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Mogadishu – Somalia, Tel: +252-699-777440/+252-1-858118/ + 252-617-240961

P. O. Box: 104722-00101

www.mu.edu.so

Email: research@mu.edu.so

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6. Titles should be font 18, while sub-titles should be font 16
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Note on Contributors

Dr. Said Abubakar Sheikh Ahmed, an Associate Professor, in the Faculty of Education and Postgraduate Program. He is also Dean of the Faculty of Arts and Humanities and Director of Research Unit at Mogadishu University. He has previously served as Executive Director of Formal Private Education in Somalia (FPENS) from 2004-2015 and has contributed to unification and development of educational curricula in Somalia after the collapse of the central government in 1991. He published several articles and conducted teacher training programmes related to education. He obtained an international certificate from Tuning Academic for the academic program of African universities on the course design of post graduate based on learning outcomes.

Email: baashaa4@gmail.com

Dr. Abdishakur Sh. Hassan Faqih, is An ssociate professor in education, a former Dean faculty of Education at Mogadishu University. He is a lecturer of curriculum and research methodology at MU, He is researcher and his interests include teacher trainings and He is currently involves professional development of higher education in Somalia.

Email: Faqih99@gmail.com

Abdirahman Ismail Dhaqane, is currently working in the Department of Civil Engineering at Mogadishu University, as a Dean Faculty of Engineering and lecturer, He holds a bachelor's degree (BSc) of Civil Engineering (Structural Division) and Master of Science (MSc) in the branch of structural engineering and water resources.

Email: musalsal03@hotmail.com

Mr. Abdulkadir jeilani, is a lecturer at faculty of computer science at Mogadishu University and researcher. He is perusing his Ph.D. from Asia e University, Malaysia. He obtained his Master Information Communication Technology Management, special Information security in 2014 from Asia e University, kuala lumpur– Malaysia and B.Sc. in Computer Science from Mogadishu University, Mogadishu – Somalia.

Email: eilani216@gmail.com

Mr. Ahmed-Nor Mohamed Abdi holds a BA and MA degrees in Public administration from Islamic University in Uganda (IUIU), Mbale, Uganda, in 2014. Since 2014, he has been a lecturer of Public Administration and a research methodology at Mogadishu University. From 2014 to 2016, he also served as assistant Dean of the faculty of Economics and Management Science. His current research interests include decentralization and local governance, good governance and public policy.

Email: ahmednor2012@gmail.com

Mr. Abdirisak Warsame Dirie has earned his MBA-HRM from Islamic University in Uganda (IUIU). He also holds a postgraduate diploma of project planning and management (PPM) at Makarere Institute of Business and Management (MIBM). He is a senior lecturer at Mogadishu University. Mr. Abdirisak is also activist in the civil society.

Email: crwarsame01@gmail.com

Mr. Adam Ahmed Hussen holds a master of Business Administration (Production Marketing) from the University of Science & Technology in Yemen. He is currently pursuing in PhD for Total Quality Management -TQM- at Asia e University Malaysia. He is also director of Planning and Quality Assurance, and a lecturer in different fields studies including business management, Islamic economics and marketing management, entrepreneurship at Mogadishu University. He has 14 years experience in higher education leadership and administration. Mr. Adam has a number of articles and conducted several training related his specialization.

Mr. Walid Abdulkadir Osman holds Master degree of Health Sciences and is a lecturer at Mogadishu University, Somalia. He is currently an assistant of Dean of Faculty of Health Sciences. His interests lie in community awareness for health care. Mr. Walid conducted several heath trainings both formal and non formal.

Email: waleedshaabani@gmail.com

Editorial

The Research Unit of Mogadishu University is pleased to publish the third annual scientific refereed journal in both English and Arabic languages which contributes to the development of knowledge, the solving of problems, and the development of society. This journal, therefore, is a platform for all researchers interested in publishing their research papers on all aspects of the life of the Somali society in particular and the region in general.

We would like to take this opportunity to express our readiness to welcome the participation of researchers to submit their research papers to MU scientific refereed journal to be published in future issues.

This issue contains fourteen research papers: seven articles in Arabic and seven in English. The areas that this issue covers are topics related to economics, management, education, religion, journalism, history, public health, and engineering, as well as computer and information technology. These disciplines reflect and represent most faculties of the university.

Finally, on behalf of the journal team, we would like to thank all those who contributed to the publishing of this issue. We especially thank the President of Mogadishu University, Dr. Ibrahim Mohammed Mursal, and also thank the Head of the research unit Dr. Said Abubakar Sheikh Ahmed, for their hard work and guidance towards the successful publication of this third issue of the university journal which we hope will continue to encourage further research among members of the university community and other researchers in Somalia.

Editor-in-Chief

*The Impact of Tuning Africa Project on Post Graduate at
Mogadishu University
“Case Study of Educational Management Department”*

Dr. Said Abubakar Sh. Ahmed

Head of Research Unit and Dean Faculty of Arts
and Humanities at MU

Abstract

This paper explores the impact of tuning Africa project on post graduate program at Mogadishu University (case study: educational management department). The author also illustrates generic and subject-specific competences as of MU educational management department .

The study methodology includes a survey of some contemporary literatures related to the article, descriptive and correlation methods. The target population includes post graduate students of educational management department at Mogadishu University as purposive sample . For the data collection, the author used pre-self established questionnaire as well as SPSS for data analyzing.

Finally, the author demonstrates findings, conclusion and recommendation of the study in line with the research questions.

Keywords: Impact, Tuning Africa , Project, Post Graduate Programe, Mogadishu University Educational management.

1. 1 Introduction

When the civil war broke out and Somali state collapsed in 1991, there was a profound destruction of all vital institutions and facilities including universities, colleges, schools, and educational gap emerged which led to establishing private education to fill the gap and provide educational opportunities for different levels as Somali government during period was not able to function and provide even basic services.

Mogadishu university is considered as the foundation stone of private universities established in Somalia after collapse of the central government 1991. The idea of establishing Mogadishu University refers to 1993 when professors and lecturers of Somali National University, who had fled from homeland to the world, returned to the country and met with some prominent society figures to discuss and agree the idea of establishing a university in the country (despite of the difficult circumstances) in order to break a barriers of despair and disappointment to help Somali students who have completed secondary education and unable to continue their education because of civil war. For this regard, Mogadishu University was officially opened on 22 September 1997 in Mogadishu (MU, Introduction, 2017).

A huge number of students with different disciplines and different levels of bachelor and Master's degrees have graduated from MU, since its inception. The university has, thus, prepared new labor market entrants for the workforce and skills as these graduate students play an important role in building human capital for economic development of the country. MU Post graduate program aims at fostering cognitive

development, providing professional specialization, contributing to the development of research projects and solving problems of the society.

The program includes joint studies between MU and other universities, and MU special program for degrees of higher diploma, master and doctorate degrees. (MU, International Relations, 2017, p. 21)

The University seeks to improve the quality of education for its various stages. It is worth mentioning that the University participated in the program of Tuning Africa 2016 for curriculum reform based on competences at post graduate programme (Educational Management Department) as subject area group (SAG), which was successful.

From October 24th to 28th 2016 MU participated in the Ninth Conference on leadership and skills development for the African universities organized by the Association of African Universities in Accra, the capital city of Ghana. It is worth mentioning that prior to this conference in Accra, the Association had announced the success of eighteen Universities of Africa, including MU, in the completion of the study implemented by University of Deusto- Spain-Tuning Africa Project via the internet on the formulation of objectives and learning outcomes for postgraduate studies in the light of the educational competencies . The study took place from February to September 2016 (MU, International Relations, 2017, p. 13).

1.2 Problem Statement

Tuning Africa Project is an opportunity for African universities in general, and in Somalia in particular, .One of the main strategies of Mogadishu University is to raise the academic level according to the international standards and therefore offered a great attention to this

project, the of Educational Management Department participated in the project and there is a great desire to expand participation.

To know the impact of Tuning Africa Project on the department mentioned above is the most important of academic work and worthy to be studied. For this purpose, the author tries to answer this main question: “to what extent is the impact of Tuning Africa Project on Post Graduate programme of Educational Management Department at MU?”

1.3 Significance of the Study

The importance of this article is that it is the first study conducted in Somalia according to the researcher's knowledge and could be an important reference for curriculum developers of higher education in Somalia.

1.4 Purpose of the Study

The purpose of this article is to find out the level/impact of Tuning Africa Project on Post Graduate Programme (Educational management Department) at Mogadishu University. The study targets teaching/ learning approaches (student centered approach) and assessment modes as well as values taught.

1.5 Hypotheses

The researcher will test the following four hypotheses:

1. There is a significant relationship between teaching, learning approaches and learning outcomes (competences).
2. There is significant relationship teaching, learning approaches and learning values.
3. There is a significant relationship between assessment and learning outcomes (Competences).

4. There is a significant relationship between assessment and learning value.

2. literature Review

2.1 Concept of Tuning Africa

Definitions of Term Tuning

Three definitions encompass most of the reality of Tuning (University of Deusto, 2005, p. 3)

- Tuning is a project for the universities and by the universities.
- Tuning is a network of communities of learners.
- Tuning is a methodology for designing and implementing degree programmes.
- Tuning Africa Project There are two main projects in Africa (University of Deusto, 2005, p. 7)
- Feasibility Study on the Relevance of a Tuning Approach in higher education for Africa (1 March 2010 – 28 February 2011).
- Tuning Africa - EU Strategies Tuning Seminars (25 September 2011 – 31 March 2013).

There are 31 countries involved in Tuning Africa project: Algeria, Benin, Botswana, Burundi, Cameroon, Central African Republic, Congo, Democratic Republic of Congo, Egypt, Ethiopia, Gabon, Ghana, Ivory Coast, Kenya, Madagascar, Malawi, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Senegal, Somalia, South Africa, South Sudan, Tanzania, Tunisia, Uganda, Zambia, Zimbabwe.

2.2 Definition of Generic Competences for Africa

The Tuning Africa Project began at the end of 2011 (Onana, et al., 2014) one of its first tasks was to define generic competences for Africa.

Each Subject Area Group (agricultural sciences, civil engineering, mechanical engineering, and medicine and teacher education) was asked to submit a list of the generic competences considered to be relevant to their perspective. As a starting point for preparing this list, they were given the thirty-one generic competences identified in Europe (Deusto, 2000) the twenty-seven generic competences identified in Latin America (<http://www.tuningal.org>), the thirty generic competences identified in Russia (<http://www.tuningrussia.org>) and a range of contributions from different participants in the project. At the first General Project Meeting, held in Yaoundé, Cameroon, in January 2012, the five Subject Area Groups (SAGs) working at that time discussed a proposal for the generic competences. The five groups presented a compilation of the generic competences in draft form, and the five coordinators agreed on a final list. List of generic competences agreed upon for Africa are as the following:

1. Ability for conceptual thinking, analysis and synthesis.
2. Professionalism, ethical values and commitment to Ubuntu (respect for the well-being and dignity of fellow human beings).
3. Capacity for critical evaluation and self-awareness.
4. Ability to translate knowledge into practice.
5. Objective decision-making and practical cost-effective problem solving.
6. Capacity to use innovative and appropriate technologies.
7. Ability to communicate effectively in both the official/national and the local languages.
8. Ability to learn how to learn and capacity for lifelong learning.

9. Flexibility, adaptability and ability to anticipate and respond to newsituations.
10. Ability for creative and innovative thinking.
11. Leadership, management and teamwork skills.
12. Communication and interpersonal skills.
13. Environmental and economic consciousness.
14. Ability to work in an intra- and intercultural and/or international context.
15. Ability to work independently.
16. Ability to evaluate, review and enhance quality.
17. Self-confidence, entrepreneurial spirit and skills.
18. Commitment to preserve African identity and cultural heritage

Analysis revealed the following top five generic competences for African higher education in all the identified disciplines (Hahn & Teferra, 2013, p. 16).

1. Ability for conceptual thinking, analysis and synthesis.
2. Professionalism, ethical values and commitment to UBUNTU.
3. Capacity for critical evaluation, and self-awareness.
4. Ability to translate knowledge into practice.
5. Objective decision making and practical cost effective problem solving.

2.3 Competency Based Curriculum

According to a report by U.S. Department of Education (2002), the importance of implementing competency-based initiatives in colleges and universities lies in two major reasons;

‘One main reason is that specific articulations of competencies inform and guide the basis of subsequent assessments at the course, program, and institutional levels. Secondly, specific competencies help faculty and students across campus, as well as other stakeholders such as employers and policymakers, to have a common understanding about the specific skills and knowledge those undergraduates should master as a result of their learning experiences’.

Therefore demand from the stakeholders is also leading to the emphasis on competency based education according to Jothika.(as cited in Choudaha, 2008).

Competency based curriculum summarizes academic and professional profiles, defines new objectives in the learning process, enhances learning environments and shifts the concept of learning as accumulation of knowledge to learning as a permanent attitude towards knowledge acquisition as described by Jothika.(as cited in Edwards et. Al, 2011).

The main idea of competency-based curriculum illustrates by Jothika.(as cited in Sudsomboon, 2007)

1. Instead of objectives, think “competencies”;
2. Instead of content, think outcomes;
3. Learner activities will be based on performance of learner and accomplishment of criteria;
4. Teaching activities are learner centered;
5. Formative evaluation is necessary).

The characteristics of competency-based education (CBE) are given by Globalization & Jothika.(as cited in Kouwenhoven, 2003).

– CBE is oriented to the professional practice.

- CBE is learner-centered and the learning process is central.
- CBE has a constructivist approach.
- In CBE the role of the teacher is that of a ‘cognitive guide’.
- CBE has learning environments focused on the development of competencies.
- CBE includes the development of generic competencies.
- In CBE assessment focused on competencies.
- In CBE curriculum development is based on the elaboration of profiles and identification of competencies.

2.4 Learning outcomes

The word “outcomes” will mean different things depending on the level of analysis and the kind of results of an academic experience that we are talking about (Tam, 2014, p. 4).

Learning outcomes are statements of what the teachers intends the learner know, do, understand and be able to demonstrate after the completion of learning. Detailed intended learning outcomes inform a single course unit or module (Serbati, 2015). Outcomes-based approach in higher education in recent decades there is a widespread interest in the outcomes of educational experiences and how those outcomes meet a variety of societal needs.

Learning outcomes are important for recognition...The principal question asked of the student or the graduate will therefore no longer be “what you do to obtain your degree?” but rather “what can you do now that you have obtained your degree?” This approach is of relevance to the labour market and is certainly more flexible when taking into account

issues of lifelong learning, non-traditional learning, and other forms of non-formal educational experiences (Tam, 2014, p. 2).

Literature on teaching in higher education has developed specific research fields about teacher conceptions of teaching and competence-based learning.

The concept of “competence” refers to a quality, ability, capacity or skill that is developed by and belongs to the student. Competences are developed in all course units and assessed at different stages of a programme. Some competences are subject-area related (specific to a field of studies), while others are generic, since students develop in their careers an integrated body of knowledge and skills from many different disciplines as well as transferable skills such as problem solving, critical and creative thinking, communication and leadership skills (Surian, 2014, p. 2).

In this context, the Tuning methodology offers concepts and operational tools to align Higher Education programmes with agreed learning outcomes and competences and qualification levels, answering to the need of labor market as well as the need of young people. To design courses based on intended learning outcomes (ILO) that are consistent and aligned with related teaching, learning and assessment techniques, it is crucial to apply a programme designing approach which optimizes the conditions for the quality of learning.

This approach requires a personal commitment by the teacher who focuses on the students’ learning outcomes and considers these the main goal of the learning and teaching process (Surian, 2014, p. 3).

The Main Characteristics of a Student-Centered Approach (Marinko, et al., 2016)The main characteristics of a student-centered approach are [MAO1] the considerations given to individual learners' experiences, perspectives, backgrounds, interests, capacities and needs Irena Marinko et al.(as cited inSchout& Harkema, 2008). Within this approach teachers mainly focus upon what students should learn and emphasize why (Irena Marinko et al. (as cited inBransford& Bateman, 2002).

Teachers take into account the existing knowledge of students, as Irena Marinko et al. (as cited in Bransford, Brown, Cocking, 2000; Protheroe, 2007)provide different opportunities for students to learn, often change teaching methods, help students who have difficulties and consider their background. Teachers discuss withstudents which study activities lead to good results, expose students to looking for alternatives and try to find their own solutions.

Examination questions refer to real-life situation and do not lead to categorizing students with regard to their scores or grades. The basic conditions for an effective learning situation are the learning environment in which learners feel safe and accepted; numerous opportunities for students to confront new information, experiences, and personal discovery of new understandings that are all adapted to the individual students and their pace of learning Irena Marinkoet al.(as cited in Mc Combs et al., 1997 .p.11).

**Table 1 Subject Specific Competences-Educational Management
Department at Mogadishu University**

<i>Knowledge</i>	<i>Skills</i>	<i>Values</i>
<ul style="list-style-type: none"> • Capacity to identify and analyses the constitutional characteristics of an organization. • Ability to choose how to respond to any situation, regardless of circumstances. • Capacity to identify, explore and use actual “web” ICT tools. • Ability to use critically how to organizing educational processes. • Ability to conduct scientific research methods. 	<ul style="list-style-type: none"> • Leadership skills , • managing human recourses, • developing human recourses • critical thinking skills, • solve problem • planning skills, • setting and evaluating strategies, • finance management • Ability to conduct research in the field of education and apply the results in educational practice. 	<ul style="list-style-type: none"> • Ability to foster social cooperation with various agencies and community members in order to promote the development of educational processes. • Ability to adopt the social value of the society. • Entrepreneurial spirit • Ethical commitment and professional attitude • Social responsibility and civic awareness

2.5 Intended Learning Outcomes at Mogadishu University

Based on generic competences of tuning of Africa, MU developed the following ILO’s for educational management department (MU, Syllabus of Educational Management Department , 2017) ability to:

- Provide concepts of management and their application in education environment.
- Apply statistics in education management.
- Recognize organizational behavior & Organization Theory in Education.

- Identify educational Technology
- To foster leadership skills
- To equip skills of planning, Solving problem, critical thinking and the assessment.
- To Apply scientific research in education
- To use practically howto organizing educational processes.
- To acquire experience of finance management and marketing in educational system
- To enhance the skills of human resource development.
- To improve communication skills in management.
- To choose title of thesis and prepare dissertation graduation
- To adopt the social value of the society.
- To foster ethical commitment and professional attitude
- Ability to foster social cooperation with various agencies and community members in order to promote the development of educational processes. Social responsibility and civic awareness the Concept of Competence.

According to (Nikolov, Shoikova, & Kovatcheva, 2014) the concept of competence can bridge the world of education, Training, knowledge management, and informal learning. There are a lot of examples of competence definitions.

The researchers in the field of competence have given various definitions for what competencies are: permanent distinctive traits and characteristics which determine performance; distinctive characteristics which differentiate the successful performer from the rest; an ability to reach goals; inner personality traits that allow a person to

cope better with a given task, role or situation; knowledge, skills, abilities and other characteristics demonstrated at work, etc.

Tuning Educational Structures in Europe defines competences as a dynamic combination of knowledge, understanding, skills and abilities.

The International Board of Standards for Training and Performance Instruction (IBSTPI) defines a competency as “a knowledge, skill, or attitude that enables one to effectively perform the activities of a given occupation or function to the standards expected in employment” (Nikolov, Shoikova, & Kovatcheva, 2014, p. 5).

As Nikolov, Shoikova, & Kovatcheva (ascited in Lisbon, 2010) write there are seven universal key competencies:

- Communication in the mother tongue;
- Communication in foreign languages;
- Competence in mathematics, science and technology;
- Digital competence;
- Ability to learn;
- Intercultural and social competencies, and civic competence;
- Intuitiveness and entrepreneurship.

Competency is an educated person who does not just “know” but can also “do” (Klein-Collins, 2013, p. 5). Competency refers to an element or combination of knowledge, skills and attitudes that an individual should be able to use to perform at work, school or other environments.

Teaching is one of the most complex professions that requires a combination of content knowledge, pedagogical skills and professional attitudes (UNESCO , 2016, p. 4).

2.6 Competency-Based Assessment

Competency-Based Assessment has become a predominant workplace reality, commonly used as an organizational development tool for the learner. Built upon earlier work on skills, abilities, and cognitive intelligence, it became a tool for understanding the talent and capability of human capital within an organization.

The benefit of collecting data of this kind is that the person gets to see a panorama of perceptions rather than just self-perception, thus affording a more complete picture (Jacquelyn & Baughman, 2012, p. 15).

Assessments are the only way that the students demonstrate knowledge and skills; thereby, having relevant and up to date assessments is essential to a CBE program (Cunningham, 2016, p. 12).

2.7 Challenges of Implementing Competency Based Curriculum

Regarding the implementation of the intended curriculum, it is extremely important that intended learning outcomes (competencies), teaching & learning approaches and assessment are aligned according to Jothika (as cited in Kouwenhoven, 2009). The higher education system as a whole should be flexible for ensuring proper alignment of competency based curriculum. Various regulatory authorities along with rules and regulations of universities may prohibit the experimentation and innovation in case of implementing competency based curriculum. Reforming a curriculum towards a more competence based approach implies more autonomy for the educational institution offering the educational programmers by Jothika.(as cited in Kouwenhoven, 2009).

3. Methodology

This research is descriptive study of correlational type. It investigates the relationship between Tuning Africa Project and post graduate Programme (Educational Management Department) at Mogadishu University. The Tuning Africa Project is an independent variable and post graduate Programme (Educational Management Department) is dependent variable.

The population sampled for this study focused on all graduates of educational management at MU (12) 2016/2017. Both combined pre-self established questionnaire was the instrument used in this study for the data collection. The author used SPSS for data analyzing .

4. Data Analysis and Discussion of Findings

The Statistical Package for the Social Sciences (SPSS) computer program was used in this study to analyze the data collected and formulated hypotheses were analyzed using Pearson correlation statistics to determine the relationship that exists between Tuning Africa Project and post graduate program - Educational Management Department at Mogadishu University. All hypotheses were tested at 0.05 as significance level.

Table 2: Teaching and Learning Approaches:

Statement	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	F	%	F	%	F	%	F	%	F	%
Problem based learning	0	0	6	50	6			0	0	0
Small group based activities	0	0	6	50	2		4	33	0	0
Classdiscussions	0	0	7	58	2	17	3	25	0	0
Projects	0	0	9	75	0	0	3	25	0	0
Cooperating in research activities	0	0	9	75	0	0	3	25	0	0
Use of role plays	0	0	0	0	4	33	8	67	0	0
Textbooks	0	0	0	0	0	0	12	100	0	0
Additional slides	0	0	0	0	4	3	8	7	0	0
Researcharticles	0	0	0	0	0	0		0	12	100
Popular scientificliterature	0	0	0	0	0	0	12	100	0	0

The table above describes the respondents towards teaching and learning approaches. The 50% of the respondents agreed strongly that the lecturers conducted, problem based learning and small group based activities methods, 58% of the participants agreed that class discussions are conducted meanwhile 75% of them agreed that project and cooperating research methods are used and the text books are followed 100% while slides are not employed, 67% of the participants disagreed. Finally, the majority of the respondents 100% disagreed that research articles and popular scientific literature are used in teaching and learning process.

Table 3: Assessment

Statement	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	F	%	F	%	F	%	F	%	F	%
Summative	12	100	0	0	0	0	0	0	0	0
Formative	12	100	0	0	0	0	0	0	0	0
Flexible	0	0	0	0	0	0	0	0	12	100
Making feedback directed to wards the task	0	0	6	50	6	50	0	0	0	0
Discussion on strengths and weaknesses	0	0	0	0	11	92	1	8	1	
Explaining mistakes advice how to improve	0	0	6	50	6	50	0	0	0	0
Help to focus on skills relating to a deep approach to learning	0	0	6		6	50	0	0	0	0

Table 3 shows that the common use of assessing ILO's in intended learning outcomes are summative and formative 100%. There is no any flexibility of assessment while the making feedback directed to the task is 50% and the discussion on strengths ad weakness rated 50% as well as the level of explaining mistakes and helping to focus on skills to deep approach to learning proportionally are 50%.

