authentic meaning, and encouragement from his mates, this vision was relayed to the leader of the C.A.C Bethel, Prophetess, J. O. Ogunranti who did not only pray with them but also enlightened them about the mind of God for that season. She stated that it was not only that the youths of the church are being swept away by the torrent of worldliness. God was looking for someone who would stand in the gap, who would not only pray but would act to extricate and rescue the youths from the torrent of worldliness and satanic domination.<sup>4</sup>

Prophetess Ogunranti, in the wisdom of God went to meet the then spiritual leader of the C.A.C Mission, Pastor E. T. Latunde (of blessed memory) to intimate the church authority with this vision. The authority of the Mission under the leadership of Pastor E. T. Latunde asked three of the most senior prophets in the Mission to seek the face of the Lord about the authenticity of the vision independently. Confirmation came from all of the three people, and Bro. Arogundade was given the green light to pursue the vision.<sup>5</sup>

The Association started from the University of Ibadan in 1971 and took root in other higher institutions in the country. The group adopted the motto "Christ leads, we follow". Her operations were mainly on campuses of higher institutions, targeting and reaching out to young elites of C.A.C. Among the foremost branches to be established was that of the University of Ife (now Obafemi Awolowo University, Ile-Ife). Branches of the Association were also established at the Mission's secondary schools in the South Western part of the country. In spite of the vibrancy of the Light of the World Society in the local assemblies, branches of the Association sprang up in the local assemblies as a meeting point for its Higher Institution members during holidays.<sup>6</sup>

Interest in the Association was overwhelming. Young men and women who were not necessarily undergoing any formal education came in large numbers to join the local assembly branches to study the Word of God and to pray. The momentum of the spread was so great that within the first four to five years of the Association's existence, branches had sprung up in most states of the country.<sup>7</sup>

### The Administration of CACSA

The Association started with a seven-member executive committee of five officers and two ex-officio members. The first sets of officers were brothers Arogundade (President) Ayo Omideyi (Secretary), Tony Falode, Tunde Adefarakan and Sister Tosin Oni (Later Mrs. Akin Ojo, of blessed memory). The group

was registered with the University of Ibadan authority in 1971. Prophetess J. O. Ogunranti was the Matron while Prof. A. M. A. Imevbore was the Patron of the Association.<sup>8</sup>

As the organisation was growing in membership and expanding, there was the need to have a larger committee to oversee its activities. Hence, by 1975/76, a National Executive Council (N.E.C) comprising the national officers (about 9 members) and all local leaders had emerged. The tenure of each NEC was three years. The last NEC was dissolved in 1997, giving room to the Directorate system with the Governing council (GC) as the highest ruling body while at the top of the hierarchy is the President.

- a. **The President:** The president stands out as the spiritual leader of the group and the final arbiter (with counsel from Governing council) on all spiritual and administrative matters of the Association. That is, instructions (spiritual and administrative) flow out from him.
- b. **The Governing Council (GC):** This body formulates policies as deems fit and as may be suggested by the Council of Directors (COD). The policies thus formulated are passed down to the concerned Directorate for implementation {see fig 1}. The body also ensures compliance of all concerned with the national policy and approved guidelines. Disciplinary actions, appointments and welfare of employees are administered by the GC.
- c. **Council of Directors (COD):** This is purely an advisory council to the GC. The council is made up of all Directors, Deputies, and Secretaries. The body makes suggestions or recommendations to the GC on policy formulation and also takes directive from GC as to the implementation of these policies.
- d. **Directorate Level:** Each Directorate is headed by a Director but assisted by the Deputy and a Secretary. Other members of the Directorate are drawn from each state where CACSA is in operation. Each Director has a member representing him in each state. For instance, Director of Finance is represented at the state level by either the State Treasurer or Financial Secretary. The representatives of all Directors form the Executive Councils headed by the State Minister. However, information and authority flow directly to these representatives through the State Ministers.
- e. **State Ministers:** These are the representatives of the President at the state level. They perform the functions of the President at the state level, with due delegation. Although they have direct



access to the President, they still receive policy instructions from Directors for implementation. Their linkage with the President is purely on supervisory matters as it relates to progress and problems of assemblies and fellowship centers in the states. Assembly Ministers are to relate to the State Ministers and not the President directly.

