INFLUENCE OF INFORMATION COMMUNICATION TECHNOLOGY (ICT) ON QUALITY OF EDUCATION AT SECONDARY SCHOOLS IN MOGADISHU, SOMALIA

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A Research Project Submitted to the Department of Educational Administration and Planning in Partial Fulfillment of the Requirements for the Award of the Degree of Masters of Education in Educational Administration and Planning (Educational Planning)

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DECLARATION

This research proposal is my original work and has not been presented for a degree in any other university

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DEDICATION

I dedicate this study to my parents and my children Rayan Abdifitah Mohamed and Sadak Abdifitah Mohamed.

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I give gratitude to the Almighty Allah, it is because of HIS GRACE THAT I have been able to undertake and complete this course.

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ABSTRACT

The purpose of this study was to determine the influence of information communication technology (ICT). Four objectives were formulated to guide the study. These were; to assess the influence of the use of ICT in searching for reference materials in secondary schools in Mogadishu. to analyze the influence of schools' capacity in the provision of computers for students on quality of education in secondary schools in Mogadishu. to examine the influence of integration of ICT in lesson presentations on quality of education in secondary schools in Mogadishu, to determine the level of provision of internet connectivity in the schools on the quality education.

This study was guided by systems theory. The systems theory as seen in the works of Herbert Spencer (1860) and Emile Durkheim (1947) will guide the study. the two compared societies to organisms with structures, which consist of interrelated parts, each playing a function in the life of a total organism. In this study, the stakeholders, parents, teachers, students, play a role for the smooth continuation of secondary school education by using ICT. The students are expected to work hard to achieve these goals.

The research design of the study was descriptive survey the target population for this study consisted of 90 Schools in three districts the respondents consisted of 140 teachers and 330 students from the selected districts in the city. The target population is therefore 470 respondents. The study established that a strong correlation between ICT and quality of education in secondary schools in Mogadishu, the additional ways of improving performance include improvement of teaching methodologies, In-service courses, workshops and seminars on the teaching methodologies of the various subject

CHAPTER ONE

INTRODCTION

1.1 Background

Information and Communication Technologies (ICTs) have impacted greatly on teaching, learning, research, and school management in a number of ways. They are electronic technologies used for accessing, processing, gathering, manipulating and presenting or communicating information.

According to Daniels (2002) ICTs have become within a very short time, one of the basic building blocks of modern society. Many countries now regard understanding ICT and mastering the basic skills and concepts of ICT as part of the core of education, alongside reading, writing and numeracy. However, there appears to be a misconception that ICTs generally refers to 'computers and computing related activities'. This is fortunately not the case, although computers and their application play a significant role in modern information management (W.J., Law, 2003), other technologies and/or systems also comprise of the phenomenon that is commonly regarded as ICTs. Pilgrim and Law (2003) state that near the end of the 1980s, the term 'computers' was replaced by 'IT' (information technology) signifying a shift of focus from computing technology to the capacity to store and retrieve information. This was followed by the introduction of the term 'ICT' (information and communication technology) around 1992, when e-mail started to become available to the general public (Pilgrim, 2003). According to a United Nations report (1999) ICTs cover Internet service provision, telecommunications equipment and services, information technology equipment and services, media and broadcasting, libraries and documentation centers, commercial information providers, network-based information services,

and other related information and communication activities. According to UNESCO (2002) information and communication technology (ICT) may be regarded as the combination of 'Informatics technology' with other related technology, specifically communication technology. The various kinds of ICT products available and having relevance to education, such as teleconferencing, email, audio conferencing, television lessons, radio broadcasts, interactive radio counseling, interactive voice response system, audiocassettes and CD ROMs etc have been used in education for different purposes (Sharma, 2003; Sanyal, 2001; Bhattacharya and Sharma, 2007)..

The field of education has been affected by ICTs, which have undoubtedly affected teaching, learning, and research (Yusuf, 2005). A great deal of research has proven the benefits to the quality of education (Al-Ansari, 2006). information and communication technology (ICTs) have the potential to innovate, accelerate, enrich, and deepen skills, to motivate and engage students, to help relate school experience to work practices, create economic viability for tomorrow's workers, as well as strengthening teaching and helping schools change (Davis and Tearle, 1999; Lemke and Coughlin, 1998; cited by Yusuf, 2005).As Jhurree (2005) states, much has been said and reported about the impact of technology, especially computers, in education. Initially computers were used to teach computer programming but the development of the microprocessor in the early 1970s saw the introduction of affordable microcomputers into schools at a rapid rate. Computers and applications of technology became more pervasive in society which led to a concern about the need for computing skills in everyday life. Hepp, Hinostroza, Laval and Rehbein (2004) claim in their paper "Technology in Schools: Education, ICT and the Knowledge Society" that ICTs have been utilized in education ever since their inception, but they have not always been massively present. Although at that time computers have not been fully integrated in

the learning of traditional subject matter, the commonly accepted rhetoric that education systems would need to prepare citizens for lifelong learning in an information society boosted interest in ICTs (Pelgrum, W.J., Law N., 2003).

The 1990s was the decade of computer communications and information access, particularly with the popularity and accessibility of internet-based services such as electronic mail and the World Wide Web (WWW). At the same time the CD-ROM became the standard for distributing packaged software (replacing the floppy disk). As a result educators became more focused on the use of the technology to improve student learning as a rationale for investment. Any discussion about the use of computer systems in schools is built upon an understanding of the link between schools, learning and computer technology. When the potential use of computers in schools was first mooted, the predominant conception was that students would be 'taught' by computers (Mevarech & Light, 1992).In a sense it was considered that the computer would 'take over' the teacher's job in much the same way as a robot computer may take over a welder's job. Collis (1989) refers to this as "a rather grim image" where "a small child sits alone with a computer". However, the use of information and communication technologies in the educative process has been divided into two broad categories: ICTs for Education and ICTs in Education. ICTs for education refers to the development of information and communications technology specifically for teaching/learning purposes, while the ICTs in education involves the adoption of general components of information and communication technologies in the teaching learning process.
In Somali ICT has impacted education process for the last ten years and it is now available many schools and many universities in Mogadishu.

ICT integration provides resources and services to support the education research and public services missions to secondary schools. ICT also enhances the development and implementation

of policies and procedures necessary to ensure the effective, secured and appropriate use of student's information resources and services.

ICT integration provides a lot of services for students including distance education programmes, inexpensive printing, cell phone plans, internet connection, free dial-up, technology equipment, rentals classroom media stations which enhance the quality of education in secondary schools, Lecturers and students get relevant materials needed through the Internet. Such quality materials are used in equipping the students and upgrading their knowledge in their field of study. Moursund (2005) stated that ICT brings some very powerful aids to translating theory into practice. Two of these aids are computer-assisted learning in distance education. These days, computers with Internet connectivity have become common household items. Students often have access to: pure educational, designed specifically to provide instruction to help the user learn; communication tools and reference materials including e-mail, web, encyclopedia, books, and other reference materials;. Pure entertainment, that is, games that are not designed to be educational, accessing electronic teaching materials such as books, journals. These can be accessed, stored and analyzed by the use of ICT; Accessing virtual library "stocks" electronic versions of books' journals;, Giving or providing access to the world of resources especially in electronic form

In this paper we are examining the influence of ICT on quality of education in secondary schools;

1.2 Statement of the Problem

Despite Information and communication technologies (ICT) innovations for the last twenty years in education and other related activities of the life , still the process of ICT use in education faces number of problems, it was anticipated to enhance the quality of education and to make teaching and learning understandable and easy , but users faced many problems such as : lack of equipment; inadequate skills of users, Lack of access to ICTs in trainee teachers', Problem of electricity, Inadequate course content for ICTs, Limited ICTs facilities.

In spite of the NGOs having distributed computers in secondary schools to enhance the accessibility of ICT, still many secondary schools in Mogadishu don't have sufficient computers and the government has not arranged training about ICT use in secondary schools, although there are efforts in place ICT is not performing well. This study sought to establish the influence of ICT on the quality of education in secondary schools.

1.3 Purpose of the study

The purpose of this study was to investigate the influence of ICT on quality of education in secondary schools in Mogadishu, Somalia

1.4 Objectives the study

The research was based on the following objectives:

1. To assess the influence of the use of ICT in searching for reference materials quality of secondary school education in Mogadishu
2. To analyze the influence of schools' capacity in the provision of computers for students on quality of education

3. To examine the influence of integration of ICT in lesson presentations on quality of education in secondary schools in Mogadishu
4. To determine the level of provision of internet connectivity in the schools on the quality education.

1.5 Research question

1. How does the integration of ICT in classroom teaching influence quality of education in secondary schools in Mogadishu?
2. How does the provision of internet connectivity in the schools affect the provision of quality education?
3. In which way is the use of ICT in searching for reference materials influence quality of secondary education?
4. To what extent are the school capacities in the provision of computers for students influence quality of education?

1.6 Significance of the study

The findings of this study may be used by teachers to improve class room delivery to be able to follow concepts tough hence to enhance quality of education and also this finding assist ministry of education through enhancing the quality of education , it is expected that this study identified the advantages of ICT in education. Lastly these findings may also be of value to improve teachers' knowledge to ICT field as it would add to the body of knowledge in educational management.

1.7 Delimitations of the study

The study was conducted in Mogadishu which is the largest city in Somalia and the nation's capital, located in the coastal Benadir region on the Indian Ocean, the city has many schools

including private and public schools. The study conducted within three districts of Mogadishu namely: Hodan Hamar-jajab and Hamar weyne districts. The districts were selected as randomly for the study in January 2015 since it is located the largest schools in Mogadishu.

1.8 Limitations of the study

The researcher was not in a position to control the attitude of the respondents as they responded to questions hence they may have chosen to give socially acceptable responses that may have resulted in the study having inaccurate findings. The researcher however urged the respondents to be truthful in providing information. There was scarcity on relevant literature in the area of study. And also there was communication challenges between supervisors and researcher since they stayed in different countries and there is no face to face communication, the communication was only through the internet during this study.

1.9 Basic assumptions

Since ICT is a tool of enhancing the quality of education this study may base on the following assumptions:

- ICT enhances teaching and learning process
- ICT enhances the quality and accessibility of education
- ICT provision in the schools affect the provision of quality education.

1.10 Definition of significant terms

ICT: information communication technology (ICT) refers to an Internet service provision, telecommunications equipment and services.

Influence: the power to affect or manipulate something

Quality Education: According to the Education for All: Global Monitoring Report 2005 - The Quality education characterize most attempts to define quality in education: the first identifies learners' cognitive development as the major explicit objective of all education systems.

The second emphasizes education's role in promoting values and attitudes of responsible citizenship and in nurturing creative and emotional development.

1.11 Organization of the study

The study is organized into five chapters. Chapter one presents the background to the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, limitations of the study, delimitations of the study, basic assumptions of the study and definition of significant terms.

Chapter two covers the literature review and the conceptual framework. Chapter three describes the research methodology which looked at the research design, target population, sample and sampling procedures, research instruments, Validity and reliability of instruments, data collection procedures and data analysis techniques.

Chapter four dealt with data analysis and discussion of findings while chapter five consisted of the summary, conclusions, recommendations and suggestions for further research..

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter covers existing literature to the influence of ICT on quality of Education in secondary schools in Mogadishu, Somalia. These include: concepts of information and communication technology (ICT), integration of ICT tools, Characteristics of quality education, ICT on quality education, Role of ICT on different stages of education, a summary of the literature review, theoretical frame work, and conceptual framework of the study.

2.2 Concept of Information Communication and Technologies (ICTs) in education

Information and Communication Technologies (ICTs) are often associated with the most sophisticated and expensive computer-based technologies. But ICTs also include the more conventional technologies such as radio, television and telephone technology.

While definitions of ICTs are varied, it might be useful to accept the definition provided by United Nations Development Programme (UNDP): 'ICTs are basically information-handling tools- a varied set of goods, applications and services that are used to produce, store, process, distribute and exchange information. They include the 'old' ICTs of radio, television and telephone, and the 'new' ICTs of computers, satellite and wireless technology and the Internet. These different tools are now able to work together, and combine to form our 'networked world' a massive infrastructure of interconnected telephone services, standardized computing hardware, the internet, radio and television, which reaches into every corner of the globe'. When we talk of ICTs, we refer not only to the latest computer and Internet based technologies, but also to simple

audio visual aids such as the transparency and slides, tape and cassette recorders and radio; video cassettes and television; and film.