Table 4: Learning Outcomes (Competences)

Statement	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	F	%	F	%	F	%	F	%	F	%
Capacity to identify, analyses the characteristics of educational organization	0	0	4	33	8	67	0	0	0	0
Ability to choose how respond any situation _of circum stances	0	0	5	42	7	58	0	0	0	0
Capacity to identify and use actual web ICT tools	2	17	3	25	6	50	1	8	0	0
Ability to identify use critically educational processes	2	17	3	25	6	50	1	8	0	0
Leadership skills	2	17	3	25	6	50	1	8	0	0
Managing human resources	0	0	4	33	7	58	1	8	0	0
Critical thinking skills	0	0	4	33	7	58	1	8	0	0
Solve problem	3	25	5	42	4	33	0	0	0	0
Planningskills	5	42	4	33	3	25	0	0	0	0
Setting and evaluating strategies	2		3	25	6	50	1	8	0	0
Ability toconductresearch in educationalpractice	2	17	3	25	6	50	1	8	0	0
Ability to foster social cooperation in order to promote educational processes	1	8	3	25	7	58	1	8	0	0

Table 4. Indicates the level of learning outcomes hat student acquired during teaching and learning process. The most ratio concentrated on agree and neutral alternatives 17% to 58% from responses of the

population study, this shows positive results of learning outcomes level such as capacity of analyzing critically characteristics of educational organization, using actual web ICT tools, managing human resources, critical thinking skills, Solving problems, conducting researches and evaluating strategies in educational practice as well as leadership skills and ability to foster social cooperation in order to promote educational processes.

Table 5: Values

Statement	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	F	%	F	%	F	%	F	%	F	%
Ability to adopt the value of the society	12	100	0	0	0	0	0	0	0	0
Ethical commitment and professional attitude	5	42	7	58	0	0	0	0	0	0
Social responsibility and civic awareness	8	67	4	33	0	0	0	0	0	0

Table 5 illustrates the level of value skills of the students where 100% of respondents agreed strongly that they have ability to adopt the value of the society and 58% agreed that they have ethical commitment and professional attitude and 67% of respondents agreed strongly that they have social responsibility and civic awareness. This highlights positive results of values acquisition.

5. Testing Hypotheses

The researcher tested hypotheses study with 0.05 as significance level. The results of the study are presented as below:

Ha₁. There is a significant relationship between teaching, learning approaches and learning outcomes (competences).

Table 6. Correlational Analysis of Teaching, Learning and Learning Outcomes (Competences)

<i>Variables</i>	<i>Calculated Value</i>	<i>Sig</i>	<i>Decision</i>
IV1. Teaching and Learning Approaches	.538	.036	Ha ₁ . accepted
DV 1. Learning Outcomes			

Table 6 shows that calculated value of correlation of 0.538 is positive value of correlation and the sig value of 0.036 is less than at 0.05 level of significance, thus, the hypothesis which states there is significance relationship between teaching, learning approaches and learning outcomes (competences) was accepted.

Ha₂. There is a significant relationship between teaching, learning approaches and learning values.

Table 7. Correlational Analysis of Teaching, Learning and Learning Values.

<i>Variables</i>	<i>Calculated Value</i>	<i>Sig</i>	<i>Decision</i>
IV1. Teaching and Learning Approaches	.605*	.018	Ha ₂ . accepted
DV 2. Learning values			

Table 7 describes that the level of correlation between teaching, learning and learning values is 0.605 and the sig value of 0.018 is less than at 0.05 level of significance, thus, the hypothesis which states there is a significant relationship between teaching, learning approaches and learning values was accepted.

Ha₃. There is a significant relationship between assessment and learning outcomes (Competences).

Table 8. Correlational Analysis of assessment and learning outcomes (Competences)

<i>Variables</i>	<i>Calculated Value</i>	<i>Sig</i>	<i>Decision</i>
IV2. Assessment	.583	.030	Ha 3. accepted
DV 1. Learning Outcomes			

Table 8 shows that calculated correlation of 0.583 is positive correlation and the sig value of 0.030 is less than at 0.05 level of significance. This means that the hypothesis which states there is a significant relationship between assessment and learning outcomes was accepted.

Ha₄. There is a significant relationship between assessment and learning values.

Table 9. Correlational Analysis of assessment and Learning Values

<i>Variables</i>	<i>Calculated Value</i>	<i>Sig</i>	<i>Decision</i>
IV2. Teaching and Learning Approaches	-.356	.141	H 4. rejected
DV 2. Learning Values			

Table 9 shows that calculated value of correlation of -0.356 is negative value of correlation and the sig value 0.141 is greater than at 0.05 level of significance, thus, the hypothesis which states there is a significant relationship between assessment and learning values was rejected.

6. Conclusion

Based on the analysis of data collected that there is relationship between Tuning Africa Project and Post graduate at Mogadishu University, particularly educational management department. The study found out the relationship between teaching, learning approaches and learning outcomes (competences) and values. The study has also revealed the relationship between assessment and learning outcomes (competences) while there is no relationship between assessment and value.

7. Recommendations

According to the findings of the study, the following recommendations are presented:

- Continuity of training on good practice competences-based student-centered approach in higher education in accordance with Tuning Africa to enhance skills of lecturers.
- Strengthening the sources and required materials by teaching methods in higher education.
- Flexibility and developing assessment modes based on competences based student centered.
- Expand Tuning Africa Approach to other specializations/faculties at Mogadishu University.

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Policies and Reforms of Educational Systems in Somalia
(A Review of the Current Situation)

Dr. Abdishakur Sh. Hassan Faqih,

An Associate Professor – Faculty of Education at Mogadishu Univeristy

Abstract

Since the collapse of the Somali government in 1991, the education system Policies have not been reformed. There are many controversy steps to reform the policies and the legal framework but hardly been the subject of any steps forward. This study presents the current situation and how to improve the quality and minimum standard in near future. Meanwhile some efforts organized to initiate discussing education policy and act framework, but informal decentralized system in the country sparked much delays. At the same time, there is a risk of fragmentation in school management between public and private schools limiting the quality impact of education and skill development on students.

The Significance of the study focuses on the strengths and challenges in the current education policy to assist accessing a good quality education and help educational policy-makers, planners, and other interested parties to make appropriate decisions concerning accessibility and quality of education system in Somalia. The study uses a documentary study review method to collect and analyze data of texts and documents available in the ministry of education databases (EMIS), International NGO's, and search function provided by Google and

Google scholar. It concludes that the absence of central accreditation and quality assure institutions created poor quality outcomes, which completely affected the education system totally. The demand for policy reform is absolutely necessary to address the education qualities and standards in the current school system.

Eventually, the study recommends that emphasis to be given the whole education system policy and quality control assuring strategy mechanism, designed around the students and learning, build teachers' capacity, and engage all public and private sectors.

Keywords: Policy, Reforms, Educational Systems, Current Situation, Quality, Accreditation

1.1 Introduction

Globalization has exerted much pressure on governments of today to redefine their roles in relation to education. In today's world, educational policies have increasingly been thought about and made within the context of the pressure and requirements of globalization (Segrera, 2010).

The two main bases of globalization have been identified as information and innovation, which are highly knowledge intensive (Carnoy, 2005). Education, in this case, has been applied to the process of globalization through a knowledge economy. In the knowledge economy, education is a crucial factor to ensure economic productivity and competitiveness in the international context (Nogueira & Jaana, 2013).

Somalia needs to consider as it endeavors to attain the ideals of education goals. The identification policy priorities have been set

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within the context of the identified educational challenges prevailing in the country learnt by the institutions collapse consequences and the new constitution of federal administration challenges about specific policies and practices could be on the march.

1.2 Statement of the problem

Education scope is to promote national development. Even with this consensus, many differed opinions have come out as to: How we want to be the Somali education system? Who will benefits from that education? And why should the education policies reformed? Such questions arise because it is not clear as to whether education is a private or public good. Such differences have existed in Somalia leading to policy reforms. However, these policy reforms had a different intension leading to different outcomes. Since the government of Somalia collapsed, there has been great desire to revitalization Somali education policies systems to shift in education cycle.

1.3 Objectives of the study

The objectives of the study are:

- 1- To trace the reforms of education policies and standards in Somalia education system.
- 2- To identify current situation reform policies by the federal government to expand access to education and assure quality.
- 3- To identify challenges facing education system in Somalia.

1.4 Research questions

- 1- How has been the reform of education policies and standers in Somalia education system?

2- Is there a policy reformed by Somalia currently to expand access to education and assure quality?

3- Is there a challenge facing the education system in Somalia?

This study responds to these questions by examining education system from Somali perspective, and then proceeding to draw recommendations.

1.5 Significance of the study

The study is focusing on the strengths and challenges in the current education policy to assist accessing a good quality education and also help educational policy-makers, planners, and other interested parties making appropriate decisions concerning accessibility and quality of education system in Somalia.

1.6 Methodology

This study will look at the education systems of Somalia, and then explore their strengths and critics from experts' opinions. It used documentary study review method to collect and analyze data. Documentary review method of research involves the analysis of texts and documents that contain data in line with the research problems (Gaborone, 2006).

Documentary research is concerned with analysis, synthesis and interpretation of data to find patterns and generalized results so as to address research questions. The study conducted a literature search for qualitative studies published within the Somali education from International NGO's, Ministry of education databases (EMIS) and computer search function provided by Google and Google scholar.

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The study employs critical case sampling that involves selecting a small number of important cases to yield the most information with greatest impact on the development of knowledge (Palinkas,2015).The sample was limited to published peer-reviewed journal articles and government documents because they have generally attained higher quality standards and they are a principle source of scholarly evidence (Hancock &Algozzine, 2015).A total of 19 documents were obtained and read with 11 articles selected for final analysis owing to their relevance and depth. The study employed qualitative analysis to identify the history, strengths and challenges faced by education policy reforms in Somalia (Kuckartz, 2014).

1.7 Background of the study

Historically, the education system in Somalia was dependent on Islamic methodology; Arabic language was medium of instruction in precolonial era. During the colonial period, British and Italians in traduced their languages into the Somali education system. Western donors consolidated the two systems in 1960 to assist education system in the country (Ministry of Education, 1976)

The history of colonial period, Somali's education system policy was disorganized and fragmented, that led to change its philosophy in post-independent to unify and address into the enrollment policy, curriculum activities, teacher training, text-books, medium of instruction. To achieve satisfactory levelin education system after the independence, the governments were determined to adopt suitable policies and strategies to improve the content of education in the country (Ministry of Education, 1976).

As part of unifying policy in education system after the independence, the system comprised of three levels—elementary, intermediate, and secondary, in which each of them was four years. Expansion of education was most vital option in Somalia during that period, so “at the advent of independence the total school population was 19,872. This increased to 42,156 in 1969.” According to Ministry of Education, year book, (1976):

Year/ Level	Elementary	Intermediate	Secondary	Total
1960-1961	16,332	22,790	750	19,872
1963-1964	20,848	4,818	1,117	25,666
1966-1967	21,050	7,532	2,218	30,800
1969-1970	23,842	14,129	4,185	42,156

(Source: Ministry of Education, 1976)

In the military period the policy encouraged a high level admission in the schools in general due to strong desire of local ownership of revolutionaries' policy. The Ministry of Education (1976) stated that “The total enrollment in the elementary schools increased from 23,842 in the school year 1969-1970 to 67,406 in 1973-1974. The intermediate schools also increased from 14,129 in the school year 1969-1970 to 25,688 in 1973-1974 and the secondary schools or their equivalent increased from 4,185 in the school year 1969-1970 to 10,586 in 1973-1974. (The Ministry of Education (1976).

From 1972, the policy encouraged those who passed the Centralized Intermediate Examination to eligible for admission in general and technical secondary schools or other post intermediate vocational schools. In spite of general schools there were facilities for post intermediate training in technical and commercial subjects, the length of training was varies from 2-4 years (Ministry of Education, 1976).

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Before 1973 there were three technical institutes in the country. One of them dealt with the construction trades such as carpentry and joinery and attached to it was a two-year clerical training center. Other deals with motor vehicle mechanics, farm equipment repair, general mechanics and electricity. In third technical institute – a four years secondary school in which general mechanics and electricity were included in a broad secondary programme. In that year a Maritime vocational school upgraded to a full Maritime and Fishery Institute, Agriculture Institute and a two years Polytechnic secondary school at Lafole started its admission. (Ministry of Education, 1976) On the other hand, the introduction of the Somali language as a medium of instruction in the schools was the most important step taken in the early seventies in education policies.

In terms of higher education policy, University Institute of Mogadishu was established in 1954, it grew out of Scuola Politica Administrative, an education center specifically designed for the speedy training of Somali officials in the art of public administration. Scuola Politica Amministrativa served as useful purpose in producing Somalis who were badly needed in the rapid Somalization of the administrative machinery. At a later stage, it was felt that a more formal university education was needed for highly administrative posts in civil service, so this feeling culminated in the establishment of the University Institute with faculty of Law and Economics. (Ministry of Education, 1976).

In academic year of 1970-71, the first group of students graduated from the faculty of law and economics. It was first time offered university degrees in Somalia. (Ministry of Education, 1976) Since that time great political desire has been given to broadening of the Somali National University (SNU).

From devastated conflict in 1991, Somalia has experienced in protracted turmoil; the violent conflict left whole Somalia without function government institutions including basic services such as education. Access to education remains, so far, limited, despite the fact that the private sector has restored schools and university studies in early time from 1995, teachers and instructors have been re-established, and curricula and textbooks transported from different countries assigned students but there was no governing body delegating national rules and policies on education system. Since the central government restored, it's unable to govern effectively in many socio-economic parts in the country, the ministry of education could not able framing establishment standards and quality assurance policies, providing substantial financial support in education, or imposing accountability for country education instrument. Thus education has been left largely up to community and individual efforts.

2 Literature Review

2.1 Conceptualization and Role of Education

International instruments and declarations proclaim the right of all individuals to have an education, which sets the foundation for the promotion of all human rights. The right to free expression, the right to equality and the right to have a voice in decision-making with regard to social and educational policies are integral parts of education. (United Nation University, Revitalizing Higher Education in Sub-Saharan Africa, project report, 2009)

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The world's commitment to the provision of education to all has a long history. The first such commitment was in 1948, when the Universal Declaration of Human Rights was published. In that declaration, education was recognized as a fundamental human right for the multifaceted development of individuals and of society. In particular, it was declared that elementary education should be free and compulsory and that the higher levels of education should be accessible to all on the basis of merit. (United Nations 1948). Why was education made such a critical focal point of the socio-economic and political development of nations in the first place? In the 1970s and 1980s, the view of education as a public good was given impetus by the evolution of human capital theory, which focused on in economics of education. Studies by the likes of Gary Schultz and George Psacharopoulos purported to have established a positive relationship between schooling and economic growth. They argued that both the individual and society benefited from an educated populace, that investing in education had both private and social rates of return. The argument was that "a more educated society may translate into higher rates of innovation, higher overall productivity through firms' ability to introduce new and better production methods, and a faster introduction of new technology"(EFA Global Monitoring Report, 2005, P 41).

The United Nations General Assembly adopted the Millennium Declaration in 2000. In formulating a plan for achieving the objectives of the declaration, it came up with 8 goals, 18 targets and 48 indicators that collectively came to be known as the Millennium Development Goals (MDGs). The MDGs are "a set of time-bound and measurable goals and

targets designed to decrease poverty, hunger, disease, illiteracy, environmental devastation and discrimination against women” (Wagner, 2007). The MDGs obliged all governments to have in place programmes and strategies that will ensure achievement of the MDGs by 2015. But Somalia faced by internal big challenges to fulfill its MDG’ commitment and failed to improve one indicator of the goals specially the education sector.

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Since rehabilitation started, the government’s ministry of education was dependent on a small grant from UN agencies randomly that meant the implementation of policy options and strategies in education system remains entirely dependent upon donors pooling funding.

The ministry of education with support of UN and other international organizations initiated efforts to reform the national education policy, but clear strategy framework collaboration was missed, so many duplicated documents have been made. There were three duplicated proposals since 2005, which one of them has never been approved by the parliament. (Ministry of Education, Planning Sector Report, 2015)

The last final draft of National Education Policy proposed in 2016 stated that “The absence of a consolidated Education Sector Policy document to address the education and training needs resulted in some departments and components operating as ‘islands’ and not ‘talking’ to each other as expected, thus leading to duplication of efforts and wastage of resources” (Ministry of Education, Culture and Higher Education, Policy Sector Report, 2016). This last draft of policy document indorsed by the cabinet, but the parliament has not yet approved it.

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In 2013, the Ministry of Human Development and Public Service (Six national sector services combined in one institution body) asked to share an idea with UNICEF to raise fund to the urgent need for expansion of education services. The program called the Go to School (G2S)*. (UNICEF, 2013-2016) the program was look like broad advertisement propaganda that was criticized by the local educator experts and private teachers (Al Jazeera Arabic 16/10/201). It rather seemed as an exaggerated advertisement slogan and self benefit program, because the reality of schooling revived in earlier 1995-1996 was not mentioned or indicated. The (Go2S) seemed as a start point now. However, The Minister and UNICEF proposed to target one million children and youth in three years without a national plan and strategy in account, the effort was dependent on a beautiful dream and absolutely shining views in front of the donors. The challenge was big; one million students in one year without basic education architecture and national planning were incredible. To achieve like this ambitious goal there must be a strong commitment in the national level.

The first step, the program inevitably needed for a significant fund, an interim support from international NGO's was not enough; so, the government committed to pay 50% of go to school teachers' salary, the amount was (100\$). But the promise not fulfilled by the government; so many teachers are left without any predictable form of remuneration. The program totally collapsed.

(*) Go to School or Back to School campaigns in over 55 countries since 1994 following the Rwandan genocide. These initiatives have become powerful strategies in facilitating access to learning for millions of children. These concerted efforts have helped to raise the credibility of both the government and a right-based approach to education. (UNICEF 2016)

The Somali national education financial strategy still is in critical point, over all education national budget remains very low, so the role of the government to coordinate education services inequities between the regions and districts, and also public and private levels. For instance, in the last two years the ministry of education of federal government started to implement centralized secondary school leaving certificate examination on private schools in Mogadishu and surround area, although the ministry has never had one class of secondary school since 1991, you may ask what sort of content applying on the student learning evaluation. If many people say it's a very good step forward into the real governing mechanism, but what good for what? In this case, the private education umbrellas own their secondary examination and certification in parallel. So, the two different examination results in one student; how the result will be valid to certify the student outcome, if the two outcomes are not matching each other? Really, this double standards in the reliability of two parallel learning outcomes causes psychological impact on the students and their parents, due to lack of education policy giving consideration for what they learned only.

The ministry's efforts facing now many challenges to take its roles, for instance:

- There is no clear education policy approved up till now, many-duplicated meeting efforts were made without necessary outcomes.
- All School building rehabilitation in Mogadishu and some areas in the other regions inaugurated, but the ministry has no capability to run it, due to resource capacity.

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- Teacher's issue is more critical point; in terms of their preparation policy, certification, licensing, recruiting, training and the salary rate. The teachers' salary is not same rate of other civil servants who is working in the government institutions, so the impact the inequities of qualifications would be disastrous in the education fieldwork and quality assuring policy.
- Lack of clear policy and strategy about public and private partnership in national education framework.
- There is also lack of reliable data related entire education framework in Somalia, the ministry Statistical Yearbooks data validation is questionable, because many gaps werenot considered. (National Education Statistical Yearbook, Federal republic of Somalia, 2013-2014).

In terms of higher education, the situation reflects that prevailing at other levels of the education system. Although the system developed considerably in the level of quantity, but some universities studying conditions are not keeping in track; due to increasing number of universities with poor infrastructure and adequate resource, lack of supply and learning materials, while laboratories and library facilities are insufficient.

2.3 Quality Issues in Education Policy

Since the World Conference on Education For All, which took place in Jomtien, Thailand (UNDP, UNESCO, UNICEF and IBRD, 1990), and the World Education Forum of Dakar (UNESCO, 2000), the recommendations submitted during major international meetings and the accompanying research have all placed emphasis on quality.

On the quality front, policies need to be developed that will ensure improvement of the quality of education provided. It is generally accepted in the literature that the concept of quality is a contested one, primarily because it is a relative (as opposed to absolute) concept. What might be considered, as quality education today may not be quality education tomorrow? For this reason, it is pointless to search for a fixed definition of “quality education”. Rather, it is conventional to describe quality in education in terms of such indicators as the percentage of trained teachers, pupil–textbook ratios and pupil–teacher ratios. (United Nation University, project report, 2009)

Quality is mainly the result of a combination of five factors. The first of these relates to policies on education, which in turn leads to the second factor, financing. The third factor has to do with enrolment and retention. The fourth concerns mainly content and teaching strategies, while the fifth is devoted to human and material resources. Among these five factors, two appear to have a significant impact on the outcomes of educational action: first, contents and strategies and, second, resources. Contents and strategies are important because they reflect political orientations and put them into operation in the form of educational measures that can be effectively observed. Resources, meanwhile, form a series of relevant indicators regarding the determination to implement policy decisions. Programmes, strategies and resources are vital for education because they play a direct role in shaping people and in helping them to achieve personal fulfillment as individuals, citizens and producers. This explains, through a retroactive loop effect the vital role-played by education in human development (Morin, 1986)

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Definitions of quality education are as an indication of the outcomes of a concerted progressive process. For example, Hawes and Stephens (1990) define it as “a process that requires efficiency in meeting the set goals, relevance to human and developmental needs and conditions, something more in relation to the pursuit of excellence and human betterment”.

Otherwise, Bandary (2005) states that “quality education encompasses a range of elements including the level of student achievement; the ability and qualification of staff; the standard of facilities and equipment; the effectiveness of teaching, planning and administrative processes; and the relevance of programmes to the needs of students and the nation in an emerging global knowledge economy”. However, others view quality as both a process and a critical indicator of expected outcomes. Schaeffer (1992) asserts “quality education involves how people are mobilized and empowered through the provision of knowledge and skills to enable them to participate in the democratic structures of their societies”.

In spite of the variations in definitions, there is a clear consensus that the provision of education is not only a quantitative process but is also qualitative. “The Dakar Framework for Action in 2000 recognized the quality of education as a primary determinant of whether or not Education for All is achieved. The second of the six goals of the Framework committed signatory nations to the provision of primary education of good quality, while the sixth goal implored nations to make a commitment to improve all aspects of education so that everyone can achieve better learning outcomes” UNESCO (2004).

2.4 Education Language Policy

Hence national language policy and the selection of languages to be taught in school and used as the media of instruction are considerable importance for the quality of teaching and learning. It is a policy choice with implications for curriculum goals, content and pedagogy. It is also an intensely political matter. The Somali language plays role of unity medium of instruction, if the new decentralized education policy definitely organized. In terms of Arabic language, it seems in strong position through Quran learning, but needs only political facilitation in the classroom.

“Educational policy makers have difficult decisions to make with regard to languages, schooling and the curriculum in which the technical and the political overlap. While there are strong educational arguments in favor of the mother tongue, a careful balance also needs to be made between enabling people to use local languages in learning and providing access to global languages of communication through education” UNESCO (2003). In general, it seems to be accepted that initial literacy programmes in the mother tongue facilitate the learning of a second language as the medium of instruction. “The introduction of national language as the main medium of education does not exclude the urgency of introducing a second language of international communication in education. A second language should be introduced into the educational system as early as possible. The experiences have shown that children learn and master languages more easily when they start at a very young age”. (The EFA Global Monitoring Report 2005, UNESCO 2004:154).