- f. **State Executive Committee:** This body sees to the implementation of the group's policies at the state level as may be directed by the appropriate Director through State Minister.
- g. **State Executive Council:** This is an organ through which the State Minister administers the assemblies in the state. It is made up of all Assembly Ministers and Secretaries in the state.
- h. **Zonal Executive Committee:** A Zone is made of two or more branches of CACSA. It is expected that there would be a replicate of offices and duties of offices at the state level. The Zonal Executive takes orders from the State Minister.
- i. **Local Church Council:-** This is the governing body of the local assembly but chaired by the Assembly Minister. In areas where there are zonal arrangements, it takes instructions from the Zonal Executive but where this does not exist, it takes instruction from the State Executive committee.

### **The Programmes and Activities of CACSA:**

Its programmes focused more on Scriptural teachings, seminars and specialised trainings that emphasise the spiritual development of its members.<sup>9</sup> Some of the programmes are: Annual National Conference which held in July/August and December conference. The first National Conference took place at the defunct C.A.C Teachers' College, Efon Alaaye in July 1971 and was rotated among different states of the federation until 1999 when the national camp ground was acquired. Other programmes include monthly Mountain Top prayer retreat at Ede Mountain in Ede, Osun State; Annual "ACADA for Christ" Conference for student fellowships in higher institutions; Leadership retreats and a host of others that are meant to enhance the spiritual development of members.

### **THE CONTRIBUTIONS OF CACSA TO CHRIST APOSTOLIC CHURCH, NIGERIA.**

#### **Evangelism and Church Planting**

Christ Apostolic Church Students' Association got involved in evangelism through its monthly programme tagged "Volunteer for Christ". The programme which was purposely meant for

evangelistic outreaches took members of the group out of their stations to villages and rural areas for a weekend. During the programme, the participants got involved in fervent prayers, house to house evangelism, open air crusades and tract distribution. Traveling Secretaries/Field Evangelists were appointed to oversee the effectiveness and success of the programme. Past editions of the programme were held in several locations which include Ede, Osogbo, Ilesa, Ido Osun, Obajoko-Iwo, (Osun State), Oyo, Ibadan, (Oyo State), Odo Owa, Owo, Efon Alaaye, Ifaki Ekiti, Ado Ekiti, (Ondo/Ekiti States) and Iperu, Moriwi, (Ogun State).<sup>10</sup> The operations of this programme led to the establishment of new Assemblies of C.A.C in rural areas and this in turn led to the numerical and spiritual growth of the church.<sup>11</sup>

Apart from the monthly evangelistic outreaches which led to the establishment of new C.A.C Assemblies in rural areas, the group received a divine mandate to embark on the establishment of worship and fellowship centres during the Minna conference in 1986. The response was slow initially but, the divine order became fully effected when the C.A.C crisis came on board in 1992.<sup>12</sup>

Between 1992 and July 2013, the organisation planted 15 C.A.C Assemblies in Ekiti State, 12 in Lagos State, 7 in Ondo State, 14 in Ogun State, 17 in Osun State and 11 in Oyo State, totaling 76 Assemblies in the South Western States of Nigeria. These assemblies are now organised into Districts as approved by the C.A.C Supreme Authority.<sup>13</sup>

#### **Music Ministry**

In line with its evangelistic operations, Christ Apostolic Church Student Association (CACSA) also engaged in music ministry. The body made use of Gospel Music as a tool for evangelism. In the early 80s, the organisation had a formidable music department headed by Bro. Tope Dada (now Pastor) and supported by the likes of Brothers Dele Ajibola, Mosaku and Ayo Adeusi. The Akure branch ventured into singing classical songs, while Lagos branch under the leadership of Bro. Mosaku, followed suit. The Akure branch waxed two music albums and appeared annually in old Ondo State highly competitive Government House Carol Service consecutively for nearly a decade.<sup>14</sup>

The outstanding effort of the music department also resulted in the establishment of a private Music School for C.A.C at Ojoyin, Ife, between 1984 and 1985.<sup>15</sup> Till date, the department has waxed three music albums and also holds an annual Choir Summit at Osogbo.