These older and more familiar technologies are referred to under the collective heading of "analogue media" while the newer computer and Internet based technologies are called the "digital media".

However, in today's world, with the increased convergence or blending of the engineering designs and with the coming together of the satellite and the computer, the dividing lines between these different media are becoming blurred and consequently, the way people define and refer to ICTs is also getting blurred. Often, the definition of ICTs is also done

In terms of "old" and "new" as if to distinguish between the analogue and digital.

But what is "old and what is "new"? Livingstone (1999), in an extensive exploration of the idea of newness, has argued that the notion of "new" can either be seen with reference to the "newness of technology" or in the context of "what's new for society" about these media. Livingstone further argues that what is new for the western world is not necessarily so for the rest of the world. Within a social context, the introduction of radio or television may be as "new" as the introduction of Internet. While there is much euphoria about the ICTs, after more than half a century of research, social scientists are still skeptical about tall and ill defined claims about potential societal changes that may follow a technological innovation. This means that 'new" cannot merely be defined either in terms of time and time scales or in terms of the technology innovation.

2.3 Integration of ICT on quality of education

there are various ICT tools available which can be utilized for the knowledge creation and dissemination in the modern world. tools include radio, t.v, internet, mobile phone, computer, laptop, tablets and many other hardware and software applications. certain ict tools like laptops, pcs, and mobile phones have their own implication in education. these devices can be used in imparting education and training for teachers and students. many of the ict tools are much hyped but have not given fruitful results till now. use of radio for pedagogical practices has been very much popular in past and is still in use in india by ignou. but one-to-many broadcast technologies like radio and television are seen as less revolutionary‘ icts in education, as their usage is seen as reinforcing of traditional instructor-centric learning models, unlike computers, which many see as important tools in fostering more learner-centric instructional models.

successful ict initiatives meet three intertwined objectives: availability, access, and demand, educational ict tools are not for making educators master ict skills themselves, but for making educators create a more effective learning environment via ict. teachers can utilize ict tools to get benefits from using these tools in the areas of content, curriculum, instruction, and assessment. icts include fixed-line telephony, mobile telephony, newspapers, radio, television, radio , computer, and internet must be accessible to rural public as per their demand. school children using various ict tools. (Sharmila Devi ,Mohammad Rizwaan , Subhash Chander June 2012)

2.3 Advantages of information communication technology (ICT) on quality of education

ICT enhanced the quality of education:

2.3.1 ICT enhancing teaching and learning process

The field of education in secondary schools, Mogadishu has been affected by ICTs, which have undoubtedly affected teaching, learning and research (Yusuf, 2005) .ICTs have the potential to accelerate, enrich, and deepen skills, to motivate and engage students in secondary schools, to help relate school experience to work practices, create economic viability for tomorrow's workers, as well as strengthening teaching and helping schools change (Davis and Tearle, 1999; Lemke and Coughlin, 1998; cited by Yusuf, 2005). In a rapidly changing world, basic education is essential for an individual be able to access and apply information. Such ability may find include ICTs in the global village. Conventional teaching has emphasized content. For many years course have been written around textbooks. Teachers have taught through lectures and presentations interspersed with tutorials and learning activities designed to consolidate and practice the content. Contemporary settings are now favoring curricula that promote competency and performance. Curricula are starting to emphasize capabilities and to be concerned more with how the Information will be used than with what the information is. Contemporary ICTs are able to provide strong support for all these requirements and there are now many outstanding examples of world class settings for competency and performance-based curricula that make sound use of the affordances of these technologies (Oliver, 2000). The integration of information and communication technologies can help refresh teachers and students. This can help to improve and develop the quality of education by providing curricular support in difficult subject areas. To achieve these objectives, teachers need to be involved in collaborative projects and development of intervention change strategies, which would include teaching partnerships with

ICT as a tool. According to Zhao and Cziko (2001) three conditions are necessary for teachers to introduce ICT into their classrooms: teachers should believe in the effectiveness of technology, teachers should believe that the use of technology will not cause any disturbances, and finally teachers should believe that they have control over technology. However, research studies show that most teachers do not make use of the potential of ICT to contribute to the quality of learning environments, although they value this potential quite significantly (Smeets, 2005). Harris (2002) conducted case studies in three primary and three secondary schools, which focused on innovative pedagogical practices involving ICT. Harris (2002) concludes that the benefits of ICT will be gained when confident teachers are willing to explore new opportunities for changing their classroom practices by using ICT. As a consequence, the use of ICT will not only enhance learning environments but also prepare next generation for future lives and careers (Wheeler, 2001). Changed pool of teachers will come changed responsibilities and skill sets for future teaching involving high levels of ICT and the need for more facilitative than didactic teaching roles (Littlejohn et al., 2002). According to Cabero (2001), "the flexibilization time-space accounted for by the integration of ICT into teaching and learning processes contributes to increase the interaction and reception of information. Such possibilities suggest changes in the communication models and the teaching and learning methods used by teachers, giving way to new scenarios which favor both individual and collaborative learning". The use of ICT in educational settings, by itself acts as a catalyst for change in this domain. ICTs by their very nature are tools that encourage and support independent learning. Students using ICTs for learning purposes become immersed in the process of learning and as more and more students use computers as information sources and cognitive tools (Reeves & Jonassen, 1996), the influence of the technology on supporting how students learn will continue to increase. In the

past, the conventional process of teaching has revolved around teachers planning and leading students through a series of Instructional sequences to achieve a desired learning outcome. Typically these forms of teaching have revolved around the planned transmission of a body of knowledge followed by some forms of interaction with the content as a means to consolidate the knowledge acquisition. Contemporary learning theory is based on the notion that learning is an active process of constructing knowledge rather than acquiring knowledge and that instruction is the process by which this knowledge construction is supported rather than a process of knowledge transmission (Duffy & Cunningham, 1996).

ICT survey in secondary schools in Mogadishu showed that ICT enhances teaching and learning proces and makes teaching and learning enjoyable forteachers and students.

2.3.2 ICT enhancing the quality and accessibility of education

ICT increases the flexibility of delivery of education so that learners can access knowledge anytime and from anywhere. It can influence the way students are taught and how they learn as now the processes are learner driven and not by teachers. This in turn would better prepare the learners for lifelong learning as well as to improve the quality of learning. In concert with geographical flexibility, technology-facilitated educational programs also remove many of the temporal constraints that face learners with special needs (Moore & Kearsley, 1996). Students are starting to appreciate the capability to undertake education anywhere, anytime and anyplace. One of the most vital contributions of ICT in the field of education is- Easy Access to Learning. With the help of ICT, students can now browse through e-books, sample examination papers, previous year papers etc. and can also have an easy access to resource persons, mentors, experts, researchers, professionals, and peers-all over the world. This flexibility has heightened the availability of just-in-time learning and provided learning opportunities for many more learners

who previously were constrained by other commitments (Young, 2002). Wider availability of best practices and best course material in education, which can be shared by means of ICT, can foster better teaching. ICT also allows the academic institutions to reach disadvantaged groups and new international educational markets. As well as learning at anytime, teachers are also finding the capabilities of teaching at any time to be opportunistic and able to be used to advantage. Mobile technologies and seamless communications technologies support 24x7 teaching and learning. Choosing how much time will be used within the 24x7 envelope and what periods of time are challenges that will face the educators of the future (Young, 2002). Thus, ICT enabled education will ultimately lead to the democratization of education. Especially in developing countries like India, effective use of ICT for the purpose of education has the potential to bridge the digital divide. India has a billion-plus population and a high proportion of the young and hence it has a large formal education system. The demand for education in developing countries like India has skyrocketed as education is still regarded as an important bridge of social, economic and political mobility (Amutabi and Oketch, 2003). There exists infrastructure, socio- economic, linguistic and Physical barriers in India for people who wish to access education Bhattacharya and Sharma, 2007). This includes infrastructure, teacher and the processes quality. There exist drawbacks in general education in India as well as all over the world like lack of learning materials, teachers, remoteness of education facilities, high dropout rate etc (UNESCO,2002). Innovative use of Information and Communication Technology can potentially solve this problem. Internet usage in home and work place has grown exponentially (McGorry, 2002). ICT has the potential to remove the barriers that are causing the problems of low rate of education in any country. It can be used as a tool to overcome the issues of cost, less number of teachers, and poor quality of education as well as to overcome time and distance

barriers (McGorry, 2002). People have to access knowledge via ICT to keep pace with the latest developments (Plomp, Pelgrum & Law, 2007). ICT can be used to remove communication barriers such as that of space and time (Lim and Chai, 2004). ICTs also allow for the creation of digital resources like digital libraries where the students, teachers and professionals can access research material and course material from any place at any time (Bhattacharya and Sharma, 2007; Cholin, 2005). Such facilities allow the networking of academics and researchers and hence sharing of scholarly material, this study has been done in india and ICT enhanced the quality of education when these facilities are available to the students. This avoids duplication of work (Cholin, 2005).ICT eliminating time barriers in education for learners as well as teacher. It eliminates geographical barriers as learners can log on from any place (Sanyal, 2001; Mooij, 2007; Cross and Adam, 2007; UNESCO, 2002; Bhattacharya and Sharma, 2007). ICT provides new educational approaches (Sanyal, 2001). It can provide speedy dissemination of education to target disadvantaged groups (UNESCO, 2002; Chandra and Patkar, 2007).ICT enhances the international dimension of educational services (UNESCO, 2002). It can also be used for non-formal education like health campaigns and literacy campaigns (UNESCO, 2002). Use of ICT in education develops higher order skills such as collaborating across time and place and solving complex real world problems (Bottino, 2003; Bhattacharya and Sharma, 2007; Mason, 2000; Lim and Hang, 2003). It improves the perception and understanding of the world of the student. Thus, ICT can be used to prepare the workforce for the information society and the new global economy (Kozma, 2005). Plomp et al (2007) state that the experience of many teachers, who are early innovators, is that the use of ICT is motivating for the students as well as for the teachers themselves. Bottino (2003) and Sharma (2003) mention that the use of ICT can improve performance, teaching, administration, and develop relevant skills in the disadvantaged

communities. It also improves the quality of education by facilitating learning by doing, real time conversation, delayed time conversation, directed instruction, self-learning, problem solving, information seeking and analysis, and critical thinking, as well as the ability to communicate, collaborate and learn (Yuen et al, 2003).

Now days secondary Students in Mogadishu are starting to appreciate the capability to undertake education anywhere, anytime and anyplace. students can now browse through e-books, sample examination papers, previous year papers etc. and can also have an easy access to resource persons, mentors, experts, researchers, professionals, and peers-all over the world and many students statrted distance learning and E-learning after ICT became avilable for thes students so ICT is the back bone of education acees at anywhere and any palce..

2.3.2 ICT enhancing learning Environment

ICT presents an entirely new learning environment for students, thus requiring a different skill set to be successful. Critical thinking, research, and evaluation skills are growing in importance as students have increasing volumes of information from a variety of sources to sort through (New Media Consortium, 2007).ICT is changing processes of teaching and learning by adding elements of vitality to learning environments including virtual environments for the Purpose. ICT is a potentially powerful tool for offering educational opportunities. It is difficult and maybe even impossible to imagine future learning environments that are not supported, in one way or another, by Information and Communication Technologies (ICT).

When looking at the current widespread diffusion and use of ICT in modern societies, especially by the young the so-called digital generation then it should be clear that ICT will affect the complete learning process today and in the future. Authenticity is an important issue which

should be addressed in the design and development of learning environments (Collins, 1996). Learning environments need to reflect the potential uses of knowledge that pupils are expected to master, in order to prevent the acquired knowledge from becoming inert (Bransford, Sherwood, Hasselbring, Kinzer, & Williams, 1990; Duffy & Knuth, 1990). In addition, teachers should stimulate pupils to engage in active knowledge construction. This calls for open-ended learning environments instead of learning environments which focus on a mere transmission of facts (Collins, 1996; Hannafin, Hall, Land, & Hill, 1994; Jonassen, Peck, & Wilson, 1999). ICT may contribute to creating powerful learning environments in numerous ways.