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However, the major languages of international communication used in numerous education systems in Somalia should be retained by improving their teaching and practice. Adding a second language of international communication in the education system will depend on the existence of a first language of a similar nature. A major argument in favor of introducing a second language as early as possible in early childhood, or at the beginning of primary education is based on improving communication between linguistic areas dominated by languages such as Arabic, English, etc. In terms of innovative programmes for the introduction of several languages in education, puts forward consistent arguments in favor of a gradual strategy. It would appear that: “There is now a strong body of evidence that bilingual schooling offers significant benefits in learning outcomes. In the most successful models, the mother tongue is used in the early years of schooling so that children can acquire and develop the literacy skills that enable fuller participation in learning activities. In a growing number of countries, after four or five years (earlier in some cases) there is a transition to learning and using the second or foreign language as the medium of instruction. In this way, initial literacy is acquired more easily, facilitating the acquisition of the language that will become the medium of instruction for the rest of the school years” (The EFA Global Monitoring Report 2005, and UNESCO 2004:154–156)

In Somalia, a growing number of primary schools offer the pupils Arabic/English lessons, in addition to Somali language, the official language of instruction. In line with a post conflict reform of curricula, particular emphasis has been placed on teaching in the mother tongue,

the first language of pupils during the first stage of basic education. But there is a question of initiating education in the mother tongue or first language of learners in order to establish basic skills, and then gradually move towards Arabic/English, so the second stage of basic education, the national language becoming a subject of teaching in this cycle. (Ministry of Education, Culture and Higher Education, Education act draft 2015)

The education governing in Somalia needs national education policy reforms to improve education qualities and standards. It can be reflected in these areas:

1. **Policy formulation.** Government education priorities focusing on free access to schooling for all, and enact flexible policies to promote inclusion and education quality.
2. **Planning and implementation,** monitoring and evaluating the education programmes for national and international educational policies and standards and the learning needs considered to be in action.
3. **Coordination.** Good coordination mechanism for education, including effective information sharing between federal and regional administrations maintained.
4. **Curricula.** Culturally, socially and linguistically relevant curricula are used to provide formal and non-formal education, appropriate to the regional and district levels.
5. **Instruction.** Instruction is learner-centred, participatory and justice.
6. **Measurement and Evaluation.** Appropriate methods, systematic and impartial evaluation in order to improve practice and validate learning achievements needed.

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7. **Training.** Teachers and other education personnel receive periodic, relevant and structured training according to need and circumstances.
8. **Recruitment and selection.** A sufficient number of appropriately qualified teachers and other education personnel are required through a participatory and transparent process based on selection criteria that reflect diversity and equity.
9. **Conditions of work.** Teachers and other education personnel have clearly defined conditions of work, follow a code of conduct and are appropriately compensated.
10. **Supervision and support.** Supervision and support mechanisms to be established for teachers and other education personnel, and are used on a regular basis.

In Somalia, there are challenges needs to identify and to set on the possible policy priorities and legal framework, such as follows:

<i>Challenges</i>	<i>Possible education policy priorities</i>
1- Limited access to educational opportunities	<ul style="list-style-type: none"> • Abolishment of school fees. • Relieving parents of indirect educational costs (related to such items as transport, uniforms, text book costs, etc.) • Continuous assessment of effective use of the available space in schools, with a view towards ensuring its optimum use.
2- Low funding of education	<ul style="list-style-type: none"> • Increasing budget allocation to education to at least 6% of the national budget, as per the recommendations of the world Education Forum held in Dakar, Senegal, in 2000. • Identification of diverse sources of funding for education.

<i>Challenges</i>	<i>Possible education policy priorities</i>
3-Illiteracy	<ul style="list-style-type: none"> • Recognition of and support for the role of community organizations in the promotion of literacy. • Striving for and consolidating partnerships between public and private institutions in literacy delivery. • Combining literacy delivery strategies of campaigns, programmes and projects to enhance the advantages of each.
4- Quality and relevance of education	<ul style="list-style-type: none"> • Development of a life skills curriculum as well as the capacity to deliver such a curriculum. • Promotion of high-quality and relevant vocational education programmes. • Reforming curricula to incorporate contextual issues in their content. • Encouraging community participation in education. • Training and deploying qualified teachers.

2.5 Decentralized of Education governing policy (USA pilot)

Somalia is facing contemporary challenge on how could be managed the decentralized education system in current newly established regional states. Until now there is no clear policy defined in this context, in many countries dependent on decentralized system in their education administration Decentralized of education system in federal countries gives in three different levels of authorities to make and implement education policy, beginning with the federal, state and local governments. For instance, the USA has highly decentralized system of education; the federal government, although playing an important role in education, does not establish or license schools or govern educational institutions at any level except schools, which serve the children of

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military personnel stationed overseas, operated by the department of defense; and the five service academies of the Army, Air Force, Navy, Coast Guard and Merchant Marine, the general authority to create and administer public schools is reserved for the states. (US Department of Education, education in the United States: A Brief Overview, September 2005)

In USA, the Congress is the federal lawmaking body and has passed numerous laws directly and indirectly affecting education, but the Department of Education is the primary agency of the federal government that implements the laws that congress enacts to support education at the federal level. In doing so, the department establishes policy for, administers and coordinates much of federal financial assistance for education. Its stated mission is to ensure equal access to education and to promote educational excellence throughout the nation. US Department of Education (2005).

The Department's major activities are the following: US Department of Education, (2005)

- 1- Implementing laws related to federal financial assistance for education, administering distribution of those funds and monitoring their use. The Department distributes financial assistance to eligible applicants throughout the nation for elementary, secondary and college education; for education of individuals with disabilities and individuals who are illiterate, disadvantaged.
- 2- Collecting data and oversees research on America's schools and disseminating this information to educators and the general public. The Department oversees research on most aspects of education;

collecting data on trends; and gathers information to help identify approaches, ideas and successful teaching techniques. Employees of the department as well as contractors and grant recipients, conduct the research.

- 3- Identifying the major issues and problems in education and focusing national attention on them. The Secretary advises the president and leads the department in implementing the president's education policies- from the preparation of legislative proposals for congress to decisions about education priorities.
- 4- Enforcing federal laws prohibiting discrimination in programs and activities that receive federal funds.

In most states, the topic of education is addressed in the state constitution, with the state legislature having the ultimate authority over education matters. This authority includes enacting education-related legislation and appropriating state funds for education.

Generally, state legislature delegates a significant amount of policy-making authority to the state board of education. State boards of education are bodies of citizens appointed by the legislature or governor, or popularly elected. The board is responsible for approving statewide education policies and determining budget priorities. In some cases, the state board is responsible for all levels of education, including vocational and post-secondary education, while in many states the board concentrates on education at elementary and secondary levels. Most states have state department of education that serves as the executive agency for education. A chief state school officer is generally responsible for overseeing the state department of education and reporting periodically to

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the state board of education, the legislature and the governor. This person may be called superintendent, commissioner, director or secretary of education. The state board of education or the governor appoints most chief state school officers, while some are popularly elected. US Department of Education, (2005)

In most cases, State governments are responsible for the following:

- Developing curriculum guidelines and performing standards;
- Providing technical assistance to school districts;
- Licensing private elementary and secondary schools to operate within their jurisdictions;
- Licensing or certifying school teachers and administrators;
- Administering statewide student achievement tests;
- Developing accountability plans and reporting on student performance to the USA Department of Education.
- Defining minimum requirements for high school graduation;
- Distributing state and federal funding to school districts; and
- Establishing the minimum number of school days per year.

In terms of local governments, although state government has an ultimate authority over education, most states delegate some decision-making powers and the operation of public elementary and secondary schools to local education agencies, or school districts. Most states give districts considerable authority to determine school budgets and to implement curriculum. In fact, many school districts further delegate decision-making and budgetary authority to individual schools, a practice known as site-based (or school-based) management. Each district has a local school board, governing district schools, their policies generally

conform to the regulations of the state board and statutes of the state legislature, district school board members generally elected or nominated popularly. The school board selects and hires the district superintendent, who is responsible for implementing policy and managing the day-to-day operations of the school district. Their responsibility as the following:

US Department of Education, (2005)

- Determining the budget;
- Allocating money to individual schools and programs;
- Hiring teachers and other staff;
- Preparing and disseminating annual reports on student performance;
- Setting teachers and administrator salaries;
- Implementing the curriculum;
- Planning and administering teacher in-service training;
- Constructing and maintaining school buildings; and
- Purchasing equipment and supplies.

In this context, Somalia facing decentralized system in service delivering in state and local level, the lessons learned in suitable decentralized power sharing and encouraging ownership of the grassroots people could be efficient way to deliver education in Somalia.

Discussion of Findings

The study used a documentary study review method to collect and analyze data available in the field notes and documents to determine key concepts. The main data resources used include:

- Ministry interim education sector policy and strategy plan (2013-2014).
- Ministry Education Management Information System (EMIS) database of 2011-2016.

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- Statistics book, developed by the ministry of Education with support of UNICEF, 2016
- Ministry of education EMIS database, School Survey Report (2012-2013).
- Teacher Profile Reports from, UNICEF, 2013-2016.
- Somalia, data set on schools from 2011-2016, OCHA.
- Somalia, Millennium Development Goals progress Report, UNDP, 2010.

The core analysis discussed on the education policy system used by the ministry of education, especially on the current private schools and universities. There were different challenges mainly concerning the overlapping and duplicating efforts to reform education system policy that delegated by UN agencies and some international NGOs since 2010. However, the ministry of education still has no national education policy and legal procedures framework approved from the parliament to control the decentralized education quality and standards system. The consequences still remains in high level of malpractice in learning outcomes and certification. The private sector is the only mainstream providing education services, regardless the quality, inclusive and equity with or without NGOs pattern.

The challenge also related to the political transformation system in the country. The different regional administrations has no clear decentralized service delivery system and coherent political structures with the central government, which maintains their participation in the national level governing process, so the problem is to adopt new national education policy reforms without stable constitutional framework. In this regard education relies on the people at many levels of the government; it

needs to design to lead to a quality education for every Somali child. Achieving this goal, it depends on good practices in single national policy that can address highly qualified teachers providing students high quality standard of education. It depends on top-down decentralized regular assessment to see what's working and what isn't. It depends on also to involve parents with good choices and information.

The main findings of the study include:

1. In the post conflict, primary enrolment was started but not enough and the role of private services providers varies greatly across regions in the country, while public education service is absent in many parts of the country.
2. The current policy guideline process is the key challenges. The capacity of the ministry to address the challenges is likely remaining unclear, due to lack of domestic policies and insufficient deficient budget, while the donor's seems a grant schemes priority for the ministry.
3. The government has no functioning schools in many parts of the country, the service provided by private schools and universities although crucial are not sufficient.
4. In the absence of central accreditation and quality control bodies resulted diverse patterns of ownership, management, and finance. So, the communities own the Majority of the schools and universities are private whereas some owned by individuals represent a substantial percentage of school owners. In this circumstance, such proliferation caused poor quality and poor resources affected the education system.

Conclusion & Recommendations

The study is dependent on documentary review method, the data demonstrated many challenges and opportunities about recovery of national education policy after profound destruction of education facilities and after education guided by a draft education policy which has never become into a full policy that addresses all issues related to decentralized education system, showing the needs of the local quality improvement. Based on the findings, the study presents the following recommendations:

1. Ministry of education capacity must be addressed especially its national education budget to lead educational access and quality policies in clude more closely decentralized education system.
2. To set up a road map in national education policy reforms guideline in decentralized system, especially in good access for all and high quality and standards drawn from unique revise policy in the whole education levels of Somali federal government.
3. To develop a national education policy and legal procedures frame work with high level participation of the regional administration, approved from the parliament to control the decentralized education quality and standards system.
4. To give more emphasis on public and private partnership in education service delivery.
5. To organize high level of advocacy by the Somali Federal Republic to comprehensive awareness of the importance to increase the national budget for educational support and development.

6. Ministry of education should open more local government schools in the different federal states to expand public education services.
7. This study used documentary review method to collect data. However, it is possible that the review may not contain all the related policies and education reforms, for more benefit the study recommends applying other methodologies of data collection such as quantitative surveys in the future studies.

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- attention to those barriers existing within some of the developing countries.

COMPARATIVE STUDY BETWEEN NATURAL AND ARTIFICIAL AGGREGATES

***(A Experimental study of Quality of Artificial and natural
Aggregates Used for Construction in Mogadishu City)***

Eng. Abdirahman Ismail Dhaqane

Dean, Faculty of Engineering, Mogadishu University.

Abstract

The utilization of two types of aggregate for concrete work is investigated in this paper. Concrete is being produced from different types of aggregate and this imparts different property to the resulting concrete. The most important property of concrete is its compressive strength. The purpose of this work, two types of coarse aggregates, crushed (Artificial) and natural aggregates were used. At beginning, the laboratory investigation was conducted to determine the suitability of using the aggregates for construction work. Tests conducted include sieve analysis, bulk density, specific gravity and absorption capacity. For each type of coarse aggregate 6 cubes (150x150mm) were cast to allow the compressive strength to be monitored at 7, 21, and 28 days.

The highest compressive strength was obtained from concrete made with crushed (Artificial) aggregate, followed by Natural Aggregate. The void ratio is to be found in range of 25% to 32%, which is enough for pervious concrete. The Fineness modulus of natural aggregates in the three samples is 6.9, 6.5, 6.9 and the average number is 6.8. The result

shown the fineness modulus of sample-2 is below the average and the sample-1 is above the average. The value of specific gravity of crashed aggregate is 2.56 and natural aggregates are 3.14 respectively. The specific gravity of aggregates normally used in road construction ranges from about 2.5 to 3.0.

Test result show that concrete made from natural the highest workability followed by crushed (Artificial) and aggregates. The result shows the highest slump was obtained with concrete made with both natural and crashed aggregate with 0.8 w/c ratio by improper compaction. Both aggregates are recommended to use 0.5 w/c ratio with proper compaction to get minimum slump hight and true slupm

It is suggested that crushed (Artificial) aggregate may be working for concrete work in places where concrete practitioners have selection of choices available.

Keywords: Aggregate, Concrete, Compressive strength, natural aggregate, crashed aggregage.

1. Introduction

In Somalia, due to the booming of construction of infrastructure, the demand of virgin aggregate for construction is high. Therefore, there are two types of aggregate used for construction purpose, first natural aggregate and Artificial aggregate (crushing aggregate). The annual growth rate of cement production is 4% due to rapidly increasing construction in developing countries (World Business Council for Sustainable Development 2005). Approximately 80% of greenhouse gas emissions associated with concrete is released during the Portland cement manufacturing process (Flower and Sanjayan 2007).

In natural aggregate it consist of fine and course aggregate as same as crushing aggregate also consist of fine and course aggregate.

Aggregates are inert granular materials such as sand, gravel or crushed stone that, along with water and Portland cement are an essential component in concrete. The aggregates occupy 70-80 percent of the volume of concrete. For a high-quality concrete mix, aggregates need to be clean, hard, strong particles free of absorbed. Aggregate shape and grading can significantly influence concrete workability. Poorly shaped and poorly graded aggregates typically have a lower packing density than well shaped and well graded aggregates, resulting in more paste being required to fill the voids between aggregates (P.J.Patel).

Sometimes excessive silt and clay contained in the fine or coarse aggregate may result in increase shrinkage or increased permeability in addition to poor bond characteristics (Shetty, M.S).

This chapter presents the state-of-the art literature review and background information about physical properties of Aggregate.

Objective:

The main Objectives of this study is

- ✓ To compare the properties of strength concrete made by natural aggregate and Artificial aggregate (crushing)
- ✓ To investigate the properties of strength concrete both aggregates (Specific Gravity, Unit Weight, Absorption capacity, Void ratio, Workability)
- ✓ To investigate the mechanical properties of both aggregates concrete

Problem Statement

Currently, two types of aggregates were used. Based on their shape characteristics, the aggregates were classified as flaky, angular and irregular. The aggregates occupy 70-80 percent of the volume of concrete.

As such its selection and proportioning should be given carefully attention in order to control the quality of the concrete structures. To get high strength of concrete depends on the quality of aggregates, therefore, in this study provides the necessary information on materials used for concrete manufacturing with a strong focus on concrete aggregates like properties of aggregates both natural and Artificial (crushing)

Terms

Aggregates: Aggregates are inert granular materials such as sand, gravel, or crushed stone

Natural Aggregate: Natural aggregates, which consist of crushed stone and sand, gravel

Crushed Aggregate (Artificial): Aggregate used concrete aggregate crushing plant making different size of aggregates.

2. Leterture Riview

Physical properties of Aggregate

There is strong evidence that aggregate type is a factor in the strength of concrete. Ezeldin and Aitcin (1991) compared concretes with the same mix proportions containing four different coarse aggregate types. Herewith the flowing subsections represent physical properties and their effect of the concrete strength

Grain /particles size

Gradation is evaluated by passing the aggregates through a series of sieves (ASTM-C136, E11).The sieve retains particles larger than the opening, while smaller ones pass through.

Aggregates are usually classified by size as course aggregates, fine aggregates. ASTM defines course aggregate as particles retained on the 4.75 mm (No.4) sieve, fine aggregates as those passing the 4.75-mm sieve.

Grading is the particle-size distribution of an aggregate as determined by a sieve analysis (ASTM C 136). The gradation of the aggregate, or distribution of particle sizes, should meet the specifications outlined in ASTM C33, "Standard Specification for Concrete Aggregates." ASTM C33 suggests that the gradation curve be smooth, with neither a shortage nor excess of material of any one size. A smooth gradation curve decreases the voids between the aggregate particles in a homogeneous concrete mix, and, because the voids must be filled with a mixture of cement and water, it therefore decreases the amount of cement required. Tests by Zhou, Barr, and Lydon (1995) show that compressive strength increases with an increase in coarse aggregate size. However, most other

studies disagree. Walker and Bloem (1960) and Bloem and Gaynor (1963) concluded that an increase in aggregate size results in a decrease in the compressive strength of concrete. Cook (1989) showed that, for compressive strengths in excess of 69 MPa (10,000 psi), smaller sized coarse aggregate produces higher strengths for a given water-to-cement ratio.

Walker and Bloem (1960) studied the effects of coarse aggregate size on the properties of normal-strength concrete. Their work demonstrates that an increase in aggregate size from 10 to 64 mm (3/8 to 2 1/2. in.) results in a decrease in the compressive strength of concrete, by as much as 10 percent.

Bloem and Gaynor (1963) studied the effects of size and other coarse aggregate properties on the water requirements and strength of concrete. Their results confirm that increasing the maximum aggregate size reduces the total surface area of the aggregate.

The fineness modulus is a measure of the fine aggregates gradation and is used primarily for Portland cement concrete mix design.

Fineness Modulus. The fineness modulus (FM) of either fine or coarse aggregate according to ASTM C 125 is calculated by adding the cumulative percentages by mass retained on each of a specified series of sieves and dividing the sum by 100. Neville (1981) in his research findings published that entirely smooth coarse aggregates lowered the strength of concrete by 10% than when the aggregates were roughened

Void ratio

Permeability is the amount of water passage through concrete when the water is under pressure or to the ability of concrete to resist

penetration by water or other substances (liquid, gas, or ions) Kosmatka et al. (2002). Concrete durability increases as concrete permeability decreases and that reduced permeability increases the concrete resistance to freeze and thaw, sulfate penetration, chloride-ion penetration, and chemical attack (IMCP 2006; Mindess et al. 2003; Kosmatka et al. 2002; Mehta and Monteiro 1993).

Increasing the maximum size of aggregates will increase the concrete permeability because the coarse aggregate size affects the micro cracks in the interfacial transition zone (IMCP 2006; Mindess et al. 2003; Kosmatka et al. 2002; Mehta and Monteiro 1993).

Workability

Workability defines as “that property of freshly mixed concrete or mortar that determines the ease and homogeneity with which it can be mixed, placed, compacted and finished to a homogenous condition” American Concrete Institute (ACI) 116R.

Workability can be recognized by three main parameters (Kosmatka et al. 2002; Chen and Duan 2000): Cohesiveness: the resistance to segregation,

Consistency: the ease of flow, and Plasticity the ease of molding.

Workability is usually assessed by engineers using the slump test (ASTM C143). Gradation, shape, and surface texture of aggregates, Well-graded aggregates will increase workability. Increasing fine aggregate content increases workability but an extreme amount can cause mixtures to become humid. Spherical, smooth surfaced aggregates will increase workability whereas angular, rough surfaced aggregates will

decrease workability (IMCP 2006; Mindess et al. 2003; Mehta and Monteiro 1993).

Aggregates constitute 60 % to 75 % of the total volume of concrete; therefore their collection is very important in the mix design process. Gradation, shape, porosity, and surface texture of aggregates affect the workability of concrete (Kosmatka et al. 2002). Aggregates should be well-graded to attain the preferred workability because fine aggregates have a high water requirement due to their high specific surface area and insufficient amount of fine aggregate causes mixtures to become stiff and segregate (IMCP 2006; Mindess et al. 2003; Shilstone 2002; Mehta and Monteiro 1993).

Aggregate shape and texture influence workability through their effect on cement paste requirements. Spherical, well rounded with smooth surfaced aggregates increase workability whereas angular, elongated, rough surfaced aggregates decrease workability and cause segregation (Mindess et al. 2003).

Effect of Strength

Strength is the measured maximum resistance of a concrete specimen to axial loading (Kosmatka et al. (2002)). Although other parameters such as durability and shrinkage may be more critical to assess concrete quality, strength is still commonly used for this purpose, particularly in structural applications (IMCP 2006 p. 116).

Aggregates: Rough and angular aggregates will increase strength (IMCP 2006; Mindess et al. 2003; Mehta and Monteiro 1993). Rough and angular aggregates will increase strength because they bond better to

the cement paste (IMCP 2006; Mindess et al. 2003; Kosmatka et al. 2002; Mehta and Monteiro 1993).

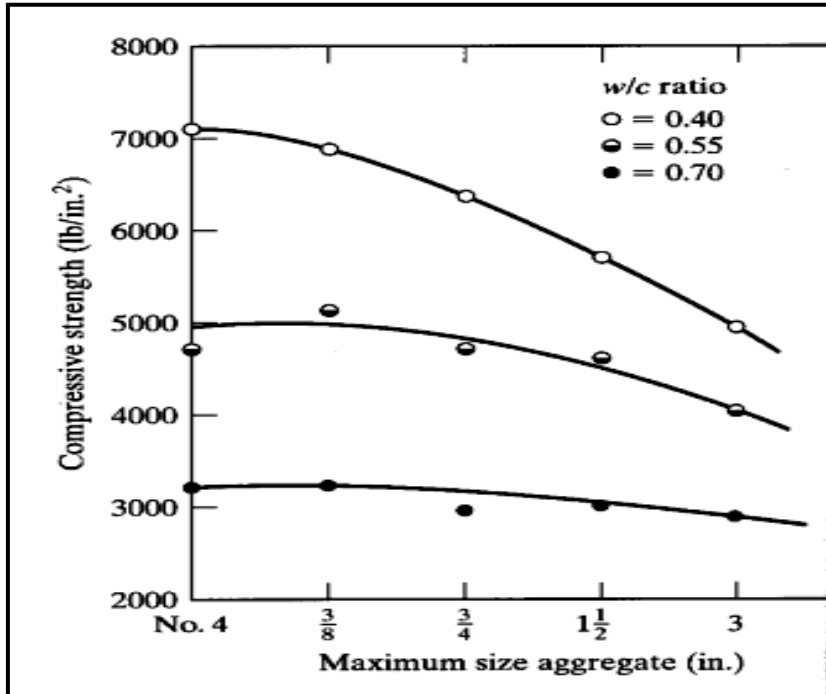


Figure 1: Effect of maximum size of aggregate on compressive strength

(Source: Cordon and Gillespie 1963)

However, once the chemical interaction between aggregate and cement paste is effective at later ages, the surface texture of aggregate reduces its influence on strength (Mehta and Monteiro 1993).