### Establishment of Campus Fellowship Centres

Christ Apostolic Church Students' Association (CACSA) had her beginning in a higher institution of learning and precisely, the premier university in Nigeria, the University of Ibadan. The Association eventually spread to other higher institutions especially in the South Western part of Nigeria. This feat was achieved by the evangelical campaign of the members from the University of Ibadan. It was through these evangelical campaigns that the membership of the Association increased. By and large, the spread of the Association into the higher institutions became established and CACSA became one of the first set of denominational groups of Christian students in higher institutions in Nigeria.

CACSA eventually became an evangelical arm of Christ Apostolic Church in the Ivory Tower and co-existed with other Christian bodies like Christian Union (CU) and the Student Christian Movement (SCM). This unique evangelical effort has helped the church (CAC) to retain within her fold many of the elites of the church that would have otherwise left the mission for other churches or ministries.

Between 1971 and 2015, CACSA has established its presence in 29 higher institutions in the South Western part of the country with a population of about 15,000 worshippers. The statistics are as follow: Ekiti State: 2; Lagos State: 1; Ogun State: 9; Ondo: 3; Osun: 8 and Oyo: 6.

### Promotion of Christian and Formal Education

Christ Apostolic Church Students' Association (CACSA) contributed to the promotion of secular/Christian education in the church. The group contributed to the educational growth of the church in the following ways.<sup>16</sup>

- a. Many members of the Association functioned as Sunday school teachers thereby helping to increase the level of Scriptural knowledge in the church.
- b. The body publishes a periodic Bible Study manual titled "**Believers Treasure**" which is used as a Bible Study guide by many C.A.C Assemblies and other denominations nationwide. It also publishes a periodic Christian magazine under the title "**With One Accord**".
- c. The organisation runs a missionary Primary School (Children Boarding School) at Osogbo, Osun State. This is aimed at producing children with sound education and good Christian background from the grassroots. CACSA took over the administration of the

school which is situated at City of Life Camp, Fadeyi Estate, Ilesa road, Osogbo in 2001. The school graduated 28 pupils between 2010 and 2013 and has a staff strength of 8 teachers as at 2013.<sup>17</sup>

- d. A Secondary School (Christ International Academy) was established in 2002 by CACSA at Moriwi, via Imeko, Ogun State. The organisation was in full charge of the administration of the school from 2002 to 2009 with a total population of 55 students and 13 teachers before it handed over the school to the community in 2009. The school is now known as Community Grammar School, Moriwi.
- e. Another Secondary School, (Christ Leads Secondary School) was established by the organisation in 2009 at the City of Life Camp, Fadeyi Estate, Ilesa Road, Osogbo. The school which started with 4 students in JS 1 had 45 students in JS and SS classes by 2013 and also had staff strength of 7 teachers.<sup>18</sup>
- f. A Theological College (Pentecostal Bible College, PEBICO), was established in 1999 at Osogbo, Osun State with satellite campuses in Efon Alaaye, Ekiti State, Akure, Ondo State, and Lagos. The main campus is at City of Life Camp, Fadeyi Estate, Ilesa road, Osogbo. (See Plates). The college runs theological courses at certificate, diploma and degree levels and serves the purpose of producing men and women with sound biblical knowledge who will in turn be useful as clerics in the C.A.C mission and other denominations. The school is affiliated with Western Pacific University, in USA.<sup>19</sup> As at 2013, the college has produced about 150 graduates.

### Leadership Development

Christ Apostolic Church Students' Association also contributed to capacity building in the church. At the national and state levels, the group organises series of leadership seminars, workshops and ministerial training programmes which are centered on sound doctrine of the Scriptures, character formation and development of spiritual gifts. The leadership training programme also called "Train the Trainer" holds twice in a year with resource persons handling different topics on issues of leadership. Some of the past topics included: Factors Influencing Leadership inefficiency in the Contemporary church; Leadership and Discipline; Leadership and Productivity; Christ's Leadership Pattern; The Importance of Wisdom and Meekness in Leadership; and Take Charge of your