ICT provides opportunities to access an abundance of information using multiple information resources and viewing information from multiple perspectives, thus fostering the authenticity of learning environments. ICT may also make complex processes easier to understand through simulations that, again, contribute to authentic learning environments. Thus, ICT may function as a facilitator of active learning and higher-order thinking (Alexander, 1999; Jonassen, 1999). The use of ICT may foster co-operative learning and reflection about the content (Susman, 1998). Furthermore, ICT may serve as a tool to curriculum differentiation, providing opportunities for adapting the learning content and tasks to the needs and capabilities of each individual pupil and by providing tailored feedback (Mooij, 1999; Smeets & Mooij, 2001). As Stoddart and Niederhauser (1993) point out, ICT may fit into a spectrum of instructional approaches, varying from traditional to innovative. Another aspect which may of course influence the use of ICT is access to technology (Kennewell, Parkinson, & Tanner, 2000; OTA, 1995). This refers not only to the number of computers, but also to the placement of the equipment, e.g. in the classroom or in a computer room. Kennewell et al. (2000) feel it is essential that computers be placed in the classroom, in order to maximize the opportunities for curriculum activity.

2.3.3 ICT enhancing learning motivation

ICTs can enhance the quality of education in Mogadishu schools in several ways, by increasing learner motivation and engagement, by facilitating the acquisition of basic skills, and by enhancing teacher training. ICTs are also transformational tools which, when used appropriately, can promote the shift to a learner centered environment. ICTs, especially computers and Internet technologies, enable new ways of teaching and learning rather than simply allow teachers and students to do what they have done before in a better way. ICT has an impact not only on what students should learn, but it also plays a major role on how the students should learn. Along with a shift of curricula from "content-centered" to "competence-based", the mode of curricula delivery has now shifted from "teacher centered" forms of delivery to "student-centered" forms of delivery. ICT provides- Motivation to Learn. ICTs such as videos, television and multimedia computer software that Combine text, sound, and colourful moving images can be used to provide challenging and authentic content that will engage the student in the learning process. Interactive radio likewise makes use of sound effects, songs, dramatizations, comic skits, and other performance conventions to compel the students to listen and become more involved in the lessons being delivered. Some of the parents of the respondents opined that their children were feeling more motivated than before in such type of teaching in the classroom rather than the stereotype 45 minutes lecture. They were of the view that this type of learning process is much more effective than the monotonous monologue classroom situation where the teacher just lectures from a raised platform and the students just listen to the teacher.

ICT changes the characteristics of problems and learning tasks, and hence play an important task as mediator of cognitive development, enhancing the acquisition of generic cognitive competencies as essential for life in our knowledge society. Students using ICTs for learning

purposes become immersed in the process of learning and as more and more students use computers as information sources and cognitive tools (Reeves and Jonassen, 1996), the influence of the technology on supporting how students learn will continue to increase. Learning approaches using contemporary ICTs provide many opportunities for constructivist learning through their provision and support for resource-based, student centered settings and by enabling learning to be related to context and to practice (Berge, 1998; Barron, 1998).The teachers could make their lecture more attractive and lively by using multi-media and on the other hand the students were able to capture the lessons taught to them easily. As they found the class very interesting, the teachings also retained in their mind for a longer span which supported them during the time of examination. More so than any other type of ICT, networked computers with Internet connectivity can increase learner motivation as it combines the media richness and interactivity of other ICTs with the opportunity to connect with real people and to participate in real world events. ICT-enhanced learning is student-directed and diagnostic. Unlike static, text- or print-based educational technologies, ICT-enhanced learning recognizes that there are many different learning pathways and many different articulations of knowledge. ICTs allow learners to explore and discover rather than merely listen and remember. The World Wide Web (WWW) also provides a virtual international gallery for students' work (Loveless, 2003). ICT can engage and inspire students, and this has been cited as a factor influencing ready adaptors of ICT (Long, 2001; Wood, 2004).

2.3.4 ICT enhancing thescholastic performance

Based on the extensive usage of ICTs in education the need appeared to unravel the myth that surrounds the use of information and communication technology (ICT) as an aid to teaching and learning, and the impact it has on students' academic performance. ICTs are said to help expand

access to education, strengthen the relevance of education to the increasingly digital workplace, and raise educational quality. However, the experience of introducing different ICTs in the classroom and other educational settings all over the world over the past several decades suggests that the full realization of the potential educational benefits of ICT. The direct link between ICT use and students' academic performance has been the focus of extensive literature during the last two decades. ICT helps students to their learning by improving the communication between them and the instructors (Valasidou and Bousiou, 2005). The analysis of the effects of the methodological and technological innovations on the students' attitude towards the learning process and on students' performance seems to be evolving towards a consensus, according to which an appropriate use of digital technologies in education can have significant positive effects both on students' attitude and their achievement. Research has shown that the appropriate use of ICTs can catalyze the paradigmatic shift in both content and pedagogy that is at the heart of education reform in the 21st century. Kulik's (1994) meta-analysis study revealed that, on average, students who used ICT-based instruction scored higher than students without computers. The students also learned more in less time and liked their classes more when ICT-based instruction was included. Fuchs and Woessman (2004) used international data from the Programme for International Student Assessment (PISA), they showed that while the bivariate correlation between the availability of ICT and students' performance is strongly and significantly positive, the correlation becomes small and insignificant when other student environment characteristics are taken into consideration. Attwell and Battle (1999) examined the relationship between having a home computer and school performance, their findings suggest that students who have access to a computer at home for educational purposes, have improved scores in reading and math. Becker (2000) found that ICT increases student engagement, which

leads to an increased amount of time students spend working outside class. Coates et al. (2004) showed that students in on-campus courses usually score better than their online counterparts, but this difference is not significant here. ICTs especially computers and Internet technologies enable new ways of teaching and learning rather than simply allow teachers and students to do what they have done before in a better way. ICT helps in providing a catalyst for rethinking teaching practice (Flecknoe,2002; McCormick & Scrimshaw, 2001) developing the kind of graduates and citizens required in an information society (Department of Education, 2001); improving educational outcomes (especially pass rates) and enhancing and improving the quality of teaching and learning (Wagner, 2001; Garrison & Anderson, 2003). ICT can help deepen students' content knowledge, engage them in constructing their own knowledge, and support the development of complex thinking skills (Kozma, 2005; Kulik, 2003; Webb & Cox, 2004).Studies have identified a variety of constructivist learning strategies (e.g., students work in collaborative groups or students create products that represent what they are learning) that can change the way students interact with the content (Windschitl, 2002). Albert Bandura, Girasoli and Hannafin (2008) urge the use of asynchronous CMC tools to promote student self-efficacy and hence academic performance. Fister et al (2008) also depict the power of tablet PCs to improve mathematics instruction. ICTs have the potential for increasing access to and improving the relevance and quality of education. The use of ICT in educational settings, by itself acts as a catalyst for change in this domain. Students using ICTs for learning purposes become immersed in the process of learning and as more and more students use computers as information sources and cognitive tools (Reeves and Jonassen, 1996), the influence of the technology on supporting how students learn will continue to increase.

2.5Characteristics of quality education

Regarding a good quality education a number of factors may be under play: Good teaching: well trained teachers who are paid adequately, using methods focusing methods on the learners' needs; Well equipped schools and learning centers: books and other materials and equipment available to stimulate learners; Safe schools or places where every learner, especially girls is safe from danger or harassment; Enough instruction in the right languages and an adequate number of hours each week and every year for curriculum coverage and evaluation.

The other factors are relevant and useful curriculum such that learning is based on what learners find in their local environment and focused on broader knowledge and competencies which they can apply in their lives; well managed schools through the local boards and committees can improve ICT use in secondary schools in Mogadishu.

Above all, a quality education is for everyone, not only a few people or a few places. A high quality education is not just for elites or the rich; it is also for the poor and the disadvantaged because a quality education can certainly make a difference in their lives.

2.6 Role of ICT on higher education

ICT plays crucial role on different levels of education such as:

The impact of ICT on the learning process seems to be more important and requires more than looking only to curricula. Improved student outcomes are observed, with regard to: motivation, enjoying learning; self-esteem; ICT skills; collaborative skills; subject knowledge; information handling skills; meta-cognitive skills, etc.

In Somalia higher education institutions, while students and teachers seem to be using the new available technologies more and more intensively, organizational designs are changing slowly.

The lack of a strategy regarding organizational change, as several studies have shown, leads to a weak impact of the use of ICT on student performance in Mogadishu students.

It may have become part of history that an academic institution could manage without utilizing the most up to date information and communication technology (ICT). The rapidly changing and advancing modern tools of teaching and learning in higher education have made the use of technology a must for competitiveness and survivability. Digital technology, according to Pollock and Cornford (2002), has reshaped higher education institutions' ethos, norms, and also their learning and teaching methods. Bouwma-Gearhart and Bess (2012) suggested that "changes in academic norms reflected changes in society and technology" (p. 251). Today, higher education institutions are adopting many types of technologies, and this adoption has increased the movement towards electronic learning and also towards online and blended methods of learning (Bonk & So, 2010). In addition, the increasing competition and the demand for quality higher education have encouraged the adoption of ICT tools in higher education institutions (Dawson, Heathcote, & Poole, 2010). Dawson et al. (2010) suggested that "the adoption of ICTs is no longer a luxury, but a necessity for all institutions" In other words, utilizing ICT tools has been seen as an important strateg y for academic leaders to enhance student learning experience and also to respond to the increase in competition among institutions.

Hargreaves (1997) and Meighan (1997) argue that the potential impact of the implementation of ICT in higher education will not be observable without organizational changes at the level of the whole system. Universities must act as a learning organization. ICT implies more interactions among all the actors. The institution is then developing collective learning by changing its rules and routines. But the main change is that innovation becomes the heart of the learning process.

Teachers and students are exploring the new possibilities given by these technologies and constructing capabilities concerning learning through ICT. Building capabilities concerning ICT usage in education becomes a discriminatory element among Somali universities. The attitudes toward time, place, curriculum and other connected attributes of the system on a systemic level are changing.

Fuchs and Woessman (2004) used international data from the Programme for International Student Assessment (PISA), they showed that while the bivariate correlation between the availability of ICT and students' performance is strongly and significantly positive, the correlation becomes small and insignificant when other student environment characteristics are taken into consideration. Attwell and Battle (1999) examined the relationship between having a home computer and school performance, their findings suggest that students who have access to a computer at home for educational purposes, have improved scores in reading and math. Becker (2000) found that ICT increases student engagement, which leads to an increased amount of time students spend working outside class.

In distance learning system, learners are remote to the institution and are in large scale. It is difficult for a learner to visit the institution every day to get a service/support as available in a conventional system and at same time, it is even difficult to the institution itself to provide various services to the learners at different phases of a student learning life cycle, due to limited human resource available. Information and Communication Technology (ICT) is a prime resource to overcome such limitations (Dr. A. Murali M Rao 2012)

Information and communication technology is group of technologies by which various support services shall be provided at different phases of student learning life cycle in

distance learning. The various phases are the admission phase (progamme details, fee structure, admission procedure and registration & re-registration), the learning phase (learning schedule, programme delivery(lectures through video conferencing, webinars, audio & video programmes, multimedia presentations and case studies), the evaluation phase (examination schedule, internal &external assessment, examinations, improvement, valuation, revaluation and result declaration) and the certification phase (marks/grades updates, certificate printing & issuing and convocation schedule) A. Murali M Rao 2012,)

In conventional system, learners are able to interact with one another face-to-face, which is a prerequisite to more meaningful social intercourse. Since, there is no such facility in the distance learning, web-based student learning and support system shall be developed and implemented using ICT to provide services at all different phases in student learning life cycle and also for knowledge and information sharing as done in a conventional system of education.

Distance education, also called open or distance learning, is a form of education in which there is normally a separation between teachers and learners. Thus, it incorporates the printed and written word, the telephone, computer conferencing or teleconferencing to bridge the physical gap between the instructor and the learner. Distance education provides educational opportunities to those who otherwise would have been denied.

Improving the quality of education through the diversification of contents and methods and promoting experimentation, innovation, the diffusion and sharing of information and best

practices as well as policy dialogue are UNESCO's strategic objectives in Education (UNESCO, 2002, 2005).