Large aggregate particles reduce compressive strength by exhibiting a high stress concentration when they are subjected to compressive load (Mindess et al. 2003).

Moreover, large aggregate particles forms interfacial transition zones exhibiting more micro cracks compared to the smaller aggregate particles (Mehta and Monteiro 1993).

Durability

ACI Committee 201 (2008) defines durability of concrete as “the ability to resist weathering action, chemical attack, abrasion, or any other process of deterioration and retain its original form, quality, and serviceability when exposed to its environment”.

Aggregates: Use of hard, dense and strong aggregate that is free of reactive silica will improve durability (IMCP 2006; Mindess et al. 2003; Kosmatka et al. 2002; Mehta and Monteiro 1993).

Increasing the maximum size of aggregate will increase durability by decreasing the cement paste content that will be under the physical or chemical attack (Mindess et al. 2003). However, reducing the aggregate size will increase durability when concrete is subjected to freeze-thaw condition (Mindess et al. 2003).

Aggregates should be unsound to prevent volume change by resisting a high internal stress when water inside the aggregate is frozen. The degree of saturation, porosity, permeability, and size of aggregate determines this stress (Mindess et al. 2003).

Use of hard, dense and strong aggregate will improve durability by providing good wear resistance (IMCP 2006; Mindess et al. 2003; Kosmatka et al. 2002; Mehta and Monteiro 1993).

In addition, aggregates should be free of reactive silica that causes a chemical reaction between the alkali in the cement paste and silica in the aggregate. Because alkali-silica reaction is very damaging for concrete and it significantly decreases the durability of concrete by causing map cracking, popouts and staining (Mindess et al. 2003).

Table 1. Durability of concrete influenced by aggregate properties

Durability	Relevant Aggregate Property
Resistance to freezing and thawing	Soundness, porosity, pore structure, permeability, degree of saturation, tensile strength, texture and structure, clay minerals
Resistance to wetting and drying	Pore structure, modulus of elasticity
Resistance to heating and cooling	Coefficient of thermal expansion
Abrasion resistance	Hardness
Alkali-aggregate reaction	Presence of particular siliceous constituents

Source: Mindess et al. 2003

3. Methodology

In an attempt of study the strength of concrete, a thorough survey of the available literature was carried out. Various physical and engineering properties of natural and artificial aggregate samples used in the study were determined.

Following the method as explained. After designing the concrete mix, a batch of concrete mix was casted into cubic and cured. The cubic was then tested for compression test. Test results were then calibrated. Some recommendations have drawn based on those results. Finally a suggestion for future study was also offered. While carrying out this investigation and design, methods prescribed by American Society for Testing and Materials (ASTM) were thoroughly followed.

In this section, the whole experimental methods of two types of coarse aggregate natural and Artificial has been summarized. It includes collection of aggregate, preparation of aggregate, investigations of aggregate and mix design. Various physical and engineering properties of the aggregate samples used in the study were determined.

Flow diagram of methodology is shown in the following section

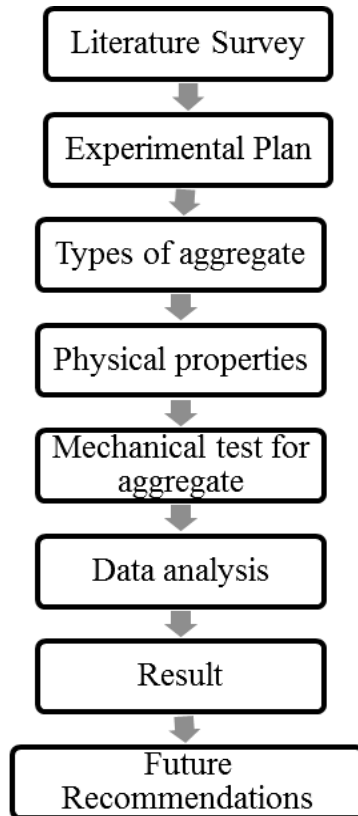


Figure 2: process flow diagram

Materials and Method

Cement: Commercially available Ordinary Portland Cement was used for this research.

Water: Potable drinking water obtained from Civil Engineering Laboratory, Mogadishu University of, Somalia was used for this work

Methodology

Physical properties:

Properties of aggregate are defined by characteristics of both the individual particles and the characteristics of combined material.

Types of aggregate

Two types of course aggregate were used. Based on their shape characteristics, the aggregates were classified as flaky, angular and irregular as per the classification

Sieve analysis of course Aggregate

The main purpose of sieve analysis to determine particle size distribution and fineness modulus of course aggregate by sieving.

Fineness modulus is the sum of the total percentages of material in the sample courser than (cumulative percentage retained) each of the following sieves and divided by 100: No.8, No.3/8 in., 3/4., 1/12 in.

Gradation of Aggregates

The particle size distribution of an aggregate as determined by sieve analysis is termed as grading of the aggregates. If all the particles of an aggregate are of uniform size, the compressed mass will have more voids whereas aggregate comprising particles of various sizes will give a mass with lesser voids. The particle size distribution of a mass of aggregate should be such that the smaller particles fill the voids between the larger particles.

The Grading Curve

The grading of aggregates is represented in the form of a curve or an S CURVE. The curve showing the cumulative percentages of the material passing the sieves represented on the ordinate with the sieve openings to the logarithmic scale represented on the abscissa is termed as Grading Curve

Specific Gravity and Absorption capacity

Bulk specific the weight-volume characteristics of aggregates are not so significant sign of aggregate quality, but they are important for concrete mix design. However, specific gravity (Sp.Gr) the mass of material divided by the mass of an equivalent volume of distilled water. Four types of specific gravity are defined based on how voids in the aggregate particles, three types are this bulk-dry, bulk-saturated surface-dry and apparent specific gravity. Gravity is the ratio of the weight in air of a unit volume of aggregate.

Absorption capacity, defines the amount of water the aggregate absorb is important in the mixing of water to the Portland cement concrete.

$$\text{Bulk Dry Sp.Gr.} = \frac{A}{B-C}$$

$$\text{Bulk SSD Sp.Gr} = \frac{B}{B-C}$$

$$\text{Apparent Sp.Gr} = \frac{A}{A-C}$$

$$\text{Absorption (\%)} = \frac{B-A}{A} \times (100)$$

A = dry weight

B = SSD weight

C= submerged weight

Unit weight and voids

Unit weight is the weight in air of a unit volume of a permeable material (including both permeable and impermeable voids). To calculate the unit weight

$$\text{Unit weight} = \frac{A}{V} \text{ Ib/ft}^3 \text{ or kg/m}^3$$

Where A is net weight of aggregate and V is volume of measure.

To calculate the percentage of voids in aggregate, $\text{Void (\%)} = \frac{S \times W - B}{S \times W}$

X100

Mixing design

Two types of aggregates were used to conduct the study. First sample is natural aggregate and second sample is crashing (Artificial) aggregate.

The Water-Cement (W/C) ratio is keeping 0.5 and 0.8.

The table below shows the mix design proportion:

Table 2: Mix design

Sample-1				Sample -2			
Type	W/C	proportion	Aggregate Designation	Type	W/C	proportion	Aggregate Designation
Natural	0.5 & 0.8	1: 2: 4	Subrounde	Crashing	0.5&0.8	1: 2: 4	Irregular
		C S A				C S A	
Where			C = Cement	S= Sand	A=Aggregate		

Workability

Workability is defined as the ease with which a fresh concrete mix can handle from the mixer to the final structure. Good workability

requires a fairly high proportion of cement, adequate quantity of fine materials, low coarse aggregate content and high water content.

Workability of concrete is mainly affected by consistency i.e. wetter mixes will be more workable than drier mixes, but concrete of the same consistency may vary in workability.

The following methods give a measure of workability.

Slump test

The mould for the slump test is a cone, 305 mm (12 in) high. The base of 203mm (8 in) diameter is placed on a smooth surface with the smaller opening of 102mm (4 in) diameter at the top and container is filled with concrete in three layers. Each layer is tamped 25 times with a standard 16 mm (5/8 .in) diameter steel rod. Immediately after filling, the cone is slowly lifted. The decrease in the height of the center of the slumped concrete is called slump. (Ismail., Sam, et all, 2009)

The slump test gives the following three results:

- True slump: if the concrete subsides evenly then it is called true-slump, and is aimed to be calculated.
- Shear slump: If one half of the cone slides down, it is called shear-slump and is difficult to measure. It occurs in harsh mixes (mixes deficient in fine aggregate).
- Collapse: If the concrete slides down as soon as the mould is removed, it is known as collapse-slump. It occurs in very wet mix

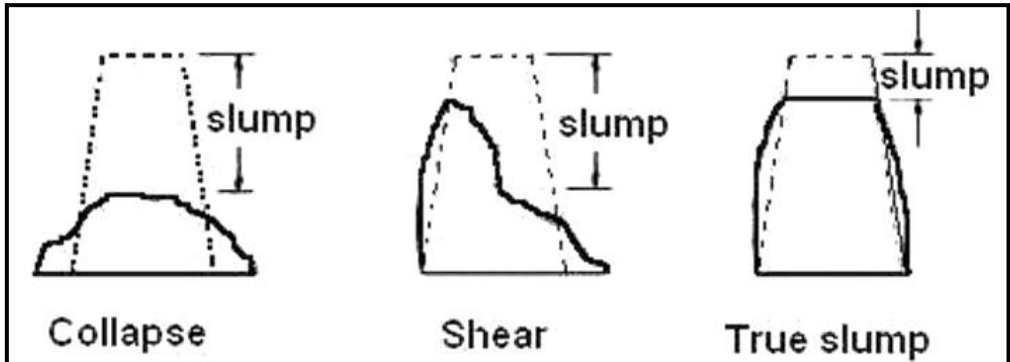


Figure 3: Different types of slump

Compacting factor test

The degree of compaction achieved by a standard amount of work is determined and also the amount of work necessary to achieve full compaction, the degree of compaction called the compaction factor, is measured by the density ratio. (Ismail., Sam, et all ,2009)

The compacting factor shall be calculated from the equation:

$$\text{Compacting factor} = M_p / M_f$$

Where,

M_p is the mass of the partially-compacted concrete

M_f is the mass of the fully compacted concrete

The results shall be expressed to two decimal places

Table 3: Workability, slump, and compacting factor of concrete with 19 mm or 38 mm maximum size of aggregate

Slump				
Degree of workability	Mm	in	Compacti on factor	Use for which concrete is suitable
Very low	0-25	0-1	0.78	Roads vibrated by power-operated machines.
Low	25-50	1-2	0.85	Roads vibrated by hand operated machines
Medium	25-100	2-4	0.92	At the less workable , manually compacted flat slabs using crash aggregate
High	100-175	4-7	0.95	For sections with congested reinforcement. Not normally suitable for vibration

Source: Ismail, M.A.K., Sam, A.R.M., et al. (2009)

Compressive Strength Test

The compressive strength of concrete depends on the water to cement ratio, degree of compaction, ratio of cement to aggregate, bond between mortar and aggregate, and grading, shape, strength and size of the aggregate (Roccoand Elices, 2009; Elices and Rocco, 2008).

For the compressive strength test, the universal compression test machine was used to conduct the study. Cubes of size 150mm x 150mm x 150 mm are tested in compression in accordance with the test procedures given by ACI. The ratio of the water to cement is the principal factor for determining concrete strength. The lower the water-cement ratio, the higher is the compressive strength

Preparation of Specimens

Six Specimens were prepared using 150 mm x 150mm x 150mm moulds. The specimens cast were demoulded after 24 hours and kept in normal curing for the required age such as 7, 21 and 28 days.

After one day of casting, the concrete cubes were removed from the mould and were transferred to a water tank for curing until the time of test. The curing of the cube was done according to ACI.

The data analysis and result was used Excel package for the model development. Several model statistics and graphical plots were obtained which can be used to explain the adequacy of the regression models.



Figure 4: Natural Aggregate casting cube



Figure 5: Crushing Aggregate casting cube

4. Result and discussion

The experimental results are discussed as follows:

Properties of Aggregates

The results for the sieve analysis test on the aggregates are shown in Figures 4.1 and 4.2. The grading curve for the crushed (Artificial) aggregates shown us a uniformly graded aggregate it refers to a gradation that contains most of the particles in a very narrow size range. In essence,

all the particles are the same size. The aggregates are not effectively full, and the resulting concrete will be more porous, unless a lot of paste is employed. Generally the crushed (Artificial) aggregate require excessive amount of cement paste to fill the voids

- Narrow range of sizes
- Grain-to-grain contact
- High void content
- High permeability
- Low stability
- Difficult to compact

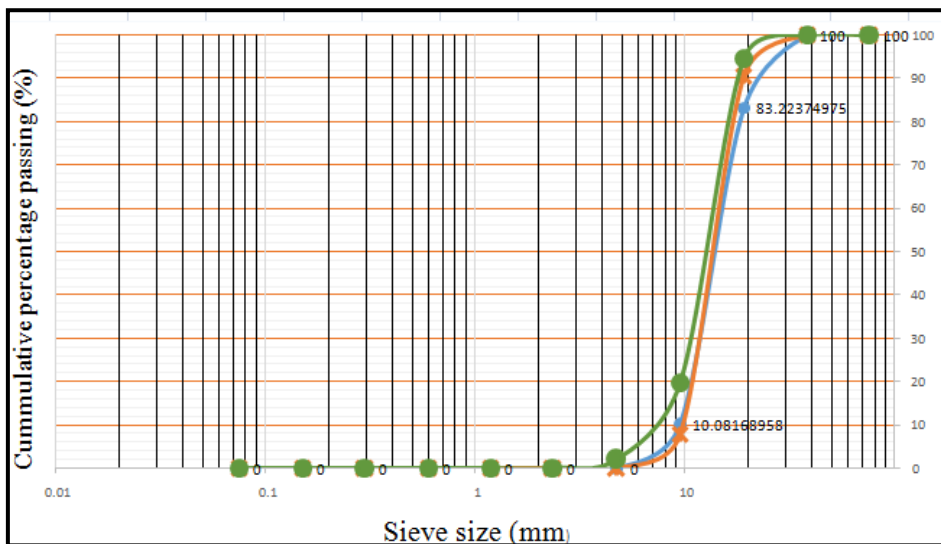


Figure 6: Sieve analysis for crushed aggregate

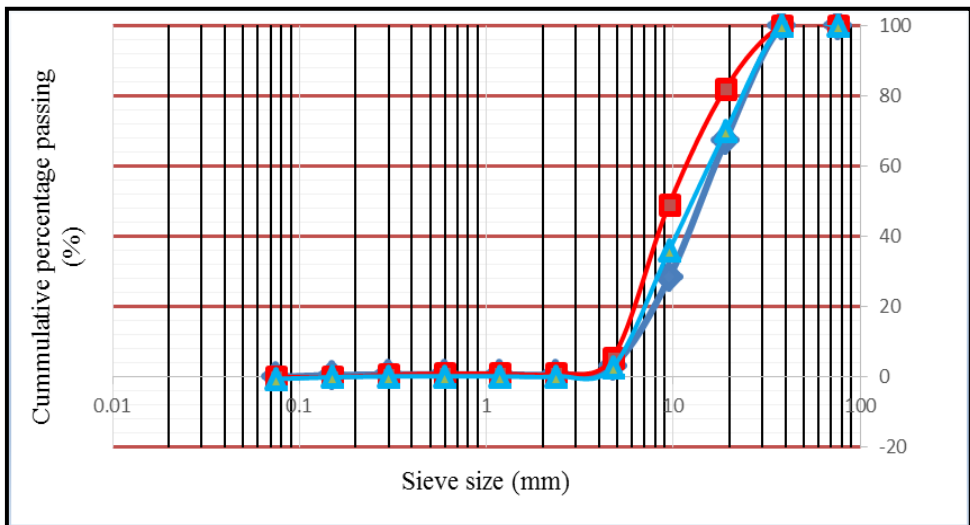


Figure 7: Sieve analysis for natural aggregate

Fineness modulus

The result for the fineness modulus test on the crashed and natural aggregates is shown in Figures 8 and 9. The Fineness modulus of natural aggregates in the three samples is 6.9, 6.5, 6.9 and the average number is 6.8. The result shown the fineness modulus of sample-2 is below the average and the sample-1 is above the average. The average of FM is medium course, and has more permeability then the fine aggregate.

Higher fineness modulus of aggregate represents larger aggregate size. Compressive strength of aggregate are closely related with the aggregate grading as well as size also. Generally concrete compressive strength increases with the increase of aggregate fineness modulus, size of aggregate. If size of aggregate in concrete increases, surface area will reduce. Then quantity of cementing materials per unit surface area will increase which increase bond stress with resulting increase of concrete compressive strength

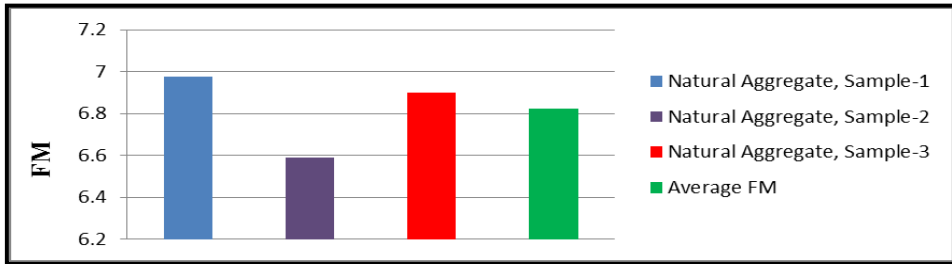


Figure 8: Fineness Modulus of Natural Aggregate

The fineness modulus of crashed aggregate from figure analysis it can easily be found that, the sample-1 FM is 7.0, sample-2 FM is 7.0 and sample-3 FM is 6.8, the average value of FM is 6.8. The analysis shown the sample-3 is equal the average value of FM and the average value are indicated medium course also has more permeable

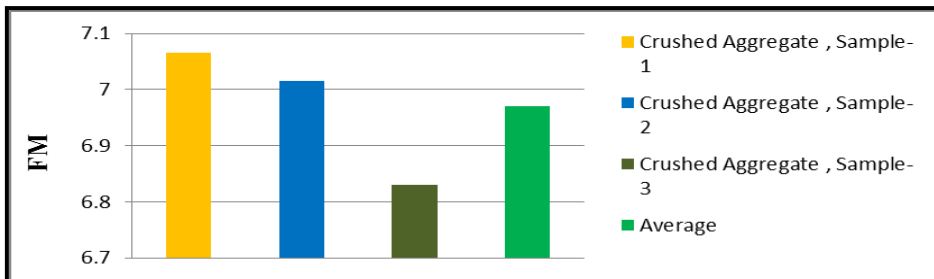


Figure 9: Fineness Modulus of crashed aggregate

The specific gravity and water absorption of aggregates are important properties that are required for the design of concrete and mixes.

The result for the specific gravity and absorption capacity test of the Natural aggregate is shown in Figure 10. The values of the specific gravities of the aggregates are from 2.56 to 3.14.

The value of specific gravity of crashed aggregate is 2.56 and natural aggregates are 3.14 respectively. Though high specific gravity is considered as an indication of high strength.

Artificial Aggregates

The specific gravity of aggregates normally used in road construction ranges from about 2.5 to 3.0

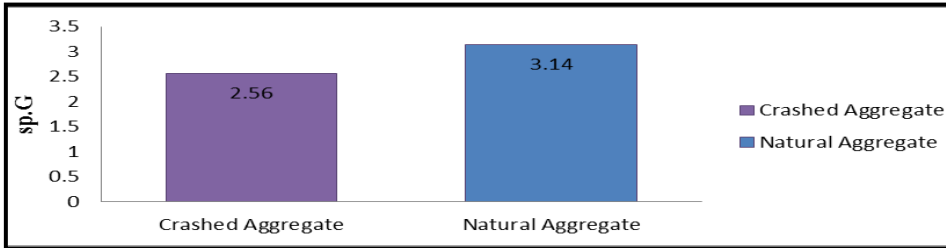


Figure 10: Specific gravity of Crashed and Natural aggregates

The absorption of the aggregate indicates the quantity of water which will be absorbed into the pore structure. Most commonly, aggregates will have a moisture content that is either below or above this absorption limit.

The moisture content and absorption of aggregates are important in calculating the proportions of concrete mixes since any excess water in the aggregates will be incorporated in the cement paste and give it a higher water/cement ratio than expected

The value of % of absorption of crashing aggregate is 7% and natural aggregate is 6% respectively (Figure 11)

Water absorption values ranges from 0.1 to about 2.0 percent for aggregates normally used in road surfacing.

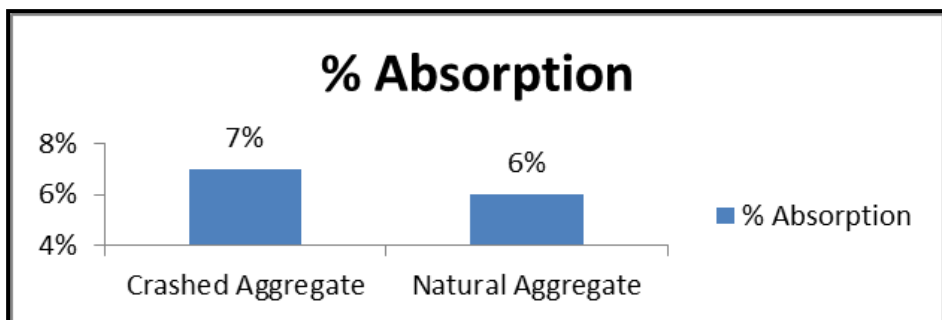


Figure 11: Absorption capacity of crashed and natural Aggregates

Slump test

The result for the slump test of concrete is shown in the tables below. The slumps obtained are in natural aggregate for 0.5 and 0.8 w/c ratio was respectively true and collapse e (Table 4). For crashed aggregates due to w/c ratio 0.5 and 0.8 the slumps was respectively true and collapse (Table 5). The result shows the highest slump was obtained with concrete made with both natural and crashed aggregate with 0.8 w/c ratio by improper compaction. Both aggregates are recommended to use 0.5 w/c ratio with proper compaction to get minimum slump high and true slupm.

Compaction factor for natural Aggregate is recommended for 0.5 w/c ratio required proper compaction but 0.8 w/c ratio no need mechanical compaction.