Character. Others are: Beware of Covetousness; Dangers of Covetousness; What shall it Profit a Man?; Rich but Poor Leader; and Leaders and Modern Technology. As a result, many leaders have been developed and by this means; the Association has become a veritable recruitment ground for the mother Church. The products of the group have operated in the church as Sunday school teachers, choir members, ushers, juvenile teachers, interpreters, prayer warriors and Pastors. A great number of the members have been appointed into leadership positions and ordained as Pastors, Evangelists, Elders, Deacons and Deaconesses in the Church.<sup>20</sup>

Such leaders include Pastor Aluko C.A.C National Sunday School Coordinator (Akure), Pastor J. Ayo Owoseye, former CACSA Organising & Publicity Secretary (Lagos), Pastor(Prof.) C. O.Oshun (Lagos), Pastor (Prof.) Akinsoyinu (Ibadan), Pastor Isaac Ijaopo (Ibadan), Pastor Segun Oloyede (Ibadan), Pastor Ayo Adeyemo (Akure), Pastor Dr. Tope Adeyemo (Ado Ekiti), Pastor Richard Adejuyigbe (Ado Ekiti), Pastor Gabriel Adeniyi (Lagos), Pastor Dele Ajibola (Lagos), Pastor Caleb Oluwadare (OAU, Ile Ife), Pastor (Prof.) Femi Adedeji (Ile Ife), Pastor Dele Akande (Oyo) and many others, too numerous to mention.

### Career Development

The origin of Christ Apostolic Church Students' Association from an academic setting gave the body a great advantage in this aspect. All the foundation members of the Association were university undergraduates and subsequently the group made great incursions into higher institutions of learning especially in the South Western part of the country and had a large followership. Moreover, many members of the group still retained their membership after graduation from the university.

It is on record that in the 1980s the Association registered as an "Employer of Labour" with the National Youth Service Corps (NYSC). This made it possible for the graduating members of the Association to undertake their one-year National Service within the group and they were posted wherever the group needed them.<sup>21</sup>

The Association has produced many academic icons, males and females who have succeeded in their various chosen fields. Some of them include: Prof. Bunmi Osun (LASU), Prof. Bisi Ogunsina (UNILORIN), Prof. Akinsoyinu (U.I and Babcock University, Ilisan), Prof. Seun Adejuyigbe, Prof. Osafeyinti, Prof. Dosu Oyewole, Prof. Femi Adedeji (Present H.O.D, Music Department, OAU, Ile Ife, Osun State), Dr. Femi Awodiran (OAU, Ile Ife), Dr. Rufus Akomolafe (OAU, Ile Ife), Dr. Joshua Dada (Ile Ife),

Pastor Dr. Tope Adeyemo (Ado Ekiti), Dr. Mrs. Ojo (Ile Ife), Mrs. Funke Adebajo (Controller of Prisons, Nigeria Prisons Service, Abuja) and a host of other Ph.D., Masters and first degree holders.<sup>22</sup>

The emergence of academicians in the church has greatly enhanced the educational enlightenment and operations of the church while it has also helped to increase the numerical strength of the church by attracting people of like minds to join the fold.

### CONCLUSION

Youths must not only be seen as leaders of tomorrow but leaders today. Young people are the church of today. We cannot afford to let them wait until they are older to make important contributions to the life of the church. Their ministry is essential. The things they can do, the places they can go and the impacts they can make are enormous. Their ministry builds the church, reaches the lost, and enhances the continuity of the church. We need them now just as the early church needed them. Since they are physically, emotionally and intellectually ready to respond in certain ways, more than adults, they have a freshness of approach, idealism, creativity and boundless energy. Their capacities which in the past have been vastly underestimated should be recognised and utilised to the full.<sup>23</sup>

### ENDNOTES

<sup>1</sup> Matthew Seebach, (2008) "Youth Participation and Youth Work: A Conceptual Review" *Journal of Youth Work Ireland, Vol.3 No 2*, accessed Feb. 1, 2020, [https://www.youthworkireland.ie/images/uploads/general/YWI\\_Journal\\_Vol3No2\\_03\\_Youth\\_Participation.pdf](https://www.youthworkireland.ie/images/uploads/general/YWI_Journal_Vol3No2_03_Youth_Participation.pdf)

<sup>2</sup> Deji Ayegboyin, and Ademola Ishola, *African Indigenous Churches*, (Lagos: Greater Heights Publications, 1997), 10.