Open distance learning system requires ICT infrastructure to provide various services effectively at different phases of a student life cycle. The ICT infrastructure includes the network infrastructure, the computing infrastructure, the system and application software, the Internet Service Provider (ISP), and the security infrastructure. (Murali, 2012)

In Somalia, Mogadishu these service such as network infrastructure, the computing infrastructure, the system and application software, the Internet Service Provider(ISP), are not well developed and has remained an obstacle for Somali students who are preparing for their second degree as distance learning.

2.6 ICT challenges on quality of education

ICT as a modern technology that simplifies and facilitates human activities is not only advantageous in many respects, but also has many limitations. Many people from inside and outside the education system, think of ICT as "Panacea" or the most important solution to school problems and improvements. However, many conditions can be considered as limitations of ICT use in education. The limitations can be categorized as teacher related, student related, and technology related. All of them potentially limit the benefits of ICT to education. Teachers' attitude plays an important role in the teaching-learning process that utilizes computers and internet connections.

Although teachers' attitude towards use of these technologies in Mogadishu schools is vital, many observations reveal that teachers do not have clarity about how far technology can be beneficial for the facilitation and enhancement of learning (Prof Ali , 2001;).

Of course, some teachers may have positive attitudes to the technology, but refrain from using it in teaching due to low self efficacy, tendency to consider themselves not qualified to teach with technology. In this respect, Bandura (1986) describes self-efficacy as "individual's opinion of capabilities to organize and perform courses of actions to achieve particular types of performances." Moreover, as identified by Brosnan (2001), attitude, motivation, computer anxiety, and computer self-efficacy are factors affecting teachers' use of computers in their lessons. Teacher resistance and lack of enthusiasm to use ICT in education may also be another limitation.

Furthermore, many teachers may not have the required IT skills and feel uncomfortable, nor do they have trainings needed to use the technology in their teaching. Unless teachers develop some basic skills and willingness to experiment with students, ICT use in education is in a disadvantage (Brosnan, 2001).

On the other hand, the limitation of ICT use in education is related to student behaviour. Appropriate use of computer and the internet by students have significant positive effects on students' attitude and their achievement.

Nonetheless, it is very common to observe limitations related to student behavior. Students tend to misuse the technology for leisure time activities and have less time to learn and study. Yousef and Dahmani (2008) described online gaming, use of face book, chat rooms, and other communication channels as perceived drawbacks of ICT use in education, because, students easily switch to these sites at the expense of their study. Internet access at home, for instance,

may be a distraction because of chat rooms and online games, reducing the time spent in doing assignments and learning (Kulik,1994). Therefore, the impact of availability of ICT on student learning strongly depends on its specific uses. If ICT is not properly used, the disadvantage will overweight the advantage. For example, while students use the internet, it may confuse them by the multiplicity of information to choose from. As a result, the teacher spends much time to control students from websites unrelated to the learning content. Then, for caution, it is important to identify the major limitations of ICT use in education as related to student behaviour. The various literature in the area, identify the following limitations of ICT use in education as related to student behavior.

Computers limit students' imaginations,, Over-reliance on ICT limits student's critical thinking and analytical skills,, Students often have only a superficial understanding of the information they download,, Computer-based learning has negative physical side-effects such as vision problem, Students may be easily distracted from their learning and may visit unwanted websites, Students tend to neglect learning resources other than the computer and internet, Students tend to focus on superficial presentations and copying from the internet, Students may have less opportunity to use oral skills and hand writing, Use of ICT may be difficult for weaker students, because they may have problems with working independently and may need more support from the teacher.

The other limitation of ICT use in secendary schools in Mogadishu is technology related. The high cost of the technology and maintenance of the facilities, high cost of spare parts, virus attack of software and the computer, interruptions of internet connections, and poor supply of electric power are among the technology related limitations of ICT use in education.

2.7 Summary of literature review

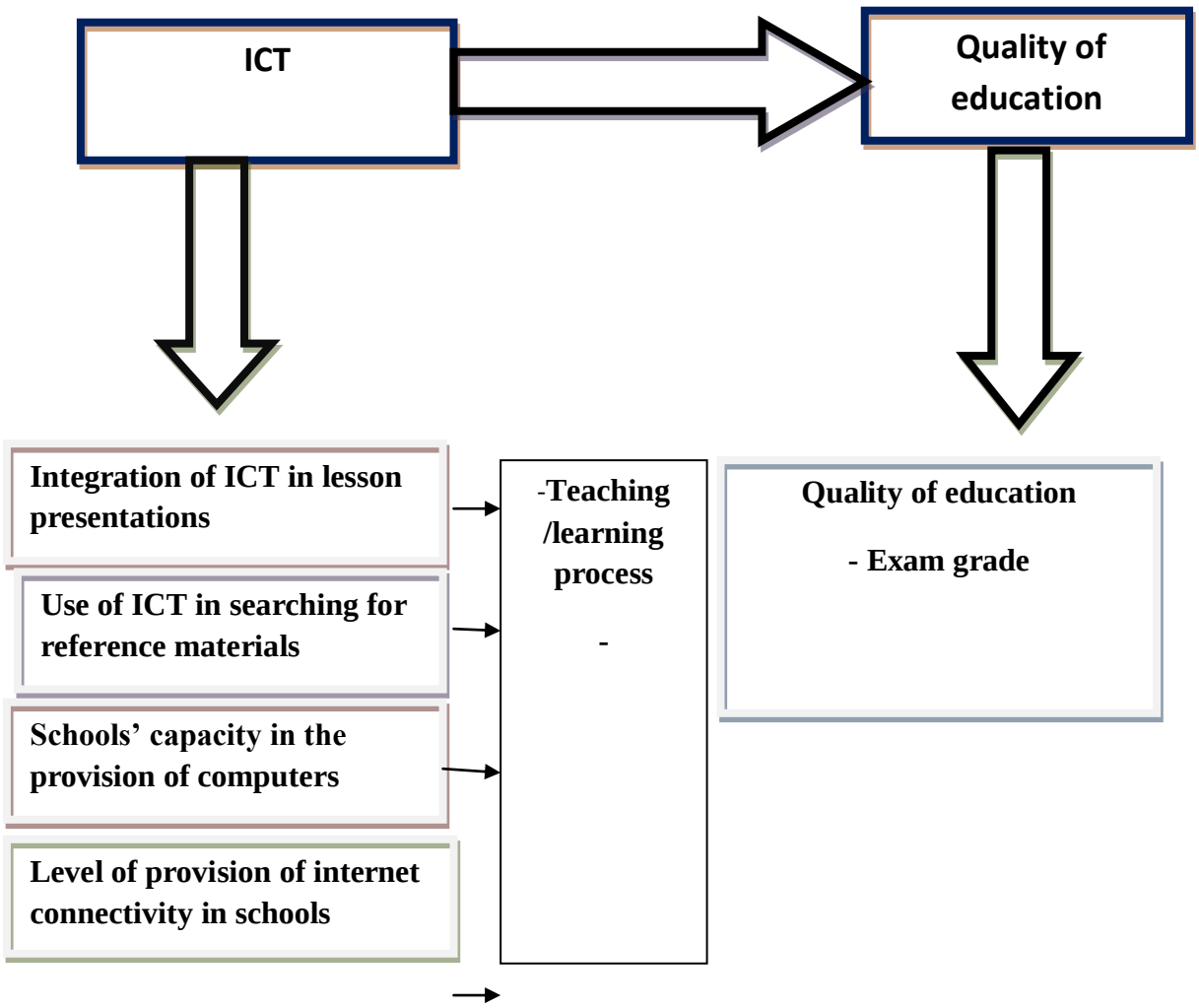
After reviewed articles, most of researchers found that there is positive relationship between ICT and quality of education in secondary schools. Although ICT has limitations which faced students and teachers Therefore, the impact of ICT on student learning and teachers strongly depends on its specific uses. If ICT is not properly used, the disadvantage will overweight the advantage.

2.8 Theoritcial frame work

This study is guided by systems theory. The systems theory as seen in the works of Herbert Spencer (1860) and Emile Durkheim (1947) will guide the study. The two compared societies to organisms with structures, which consist of interrelated parts, each, playing a function in the life of a total organism. In this study, the stakeholders, parents, teachers, students, play a role for the smooth continuation of secondary school education by uisng ICT. The students are expected to work hard to achieve these goals. Failure to complete education cycle implies that a student has not achieved all his capabilities and therefore will not be able to take up societal responsibilities competitively like others. It is proposed in 1940's by Ludwing Von Bertalanffy and furthered by Ross Asbby 1968. Van Bertahanffy emphasized that real systems are open to interact with their environment and that can acquire qualitatively new properties through using ICT on education.. System theory focuses on the arrangement of all relations between parts which connect them into a whole. Its application include, computing engineering, management and ecology. It aims at to specify possible courses of action with their risks costs and benefits (Francis, 2000). This theory is applicable in this study since thequality of education interrelated tasks , each, playing a function in the life of a total organism. It looks at the educational institution system of interrelated parts working together to achieve common goals.

2.9 Conceptual framework

Figure 2.1 Relationship between variables on the influence of ICT on quality of education.



From the concept developed and after the review of literature related to the variable the researcher developed the following variable based on discussion of scholars.

There is significance relationship between; ICT integration and teaching methods

There is significance relationship between, internet connectivity and learning practice

There is significance relationship between, internet bas\d materials and exam grade.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1Introduction

This chapter describes the methodology is being used in this study. It is organized in seven sub topics namely: research design, population and target population, sample and sampling technique, instrument validity, instrument reliability, data collection procedure, data analysis Techniques and ethical consideration to be considered during the study.

3.2 Research design

The research design employed in the study is descriptive survey, to establish the influence of ICT on quality of education in secondary schools in Mogadishu, Somalia. Kerlinger and Lee (2000) points out that descriptive studies are not only restrictive to fact finding but may often result in formulation of important principles of knowledge and solution problem. It involves measurement, classification analysis comparison and interpretation of data. Descriptive survey is a method of collecting information by interviewing and administering a questionnaire to a sample of individuals Orodho (2003). Since the study is on determining the ICT integration in schools it require examination of the recent situation in schools hence the design is appropriate.

3.3 Target population

]'According to Kombo and Tromp (2006) population is a group of individual, objects or items from which samples are taken to measurements. The target population for this study consisted of 90 Schools in three districts the respondents consisted of 140 teachers and 330 students from the selected districts in the city. The target population is therefore 470 respondents.

4.4 Sample size and sampling techniques

Kombo and Tromp (2006) defines a sample as a finite part of the statistical population whose properties are studied to gain information about the whole. In this study, sample is a set of respondents selected from a larger population for the purpose of survey. Sampling is the procedure are researcher uses to gather people, places, or things to study (Kombo & Tromp, 2006).

Borg and Gall (1989) explained that a minimum of 30 thirty respondents can be used but that the larger sample, the more likely the respondents scores on the measured variable is to the representative of population scores, considering this researcher, chose 20 schools and47 teachers and 50 students (Borg & Gall, 1989). This implies that the target population is 140 teachers and 330 students, the total of responds are 470 responds. Simple random sampling technique is used to select the 20 schools from 90 schools in three districts and 47 teachers' from140 teachers and 50 students from 330 students in the following process, all the schools will write on pieces of paper which are then folded into balls and put in a closed container. The container will shake vigorously before picking one at a time and noting the school it represents. Picking the pieces of papers will do without replacement each time. The process is repeated until the 20 schools and 47teachers and 50 students found.

3.5 Research instruments

The researcher relied on self-administered questionnaires and interview schedule. A questionnaire is a research instrument that gathers data over a large sample (Kombo and Tromp, 2006). The advantages of using questionnaires are: the person administering the instrument has

an opportunity to establish rapport, explain the purpose of the study and explain the meaning of items that may not be clear. Gay (1976) maintains that questionnaires give respondents freedom to express their views or opinions and also to make suggestions. They are also anonymous. Anonymity helps to produce more open answers than it is possible in an interview. Two questionnaires will use for two different categories. That is, for teachers and students. The teachers' questionnaires contained questions involving their personal information and items regarding the influence of ICT on quality of education in secondary schools in Mogadishu.