Radius of slump (r) = 0.0508m

Radius of slump (R) = 0.1016m

Height of slump = 0.3048m

Volume of slump = $(\pi h/3)(R^2 + Rr + r^2)$

=0.0057m

Specific Weight of Concrete = 2400 kg/m³

Weight of Concrete = 13.68Kg

Wastage Factor of 50%

So, Total weight of Concrete = (0.5*13.98 kg) + (13.68 kg) = 21 Kg

Mix Ratio Design = 1:2:4

Weight of Cement= 3Kg

Weight of Sand = 6Kg

Weight of Aggregate = 12Kg

Artificial Aggregates

W/C=0.8

Weight of Water = 2.4litre

Table 4: Slump test for natural Aggregate

Trial No	W/C Ratio	No of Temping	Slump Height (mm)	Type of Slump
1	0.5	5	177.3	Collapse
2	0.5	10	25.4	Shear
3	0.5	15	25.4	Shear
4	0.5	25	12	True
5	0.8	5	254.6	Collapse
6	0.8	10	203.2	Collapse
7	0.8	15	177.4	Collapse
8	0.8	25	165	Collapse

Table 5: Slump tes for crashed aggregate

Trial No	W/C Ratio	No of Temping	Slump Height (mm)	Type of Slump
1	0.5	5	168	Collapse
2	0.5	10	18	True
3	0.5	15	18	True
4	0.5	25	14	True
5	0.8	5	220.1	Collapse
6	0.8	10	203.2	Collapse
7	0.8	15	177.8	Collapse
8	0.8	25	165.1	Collapse

Table 6: compaction factor for natural Aggregate

SL	Description	W/C = 0.5	W/C = 0.8
1	Mix Ratio	1:2:4	1:2:4
2	Weight of Cement	3Kg	3Kg
3	Weight of Sand	6Kg	6Kg
4	Weight of Aggregate	12Kg	12Kg
5	Weight of Water	2.4L	2.4L
6	Weight of Cylinder (W1)	3.25kg	3.25kg
7	Weight of Cylinder + Weight of Partial Compacted (W2)	12.42KG	13.69KG
8	Weight of Partial Compacted (W3)	9.17KG	10.4KG
9	Weight of Cylinder + Weight of Full Compacted (W4)	13.68kg	14.21kg
10	Weight of Full Compacted (W5)	10.61kg	10.69kg
11	Compaction Factor (W6) = W3/W5	$9.17/10.61 = 0.86$	$10.41/10.96 = 0.95$
12	Compaction Factor %	86%	95%
13	ACCEPTANCE Of RESULT	Properly Compaction YESS ACCEPTED	Over Compacted NOT ACCEPTED

Table 7: compaction factor for crashing Aggregate

SL	Description	W/C = 0.5	W/C = 0.8
1	Mix Ratio	1:2:4	1:2:4
2	Weight of Cement	3Kg	3Kg
3	Weight of Sand	6Kg	6Kg
4	Weight of Aggregate	12Kg	12Kg
5	Weight of Water	2.4L	2.4L
6	Weight of Cylinder (W1)	3.25kg	3.25kg
7	Weight of Cylinder + Weight of Partial Compacted (W2)	13.2KG	14.5KG
8	Weight of Partial Compacted (W3)	10.1KG	11.9KG
9	Weight of Cylinder + Weight of Full Compacted (W4)	14kg	16.8kg
10	Weight of Full Compacted (W5)	11.61kg	11.69kg
11	Compaction Factor (W6) = W3/W5	$10.1/11.61 = 0.87$	$11.9/11.96 = 0.99$
12	Compaction Factor %	87%	99%
13	ACCEPTANCE Of RESULT	Properly Compaction YESS ACCEPTED	Over Compacted NOT ACCEPTED

Compressive Strength

For the two types of concrete, it was observed that the compressive strength increases with age at curing.

For all the ages at curing, the highest strength was obtained from concrete made with crushed (Artificial) aggregate, followed by Natural Aggregate. The amount of paste required is believed to depend on the amount of void spaces to be filled and the total surface of the aggregate to be coated with paste (Mindess, Young, and Darwin 2003). The important portion of the gradation curve for the crushed aggregate as earlier mentioned, falls outside the recommended range and it is lower

than the lower limit. This implies that the coarse aggregate has greater voids to be occupied by mortar. This may affect the workability of the concrete, unless mixture proportioning adjustment is carried out to improve. This quality has the possible of producing concrete with weaker mortar/aggregate interface. Natural Aggregate, even though the gradation characteristic is good, has rounded particles and may not appropriately join each other during compaction resulting to reduction in strength compared to where full or higher compaction is achievable.

5. Conclusion and Recommendation

Aggregate type has effect on the compressive strength of normal concrete. Highest compressive strength was achieved from concrete containing crushed aggregate. Concrete containing crushed aggregate shows the strength development at all ages.

It has been concluded that mixing of smaller and bigger size of aggregate gives better Compressive strength than a single size of aggregate.

Aggregate of this nature requires more amount of water when used for concrete work to provide for aggregate coating and lubrication (ACI Committee 211.1-91).

The concrete containing both crushed and natural Aggregates shows the highest slump with 0.8 w/c ratio workability compared to concrete made natural and crushed aggregate with 0.5 w/c ratio.

It is suggested that crushed aggregate may be working for concrete work in places where concrete practitioners have selection of choices available.

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***The Influence of Information Communication Technologies
on Administrative Effectiveness of Secondary Schools
in Mogadishu***

Mr. Abdulkadir Jeilani Mohamoud

Lecturer, Department of Computer Science,
Mogadishu University.

Abstract

The study proposed the influence of Information and Communication Technology for administrative purpose by secondary schools in Mogadishu. The study states the level of ICT availability, to what extent do the secondary schools use ICT for administrative purpose and hypothesis was tested the relationship between ICT usage and administrative effectiveness. A sample of fifty administrators were selected from the secondary schools in Mogadishu city.

A questionnaire was distributed to collect the needed data for the study. The findings of the study stated that there is inadequate ICT facilities and low of level ICT usage this can lead to low administrative effectiveness.

The study also found that there is no correlation between ICT and administrator purpose.

The Statistical Package for Social Science (SPSS) was used to analyze the data collected. The formulated hypothesis was analyzed

using regression analysis. The hypothesis was tested at 0.05 significance level.

Finally the study recommended that more struggles should be need towards supply adequate Information Communication Technology to the schools.

Keywords: Information Communication Technology, Administrative effectiveness, secondary school.

1.1 Introduction

Today, School managers are directing the problems concern about school data warehousing and collecting than they were even a few years ago. Since schools are utilizing information and communication technology (ICT) around the world, not only improving academic efficiency, but also for providing better stakeholder service.

Information and Communication Technology (ICT) has been defined by various scholars from different perspectives.

Mueen, Asadullah, Raed, & Jamshed, (2013) defined ICT to include electronic network-embodiment complex hardware and software-linked by a vast array of technical protocol.

Ufuophu & Agobami, (2012, p. 2) observe that the ICTs include internet, satellite, cable data transmission and computer assisted equipment. ICT, however are facilities, tools or resources that could be used to process, store, preserve, access, retrieve and disseminate information with ease. It could be seen as the engine for growth and tool for empowerment, with profound implications for education, change and socio-economic development.

It is important to note that the term "ICT" in the context of this research refers to a wide range of computerized information and communication technologies. These technologies include products and services such as desktop computers, laptops, handheld devices, wired or wireless intranet, business productivity software such as text editor and spreadsheet, enterprise software, data storage and security, network security and others (Ashrafi & Murtaza, 2008, p. 2).

Institutional management information systems should be designed to achieve the following;

Provide accurate record of information, Reduce expenses manual activities, Enhance communication among employees, and support the organizations strategic goals and direction.

According to Bamidele, (2015, p. 3) various scholars identified that the Information administration is one part of overall administration of education institutions which mainly covers general and day-to-day operational activities. Hence, it could be concluded that Information administration cycle includes three major components namely:

1. Student administration,
2. Staff administration, and
3. General administration.

Student administration is an important and integral part of information administration. This involves various activities commencing from the admission process to learning activities till processing of results and performance analysis.

This includes admission enquiry by students, applying for admissions through electronic media, registration / enrolment using computers, course allotment, and availability of information like timetable / class schedule in electronic form and attendance monitoring / maintenance through e-media,

Staff administration includes recruitment and work allotment of faculty and staff in the institution, their attendance and leave management, and performance appraisal this also includes relevant communication to and from the institutions and among peers. Staff

administration done through Information and communication technology (ICT) helps in processing of voluminous records in a quick, meticulous, and impeccable manner thereby making data retrieval easier (Thomas, 2004, p. 3). A very important part of Information administration is general administration of school management system which includes the various day-to-day activities of the entire system.

In general, a good communication system should also be in place for the overall effectiveness of administration. ICT helps in providing a good communication system in higher education system (Magni, 2009, p. 4), and ICT helps in providing timely information to all concerned. In institutional setting therefore, administration has been extended as a service activity or tool through which the fundamental objectives of the institutional process may be more optimized efficiently when allocating human and material resources as well as to make the best use of existing resources (Liverpool & Jacinta, 2013, p. 2)

The various ways of introducing technology in education institution administration are the following (Salerno, 2009, p. 2)

- Sending e-mail notices and agendas to staff, rather than printing and distributing them.
- Submission of lesson plans through e-mail
- Foster technology growth by asking parents to write e-mail addresses on medical forms.
- Insist that all teachers create a class Web page
- Attend technology conferences to see what other schools are doing, what other teachers are doing to integrate technology, and what

principals are doing to encourage the use of technology in their schools and classrooms.

- Admissions through web-enabled services.
- All day-to-day activities of the institution (General Administration)
- Staff administration

A Small number of schools in Somalia have effective computer systems to efficiently their daily activities. Liverpool & Jacinta (2013) stated the role of ICT in institutional administration as follows:

- **Organization of Information:** Institution administrators need to have basic information on students and lecturer flows. For example, categories data on student/staff by sex, level, state of origin, performance in schools etc. They could use Microsoft Access or Excel to organize data into an easily accessible format and can be easily stored and retrieved from the microcomputer.
- **Computation and Processing of Paper Work:** ICT are used to map out different activities of the academic session such as number of weeks for teaching, conducting of continuous assessment tests, examination periods and when the result could be released to students. Others activities such as stipulated time for teaching practice and student industrial work experience scheme (SIWES). Institutional administrator could use Microsoft Access, Excel or other simple applications to collect and keeps records of events, enhancement of effective happening in the institution, issues out notices of meeting for staff, students and parents.
- **Enhancement of Effective Communication:** With the installation of computers and internets communication made it easier for the

institutional administrator to use telephone, fax and other communication facilities for transforming thoughts, sharing and imparting of information, growing and receiving and understanding of message within a network of independent relationship across international frontiers.

- **Enhancement of Planning:** Institutional administrator could use ICT to plan and make decisions on the basis of accurate and readily available facts. ICT could be used to plan the budgets of the college expenditure and plans for replacement of both obsolete and repairs of broken down equipment or institutional facilities.
- **Improvement of Monitoring:** Institutional administrators use microcomputers in monitoring various areas in the institutional system, such as the uses of continuous monitoring and assessment of students learning and achievement in the institution. Campbell & Sellburn (2002) pointed out that ICT can be valuable for storing and analyzing data on education indicators, students' assessments, educational, human and material resources and cost and finance.
- **Managed Instruction:** This is an approach by the institutional administrators to use computer in scheduling courses/subjects, space, installation, inventory and personnel control, recording and reporting attendance, school accounting, storage and retrieval of student information marks management. This is capable of generating the demographic data of students and institutional staff, production of results online.

(Iwu & Ike, 2009, p. 4) Categorized the use of ICT into the following for effective and efficient services:

Sensing Technologies: These equipment gather data and translate them into form that can be understood by the computer, such as scanners, sensors, keyboard, mouse, electronic pen, barcode sensors or readers, touch of digital boards, voice recognition system etc. Institutional administrators could use them for computation and processing of paper work. These sensory technologies gather data to do complex computation very rapidly and accurately. Similarly, institutional administrator could use word processing to draft, revise and produce reports of high quality for presentation without much hard labor, frustration and waste of time.

Communication Technologies: These are equipment that institutional administrators could use to transfer information from the sources to users. They are capable of overcoming natural barriers to information transfer like speed and distance. These include; facsimile machines (fax), telephone, electronic mail, telecommunication system, teleconferencing, electronic bulletin boards etc.

Display Technologies: These are output devices that form the interface between sensing, communication and analyzing technologies and human user. These include; computer screen, printers, television etc. Every computer in the institution has to be connected to the internet. The office of the institutional administrators is open to the public, to researchers, staff, students and parents wanting information about the institution. They can find all of that information on the internet. This makes the work easier by reducing the flow of people through the office and improves access to information.

Analysis Technologies: These are the technologies that help the institutional administrator to investigate of query of data, analysis and in-

depth query for answers from simple to complex phenomena in administrative procedures. ICT has changed the way in which institutional administrators collect and analyse data. For instance, the use of Access, excel and other simple applications to collect, store and analyse information. They may also need some sophisticated packages like SPSS (statistical package for the social science). This is to improve the timeliness and volume of information in implementing an institutional management information system.

Storage Technologies: These technologies facilitate the efficient and effective storage of information in a form that can be easily accessed. They include: magnetic tapes, disks, optical disks, cassettes, flash drive, memory card, zip drive etc.

Somalia has not had an effective central government since the breakout of a civil war in 1991 and that almost all government institutions were destroyed during the conflict. Yet in the last 15 years, the private sector has revolutionized the country's ICT sector. While access to ICTs is still more prevalent in urban centers than in rural areas, access is among the most affordable on the African continent (ICTs & State-building, 2014, p. 4).

The growth of the ICT sector in Somalia is demonstrated by the rising number of fixed and mobile telephone services, increasing use of desktop, laptop, and tablet computers, and the surge in the number, speed, and reach of internet service providers (ISPs).

Most ICT companies operating in Somalia are Somali-owned and operated. Revenue generated by the telecommunications sector alone outstrips all other revenue-generating sources, both public and private.

AbdikadirJahweyn, former Minister of Information, Communication, and Postal Service, estimates that telecommunication companies in Somalia earn approximately 1 billion USD in profit annually yet are not subjected to state oversight or taxes (personal communication, March 2013).

According to Hare, (2007, p. 8) the seemingly healthy ICT infrastructure is found mostly in the urban centers, especially the capital city, Mogadishu. This translates to limited use of ICT in the schools, most of which are located outside of Mogadishu. Policy efforts have been focused on reviving the education system, increasing enrolments, and reducing the school drop-out rate and not ICT. There are some private schools that use ICT but more as an administrative tool than as something integrated into teaching and learning.

1.2 Problem statements

Management information technology can solve many of the problems facing education institution. Such problems include poor estimate staff requirements, lack of accurate information on students, lack of time access information quickly, lack of confidence or skills, lack of training.

However, little or no studies have been carried out on this topic notably in Somalia. This study therefore endeavors to fill this apparent research gap by determining the effect of ICT for administrative purpose in Mogadishu – Somalia.

1.3 Research questions

This study will investigate the following two questions:

- What is the level of availability and accessibility of ICT facilities for administrative purposes?

- To what extent do secondary schools use ICT for administrative purposes?

1.4 Objectives of the study

To determine the level of availability and accessibility of ICT for administrative purposes in Mogadishu – Somalia, to identify whether the relationship exist between ICT and effective school system

1.5 Research Hypothesis

There is statistical significant correlation between ICT usage and Administrative Effectiveness of secondary schools

2.1 Literature review

In this section the researcher represents the following key literature about the influence information and communication technology for administration.

A system is a group of component that interact to achieve some purposes, an information system (IS) is a group of component that interact to produce information. A model of the components of an information system: computer hardware, software, data, procedures and people (Kroenke, 2011, p. 103).

Olayemi & Omotayo, (2012, p. 11) state that ICT will among others serve as a tool for increased productivity, act as a tool for information storage, processing and retrieval and increase decision-making.

2.2 Level of availability and accessibility of ICT

The primary purpose of Information communication technology is to help an organization achieve its goals by providing managers with insight into the regular operations of the organization so that they can control, organize, and plan more effectively (Babu & Sekhar, 2012, p. 25).

(BECTA, 2000, p. 14) Accessibility to ICT facilities ensures accuracy, timeliness and effectiveness of managing the whole process of examination, that is, it allows easy flow of information and risk monitoring systems that are appropriate

Olayemi & Omotayo, (2012, p. 15) findings that secondary school in Ekiti State are not well equipped with adequate ICT facilities.

In other words, Japan, in 2000, 75% of households possessed some ICT facility (mobile phone, word processor, fax, car navigation) and more than 50% had a PC. (ICT, 2014, p. 26).

The various research studies conducted to evaluate the extent of usage of Information and Communication technologies in multiple aspects of higher education revealed that heads of faculties utilized technology in planning, and to a large extent in the supervision and evaluation of academic affairs, student affairs, financial affairs and administrative affairs (Dr.R.Krishnaveni & J.Meenakumari, 2010, p. 102).

Turban mentions some characteristics of information quality (Turban & Volonino, 2010, p. 103)

- Accurate: correct and complete data.
- Timely: produced in time for its intended use.
- Relevant: both to context and to subject.
- Sufficient: for the purpose for which it is generated.
- Worth its cost: an appropriate relationship must exist between the cost of the information and its value.

On the other hand, Lazarus, Jackson, Elizabeth, & Jesse, (2013, p. 3) investigated whether there was a significant difference between teachers' and administrators' perceptions on the importance of Information and

Communications Technologies (ICT) in secondary school administration and evaluated the extent to which it was used by administrators. The results showed that administrators rated the importance of using ICT in supervision of instruction and in student administration more highly. Also, there was significant difference between the perceptions of teachers and administrators on the importance of ICT use in the following areas of secondary school administration: student administration, general administration and supervision of instruction.

Devon, (2004, p. 61) points out that in respect to management of students affairs; there are various types of information systems that can be available in making informed decisions at all levels and in improving efficiency of operations, such as executive decision making management information system, collaborative information systems, electronic messaging systems, group decision support system.

The use of ICTs provides quality services to users. Moreover, ICTs have revolutionized activities in all spheres of life, especially in management and information services in institutions of higher learning (Earnest, 2003, p. 17).

Software for managing examinations in School has been developed for use by administrators to play examination roles for administrators, teacher and students. However the level of accessibility to the possible platforms need to established, thus a necessity for this study.

2.3 The extension of ICT for administrative purposes

Angie & Rita, (2013, p. 5) carried out studies to identify the role of ICT in school administration and the extent of its application by secondary school Principals in the administration in southern eastern

states of Nigeria. Their findings showed that the use of ICT in school administration is a necessity and worthwhile venture especially in this era of globalization but the extent of their application in secondary schools is very slow as school administrators are incompetent in handling ICT facilities for effective administration.

Krishnaveni & Meenakumari, (2013, p. 5) carried studies to identify the various functional areas to which ICT is deployed for information administration in higher education institutions and to find the current extent of usage of ICT in all these functional areas pertaining to information administration. Their findings indicated that current level of usage indicates a clear integration of ICT for managerial or information-based administration in higher education institutions. The study also revealed that demographic factors do not have major impact on information administration in higher education institutions.

3.1 Methodology

There is lack of sufficient research of this area, particularly in Somalia. The aim of this research is to examine the use of information communication technology in school management and to find our ideas of managers about managerial information system.

The study used descriptive research design of correctional type and was considered the most suitable approach.

A questionnaire was used in the study to gather primary data. The questionnaire was made up of the main sections. Section A focused on level of availability of ICT facilities for administrative purposes in the school and contained thirteen (13) items and the response modes are “Yes” and “No”.

Section B contained thirteen (13) items on extent of using ICT for administrative purposes by the secondary schools and the response mode are “Never”, “Rarely”, and “Always”.

The data collected were analyzed using frequency counts, percentages, and linear regression test statistics. The hypothesis was tested at 0.05 level of significance.

3.2 Results

In this section the researcher represents the results of the two questions:

- **Research question 1** what is the level of availability and accessibility of ICT facilities for administrative purposes?

Table: 1

No	Response items	Scale of response	Frequency	Percentage (%)
1	Do you have computer in your office	Yes	45	90.0
		No	5	10.0
2	Do you have computer skills	Yes	9	18.0
		No	41	82.0
3	When the computer develops complication what do you do?	I call a technician	30	62.0
		I stop using it	20	38.0
4	Do you have internet access in your office?	Yes	21	42.0
		No	29	58.0
5	Do you have email address?	Yes	23	46.0
		No	27	54.0
6	Do you have electronic media to prepare electronic form of timetable/class schedule in your school?	Yes	19	38.0
		No	31	62.0

No	Response items	Scale of response	Frequency	Percentage (%)
7	Do you have electronic media to communicate academic details of students to their parents / guardians in your school	Yes	15	30.0
		No	35	70.0
8	Do you have backup equipments in your office	Yes	13	26.0
		No	37	74.0
9	Do you have an ant-virus management program to protect system from destroying the content?	Yes	25	50.0
		No	25	50.0
10	Do you have electronic media (Mobile) to communicate with staff in your office school?	Yes	50	100.0
		No	0	0.0
11	Does the school have any electronic examination management systems/database?	Yes	4	8.0
		No	46	92.0
12	Do you have facility for students to make fee payments electronically in your school?	Yes	31	62.0
		No	19	38.0
13	Do you have electronic equipment for automation of attendance and leave management of staff in your office school?	Yes	3	6.0
		No	47	94.0

Source data, 2017

Table 1 indicates that computer (90.0%) and mobile phone (100.0%) are the ICT facilities available for the secondary schools. While the majority of the ICT facilities are not available at all such as internet connectivity (42.0%), email address(46.0%), electronic media to prepare timetable/class schedule(38.0%) electronic media to communicate

academic performance of the students to their parents (30.0%), backup equipment in your office (26.0%), ant-virus management program to protect system failure(50.0%), electronic examination management systems/database(8.0%), students to make fee payments electronically in the school(62.0%) and electronic equipment for automation of attendance (0.0%). The responses also indicate their skills in a computer are very low were 82.0% mentioned have no any skills and if they met complication they always call a technician or stop using it 62.0% and 38.0% respectively.

- **Research question 2** to what extent do secondary schools use ICT for administrative purposes?

Table: 2

No	Response Items	Never	Rarely	Always
1	Using computer for student registration/enrolment and for maintenance of attendance of the students	6(12.0%)	22(44.0%)	22(44.0%)
2	Using internet for administrative purpose	28(56.0%)	16(32.0%)	6(12.0%)
3	Using electronic media to communicate academic details of students to their parents/guardians	31(62.0%)	18(36.0%)	1(2.0%)
4	Sending of SMS messages to communicate with both staff and students	1(2.0%)	1(2.0%)	48(96.0%)
5	Sending emails messages for official work	31(62.0%)	15(30.0%)	4(8.0%)

No	Response Items	Never	Rarely	Always
6	Using electronic media to prepare electronic form of timetable/class schedule	37(74.0%)	13(26.0%)	0(0.0%)
7	Using electronic equipment for automation of attendance and leave management of staff	50(100.0%)	0(0.0%)	0(0.0%)
8	Using electronic media for the processing and display of students' results	47(94.0%)	3(6.0%)	0(0.0%)
9	Using computer for staff recruitment and work allotment of staff	31(62.0%)	12(24.0%)	7(14.0%)

Source data, 2017

Table 2 shows that secondary school administrators were never used ICT facilities to perform their task, 8 items out of 9 (such as 1,2,3,4,6,7,8,9) indicates that above 65.5% were never use ICT to facilities their tasks. While 48 (96.0%) of the secondary school administrators indicate that they always used ICT facilities to send SMS messages to communicate with both staff and students.

Hypothesis: There is no statistical significant correlation between ICT usage and Administrative Effectiveness of secondary schools (at the level 0.05)

Table: 3

Correlations			
		Using ICT can increase administrators' effectiveness	ICT available
Using ICT can increase administrators' effectiveness	Pearson Correlation	1	.024
	Sig. (2-tailed)		.868
	N	50	50
Using ICT	Pearson Correlation	.024	1
	Sig. (2-tailed)	.868	
	N	50	50

Table 3 shows the relationship between ICT usage and administrative effectiveness of secondary school. The result obtained from the analysis shows that the value of sig- calculated 0.868 is greater than at 0.05 level of significance. Therefore, the alternative hypothesis is rejected. That is, there is no significant relationship between ICT usage and administrative effectiveness secondary schools in Mogadishu

4.1 Discussion

It is clear the result analyzed in table 1 indicated the level of availability and accessibility of ICT are very low except having computers and mobile phone for sending SMS for their staff and students, and the study also identifies that there is no adequate equipment in the schools. The findings in table 2 also indicated that there is low rate extent do secondary schools use ICT for administrative purposes. The reason for this result the federal government of Somalia does not provide

adequate ICT facilities to the secondary schools and the NGO's does not equipped these schools.

Finally, the findings of the study indicated that there is no relationship exists between information communication technology and administrators' effectiveness.