<sup>3</sup> Babs Mala, "Christ Apostolic Church: Its Present Pre-occupation", in *African Independent Churches in the 80s*, ed. Babs Mala (Lagos: Organisation of African Instituted Churches, 1983), 67.

<sup>4</sup> The Directorate of Publicity and Publication, CACSA, *Christ Apostolic Church Students' Association: The vision and mission in thorns*. (Akure, The Directorate of Publicity and Publication, CACSA, 2005) 1.

<sup>5</sup> Ibid.

<sup>6</sup> Feyi Omolola, *A General in God's Army: A Biography of Samuel Oluwabusuyi Arijesudade*. (Osogbo, The Directorate of Publicity and Publication, CACSA 2010), 45-53.

<sup>7</sup> Ibid.





- <sup>8</sup> The Directorate of Publicity and Publication, CACSA, *Christ Apostolic Church Students' Association: The vision and mission in thorns*. (Akure, The Directorate of Publicity and Publication, CACSA, 2005), 2,6.
- <sup>9</sup> Adeware Alokun, *The Christ Apostolic Church* (Nigeria: Ibukunolu Printers Ltd., 1991), 267-273.
- <sup>10</sup> Tope Adeyemo (Pastor), CACSA General Secretary. Interview Respondent. Interviewed on 23/05/14 at CACSA National Camp Ground, City of Life, Osogbo.
- <sup>11</sup> Ibid.
- <sup>12</sup> The Directorate of Publicity and Publication, CACSA, *Christ Apostolic Church Students' Association: The vision and mission in thorns*. (Akure, The Directorate of Publicity and Publication, CACSA, 2005), 5-6.
- <sup>13</sup> Tope Adeyemo (Pastor), CACSA General Secretary. Interview Respondent. Interviewed on 23/05/14 at CACSA National Camp Ground, City of Life, Osogbo.
- <sup>14</sup> Richard Adejuyigbe, "The Early Years of C.A.C Students' Association (1970-1992)". In *The Stewardship of Pastor Olu Arijesudade*. (Lagos: Pesther Brands Ltd., 2014) 9.
- <sup>15</sup> Femi Adedeji (Prof).H.O.D Music Department, OAU, Ife. Interview Respondent. Interviewed on 16/05/14 at his church site, Truth of the Gospel Ministries, Ife.
- <sup>16</sup> The Directorate of Publicity and Publication, CACSA, *Christ Apostolic Church Students' Association: The vision and mission in thorns*. (Akure, The Directorate of Publicity and Publication, CACSA, 2005), 41-42.
- <sup>17</sup> Noah Akintemi (Pastor), Administrator, Children Boarding School and Christ Leads Secondary School, Osogbo. Interview Respondent. Interviewed on 23/05/14 at CACSA National Camp Ground, City of Life, Osogbo.
- <sup>18</sup> Ibid.
- <sup>19</sup> The Directorate of Publicity and Publication, CACSA, *Christ Apostolic Church Students' Association: The vision and mission in thorns*. (Akure, The Directorate of Publicity and Publication, CACSA, 2005), 41-42.
- <sup>20</sup> Tope Adeyemo (Pastor), CACSA General Secretary. Interview Respondent. Interviewed on 23/05/14 at CACSA National Camp Ground, City of Life, Osogbo.
- <sup>21</sup> Ayo Owoseye, "CACSA and the Man, Pastor Samuel Olubusuyi Arijesudade". In *The Stewardship of Pastor Olu Arijesudade*. (Lagos: Pesther Brands Ltd., 2014), 15.
- <sup>22</sup> Femi Adedeji (Prof).H.O.D Music Department, OAU, Ife. Interview Respondent. Interviewed on 16/05/14 at his church site, Truth of the Gospel Ministries, Ife;
- See also, Femi Adedeji, *Biblical Christian Leadership: In Honour of Samuel Olubusuyi Arijesudade*. (Ile Ife, The Truth Publishers, 2014), 1-247.
- <sup>23</sup> O. Ademola. "The Youths in Nation Building: A Case Study of Nigerian Baptist Convention Youth Organisations" (M.A Diss, University of Ibadan. 1994), 5.