The students' questionnaire contained the student's demographic factors and other items on the influence of ICT on quality of education in secondary schools in Mogadishu.

3.5.1 Instrument validity

Validity is the degree to which test measures what it claim to measure (Borg & Gall, 1989). There are various types of validity; Content validity is the degree to which sample of test item represents the content that test is designed to measure. The external validity is the generalization of the study findings. As such, the researcher sought assistance from the supervisor in order to help improve content validity of the instrument.

3.5.2 Instrument reliability

According to Kumar (2005) a research instrument is reliable if repeated measurements but if under similar condition give the same results. To test the reliability of instrument, test retest method of reliability is employed in the study during pilot study. This involved administering the same instrument twice to the same group of subject with a time lapse between the first and second test.

Pearson's product moment correlation coefficient formula is used.

$$r = \frac{N\Sigma xy - (\Sigma x)(\Sigma x)}{\sqrt{[N\Sigma(x)^2 - (\Sigma x^2)][N\Sigma(y)^2 - (\Sigma y)^2}}$$

Where:

N= number of scores

X= first set scores

Y= second set scores

∑XY = sum of the product of first and second scores

∑x= sum of first set scores

∑y= sum of second set scores

∑$x^{2=}$ sum of square first set scores

∑$y^{2=}$ sum of square second scores

=According to Mugenda and Mugenda (1999) a coefficient of 0.80 or more simply showed that there is high reliability of data.

3.6 Data collection procedures

The researcher wrote letters to the head teachers to be allowed to do the study in their schools. The selected schools visited and the questionnaires Administrated to the respondents. The respondents were assured that strict confidentiality would be maintained in dealing with the identities. The questionnaires were collected at the possible time.

3.7 Data analysis techniques

After the data is collected, it sorted and cleaned. Data is coded and organized into themes and used description of behavior and context in which it is to occur. Data gathered is coded for

analysis. This is done after editing and checking out whether all questionnaires have been filled in correctly. Coding is assigning a code number to each answer to a survey question. This is then entered into Statistical Package for Social Sciences (SPSS) software to generate the required descriptive statistics namely frequencies and percentages.

Brinker (1988) compete that the simplest method to present data is in frequency or percentage tables, which summarizes data about single variable.

3.8 Ethical Consideration

This study may conduct ethically such as keeping privacy and the confidentiality of data, and also use for academic purpose. Similarly, to maintain ethical issue, the researcher will request from head teacher to allow to interview teachers and students in their schools.

Under this study, the respondents will inform that participation is voluntary so that make informed decision to participate or not, the researcher will also try to avoid any action against an ethical issue.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

Presented in this chapter are data presentation, analysis and interpretation of the Findings. The data presented in this chapter were processed using Statistical Package for Social Sciences (SPSS). All themes discussing the same research questions are presented and analyzed together.

4.1Questionnaire return rate

Questionnaire return rate is the proportion of the questionnaires then are returned after they have been issued to the respondents. Out of the 47 teachers and 50 Students sampled during the study, 47 teachers and 50 Students filled and returned the questionnaires. The return rates are all 100% and hence return rate of data is very high.

4.2 Demographic data of the respondents

This section presents the demographic data of the teachers, and students that were sampled. The section presents that demographic data of the teachers and then presents students.

4.2.1 Demographic data of the teachers

The demographic data of the teachers is based on their gender, age, level of education, and the duration they had served as teachers.

To establish the gender of the teachers, they were asked to indicate their gender.

Figure 4.1: Distribution of the teachers by gender

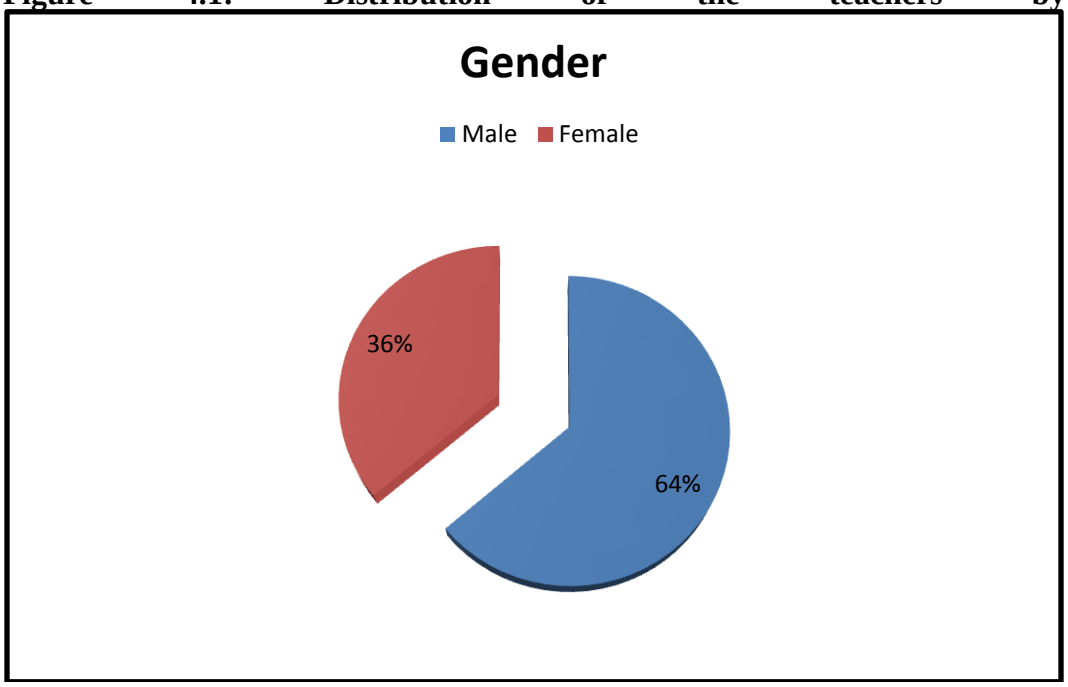


Figure 4.1 shows that the majority of the teachers were male at 64%. The data shows that most of the schools were dominated by male teachers.

Table 4.1: Distribution of the teachers according to age

Age	Frequency	Percent
20-25 years	12	25.5
25-30 years	18	38.3
30-35 years	10	21.3
35-40 years	4	8.5
above40 years	3	6.4
Total	47	100.0

Table 4.1 indicates that the most of teachers were aged between 25 and 30 years.

Table 4.2: Distribution of the teachers according to academic qualification

Academic qualification	Frequency	percent
Secondary	5	10.6
Bachelor	27	57.4
Master	11	23.4
Other	4	8.5
Total	47	100.0

Data shows that the majority of teachers had bachelors in education. Different professional qualification of teachers will affect the way they interpret their teaching and use of ICT.

Figure 4.2: Distribution of the teachers according to teaching experience

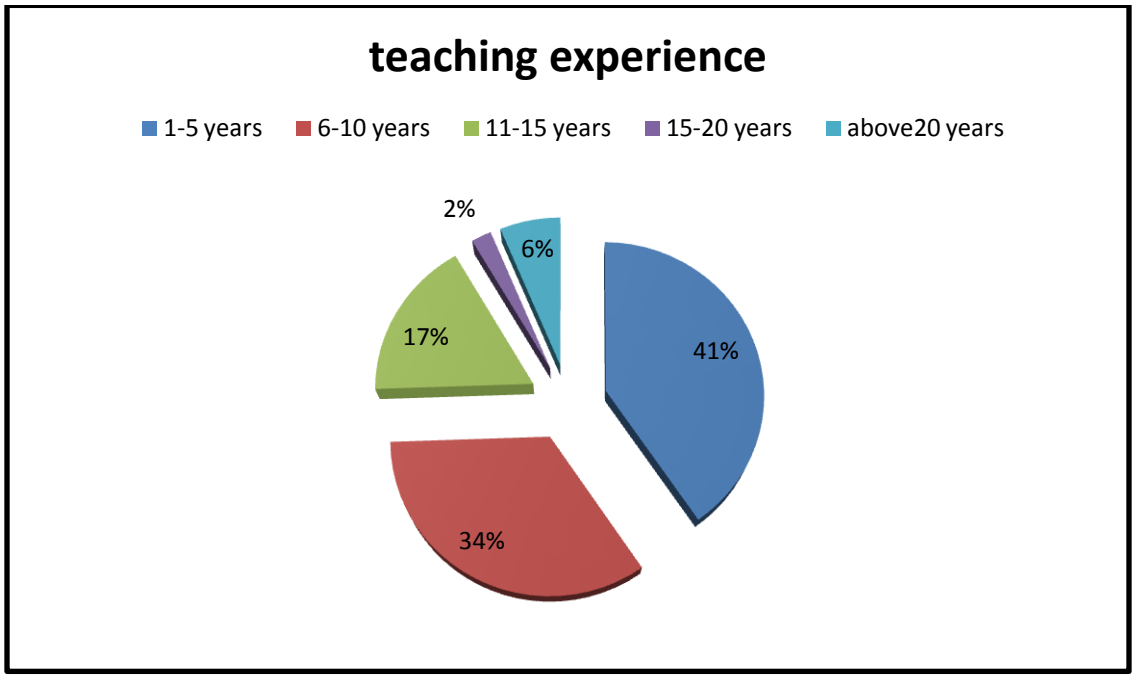


Figure 4.2 indicates that 41 percent of the teachers had served in teaching experience position for 1-5 years. This confirms that teachers in secondary schools in Mogadishu have adequate experience that would enable them provide education on their schools.

4.2.2: Demographic data of the students

The demographic data of the students was based on their gender, age, level of Education and shift of the study. To establish the gender of the students, they were asked to indicate their gender.

Figure 4.3: Distribution of the students according to gender

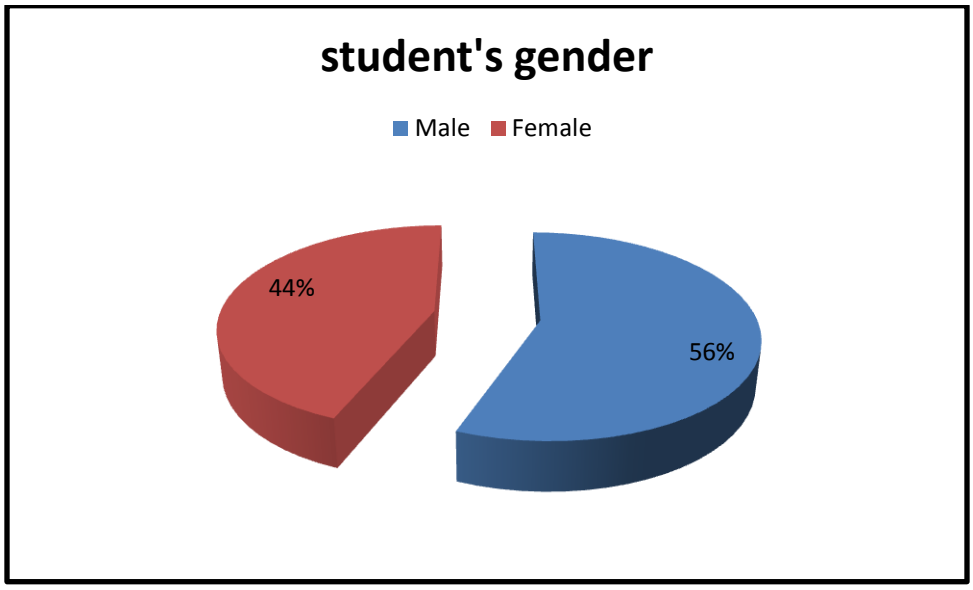


Figure 4.3 shows that there is a few dissimilarity between Male and female in secondary schools in Mogadishu and there is increasing number of girls who are joining in schools which may increase the number of female in secondary schools in Mogadishu.