5.1 Conclusion

Based on the analysis of data collected, the study concludes that there is low available of information and communication technology such internet access, having email address, electronic media to prepare timetable and class schedule, electronic media to communicate academic details of students and their parents, backup equipment, anti- virus program, electronic examination management / database, fee payment system and equipment of automation attendance.

5.2 Recommendation

Based on the findings of the study, the following suggestions are recommended:

- i. The researcher highly recommends to increase the availability and accessibility of ICT
- ii. The federal government should provide ICT facilities to the schools.
- iii. The local and international NGOs' should provide support to the schools ICT equipment.
- iv. The administrator should encourage the use of information and communication technology in order to improve their productivity
- v. At the end of academic year, the administrator should create training, retraining and ICT awareness.

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Community Participation in Decision Making Process in Mogadishu Municipality

Ahmed- Nor Mohamed Abdi,

Lecturer, Faculty of Economics & Mgt Science,
Mogadishu Univetrstity

Abdirisak Warsame Dirie

Lecturer, Faculty of Economics & Mgt Science,
Mogadishu Univetrstity.

Abstract

This paper discusses the community participation in the decision-making process in Mogadishu Municipality. The main purpose of the study is to indicate the level of community participation in the decision-making process in Mogadishu municipality. The paper employed qualitative research approach by using random and purposive sample techniques. The study found that the local communities in Mogadishu municipality are willing and able to participate the local government decision-making process. The paper revealed such factors hindered local community to take part in decision-making process which includes mistrust between local government officials and the community in Mogadishu city, insecurity, limited resource of local government institutions, and lack of training of local officials. However, the study discovered that the level of community participation in the decision-making process in Mogadishu municipality is very minimal and limited. Finally, the study concluded that the community participation in decision making is very weak.

Keywords: Community, Participation, Decision Mogadishu Municipality

Introduction

1.1 Background

Community participation in decision-making processes in Mogadishu Municipality is a necessary in post-conflict reconstruction and peace-building of Somalia with respect to the formulation, implementation, and evaluation of comprehensive developmental plans, programmes, and policies at the local or grassroots level. As Silverman (2006) highlighted that community participation is a fundamental element of local public policy formulation and execution in democratic societies.

The participation of communities in the decision making processes is one of the central element of transparency governance, and enhances local officials commitment. It is a continuous process that covers the time between the two elections, where the information concerning the municipal decisions and policies occurs in both passages; local residents voice their concerns about local government and municipal authorities in its turn informs on the execution of the municipal policies (OSCE, 2013). However, citizens' involvement might take in different forms: The local community may take part in development actions by giving information concerning themselves, identifying problems, priorities, needs and contributing developmental policies, goals and strategies. Therefore, decentralization is one of the key option to encourage participation and community involvement in local governance as well as to promote the stability and security of the local population. It is based on the principle of subsidiarity which implies bring authority and power nearer to the communities.

On the other hand, The local government which is assigned to implement public involvement is seen failing because of lack of information sharing to the local population, ineffective programmes and incapability of its human resources (Ngcamu, 2014). Though, Participatory local government mechanisms are always supported and advocated in developing nations. It is believed that citizen involvement brings about several policy advantages including improved accountability, responsive government, and high-quality public services delivery.

From 1960-1969, the administrative rule in Somalia was decentralized and performed by the local organs of the State and by public bodies”, and all over of the country, popularly elected local councils had been responsible for local and district administrations. The elected government of the Somali Youth League Party (S.Y.L) managed that form of decentralization. In 1969 Military coup of Mohamed Siad Barre nullified this form of elected local governments and dissolved all the elected local and district councils. Though the military failed to enable the local communities to manage their local affairs, they establish a system of government which promoted nationalism, patriotism, and national identity.

1.2 Problem Statement

After the breakdown of Somali Central Government in 1991, formal central, regional, and local authorities ceased to exist. In 2004 the established Transitional Federal Government of Somalia adopted a federalism form of governance reflecting the Charter of Transitional Federal Government (2004). This indicates that government has to give

local communities a chance to take part in development activities including involving citizens in identifying needs, problems and priorities, involving in determining developmental goals, policies and strategies.

The Federal Government (2012) also restated the same principles of federalism and devolution of authority. This implies that both official documents recognized the significance of local self-governance and community involvement in key decision-making processes which directly or indirectly affect their lives.

Mogadishu (known locally as Xamar) is the capital and most populous city of Somalia. It composes 17 districts, each one has its own local District Authority (DA). It has divisions, subdivisions and neighbourhoods. Nominated district commissioners runs the business of the district. The mayor of the city appoints the commissioners of the different districts. The president of the Federal Government of Somalia appoints the Mayor of Mogadishu Municipality and his deputies in consultation with the relevant stakeholders. The nomination of the Mayor, his deputies, and the district commissioners are based on clan power sharing. Therefore, this implies that community involvement in municipality operation is very limited.

1.3 Purpose of the Study

The main purpose of the study is to describe the level of community participation in the decision-making process in Mogadishu municipality.

1.4 Research Questions

The researchers try in this article to find out answers to the following research questions:

1. Is the Community involvement in the decision-making processes necessary for developing a sense of ownership in local authority's programs, policies and plans?
2. What are the Factors influencing community participation in local government decision-making processes?

How is the Level and quality of community participation in the decision-making process for service delivery in Mogadishu Municipality?

1.5 The Concept of Community Participation

The terms participation, community participation, popular participation, people's participation, and democratic participation are often used interchangeably in current development phraseology (Kuye, 2005). Community participation refers a practice of involving people, with identical needs and objectives, in decisions influencing their lives. Charles Abrams defines community participation as "the concept that the local citizens must be given an active role in the programmes and improvements directly touching them. Its rational is to transfer the power to control affairs and decisions to people most affected by them.

Furthermore, since no national or local authority has the financial means to solve all the problems that influence its communities sufficiently, it is essential to involve local people in the situation that affect them (Turner, Bank, & Wates, 2012). Nabeel Hamdi defines community participation as a more influential idea which "refers to the principle by which experts, families, community members, local government officials, and others come together to do something out, preferably in an official or informal partnership".

Additionally, the Organization for Security and Cooperation in Europe (2013) underlined that “the main prerequisite for pursuing a sustainable democratic reform processes is the ability to make the citizens trust the elected leadership” The more productive and more democratic municipality will be developed, when there is a strong link between the two sides(local citizens from one side and their elected local officials from another side). Local elected officials should have the spirit and ability to respond the vital needs of their local communities, represent their real interest and develop their condition of life. Those individuals and communities who participate in the decision-making process of their locality are known stakeholders. Unquestionably, they have a strong interest in the formulation and execution of local municipal policies, because it concerns their wellbeing and daily lives. This paper explores the Public involvement in the decision-making process in Mogadishu municipality.

Despite that, the establishment of local government anywhere in the world is based on the need to make easy the development at the grassroots. Local authorities create a sense of ownership, belongingness, safety, and satisfaction among its population(Abe, Monisola, & State, 2014). The right of local citizens to participate in the political affairs of their locality without undue influence or pressure is another key characteristic of political decentralization. This is promoted by the necessities on the local authorities to give information on the plans and policies for their citizens and to provide open platforms for dialogue of important issues, A method to ensure this community participation is through neighbourhood associations, the formation of citizen committees

dealing with local issues, such as education, health, water, sanitation, infrastructure development and physical planning of the citizens (Wright, 2013).

Naturally, involving citizens in local government decision-making processes is a significant worth and priority in democratic and civilized societies. Most countries of the world, Governments are restructuring and strengthening their system of local governments, transferring responsibilities and resources to lower levels of governments. Nations have different driving factors such as, Political, social and economic as well as external and internal. The shared assumption is that transferring responsibility for service provision to the third tier of government should help to ensure that resource use and decision match the priorities and needs of local communities (Devas and Grant, 2003). Alternatively, citizens should stand as producers and shapers rather than as users and choosers of local government policies and plans or services designed by others. Old-fashioned forms of political representation should be re-assessed and direct democratic methods should increasingly be drawn upon to allow citizens to play a more active role in decisions which have an effect on their lives (Maloka, 2014).

2 Literature Review

There are numerous debates and discussions around the world concerning the community involvement in local government decision-making processes and its influence on developing local authorities. There are various research studies about the community involvement in local governments.

As Idasa: African Democracy Institute (2010) contended local government is the nearest tier of government to the people at the grassroots level. As a result, it is delegated to play a crucial role in formulating effective service delivery mechanisms for the people to achieve a high level of standard living. The arguments for improved community participation often based on the benefits of the process and the confidence of scholars that engaged communities is more active than a passive one. With the community participation, drafted policies might be more rationally reflect citizen's preferences and choices, the communities might enthusiastically become evaluators of the tough choices that city managers have to take. As result, the enhanced support from the local residents might create a less divisive and hostility, combative population to manage and control (Irvin and Stansbury, 2004). Moreover, another study reveals that, in every community, elected or appointed representative democracy requires to be supplemented by means of public participation, to allow those appointed or elected to know better what are the preferences and needs of local citizens, as well as to inculcate a sense of ownership on the part of communities of the services and goods provided by local government (Enshassi and Kullab, 2014).

Nzimakwe & Reddy (2008) in their research article asserted that public participation forms part of local community involvement and citizenship which is central to the value of good local governance. It facilitates the participation of local poor people and marginalized into local affairs, creates sense ownership of locally available resources and makes suitable decisions to use such resources in a sustainable manner.

Consequently, citizen participation means empowering local communities by equipping skills and abilities that qualify them to take part and make informed decisions concerned with their developmental needs (Reddy, 2008).

In addition, Silverman (2006) investigated the socioeconomic features and public participation strategies of municipalities in Canada and USA. The research aimed at to study the instruments used by both municipalities to inspire public participation and to argue the contrasts exist between the socioeconomic makeup of central cities in the United States and Canada and to explain these different mechanisms used for community participation. The findings revealed that Canadian Municipality Authorities use broader range of community participation instruments including; voluntarism and community engagement, neighbourhood and strategic planning, and electronic government. On the other hand, the articles result showed that United States municipalities are more likely to stimulate public participation via community meetings and referendum on public issues.

Not only the above studies noted the significance of public participation but also Yvonne (2010) carried out another recent study on public participation for sustainable development in local cities in Kenya. According to him, the composition of community and its attitude towards local governance will affect the type and level of community participation in local government decision-making processes. He further added, the mechanisms already adopted are public hearings in government meetings, whereby individual citizens can voice their concern on local government policies and programmes. Besides, Ammar

et al (2012) conducted a research which examined the effect of residents' participation in management and maintenance works on residents' satisfaction in new multi-story housing projects in Gaza, Palestine. Their findings revealed a strong relation between the level of the citizen's participation and their satisfaction (Ammar & Hj, 2012).

To sum up, in Somalia, the researchers do not come across any study article that had been written about community participation and decision-making process in local authorities. Therefore, this gap gives the researchers of the study a chance to carry out a descriptive research study about the community participation in decision making process in Mogadishu Municipality. Particularly, this article aims to describe the extent to which Mogadishu local communities participate in decision-making processes in Mogadishu Municipality.

3. Methods of Data Collection

This paper applied qualitative research approach both simple random sampling and purposive sampling techniques are utilized to select study respondents. The first technique adopted community members and civil society representatives, while Banadir regional government officials, District Commissioners, traditional elders, religious leaders, experts on governance and decentralization, women and youth representatives are used to select purposive sampling technique for the reason of their expertise and information.

Geographically, the study conducted in Mogadishu Municipality also known as Banadir Regional Administration which is comprising 17 districts. However, for the reason of time and budget limitations as well as security problems, only 5 districts was conducted the study. The

selected districts are Hamarweyne, Yaqshid, Hodan, Wartanabada and Wadajir district. The selection of the districts was based on such factors including those far from regional administration headquarter, district located the administration headquarter its self, the size of the district, and those considered to be most marginalized. The total number of the respondents was 340 in all five selected districts. Each district was selected a sample representatives including all the above mentioned participant's categories as indicated the following table:

Table 1: Sample Distribution

SN	Participants	Total	Sampling technique
1	Community members	200	Random sampling
2	District government officials	45	Purposive
3	Traditional/community leaders	25	Purposive
4	Religious leaders	15	Purposive
5	Experts of decentralization,	10	Purposive
6	Civil society representatives	30	Random sampling
7	District Commissioners and division and sub-division Heads	15	Purposive
	Total	340	

Source: Primary

3.1 Demographic Information

This section concludes the demographic information of the study subject in terms of sex, age and qualifications. The following table indicates each variable with their percentage level which ensures that participants are mixed with their gender both male and female, age variances and different qualifications to ensure the insertion of all different participants are included the study participants as summarized the table below:

Table 2: Demographic Information of the Respondents

Gender		Qualifications				Age			
Male	Female	S.S	Diploma	Bach	Other	18-31	31-40	41-50	50+
54%	46%	39.5%	1%	54%	5.5%	58.5	58.5	58.5	58.5
						%	%	%	%

Source: Primary

In addition, in case of implementing primary data collection, in depth interview for community members and selected local government officials has been used, while focus group discussion was conducted in grass roots level for the districts population. Additionally, key informant discussion was conducted for decentralization experts, academicians and civil society representatives and finally observation checklist was used as supplementary data collection. Secondary data was collected in journal articles in post conflict affected countries, relevant government reports and newspapers.

In order to ensure the validity of the instruments, the researchers evaluated the questions raised against the contents and objectives of the study. The instruments was also professionally examined the researcher's advisor and other experts of the field to develop the validity content of the instruments. Reliability was ensured through testing the study question in two different time and locations and produced similar and consistence results. Therefore, to be ethical upright, the researchers applied critically ethical issues to the study respondents and giving proper identification of the research objectives, gave them clear information, confirmed to them free and informed consent as well as protected their right of privacy, anonymity and confidentiality.

3.2 Method of Data Analysis

Collected primary data through interview, focus group discussions, key informant discussion and observation was analysed carefully along with eliminated the data errors. Data was broken down themes and sub-themes and deeply focused research objectives. Each theme was analyzed and examined in detail until produced the main idea of investigation. Data information collected by interview and FGD were analyzed qualitatively in a systematic way, whereby the researchers established patterns, trends and relationships in the information gathered and came up with useful conclusion and recommendations. Coding was expected to organize and reduce research data into manageable conclusion. The researchers applied statistical Package for social science in a qualitative data analysis.

4. Results and Discussions

Based on the research questions, the researchers present and discuss their answers in accordance with the findings:

The results of this study revealed that the majority of the respondents agreed that community participation facilitates information sharing, increases public awareness, and enhances efficient allocation of resources by matching to citizens' preferences and priorities. It creates a sense of public ownership of the municipal's policy and decisions. As a result, their willingness to pay for services increases. This implies the promotion of the inclusion of the poor and marginalized people in the decision-making process. Furthermore, it signifies when citizens are active and are fully involved, they can come up with new ideas, add legitimacy to the process of local governance, and improve energy for follow-up on the

outcomes obtained in such community participation processes. In addition, there is a common desire among the respondents in all districts to exercise their democratic rights by electing local leaders at district level which facilitates accountability and transparency as well as an increased belongingness of the policies of the local authorities. The majority of focus group and interview participants expressed their views as follows:

“As we are the local communities, we like to elect our district commissioners and the governor of Mogadishu municipality to hold accountable for their decision and actions. Community involvement in the decision-making processes is necessary for developing a sense of ownership in local decision-making processes and policies”

In the same way, many participants throughout focus group discussions and interview acknowledged the importance and necessity of citizen participation in the decision-making processes and how their participation enhances the quality of service delivery. They strongly suggested to the Mogadishu municipality to create platforms through which they can engage decision-making processes which influences their daily lives. Such platforms will help the local officials in the municipality to be informed the urgent and long-term service delivery expectations of the citizens. Most important is that consultations with local people will empower the local authorities to provide feedback to the communities, promote ‘checks and balances’ and provide space for communities to hold their local government officials accountable. Therefore, the majority of the respondents frequently stated the community participation in local government decision-making process improves the quality of services

delivery since the community and the local government officials identify the problems and needs together. The results indicated that public involvement in local government policies and service provision help in problem solving in the community and create trust between the public and the local authorities. At the same time, the evidence confirms that increased participation and better accountability can result from democratic decentralization, and that these substantive benefits should not be underestimated.

4.1 Factors influencing community participation in local governance decision making process

Findings from focus group discussions and interview revealed a number of challenges faced the local community to participate the decision-making process. These barriers include; lack of trust between the local authorities and community members and fear of community members to associate with the local government institutions and its agents due to the insecurity that Mogadishu municipality has been experiencing. Concurrently, this is accompanying to the Mogadishu municipal official who are unskilled, lack the required training and knowledge base in public and development administration policy to function optimally. As pointed out one participant of focus group discussion meetings and mentioned as follows:

“In general there is no community participation in the local government decisions in the Mogadishu municipality, particularly in my district, I haven't participated or any member of my relatives or friends not contributed any consultation meeting with local administration at district level for the reason of insecurity and mistrust between local government officials and community.”

The majority of focus group and community interview participants showed that there is no notable community participation in the decision-making process in Mogadishu districts authorities. On the other hand, an interview with local government officials in all 5 districts confirmed that community participation in the decision-making processes is very weak and needs to be improved as mentioned one of the local government officials:

"In our district, there is no effective community participation in decisions regarding service delivery to ensure the local government institutions covered the priority needs of local community. The reason is insecurity and lack of enough resource to allocate community consultation"

Therefore, this implies that there is no cooperation and collaboration between the local community members and district authorities. Meaning that local government officials have no clear input and information to serve their community at the district level and to identify their priority needs and preferences.

4.2 Level and quality of community participation in decision making process for service delivery in Mogadishu Municipality

Similarly, the evidence provided by key informants interview and focus group discussants in the study show that there is limited community participation in decision making process. The majority of respondents both in FGD and KIIs agreed in the same way that there is little contribution for community members in the decision-making process. According to them, they revealed traditional leaders help local leaders in conflict resolution on land disputes and family affairs, while

district youth participate in a district football competition. Additionally, the study demonstrated that women also take part district cleaning and sometimes they are organized for participation in political demonstrations. However this does not equate to meaningful participation in decision making around municipal service delivery. For instance, one of the focus group discussants expressed his concern on this issue of community participation in decision making process and said:

“When we attempt to engage the local government office at district level it is not easy to us, even to meet the district commissioners, therefore, I am shocked how they are representing our district. We aware that there is a problem of security in our country which makes local leaders uneasy about being accessible”

The evidence provided by Key Informant Interviews (KIIs) and focus group discussion (FGDs) participants argued that there is limited information accessible to the citizens that would enable them play a key role in demanding accountability and transparency. They disclosed the executive officials of Mogadishu municipality authorities are appointed by the federal government which means that they owe allegiance upwards and are not obligated to account to the citizens. In addition to that, each District Commissioner is appointed by the Governor/Mayor of local government in consultation of the relevant stakeholders including clans and sub-clans leaders and members of parliament who come from that district. Most respondents of this study mentioned that there are no procedures and channels for accessing information. For instance, one of the focus group discussants said:

“Access to information on the actions and performance of local government is critical for the promotion of government accountability. As Mogadishu residents, we do not know what goods and services are provided by the local government, how well they are provided, who the beneficiaries are, and how much they cost. In addition to that, we demand meaningful and effective participation from the local authorities, you know access to information allowing us to monitor the local government’s subsequent actions, and it also enhances the impact of participation by creating a pressure on the local government to take into account our preferences in decision-making”

Transparency of local government service delivery and financial information is essential for the local authorities and the general public to be adequately informed about the performance of the locality. It is essential that information not only be provided but that it is relevant and understandable to all stakeholders. The concerns of participants are largely based on the belief that the local government institutions neither have transparency mechanisms, nor are they held accountable. An interview with a local District Administrator mentioned whether his department involved community members in decision making process, he conveyed his view as follows:

“We do not plan any thing, all programs and plans are top down - come from the headquarters of Mogadishu municipality- and the local communities are unaware what happens in the district. He further added that there are no systems in his department which encourage accountability and transparency”.

The local District Administrator was asked to mention the channels that his department uses to share information with members of the community, he showed his voice as follows:

“We share information with members of the community in our district through radio, televisions, and newspapers and through community elders”

Sharing information with the local communities through media is a very good starting point, but this is not enough and it's not adequate to meet the communities' need to ensure transparency and accountability. For making sure transparency and opens and subsequently accountability there should be direct community participation in decision making processes to improve local service delivery.

The participants were asked to suggest how citizens could attempt to hold officials accountable; the majority of the participants suggested that regular local elections are the most appropriate mechanism by which citizens at large can hold accountable to local public officials at regional, district, division, subdivision and neighbourhoods level. The current local authorities come in power through a selection process, as result, citizens cannot able to hold accountable for their actions and decisions rather than participating in the decision- making process in the local district.

Conclusion

This paper intended to explore the community's participation in the decision-making process in Mogadishu municipality. Its aim is to indicate the importance of community participation in Mogadishu municipality, factors hindering the effective local community participation in decision-making processes and along with the level of

society involvement as well as the general status of community contribution in the decision-making process. The study was carried out in 5 districts of Mogadishu city for the reason of limited resources and time. The study concludes the majority of the local community in the Mogadishu city that was very interesting to its effectiveness participation and contribution of the activities in their respective local governments in terms of the decision-making process, planning local government activities as well as other community contribution. Furthermore, the study indicated factors hindered the local community to effectively participate the activities in local government. Such factors includes mistrust between local officials and community, insecurity, limited resource of the local government institutions to organize community meetings as well as limited knowledge of local government officials for community participation processes. Finally, the study revealed, the level of community participation in the decision-making process in the Mogadishu municipality is very negligible.

Recommendations

Based on the findings of the study concerning the community participation in the decision- making processes in Mogadishu Municipality, it is recommended to :

- Enforce Mogadishu community to select thier own leaders
- Encourage decentralised local governance. It is the only way community participation can be enhanced.
- Create community forums to facilitate local population participation in local government decsion making process.

Process in Mogadishu Municipality

- Mogadishu Municipality meetings should be open to the public; this creates community confidence and trust to the local authorities.
- Organize community integration meetings to re-build trust between local government officials and community in Mogadishu municipality.
- Training on developing performance and quality service delivered.

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- Each district of Mogadishu city should create a website through which they can update, network with the public, and show its activities and services.

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The Role of Zakat in Poverty Alleviation in Somalia
“Analytical Study on Islamic Economics”

Mr. Adam Ahmed Hussein

Head department quality control, Mogadishu University

Abstract

Historically, the applications of Zakat pillar approved is be effective meaning to poverty alleviation and realization of the principle of brotherhood in Muslim community by minimizing poverty rate to lowest level, the poverty disappeared during period of Omar bin al khadab caliphate and the time of Omar bin Abdul Aziz because just rule and good leadership when Islamic caliphate fall and the influences of western system dominated the Islamic world, zakat has lost its glory as it is main character Islamic economic system. so, the poverty rate has been increased since that time, therefore this paper aims to present a comprehensive mutual understanding to the extent of need to re-establish Zakat institutions, especially, in Somalia in the rebuilding stage and reformation of developmental institutions. There is a demanding need for reduction of the extreme poverty by clearly utilizing zakat in poverty alleviation and economic growth.

The study has approached the descriptive analytical method to explain the concepts and the relationship between Zakat institution mechanism and poverty factors. The author used secondary data and found result that there is negative relationship between effectiveness of zakat role and poverty level in Somalia. The study also suggests that effectiveness of Zakat role in poverty reduction will improve by re-establishing zakaat institution which requires synergism between deferent efforts of community institutions like microfinance intuitions, intellectuals and relative organization in public sector so that the poverty is reduced.

Keywords: Zakat Institutions, Poverty Alleviation, Effectiveness Islamic Economic System.

1.1. Introduction

Islam provides a complete set of systems and processes to organize relationship between person and Allah -his Creator- person and universe, person and the other persons and society, as well as person relation with himself.

One of the purposes of Islam is that the five basic requirements of human life to be secured for all community members, five Generic Shari'a Maqasid are maintaining the religion, the self, the wisdom, the dignity and wealth. The aim of brotherhood between believers and Zakat pillar of Islam is to constantly look after the poor in the community by the individuals and authority as well.

The degree of poverty can be measured at the national level by observing the percentage of the population living under national poverty lines. The usual measurement is by using US\$1 and US\$2 (at 1993 Purchasing Power Parity terms) at reference poverty lines (Note 3). It is estimated that 20 percent (1.2 billion) of the people in the world live on US\$1 a day and 46.7 percent (2.8 billion) of them live on \$2 a day (World Bank, 2001).

The corresponding percentages of poverty for Islamic Development Bank (IDB) member countries indicate that a relatively large percentage of the populations of these countries are poor although the world economy has grown intensively, In addition, Islam had brought a method on solving the problem of poverty. (Ahmed, 2015).

1.2. Problem Statement

Allah created the worlds with the objective of worshipping and pleasure of Allah by using all their capacities and abilities, including

physical, mental and material forms of worship. Islam as the final and complete message doesn't allow wastage of resources. Therefore, all financial worships in Islam find their route to the pockets of the poor and needy.

The institution of zakat in Islamic society can and will bring about positive changes for the society, aside from the fulfilment of religious duty as decreed by Allah SWT. To ensure that zakat is a transcendental duty to uphold the pillars of Islam by conducting precisely Zakat institution.

The following research questions are explored by this study to address the role of zakat in poverty reduction and to point out the importance of Zakat institution for national economic development:

- How to develop conceptual understanding of the role of Zakat in poverty alleviation in societies that have been suffering from poverty a long time?
- How technically, possible to establish zakat institution with community based initiative and state perspective?
- What strategies can be used in addressing technical problem of managing zakat to realize its purpose in poverty alleviation?

1.3. Objectives:

The paper aims to present a mutual understanding to the role of Zakat institutions in poverty eradication in Somalia, especially, in rebuilding stage and reformation of developmental institutions.

1.4. For this purpose the following specific objectives are addressed:

1. To describe scope of Zakat concept as economical pillar of Islam to show its economic and social functions.

2. To analyze the challenges and the opportunities of establishment of autonomous Zakat institution based on community initiative in Somalia.
3. To propose appropriate strategies to effectively manage zakat institution to achieve purpose of Zakat in this stage of economic reformation of Somalia.

1.5. Methodology

Descriptive analytical approach will be used in this paper to describe concepts and analyze the variable determining the relationship between institutional mechanism of Zakat and poverty problem, relative secondary data will be used to theoretical and procedural analysis to reach the purposed output.

The main sources of this study as Islamic Muamalat particularly and Part of Islamic economics system generally, like all other aspects of muamalat are the Qur'an and the hadith (al Aslain), and the body of jurisprudence, established on: consensus of Uluma, judicial reasoning, derivation, public interest, custom and usage as well as experiences of some Islamic world nations who developed Zakat institution and show its efficiency and effectiveness.

2. Literature Review

2.1 Concept of Zakat:

Linguistically, Zakat means growth, it can also mean purification and the Sharia's meaning of Zakat refers to the determined share of wealth prescribed by Allah to be distributed fuqar and masakin among the deserving categories of those entitled to receive it. Zakat is regarded

both as a right of Allah as well as right of the poor. The concept of Zakat implies both meanings of growth and purification.

The first meaning is construed as to cause growth in wealth or as to cause more reward or as to pertain to increasing wealth, such as the case in commerce and agriculture. This first meaning is supported by the Hadith of the prophet Mohamed peace and please of Allah be upon him. “*No wealth decreases because of Sadaqat (Zakat)*” owing to the fact that its reward is multiple. ((God increases the reward of *Sadaqat*)) (*al baqarah ayah 201*). The second meaning is construed to imply that *Zakat* purifies the human soul from the vice of avarice as well as sins.” (al Showkani).

2.2 Definition of Zakat

Juristically, Zakaat is the amount of money or wealth that every adult, mentally stable, free, and financially able Muslim, male and female, has to pay to support specific category people.

Zakat is obligatory and compulsory to perform immodestly after its conditions. These conditions relate to both the payer and the wealth of the payer; and should be counted as a Mercy from the Almighty Allah.

2.3 Conditions of the Payer of Zakat

- He or she is an adult, sane, free and Muslim.
- He/she must possess wealth in excess of specified minimum (Nisaab) excluding personal needs (clothing, household, furniture, utensils, car etc. are termed article of personal need).
- The Nesaab should be possessed for a complete lunar year.

- The wealth should of productive nature form which one can drive profit or benefit such as merchandise for business, gold, silver, livestock etc.

2.4 Kinds of Zakatable Wealth

- Gold and silver, in any form and the Cash in Bank, company stocks and bonds, etc.
- Livestock.
- Agriculture yield
- Merchandise for business,
- Income derived from rental business. all should be equal to the value of Nisaab in long complete lunar year.

2.5 Important of Zakat for Muslim Community

As Mutasim (2009) stated that poverty reduction is one of the main objectives of development policies. Later Unated? Nations put poverty alleviation as the first goal of the Millennium Development Goals (MDGs).

- **Zakat plays vital role in redistribution policies** of assets and opportunities, capacity building and wealth creation, and extending income support (Abdelmawla, 2011).
- **Zakat position in the quran and the Sunnah:** Sadaqah and Zakat are mentioned in the Qur'an and Sunnah, sometimes interchangeably, For example: The word Zakat is mentioned 30 times in the Qur'an. Salaah and Zakat are interlinked in 28 places in the Qur'an. Zakat is not linked with Salaah in 2 places in the Qur'an. (Surah Al-'Araf: 156 & Surah Ar-Rum:39) On the other hand the word Sadaqah is mentioned 13 times in the Qur'an. Sadaqah covers the

meaning of obligatory and voluntary charity. (foundation, 2015) in addition to the numerous of prophet hadiths about zakat pillar in which the sahihayn (Bukhari & Muslim) and othes sunan books are rich.

- **Zakat as determent of Islamic economic system**

uniqueness: Islam gives an important consideration to both Material and Spiritual satisfactions of mankind. Material satisfaction hapen through satisfying the physical needs and wants of all members of the society, spiritual satisfaction is gained with nearness to Allah and moral uplift, this is necessary in peace of mind, inner happiness, family and social solidarity, absence of crime and anomie. as M.O Chapra (2009) stated Equally important is generally recognized to the conditions of sustained well-being that are nearness to Allah, spiritual and moral uplift, security of life and property, individual freedom, proper upbringing of children, family and social solidarity, and minimization of crime, tensions and anomie. (CHAPRA, 2009). Therefore, givig Zakat plays vital role in realising all these values for the two sides of zakat payer and benefiter and welfare of the society.

- **Zakat, among others, is a factor proved principle of**

Traineeship Ownerships of the wealth: One of the Islamic economic system characteristics “the Trusteeship ownership principle” which means that all things belong to Allah S.W.T, is one of the major characteristics which differentiate Islamic system of economics from conventional economic systems. Wealth is therefore held by human beings in trust. Zakat distribution, Inheritance distribution, Takaful insurance and Awqaf–endowment are unique features to maintain

circulation of the wealth in large manner among people and to defend from hoarding money and monopolise health (CHAPRA, 2009).

- **Zakat uplift moral values in resources allocation and distribution:** Conventional economists ignore role of moral values in resources allocation and distribution. When there is absence of moral values societies should be solely dependent on the market or the government for allocation and distribution of relatively scarce resources. The question is can the market or the government promote the balanced well-being of both individual and the society without the help of moral values? It is obvious that needs to adhere requirements of Islam in every aspect of the human life including religious, political, social and economic activities in order to maintain a good relationship with Allah. In general Muslims believe that they are responsible for their actions and all actions accountable to god in the Day of Judgment. As Allah created the universe he is the ultimate owner of everything and human being is only responsible to steward the gods possession. Thus human being is only responsible to manage their property according to God's way. (farah, 2012).

Mutasim (2009) cited in Hassan "The Islamic economy identifies those economically individual differences among people as each person is endowed with different types and levels of human abilities. Thus, even though individuals are provided with equal opportunities, the economic status of two individuals may not be equal.

Therefore, poverty cannot be alleviated simply through income redistribution or ensuring equitable opportunities for all. An Islamic

approach to poverty alleviation would ideally involve a holistic approach including a set of antipoverty measures:

- a) Increasing income level with pro-poor programs.
- b) Achieving an equitable distribution of income.
- c) Providing equal opportunities for all social segments.(Mutasim, 2009)

2.6 The Purpose (Maqasid) of Zakat

Social solidarity is one of the purposes of zakat to save the community balance through compassion, love, altruism, and purity of conscience, Zakat rejects extermination, loathing and envy, as drawn by our great Islam; but actual circumstances of the world give the confidence that the rich become rich for the benefit of the poor, if each rich gives the right of his poor slaves from the God's trust of wealth not poor, not hungry have been seen, the numbers who are dying because of hunger or disease would disappear. The lowest receivers to their rights in the countries of the world are Muslims (Alukah, 2016).

2.7 General Objectives of Zakat

Zakat is not just any form of voluntary or charity alms giving or tax or simply an expression of kindness and generosity. Zakat is all of these combined and much more, for it also includes Allah-consciousness as well as spiritual, moral and social objectives. As the third pillar of Islam, Zakat is first of all an Ibadah (worship) whose spiritual impact on purification and sanctification is Zakat's most important function.

2.8 Economic Objectives of Zakat

Paying Zakat is an act that purifies one's wealth. It is a divinely prescribed method of cleansing and purifying a person's heart and soul

from all kinds of wealth greed and material love by instilling love of Allah, making a person an obedient, sincere, and grateful servant of Allah.

The institution of Zakat-ul-Maal embodies a viable system established to assist in the process of growth and development of the Muslim community. It takes care of the poor in the community by providing the basic needs of the good life. Zakat is right of the poor and other recipients on the wealth of the rich persons, thereby establishing mutual rights and responsibilities between members of the community. Moreover, Zakat contributes fair and just distribution of wealth and circulation money in a society. The following are specific economic objectives of Zakat:

1. To promote circulation of the money.
2. To prevent from hoarding money and monopoly of goods.
3. To promote growth of economic market.
4. To create new employment opportunities.
5. To contribute in education and social development.

2.9 Advantages of Paying Zakat

1. means to attain Allah's mercy
2. A precondition to achieve victory
3. A sign of brotherhood in religion
4. A distinctive feature of the faithful community

2.10 Factions of Zakaat

Zakat plays various functions in the economy:

First, Zakat helps reforming both financially and spiritually in society. It eliminates misery and greed from hearts and consolidates the Islamic economy, leading to its stability and prosperity.

Second, for the production to grow without check in an economy, the money must circulate. Hoarding of funds is a prime reason for the depressions and slowdowns in the economy in the modern economic era as people save more and spend less, resulting loss in the business and layoff employees resulting further slowdowns in the economy.

Third, Zakat shapes consumer behavior, *it* ensures that wealth is distributed and circulated in the system, increases production and stimulates supply because redistribution of income through giving amounts of Zakat will enhance the demand by putting more real purchasing power to hand of the poor resulting in an ever-growing economy.

The regulations differ for each of the above categories. As the detailed system of computation of zakat in all categories discussed and detailed in standard books on Islamic jurisprudence. For cash, the minimum rate is two and half percent (2.5%).

Zakat should be given only on the net balance after all lawful expenses have been met at the end of the year. The rate mentioned above is only a lower limit as obligatory payment. There is no upper limit sadaqatu tadawuc charitable fund. Beyond these obligations, the more one gives, the greater the benefit on both the giver and the recipient.

The payment of Zakat is compulsory on the excess wealth which is equal to or exceeds the value of Nisaab, and which is possessed for a full Islamic year. If such wealth decreases during the course of the year and increases again to the value of Nisaab before the end of the year, the Zakat then must be calculated on the full amount that is possessed at the end of the year.

The Amount of Zakat: the amounts of Zakaat are detailed the following:

- 1) 2.5% on annual saving that are zakatable.
- 2) 5% on agriculture being taken care of by a farmer who is planning and irrigating from his own money. During harvest time, he pays five percent from the total crop.
- 3) 10% on the farmer's product if it is being irrigated by rain.
- 4) 20% on the resources like oil or precious metals (i.e. gold, silver,) which you find on a piece of land that you own. This is your property, no one can nationalize it.
- 5) 2.5% on whatever a business person saves after taking care of his family's needs and his business expenses. (There is some different opinion among the scholars in this).

2.11 Benefits of Giving Zakaat

The inner intention when discharging Zakat should be based on the fulfilment of the Commandments of Allah. Solely for the pleasure of Allah. The individual who sincerely dispenses his Zakat most definitely becomes the recipient of the promised rewards and benediction of Alla. (Al-Baqarah :276) tells us that: "Allah will deprive usury but will increase charity: For He does not love the one who is ungrateful and

wicked.” The Hadith of the Prophet (peace be upon him) enunciates this concept very beautifully: “When a slave of Allah pays Zakat, the Angels of Allah pray for him in these words: “O Allah! Grant abundance to him who spends (in Your cause) and destroy him who does not spend and restricts to himself his wealth. (Bukhari).

Abdullah bin Abi Aufa narrated: When the people brought Sadaqah to the Prophet (peace be upon him) he used to say, “O Allah! Bless them with your Mercy.” Once my father came with his Sadaqah to him whereupon he i.e. the Prophet (peace be upon him) said. “O Allah! Bless the family of Abu Aufa.” (Bukhari).

The moral and material benefits of Zakat are obvious. To give zakat purifies the heart of the giver from selfishness and greed for wealth and develops in him sympathy for the poor and needy.

Receiving Zakat also purifies the heart of the recipients from envy and hatred of the rich and prosperous, and fosters in him a sense of good will towards his brother Muslims who although are better off, have shared their wealth with him for the sake of God.

God says in Qur'an "To Him belong the keys of the heavens and the earth; He enlarges or restricts the sustenance to whom He wills, for He knows full well all things." (42:12) "He has raised some of you in ranks above others that He may try you in the gifts He has given you." (6: 165).

Thus, a Muslim, whether prosperous or needy, considers his condition in this world as a test from God. Those who have wealth have the obligation to be generous and charitable and to share the bounties of God

with their brothers, while those who are poor have the obligation to be patient, to work to improve their situation, and to be free of envy.

Thus, Islam neither approves of hoarding and unlimited building up of capital, nor of compulsory equal distribution of wealth, as both are unjust. Its teaching encourages the earning of a livelihood and acquisition of wealth by lawful, honest and productive means, and enjoins the just sharing of the acquired wealth among the workers, the investors and the community at large.

The community's share in the produced wealth is Zakat and Sadaqah (charity), the first an obligatory and the second a voluntary contribution from individuals. Zakat, when honestly practiced, results in freeing the society from class distinctions, rivalries, suspicion and corruption.

It produces a community of people who love and respect each other, and who have sympathy and concern for each other's welfare. Giving Zakat is not a matter of pride. It is a devotional act, like Salat, on the completion of which the contributor should be thankful to God for the fulfilment of his obligation and pray for the forgiveness of his sins (Khan, 2014).

2.12 The following are some of the many benefits for the one who gives his Zakaat:

- 1) Pleasure of Allah.
- 2) Increase in wealth.
- 3) Protection from losses.
- 4) Forgiveness and blessing from Allah.
- 5) Safety from calamities.
- 6) Protection from the wrath of Allah and from a bad death.

- 7) Shelter on the Day of Judgment.
- 8) Security from seventy misfortunes.
- 9) Shield from the fire of Jahannam.
- 10) Safety from grief.

Recipients of Zakaat: The recipients of Zakaat are as following:

1. **Fuqara:** (Poor) people who are poor and who possess more than their basic needs but do not possess wealth equal to Nisaab.
2. **Masaakiin** (Needy) people who destitute and extremely to the extent they are forced to beg for their daily food rations.
3. **al- amileen** (employee of Zakaat): people appointed by an Islamic government to collect Zakaat.
4. **Mu-allafatul-quluub** (sympathizers): persons who have recently accepted Islam and are in need of basic necessities who would benefit from encouragement by Muslims which would help strengthen their faith.
5. **Ar-riqaab:** slaves who are permitted to work for remuneration and have an agreement from their masters to purchase their freedom on payment of fixed amounts.
6. **Al-gharimeen:** persons who have a debt and do not possess any other wealth or goods with which they could repay that which they owe. It is conditional that that this debt was not created for any un-Islamic purpose.
7. **Fi-sabeelillah**(for the cause of Allah): persons who have to carry out an obligatory deed which has become obligatory on them and subsequently (due to loss of wealth) are unable to complete that obligation.

8. **Ibn-us-sabeel (travelers)**: persons who are travelers and during the course of their journey do not possess basic necessities, though they are well to do at home. They could be given Zakaat in order to fulfill travel needs to return home.

Contextual Analysis

In this part, the researcher seeks in the answers for the pre-stated research questions through available references

Q 1. "How to develop conceptual understanding of the role of Zakat in poverty alleviation in societies that have been suffering from poverty a long time?" the researcher explained the answer of this question in theoretical frame work and literature review, the remaining two questions are illustrated below:

Q 2 "How technically, possible to establish zakat institution with community based initiative and state perspective?"

Based on references related to this question, the writer presents some technicality of establishing Zakat institutions in Somalia:

1. Establishment of autonomous Zakat institution based on community initiative in Somalia "Challenges & Opportunities"

Although further development of Islamic economy, zakat is still relegated as only alms for the poor in many Muslim nations, while on the other hand surah At – tawbah ayat 60 clearly states that zakat is used for all the funding needed by modern states.

That is why the concept of zakat is never discussed as a viable and specific solution in handling Islamic society problem. In line with the development of modes of government in Islamic regions, with these

experiences of public services development and zakat institutionalization, management and organization of zakat develops faces some challenges in along numerous routes as fzlu rahman (1898) states:

- Some states instituted state sponsored Zakat management system, mostly ministry of awqff and religious affairs are mandated to guide zakat institution
- There are some states that relegate the Zakat management to the population or the individuals.
- There are yet others that form an independent civil Zakat organization that also sanctioned by the government.

This diversity is an integral part of the history of zakat management (Fazlur Rahman, 1989).

Somalia is a country with the 100% Muslim population, the question of Zakat is then an indispensable feature of Somali economic issue. Exercising Zakat management in Somalia has a long history, since the inception of Islam in Horn of Africa but most of the times the concept of zakat has been integrated with the population issue and has the one or more of the following feature such as:

- a) **Direct given by the benefactor (Muzaki) to the beneficiary (Mustahiq)** Without the use mediation of Amil Zakat, due to the lack of zakat organization and then al-Muzakki gives directly to the al-Mustahiq.

The challenge in here is community awareness of zakat organization is still very low especially regarding the use of al amil zakat as the amil may be individual institution or state entity.

The other challenge is that Zakat is viewed as purely religious duty without any relevance with the solution of greater problem such as poverty eradication and development acceleration.

- b) **Committees of mosque lead by al-ulama operate as Amil Zakat** to collect and accept zakat from people in agriculture society and especially Zakatu fitrah in the neighbourhood of the mosque in the cities. Even then some people still feel that it is much more proper to give directly to the Mustahiq without going through the Amil Zakat organization like this manner.
- c) **Zakat given to the recipient is usually consumptive in its character**; which means it is used for short term needs and the amount of zakat income or wealth is very little bit. So the Amil duty is only to collect and distribute the amount of zakat. Managing the zakat fund to be productive doesn't include in the responsibility of the Amils, therefore he does not need to have professional skills in management of Zakat institution. He works as a part time profession. at the times of educational development and civilization the condition of importance of zakat is improved and the common consumptive attitude in the population is exacerbating, but there is still there is some negative reflection which is lack of trust and respect by the population to the Amil

Zakat, they have not give wakalah to him to manage zakat fund on behalf of them in productive way.

d) **In addition to that the wealth object of zakat is still limited.**

Conceptually Zakat object understanding is till now very limited, the majority of zakat payers consider zakat object into the wealth explicitly specified in Al – kitab or sunah; such as gold, silver, farm product (specifically primary food producing crops), ranch animal (limited to camel, cow, sheep, and goat), trade (limited to goods commodity), and rikaz (found wealth).

This is caused by:

- Poor understanding of zakat, it's goal, essence, value, procedure and zakat object.
- The ignore role of zakat to increase economic activity and wellbeing of the population?.
- The successive public authorities in Somalia have further aggravated the condition of the poor as such authorities failed to educate the population about the significance of zakat and its role in poverty reduction.
- In the recent stages of Somali history the problem of political level never became modern state that care after the zakat institutionalization and social charity organization does not encouraged well?

Even though there have been many charities and non-governmental organizations established in the country during the anarchy period -since

1991- but they have not professionally been developed with enough capacity to the management of zakat organization

Q 3.What strategies can be used in addressing technical problem of managing zakat to realize its purpose in poverty alleviation?

The researcher tries to present the following technical process to manage Zakat in poverty alleviation.

Management of zakat institution was the responsibility of the state since the birth of Muslim society. The policy of distribution of zakat was determined by the state leader (caliphah).

As Faizi stated (2016) in the early Islamic era, zakat had a central role in Islamic fiscal policy as a governmental action in the governmental budget context with the intention to influence the economy. This policy is usually being done together with other policies such as monetary and trade policy as a source of states' income. Zakat also sustains governmental spending and helps influence on Islamic economic policy to increase societal economic well-being, particularly those living in poverty.

There is lack of trust and confidence of citizens in the modern states in Muslim countries after the collapse of Islamic caliphate and the domination of colonial western system on Islamic world, as there has been no state societies relations where the contemporary states had been founded on the theory of western modernization for that reason citizens have no faith to pay zakat to the government as religious obligations have no place in the modern states unlike tax which is considered national duty.

This condition required to develop alternative initiatives of community based zakat organization manage by elites with relevant provision and supported by the companies. Zakat become an individual concern when the caliphate system collapsed and the monarchical system replaced.

Muslim individuals in every community may arrange their zakat payments under one institution that can be managed as charity organization that organises amounts of Zakat for the benefit of the recipient and can direct them to invest in a productive sectors through Islamic financing approaches like Musharaka, Mudaraba, and Murabaha etc. (Faizi, 2016).

Results

By analysing common situation of zakat payment system in our community and describing the extreme poverty that should be stressed by Somali rebuilding and development strategy, the following result are founded.

1. The government and society need to have mutual understand on the purposes, benefits and reasons of establishing autonomous Zakat institution.
2. Zakat purposes are not comprehensively understood by the society especially community awareness on the economic role of Zakat as effective tool in poverty alleviation is very low and need to raise the level of awareness.
3. The collaboration between the various actors in the society like educational institutions, business groups, policy makers and community leaders is less than ideal level?? Regarding zakat's wisdom, reasons, purpose and the socio economic role as indicated by the ways society applied zakat management in contemporary history of Somalia.
4. Establishment of such organizations need trust and confidence between society and government, because, zakat is individual responsibility as it is one of the pillars of Islam and the collection distribution and maintaining of it is the responsibility of the state.
5. There is need to discuss nationally, technical structuring and designation of the zakat organization as there is lack of national fiscal policy addressing problem of zakat management to realize its purposes.

6. As many countries examine managing zakat through independent organization, like Kuwait, Malaysia, Sudan, Pakistan, Indonesia and Djibouti shown the role of zakat as economic tool in poverty alleviation as an examples the zakat institution will be successful if perfectly regulated and managed??. The sentence is not clear
7. National policy of poverty eradication and social efforts regarding the caring poor members are not integrated since contemporary state formed on colonial legacy.