Figure 4.4: Distribution of the students according to by age

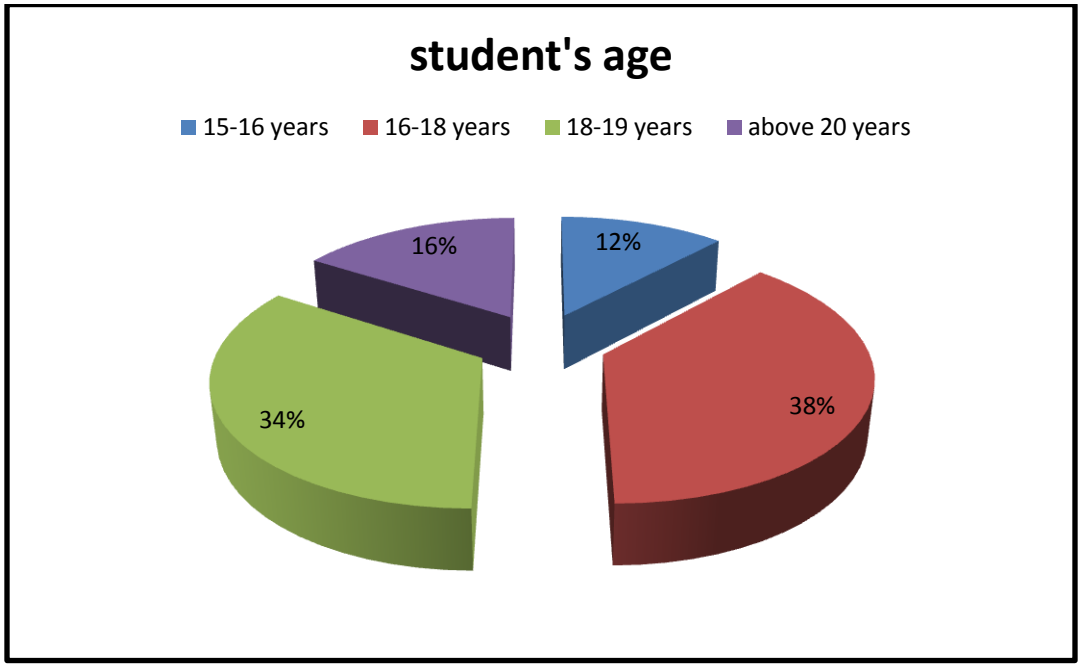


Figure above shows that most students were aged between 16-18 years, 18-19 years while some of them were above 20 years.

Table 4.3: Distribution of the students according to level of education

Grades	Frequency	percent
Grade nine	11	22.0
Grade ten	10	20.0
Grade eleven	18	36.0
Grade twelve	11	22.0
Total	50	100.0

Table 4.3 indicates that the most of the students were grade ten and grade eleven while others were grade nine and grade twelve.

Figure 4.5: Distribution of the students according to shift of the study

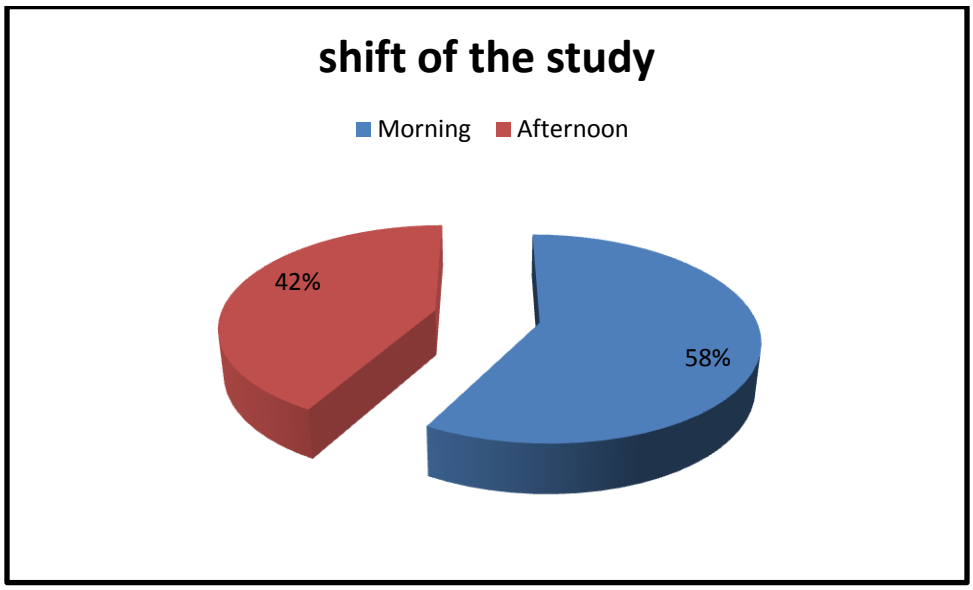


Figure 4.5 indicates shift of the study, the researcher wanted to know which shift of the study was more is it morning or afternoon and this figure shows that shift morning was the most one which secondary students in Mogadishu were studying at morning time.

Table 4.4: Teachers' response on how often do they prepare their lessons with ICT

statement	frequency	percent
Always	13	27.7
Sometimes	21	44.7
Rarely	7	14.9
Never	6	12.8
Total	47	100.0

Table above shows that the majority of the teachers were spending their time to prepare their lessons with ICT which may enhance students' attention towards lessons.

Figure 4.6: teachers' response how often do they download/upload /browse material from the schools' website

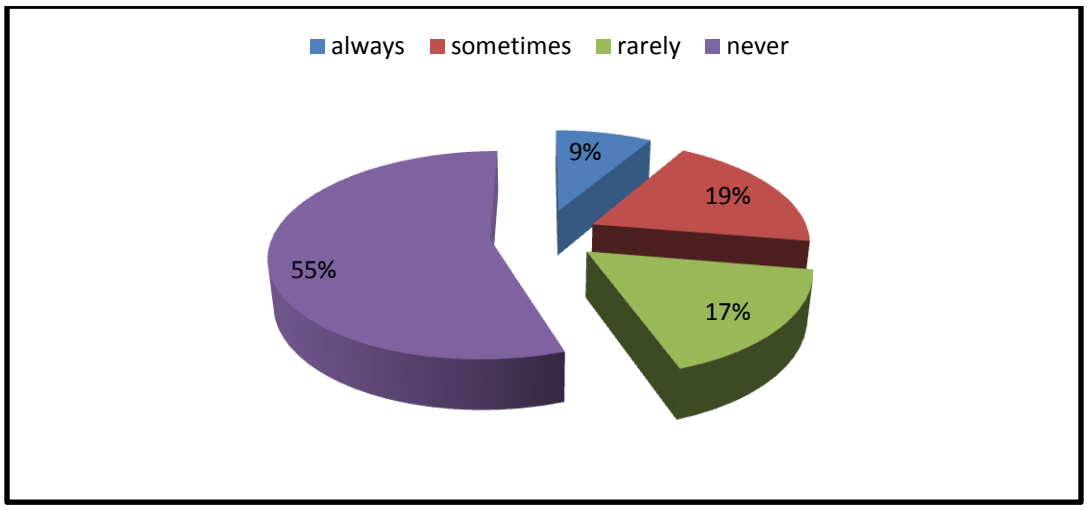


Figure 4.6 indicates that the majority of teachers were not downloaded /browsed materials from schools 'website and this shows that schools' websites were not developed , teachers who always download reference materials from schools' website were **9%** while teachers who don't download reference materials from schools' website were **55%** The data is presented in figure 4.6

Table 4.5: Teachers' response on the internet communication with ICT (e.g. Email)

Duration	Frequency	percent
always	25	53.2
sometimes	11	23.4
rarely	5	10.6
never	6	12.8
Total	47	100.0

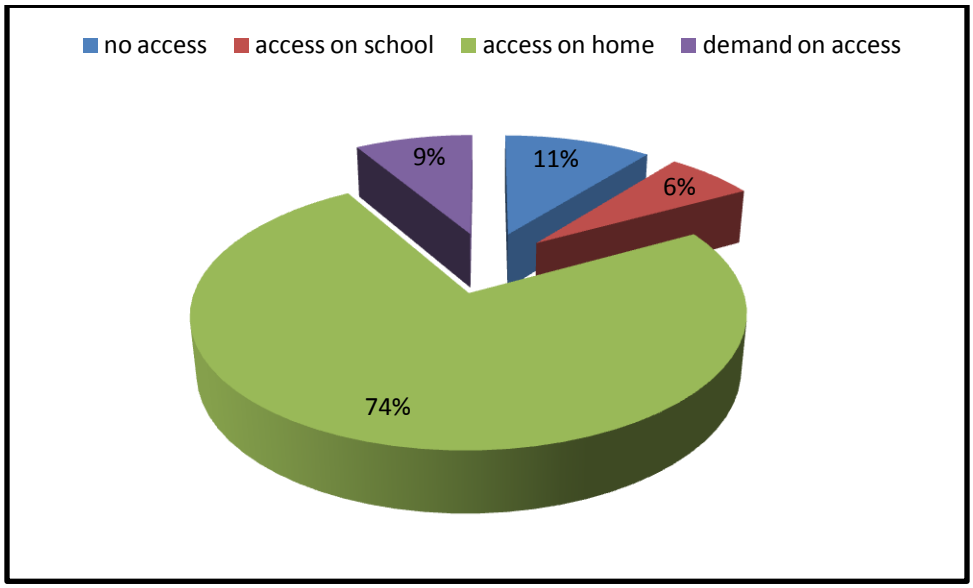
Table above shows that majority of the teachers were using ICT as communication tools, **53%** answered "always" which means that the most of the teachers used ICT as communication tools.

Table 4.6: Teachers' response on accessibility of desktop computer at the school and at home

Accessibility	Frequency	Percent
no access	15	31.9
access on the school	19	40.4
access on home	7	14.9
demand on access	6	12.8
Total	47	100.0

Table 4.6 indicates that **40.4%** of the teachers had access desktop computer on the school while **31.9%** had no access desktop computer at all, the accessibly of desktop computer in the school may enhance integration of ICT with class presentation.

Figure 4.7: Teachers' response on accessibility of laptop computer at school or home



The finding figure 4.7 shows that the majority of the teachers had accessibility of laptop computer at home; since 74% of the teachers had access on the home while a few teachers had accessibility of laptop computer at school they were 6% of the teachers, data is presented figure 4.7

Table 4.7: Teachers' response on students' interest to use ICT in education in class presentation

Statement	Frequency	Percent
strongly agree	21	44.7
Agree	16	34.0
strongly disagree	3	6.4
Disagree	7	14.9
Total	47	100.0

Table 4.7 indicates that 78% of the teachers pointed that the students had interested to use ICT in education and class presentation and this finding shows that the ICT had improved way of teaching in secondary schools in Mogadishu since students were much interested to use ICT in education.

Figure 4.8: Teachers' response on if ICTs have made education easier during class presentation

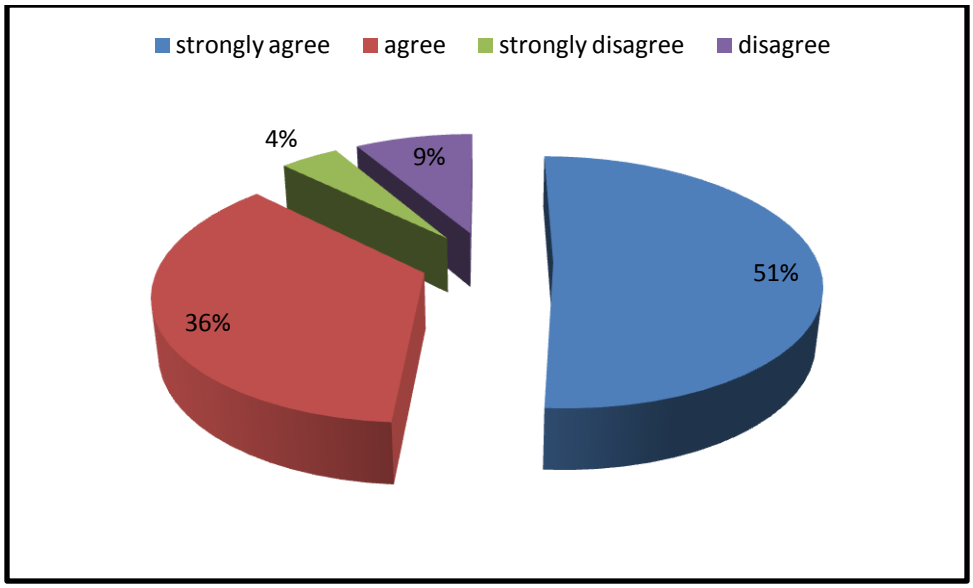


Figure above shows that 51% of teachers had strongly agree that ICT have made education easier during class presentation while 36% of teachers had agree that ICT have made education easier during class presentation, and this finding shows how ICT had made education easier in secondary schools in Mogadishu

Table 4.8: Teachers' response on how they feel comfortable with the idea of the computer as a tool in teaching and learning

statement	frequency	percent
strongly agree	31	66.0
agree	9	19.1
strongly disagree	2	4.3
disagree	5	10.6
Total	47	100.0

Table 4.8 shows 66% of the teachers had strongly felt comfortable with the idea of the computer as a tool in teaching and learning and this finding shows that teachers had moved traditional teaching into modern teaching.