Recommendations

Based on the above outcomes of the analysis on the role of zakat institution on poverty alleviation, we suggest using the following strategies to effectively achieve objectives of the zakat as pillar of Islam by institutionalization of zakat institution as productive organizations:

1. The family, society, market and government are important institutions involved in the allocation and distribution of resources so they should all be interlinked and to motivate all those actors to serve interest of the individuals, society and environment require uplift of moral values ad sacrifice self-interest.

For Muslim individuals and organizations, the accountability in front of Allah, reward and punishment in the Hereafter, Long-run perspective of self-interest in this world as well as the Hereafter are the main motivational factors in serving others in the community. (Umar, 2009)

2. Anti-poverty programs in the macro level , two broad strategies should be integrated:
 - a) **Direct Strategies** that targets the underprivileged segments in the community and provides them necessary

needs to ensure their finance access and capacity, improve health conditions, increase literacy rate, and ultimately eradicate poverty rate. Zakat institution will play vital role of realizing these strategy.

- b) **Indirect Strategies** that formulate a macro-economic policy framework to ensure sustainable growth, higher employment, higher per capita income, income and wealth of households raise the amount of zakat will increase and eventually poverty will reduce. So the government should be committed to take the role of implementation of this strategy through deployment of national production factors.

3. **Zakat institution must be established and effectively managed to realize critical objective of the Zakat** which is to achieve socio-economic justice without concentration of wealth or income in the hands of a few which is forbidden in Islam, so redistribution of the wealth and income by any means acceptable in the Shari'ah is one of the major objectives of the Islamic economic system. *Abdullahi ibn Abbas (Rdia Allh Anhuma) narrates that when the Prophet (peace be upon him) sent Muàdh ibn Jabal (Rdia Allh Anhu) to Yemen he told him, "You are going to a people who have a Scripture, so call them to testify that there is no god but Allah, and that I am the Messenger of Allah. If they respond to this, then teach them that Allah has imposed five Salaah upon them every day. If they respond to this, then teach them that Allah has imposed upon them a sadaq to be taken from the wealthy amongst them and given to their poor. If they*

respond to this, then beware of taking any more of their wealth and most worth full wealth of them (Foundation, 2016)

4. To effectively managing zakat institution trust and wakalah contracts in zakat institution as Amil Zakat should be created, then the institution of zakat as Amil will manage zakat fund accordingly on behalf of the payers and recipients.
5. The benefits and reasons of requesting establishment of Zakat institution needs raising awareness campaign with collaboration among all actors in the society, as the zakat's responsibility is individually based and the collecting and maintaining of it is the responsibility of the state.
6. The fiscal infrastructure of national zakat organization should be developed clearly by the state to address technical problem of zakat management and overcome Zakat purpose realization challenges.
7. National policy of poverty eradication and social efforts concerning the care of the poor in the society should be integrated through forming community organizations and public services entities.
8. To create common knowledge by providing education about benefits and reasons of Zakat institution establishment, this is responsibility of Islamic scholars (Al ulama) and all actors in the society and more technical problems should be targeted by the experts of strategists, technologists and economist.

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Effects of Smoking Cigarette on the Health among Residents in Mogadishu, Somalia

Mr. Walid Abdulkadir Osman Alsh'bani

Lecturer, Faculty of Health Sciences, Mogadishu University.

Abstract

Cigarette smoking, hereafter referred to as “smoking,” is the main reason behind premature death in developed countries. Smoking is currently considered one of the greatest health problems worldwide, and it is one of the most preventable causes of death. There were no studies according to the knowledge of author conducted in Somalia to determine the health effects of cigarette smoking in the study area. The study aims to find out the impact of cigarette smoking on the health among men in Mogadishu city.

A cross sectional study was used. A structured questionnaire was used to collect data from the respondents at a cluster sampling. Quantitative data analysis was used. This study took into consideration 295 respondents as sample size to determine feasible findings about topic under the study.

In general, 37.5% of the participants were cigarette smokers. The prevalence of khat chewing is high among participants aged 20 – 29 years in study. The health effects on cardiovascular as reported by the participants include chest pain, rapid heartbeat, asthma, heart attack and hypertension. There is another effect to the oral cavity, as described by the respondents which may affect the appearance of the teeth and tissues, such as tooth decay, tooth stains, bad breath, and stomatitis and tooth discoloration.

Greater efforts in practicing primary and secondary prevention among current and future physicians to solve the health problems associated with tobacco use in the country is needed as well as increasing public awareness of the potential health hazards of cigarette smoking;

Keywords: Health, Impact, Cardiovascular disease, Cigarette Smoking, Mogadishu.

1.1 Introduction

Cigarette smoking, hereafter referred to as “smoking,” is the main reason behind premature death in developed countries. Smoking is currently considered one of the greatest health problems worldwide, and it is one of the most preventable causes of death. Globally, the use and sale of substances such as alcohol and tobacco is causing substantial levels of problems related to health (Weiss, Cohen and Eisenberg, 2001). The World Health Organization (WHO) estimates more than 4 million deaths a year to tobacco and this number is likely to increase to 10 million deaths a year by 2020. Moreover, it is now a growing public health challenge in the developing world. Citing the death of 5 million individuals worldwide every year due to smoking-related diseases, the WHO states that smoking should be considered a pandemic (Reda, Moges, Yazew and Biadgilign, 2012). About 1.3 billion smokers worldwide and half of them die due to smoking-related diseases (WHO, 2017). Tobacco smoking is causing over 3 million deaths every year worldwide, and if current smoking trends continue the annual mortality will exceed 10 million by 2030 (Gupta, 2006).

Tobacco consumption has fallen substantially over the past 30 years in many industrialized countries as a result of increasing awareness of the hazards of tobacco use and the implementation of aggressive and effective tobacco control policies. In contrast, over the same time period, tobacco consumption has been increasing in the developing world; developing nations now consume the greatest share of the world’s cigarette production (WHO, 2009). Just as global tobacco consumption is shifting between industrialized and developing countries, the tobacco pandemic is spreading to women in a variety of settings. Historically, smoking by women in industrialized countries increased during the last century, lagging behind the rise in men by about 20 to 30 years. This rise among women can be attributed to weakening social, cultural, and

political constraints, coupled with women's earning power and targeted marketing by tobacco companies. Today, the prevalence of smoking among women in some countries remains high, while surveillance data from other countries provide warning of increasing use among youth, particularly girls (Reda et al., 2012). In 2006, more than 1 billion smokers in the world consumed about 5.7 trillion cigarettes (WHO, 2009). An additional 700 billion bidis are consumed annually in India alone (Asma and Gupta, 2008). There is wide variation in smoking prevalence among both males and females from one region to another. According to WHO (2009), the prevalence of smoking globally is higher for men (40% in 2006) than for women (nearly 9% in 2006), and males account for 80% of all smokers (nearly 1 billion).

Despite widespread knowledge of the health consequences---, tobacco use, especially smoking is common globally. During the last decades efforts have been made in many countries to reduce smoking in the general public, as well as to prevent young people from starting to smoke. Studies have reported that young people start experimenting with tobacco as early as 10 years of age, and become regular smokers at approximately 15 (Lindberg, Jonsson and Ronmark, 2005). Smoking prevention programs most often address the general population. However, identifying subjects at high risk could make more targeted and extensive efforts possible. Prevention programs in which young people were enrolled and committed in the program, and programs that lasted throughout adolescence, have been successful (Winkleby, Feighery and Dunn (2004). Common risk factors for starting to smoke are having family members, or friends that smoke (Rosendahl, Galanti and Gilljam, 2003). Other risk factors are personal factors, such as risk-taking behaviour, stress, depression, and susceptibility to peer influence. Good school performance, being a member of a two-parent family, participation in sports and physical exercise, good self-esteem, personal health concerns

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and good refusal skills have all been negatively associated with smoking (Holmen, Barrett-Connor and Clausen, 2002).

Cigarette smoking has been described as a “gate way” substance towards illicit drug use among adolescents (Gilliland, Islam, Berhane, Guaderman, McConnoll, Avol and Peters, 2006). The onset of tobacco use occurs primarily in early adolescence, a developmental stage that is far removed by several decades from the death and disability that are associated with smoking in adulthood. Therefore, the fact that many adult smokers initiated their smoking habit as adolescents makes adolescence smoking a significant public health problem (Warren, Jones, Peruga, Chauvin, Baptiste, de Silva, el Awa, Tsouros, Rahman and Fishburn, 2008). It is also important as it is associated with respiratory health effects such as the incidence and exacerbation of asthma (Rudatsikira, Muula and Siziya, 2009). Studies showed that national smoking prevalence among men in sub-Saharan Africa varies from 20% to 60% and the annual cigarette consumption rates are on the rise for both men and women (Warren *et al.*, 2008).

Tobacco use is determined and influenced by several kinds of factors: (1) individual factors (perceptions, self-image, and peers); (2) social factors (societal norms); (3) environmental factors, such as advertising and economics; and (4) cultural factors, such as traditional uses of tobacco, acculturation, and the historical context of the tobacco industry in various communities. Behavior and patterns of tobacco use result from each of these factors and from their complex interplay, which is difficult to study and measure. Although available evidence has demonstrated that these factors contribute to behavior, research has been unable to quantify the distinct effect of each one and the effects of their interaction. The lack of definitive literature points to the need for further research to better quantify the ways in which a person’s exposure to various social, environmental, and cultural influences affects tobacco use behavior.

Most likely, it is not a single factor but rather the convergence or interaction of some or all of these factors that significantly influences both a person's decision to use tobacco and patterns of tobacco use (Lynch and Bonnie, 1994).

According to The Tobacco Atlas 2013 report, every year more than 3200 of its people are killed by tobacco-caused disease, while more than 32000 children and more than 602000 adults continue to use tobacco each day. Complacency in the face of the tobacco epidemic will ensure the tobacco industry continues to run roughshod over the lives of Somalia's citizens and ensure that tobacco's death toll will grow with each passing year. Tobacco control advocates must reach out to other communities to strengthen their efforts in this mortal fight. Even though fewer men and women, on average, die from tobacco use in Somalia compared with other low-income countries, still 41 men (3.8%) of men and 21 (2.5%) women are being killed by tobacco every week, necessitating action from policy makers. It is a public belief that abuse of drugs is not high in Somalia, but use of psycho-stimulants such as tobacco and khat is growing; tobacco harms the health, the treasury, and the spirit of Somalia as it is the sign of an ongoing and dire public health threat. The health hazards, determinants of cigarette smoking and its prevalence have not been well studied. Therefore, the aim of this study is to describe the health effects of cigarette smoking among men in Mogadishu, Somalia.

1.2 Statement of the problem

Tobacco contains many chemicals which are known to cause cancers (Report on Carcinogens, 2011). It kills more than the combination of AIDS, legal drugs, illegal drugs, road accidents, murder and suicide (Mackay & Eriksen, 2002). It is a major health problem faced by the community throughout the world. It is the single leading cause of

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preventable mortality and morbidity; more than five million lost their lives every year as a result of cigarette smoking (WHO, 2008).

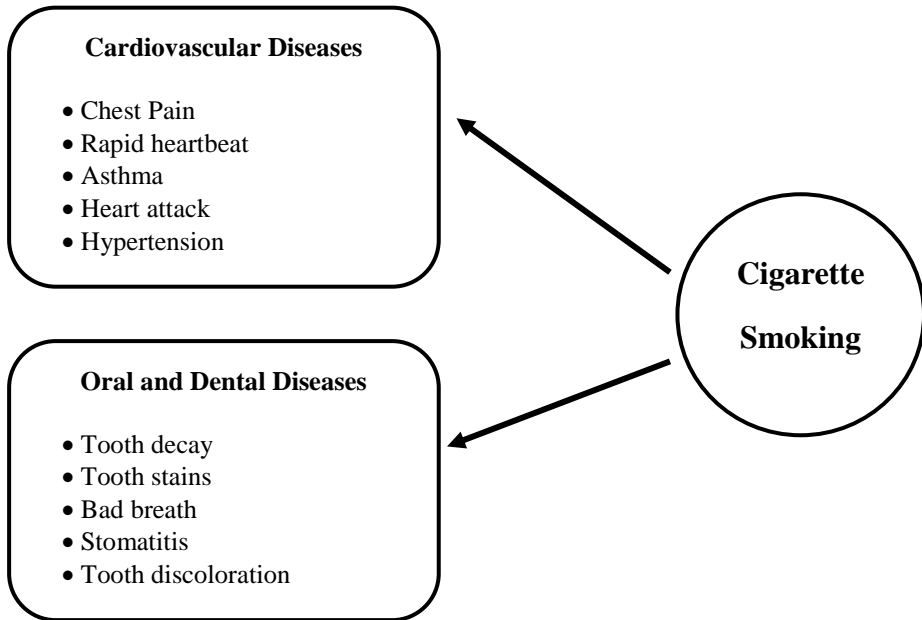
It is a public belief that abuse of drugs is not high in Somalia but use of psycho-stimulants such as tobacco and khat is growing; tobacco harms the health, the treasury, and the spirit of Somalia as it is the sign of an ongoing and dire public health threat. Everyone knows cigarette smoking is bad for you. The health hazards, determinants of cigarette smoking and its prevalence have not been well studied. Therefore, the aim of this study is to describe the effects of cigarette smoking on health among residents in Mogadishu, Somalia. Because of the prevalence of smoking among the residents of Mogadishu nowadays, it is important to know their effects on the health help minimize the number of smokers.

1.3 Research objective

The specific objectives were: To describe the effects of cigarette smoking on the cardiovascular health; also to identify the effects of cigarette smoking on the oral and dental health among residents in Mogadishu, Somalia.

1.4 Conceptual Framework

The following conceptual framework was adopted by the researcher.



2.0 Methodology

2.1 Study Design and Population.

The research design used for this study was descriptive and cross-sectional using the quantitative approach in Mogadishu, Somalia, from April 2017 to September 2017. The design was descriptive cross-sectional because this design was used when to provide an accurate account of the characteristics of a particular individual, event, or group in real-life situations for the purpose of discovering new meaning, describing what exists, determining the frequency with which something occurs and categorizing information as well as it is used to examine groups of subjects in various stages of development simultaneously with

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the intent of inferring trends over time (Burns & Grove 2005). Quantitative research refers to a formal, objective and systematic process to describe and test relationships and to examine cause-and-effect interactions between variables (ibid).

Burns and Grove (2005) define a population as all elements such as individuals, objects, events or substances that meet the sample criteria for inclusion in a study. A population is the entire aggregate of cases in which a researcher is interested and the elements which show the sample criteria for inclusion in the study. It is sometimes referred to as a target population. A portion of a target population to which the researcher has reasonable access to is referred to as an accessible population. In this study, the population consisted of all persons in the seventeen districts of Mogadishu city as well as their eligible dependents. Targeted population were those who aged above 20 years to ensure that all subjects were responsible for their decision. People aged <20 years were excluded from this study.

2.2 Sampling Procedure/Method Sample and Size Determination.

The sampling units were all the seventeen districts of Banadir region, namely Bondhere, Daynile, Dharkenley, Hamar-Jajab, Hamar-Weyne, Heliwaa, Hodan, Howl-Wadag, Karan, Shangani, Shibis, Waberi, Abdiaziz, Wadajir, Warta-Nabada, Kaxda and Yaqshid. Cluster sampling will be used which is usually exclusive sub-populations, which together comprise a population as each cluster consists of heterogeneous elements and typical elements of the population. Secondly, one district was randomly selected (Abdiaziz) and has approximately 12,628 persons (District Authority, 2016). Four sub-districts made up of Abdiaziz district, namely Looya-adde, Neero, Gaarisa and Dhagahbuur. Then one of these sub-districts (Gaarisa) which has approximately 1,128 persons was selected for the study using simple random sampling as its adults were included.

The researcher has employed the **Slovin's** formula to determine the final sample size from which data will be collected. The sample size is calculated from the target population as follows;

$$n = \frac{N}{1 + N (e^2)}$$

- n = the desired sample size/required.
- N= the estimate of the target population size.
- e = the level of statistical significance/margin error at 5%; standard value of 0.05.

$$1,128 / (1 + 1,128 * 0.05^2) = \mathbf{295}$$

Therefore, two hundred and ninety-five respondents participated in this study.

2.3 Data Collection Technique.

Data were collected by using structured questionnaires which was prepared first in English and then translate into Somali and back to English. Two data collectors who were under graduate nursing students were involved, and training was given; mainly on the purpose of the study, handling ethical issues and method of data collection.

2.4 Data Analysis.

The collected data were cleared and checked for completeness and were entered, compiled and analyzed using SPSS 19 (Statistical Package for the Social Sciences) program was used appropriately; percentage were used as a statistical test. Data cleaning was performed to check for accuracy, consistencies, missed values and variables. Any error identified was corrected. The regression model was applied to determine relationships between the variables.

2.5 Ethical Considerations.

Participation in this research study was completely voluntary and they were not being induced to participate through offer of material items or money. Good explanation for the participants was done before filling the questionnaire. Participants were assured of their privacy and non-participation if they so wished. The benefit of the study was explained to all of the participants. Confidentiality and privacy of all respondents was maintained through use of unique identifiers, personal identifying information, such as name, telephone or address was not being recorded. All the study participants were informed about the objective of the study and their verbal consent was obtained.

2.6 Study Limitations.

Some of the female participants refused to fill the questionnaire, due to gender issues. Certain aspects of the questionnaire were considered too technical and therefore difficult for the respondents as evidenced by the high proportion of respondents ticking a wrong place for many questions. Further, translation of the questionnaire from English to Somali and back to English might have affected the meaning of certain statements and experts' comments.

3. Results

Out of the two hundred and ninety-five questionnaires were distributed, two hundred and sixty-one were returned making the response rate 88.5%. In Table 1, the majority of the respondents (143) were aged between 20 and 29 years representing 54.8%. The majority were males (77.4), singles (50.2%), had informal education (37%), and (70.3%) were unemployed. Most of the respondents (77.8%) had a total family income of USD \leq 100 per month. The data obtained from the questionnaire, reveals that 98 (37.5%) of the participants were cigarette smokers.

Table 1: Results

No	Response items	Scale of response	Frequency	Percentage (%)
1	Age Group	20 – 29 years	143	54.8
		30 – 39 years	77	29.5
		40 – 49 years	29	11.1
		>49 years	12	4.6
		Total	261	100
2	Gender	Male	202	77.4
		Female	59	22.6
		<i>Total</i>	261	100
3	Marital Status	Single	131	50.2
		Married	114	43.7
		Divorced	12	4.6
		Widowed	4	1.5
		<i>Total</i>	261	100
4	Educational Level	Primary	81	31
		Secondary	45	17.2
		Informal	64	24.5
		Illiterate	50	19.2
		University	21	8.1
		<i>Total</i>	261	100
5	Employment status	Employed	101	38.7
		Unemployed	160	61.3
		<i>Total</i>	261	100
6	Smoking cigarette	Yes	98	37.5
		No	163	62.5
		<i>Total</i>	261	100

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No	Response items	Scale of response	Frequency	Percentage (%)
7	Number of Cigarettes/Day	≤5 cigarettes	42	42.9
		>5 cigarettes	56	57.1
		<i>Total</i>	98	100
8	Total years of Smoking	≤5 years	63	64.3
		>5 years	35	35.7
		<i>Total</i>	98	100
Effects of cigarette smoking				
9	Chest pain	Yes	53	54
		No	45	46
		<i>Total</i>	98	100
10	Rapid heartbeat	Yes	61	62.2
		No	37	37.8
		<i>Total</i>	98	100
11	Asthma	Yes	52	53
		No	46	47
		<i>Total</i>	98	100
12	Heart attack	Yes	55	56.1
		No	43	43.9
		<i>Total</i>	98	100
13	Hypertension (High blood pressure)	Yes	52	53
		No	46	47
		<i>Total</i>	98	100
14	Took decay	Yes	73	74.5
		No	25	25.5
		<i>Total</i>	98	100
15	Took stains	Yes	51	52
		No	47	48
		<i>Total</i>	98	100
16	Bad breath	Yes	59	60.2
		No	39	39.8
		<i>Total</i>	98	100

No	Response items	Scale of response	Frequency	Percentage (%)
17	Stomatitis (Smoker's Palate)	Yes	63	64.2
		No	35	35.8
		<u>Total</u>	98	100
18	Tooth discoloration	Yes	67	68.4
		No	31	31.6
		<u>Total</u>	98	100

3.1 Discussion

This study provides an insight on smoking cigarette among residents in Mogadishu with a specific focus on its effects on the cardiovascular system and oral cavity. In this study, there was significant correlation between chest pain, rapid heartbeat, asthma, heart attack, tooth decay, tooth stains, bad breath and stomatitis and cigarette smoking (Table 2). This has highlighted a detailed figure on the health effects of cigarette smoking among residents in Mogadishu, Somalia. Without question, effects on the cardiovascular system are the main effects that should lead the tendency to focus on. This is due to smoking produces transient vascular effects on the heart and blood vessels as well as toxic components of the tobacco smoke are being distributed throughout the whole organism by means of circulation. Effects on the oral cavity have also got a vast importance.

These results agreed with the study conducted by Nikodemowicz (2007), who showed that the effects of cigarette smoking on the cardiovascular system included fatty buildups in arteries, several types of cancer and chronic obstructive pulmonary disease (lung problems). Atherosclerosis (buildup of fatty substances in the arteries) is a chief contributor to the high number of deaths from smoking. Cigarette smoking is a major cause of coronary heart disease, which leads to heart attack and it is the most important single risk factor in coronary artery

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disease, sudden cardiac death, ischemic stroke, aortic aneurysm formation, and peripheral vascular disease and Buerger disease. It must be also said this factor might be possibly removed.

These results are also in agreement with the results of Johnson and Bain (2000) who cited that smoking often results in discolorations of teeth and dental restorations. Bad breath and diminished taste as a result of stomatitis are common side effects of smoking. Periodontal disease is increased both in prevalence and severity in smokers.

Table 2: Analytical Presentation

***Independent Variable (Smoking Cigarette)**

Dependent Variables	T value	P value
Chest pain	2.611	0.002
Rapid heartbeat	2.500	0.017
Asthma	2.921	0.001
Heart attack	3.538	0.003
Hypertension	2.531	0.011
Tooth decay	2.588	0.012
Tooth stains	3.071	0.004
Bad breath	3.350	0.001
Stomatitis	2.933	0.005
Tooth discoloration	3.612	0.001

4. Conclusion and Recommendations

When we think about tobacco use, we have the tendency to limit our concern to the increased risks for cardiovascular system and/or oral cavity. This article reviews some of the cardiovascular and oral changes associated with tobacco use. Some of these changes directly affect the wellness of the heart and its vessels and include chest pain, rapid

heartbeat, asthma, heart attack and hypertension. Others affect dental health, as evidenced by the relationship between cardiovascular and oral cavity diseases and smoking. Other changes may affect the appearance of the teeth and tissues, such as tooth decay, tooth stains, bad breath, and stomatitis and tooth discoloration, thus affecting the person's desire for a pleasing presentation to others. Relating the use of tobacco to specific findings in the oral cavity will visually document for the patient the adverse effects of their tobacco use. Smoking is the most important modifiable risk factor for cardiovascular disease, a major risk factor for cardiovascular morbidity and mortality, and is considered to be the leading preventable cause of death in the world. This "piece of the puzzle" may set in motion their desire to stop using tobacco products.

Therefore, the researcher recommends:

- Greater efforts in practicing primary and secondary prevention among current and future physicians to solve the health problems associated with tobacco use in the country is needed as well as increasing public awareness of the potential health hazards of cigarette smoking;
- A community awareness by the community healthcare workers is needed, which seeks to change the social climate and promote a supportive environment;
- A health systems approach that focuses on promoting and integrating clinical best practices (behavioral and pharmacological) which help tobacco-dependent consumers increase their chance of quitting successfully.

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