Figure 4.9: Teachers' response on if the computer is not helpful to student learning because it is not easy

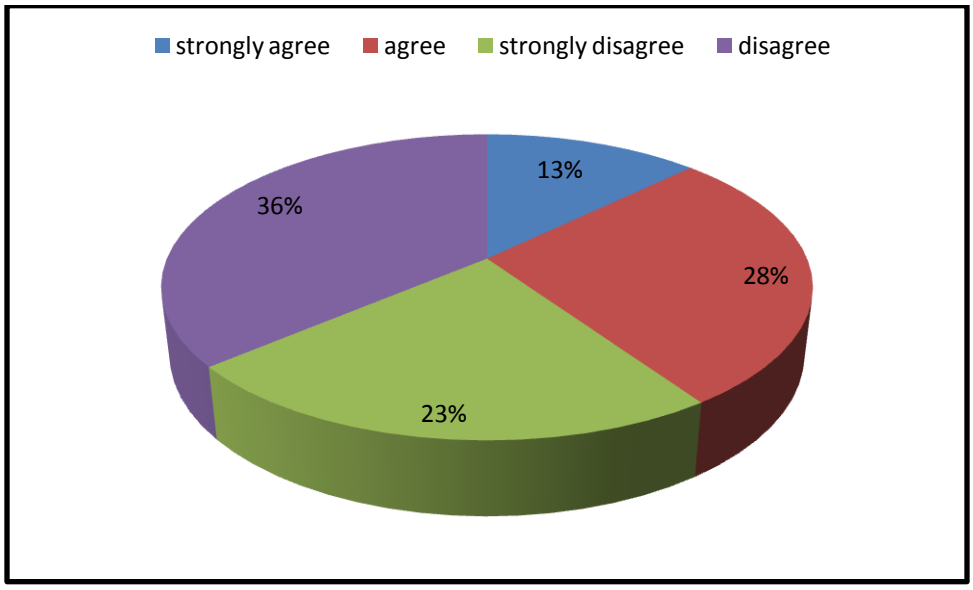


Figure 4.9 shows that 36% of the teachers had answered "disagree" which means that the computer is helpful to student while 13% of the teachers had answered "strongly agree" which means that the computer is not helpful to student learning because it is not easy.

Table 4.9: students' response on knowledge of word processing (e.g. Word)

statement	Frequency	Percent
I cannot use it	6	12.0
I can use it to small extent	29	58.0
I can use it well	7	14.0
I can use it very well	8	16.0
Total	50	100.0

Table above indicates that 58% of students could use word processing to small extent while 12% of students couldn't use word processing and this shows that majority of students could use word processing

Figure 4.10: students' response how of often do they communicate online with parents (e.g. E-mail)

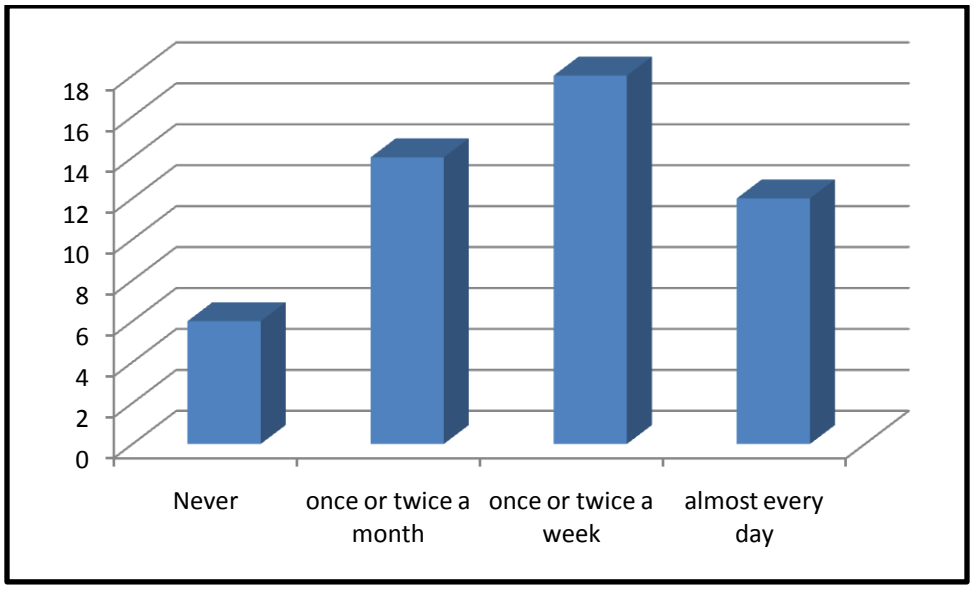


Figure 4.10 shows that the majority of students had often communicate with parents once or twice a week while some of them had communicate with their parents almost every day , we can understand this findings that the students spare more time with the communication.

Table 4.10: students' response on how often do they search internet for reference material with ICT

statement	Frequency	Percent
Never	4	8.0
once or twice a month	28	56.0
once or twice a week	12	24.0
almost every day	6	12.0
Total	50	100.0

Table 4.10 indicates that 56%of the students had searched internet for reference material while a few of them didn't search internet for reference materials and this finding shows that the majority of students downloaded/uploaded from the different worldwide websites by using ICT.

Figure 4.11: students' response on if they have undertaken introductory courses on internet use and general applications (basic word processing) in the past two school academic years

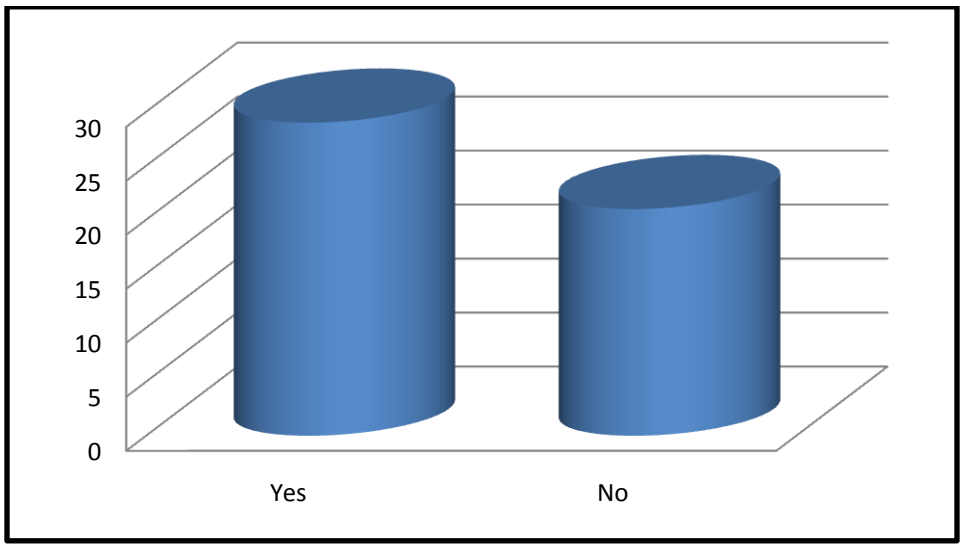


Figure 4.11 shows that majority of the students had undertaken introductory courses on internet use and general applications in the past two school academic years while some of them hadn't undertaken introductory courses on ICT and this finding shows that knowledge of ICT had increased through courses provided by schools in Mogadishu.

Table 4.11: students' response on if they have undertaken course on pedagogical use of ICT in teaching and learning

statement	Frequency	Percent
Yes	18	36.0
No	32	64.0
Total	50	100.0

Table above shows that the 64% of the students hadn't undertaken course on pedagogical use of ICT in teaching and learning while 36%of the students had undertaken course on pedagogical use of ICT and this finding shows that there was a few courses on pedagogical use of ICT in teaching and learning.

Figure 4.12: students' response on if they spare their time personal learning about ICT in their own time

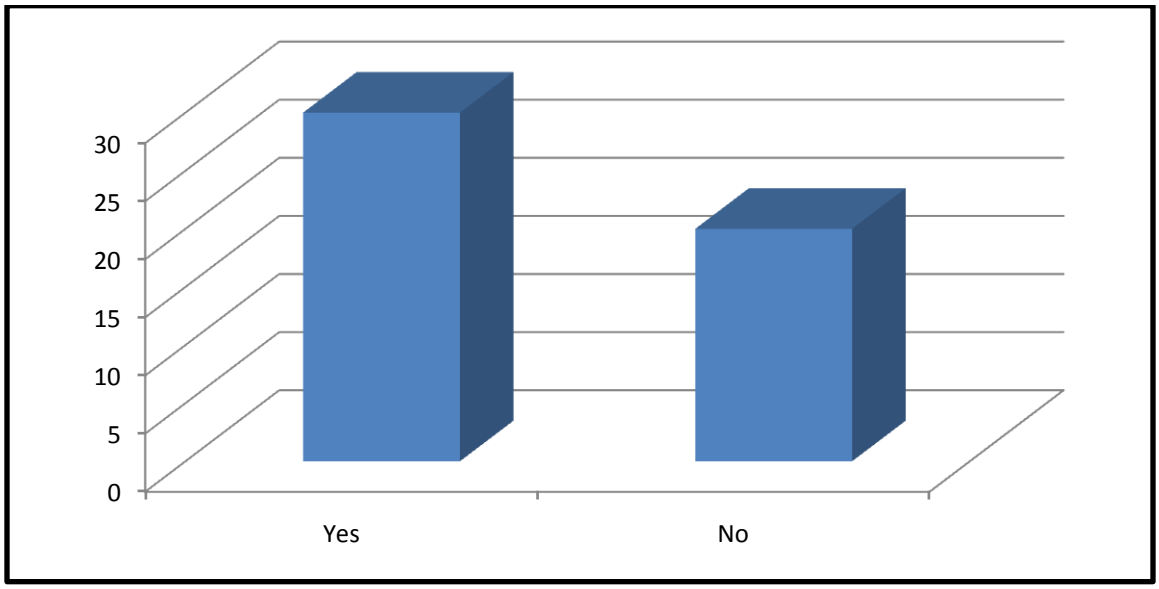


Figure above indicates that the majority of the students had spent their time personal learning about ICT in another school in order to get extra knowledge about ICT use in education and parents paid extra fee about ICT learning in another schools.

Table 4.12: students' response on if the parents not in favor of the use of ICT at school

statement	Frequency	Percent
Yes	22	44.0
No	28	56.0
Total	50	100.0

Table 4.16 shows that 56% of the students had answered "NO" which means that parents in favored of the use of ICT at school and parents bough ICT tools to their students such as laptop computer and also paid internet boundless to use social networks to communicate with their colleagues.

CHAPTER FIVE

SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the study, conclusions, recommendations and suggestions for further research.

5.2 Summary of the study

The purpose of the study was to find out the influence of ICT on quality of education in secondary schools in Mogadishu.

Four research questions were formulated to guide the study.

1. To assess the influence of the use of ICT in searching for reference materials quality of secondary school education in Mogadishu
2. To analyze the influence of schools' capacity in the provision of computers for students on quality of education
3. To examine the influence of integration of ICT in lesson presentations on quality of education in secondary schools in Mogadishu
4. To determine the level of provision of internet connectivity in the schools on the quality education.

The research questions were used to guide investigations into the objectives. The research question one sought to establish how does the integration of ICT in classroom teaching influence quality of education in secondary schools in Mogadishu. How does the provision of internet connectivity in the schools affect the provision of quality education? In which way is the use of ICT in searching for reference materials influence quality of secondary education?

To what extent are the school capacities in the provision of computers for students influence quality of education?

The research design employed in the study was descriptive survey. The target population for this study was consisted of 90 Schools in three districts the respondents consisted of 140 teachers and 330 students from the selected districts in the city. The target population is therefore 470 respondents Simple random sampling technique is used to select the 20 schools from 90 schools in three districts and 47 teachers' from140 teachers and 50 students from 330 students.

Two different questionnaires were used to gather data from teachers and students. Data were analyzed using both qualitative and quantitative techniques. Descriptive statistics was done using SPSS. Data were presented as frequency tables and figures.

5.3. Summary of findings

Data revealed that majority 64% of the teachers were male; majority 36%

Of the teachers were female; 38% of the teachers were aged between 25 and 30 years

Majority57.4% of teachers had bachelors in education; while 23% of the teachers had mastered in different filed of education.

40.4% of the teachers were experienced between 1-5 years while 6.4% were experienced above 20 years

The findings were anchor on the research questions that were formulated from the research objectives of the study. Teachers in secondary schools in Mogadishu were found that the majority of the teachers were spending their time to prepare their lessons with ICT which may enhance students' attention towards lessons.

The study also found that the majority of teachers were not downloaded /browsed materials from schools 'website and this shows that schools' websites were not developed , teachers who always download reference materials from schools' website were **9%** while teachers who don't download reference materials from schools' website were **55%** The data were presented in figure 4.7 and also researcher found that majority of the teachers were using ICT as communication tools, **53%** answered "always" which means that the most of the teachers used ICT as communication tools.

Findings on teachers' accessibility of desktop computer at schools indicated that **40.4%** of the teachers had access desktop computer on the school while **31.9%** had no access desktop computer at all, the accessibly of desktop computer in the school may enhance integration of ICT with class presentation.

Findings on teachers' accessibility of laptop computer at home and school showed that the majority of the teachers had accessibility of laptop computer at home; since 74% of the teachers had access on the home while a few teachers had accessibility of laptop computer at school they were 6% of the teachers, data is presented figure 4.8

Findings on students' interest to use ICT in education indicated that 78% of the teachers pointed that the students had interested to use ICT in education and class presentation and this finding showed that the ICT had improved way of teaching in secondary schools in Mogadishu since students were much interested to use ICT in education.

Findings on how the teacher felled comfortable with the idea of the computer as a tool in teaching and learning showed that 66% of the teachers had strongly felt comfortable with the idea of the computer as a tool in teaching and learning and this finding showed that teachers had moved traditional teaching into modern teaching.

Findings on students' knowledge of word processing indicated that **58%** of students could use word processing to small extent while **12%** of students couldn't use word processing and this shows that majority of students could use word processing and they wrote their documents and text by using word processing.

Findings on students' response on how often do they search internet for reference material with ICT indicated that 56%of the students had searched internet for reference material while a few of them didn't search internet for reference materials and this finding shows that the majority of students downloaded/uploaded from the different worldwide websites by using ICT.

Finding on students' response on if they have undertaken introductory courses on internet use and general applications (basic word processing) in the past two school academic years found that majority of the students had undertaken introductory courses on internet use and general applications in the past two school academic years while some of them hadn't undertaken introductory courses on ICT and this finding shows that knowledge of ICT had increased through courses provided by schools in Mogadishu.

Finding on students' response on if they have undertaken course on pedagogical use of ICT in teaching and learning showed that the 64% of the students hadn't undertaken course on pedagogical use of ICT in teaching and learning while 36%of the students had undertaken course on pedagogical use of ICT and this finding shows that there was a few courses on pedagogical use of ICT in teaching and learning in secondary schools in Mogadishu.

5.4 Conclusions

Based on the findings of the study, the study established a strong correlation between ICT and quality of education in secondary schools in Mogadishu, the study found that the majority of the teachers were using ICT in their teaching and changed their way of teaching from traditional teaching into modern teaching, the study also concluded that students in secondary schools had used ICT in searching for reference materials , it was also concluded that the teacher felled comfortable with the idea of the computer as a tool in teaching and learning.

The study also concluded that the majority of the students have undertaken introductory courses on internet use and general applications (basic word processing) in the past two school academic years while some of them hadn't undertaken introductory courses on ICT and this finding shows that knowledge of ICT had increased through courses provided by schools in Mogadishu.

5.5 Recommendations

Based on the findings of this research, the study recommends that:-

1. The Ministry of Education may add curriculum pedagogical models on how to use ICT for learning which many students have pointed main obstacle was lack of pedagogical models on how to use ICT for learning.
2. The Ministry of Education ensures availability of adequate skill teachers in secondary schools in Mogadishu with ICT because the study found there was lack of adequate skill teachers in schools.
3. Students in secondary schools in Mogadishu should be given courses on ICT use in education

5.6 Suggestions for further research

Taking the limitations and delimitations of the study the following were the areas suggested for further research

- study on the relationship between ICT and students' performance in secondary schools in Mogadishu
- Study on challenges of ICT on quality of education in secondary schools in Mogadishu.
- Study on influence of social networks on students' performance in secondary schools in Mogadishu.

References

Anderson, N. & Baskin, C. (2002). Can we leave it to chance? New learning technologies and the problem of professional competence. International Education Journal,

Annan, D. L. (2008). Facilitating adoption of technology in higher education. Distance Learning, unpublished MED. Project (university?)

Aragon, S. R. (2003). Creating social presence in online environments. New Directions for Adult and Continuing Education, ,

Arinto, P. B. (2013). A framework for developing competencies in open and distance learning. The International Review of Research in Open and Distance Learning,.

Bonk, J. C., So, H.- J. (2010). **Examining the roles of blended learning approaches in computer-supported collaborative learning (CSCL) environment**s: A Delphi study. Educational Technology & Society,

Bouzidi, L. and Jaillet, A. (2009). Can online peer assessment be trusted? Educational Technology & Society,

Butcher, N. (2003). Technological Infrastructure and Use of Information and Communication Technology in Education in Africa.

Federal Republic of Nigeria, (2004). National Policy on Education. Lagos: NERDC Press.1 5 – 18
.

Galbreath, J. (2000). Knowledge management technology in education: An Overview. Education Technology. 40(5) 28 -33

http://www.nitda.gov.ng/docs/policy/ngitpolicy.pdf

http://www.triangle.co.uk/jit/index.htm

Juceviciene P. & Tautkeviciene, G. (2003). Academic Library as a learning environment: how do students perceive it? A paper presented at the European Conference on Educational Research,

Lansen, K. & Vincent-Lancrin, S. (2005). The impact of Information and Communication Technology on tertiary education: advances and promises. A paper presented at the OECD/NSF/U. Michigan

Professor Adewale O. Abolade, (2010) INFORMATION AND COMMUNICATION TECHNOLOGIES (ICTs) AND THE NIGERIAN TEACHER EDUCATION PROGRAMME
.

Sharmila Devi, (2012), ICT for Quality of Education in India, volume 2 issue 6

APPENDICES

APPENDIX I: LETTER OF INTRODUCTION TO THE RESPONDENTS

Dear Respondent,

RE: Research on influence of information communication technology (ICT) on quality of education in secondary schools in Mogadishu, Somalia.

I am a student at the University of Nairobi currently pursuing a Master's degree in Education in the department of educational administration and planning. As part of my assessment, I am carrying out research on "**influence of information communication technology (ICT) on quality of education in secondary schools in Mogadishu, Somalia"**. You have been selected for the study. The purpose of this letter is to request you kindly to spare some of your time to complete the questionnaire. The information you will give will be treated with absolute confidentiality and will only be used for the purpose of this study.

Please try to be as honest as possible in your responses and ensure that you attempt all questions.

Abdifitah Mohamed Mohamud

University of Nairobi

Master of education Student (M.E.D student)

Yours faithfully

QUESTIONNAIRE FOR TEACHERS

You have been selected to participate in a study on **influence of information communication technology (ICT) on quality of education in secondary schools in Mogadishu**, **Somalia** for a Master's degree project. You are requested to respond to each question thoughtfully and honestly. Your independent view is required and your cooperation is highly appreciated. Please respond to all items by ticking (√) appropriately.

SECTION ONE: Background information

1. Please indicate your gender Male [ ] Female [ ]

2. Please indicate your highest academic qualification?

A) Secondary ( ) B) Bachelor ( ) C) Master ( ) D) other ( )

3. Please indicate your age

20-25{ } 25-30 { } 30-35{ } 35-40 { } above 40 years { }

4. Please indicate your teaching experience?

1-5 years [ ] 6-10 years [ ] 11-15 years [ ] 15-20 years [ ] above 20 years [ ]

SECTION TWO ICT ACTIVATES

How often do you do the following activities with ICT?

1) Always 2) sometimes 3) rarely 4) never

ICT Activates		1	2	3	4
1.	Browse / search the internet to collect information to prepare lessons				
2.	Browse or search the internet to collect learning material				
3.	Use applications to prepare presentations for lessons				
4.	Download/upload/browse material from the school's website				
5.	Online Communication (e.g. E-mail)				

SECTION THREE ACCESS OF ICT

Do you have access or can you get the following?

1- No Access, 2- access on school, 3- access on home 4- demand on access

	ICT access	1	2	3	4
1	Desktop computer without internet access				
2	Desktop computer with internet access				
3	Laptop computer				
4	Mobile phone provided by the school				

SECTION FOUR: ICT USE IN EDUCATION

Please rate the following statements on how the ICT affects the quality of education in secondary schools
1) Strongly agree, 2) Agree 3) strongly disagree, 4) Disagree,

ICT use in education		1	2	3	4
1.	I present, my lesson and explain to the whole class with ICT				
2.	Students are interested to use ICTs in Education. In class presentation				
3.	ICTs have made education easier during class presentation				
4.	Students work on exercises or tasks individually with ICT supporting				
5.	Students give presentations to the whole class by using ICT				

SECTION FIVE: COMPUTER ATTITUDES
Please circle your answer:

1) Strongly agree, 2) Agree 3) strongly disagree, 4) Disagree,

NO		1	2	3	4
1.	I feel comfortable with the idea of the computer as a tool in teaching and learning				
2.	If something goes wrong I will not know how to fix it				
3.	The computer is a valuable tool for teachers				
4.	The computer will change the way I teach				
5.	The computer will change the way students learn in my classes				
6.	The computer is not helpful to student learning because it is not easy to use				

APPENDIX III

QUESTIONNAIRE FOR STUDENT

You have been selected to participate in a study on **influence of information communication technology (ICT) on quality of education in secondary schools in Mogadishu, Somalia**. For a Master's degree project. You are requested to respond to each question thoughtfully and honestly. Your independent view is required and your cooperation is highly appreciated. Please respond to all items by ticking (√) appropriately.

PART ONE: Background information

1. What is your gender? A. Male [ ] B. Female [ ]

2. What is your age bracket? A. 15-16 [ ] B. 16-18 [ ] C.18--19 [ ] above 20 years [ ]

3. Which class are you? A. Grade nine [ ] B. Grade ten [ ] C. Grade eleven [ ] Grade twelve [ ]

5. Which shift is your study? A. Morning [ ] B. Afternoon [ ]

PART TWO: KNOWLEDGE OF COMPUTER SOFTWARE

Please circle your answer:

1) **I cannot use it**
2) **I can use it to a small extent**
3) **I can use it well**
4) **I can use it very well**

No		1	2	3	4
1.	Word processing (e.g., Word)				
2.	Databases (e.g., Access)				
3.	Spreadsheets (e.g., Excel)				
4.	Graphics (e.g., Paint, Photoshop)				
5.	Presentation software (e.g., PowerPoint)				
6.	Internet				
7.	Publishing software (e.g., Publisher)				
8.	Programming languages (e.g., Logo, C)				
9.	Arranging videos and sound recording				

PART THREE: USE OFF COMPUTER FOR PERSONAL PURPOSES

Please circle your answer:

1. **Never**
2. **Once or twice a month**
3. **Once or twice a week**
4. **Almost every day**

No	**I use the computer to:**	1	2	3	4
1.	Play games (e.g., PES 2012,)				
2.	Make presentations (e.g., PowerPoint)				
3.	Process text (e.g., Word)				
4.	Publish materials (e.g., Publisher)				
5.	Prepare spreadsheets (e.g., Excel)				
6.	Create graphics (e.g., Paint)				
7.	Communicate online with parents (e.g., email)				
8.	Search Internet for reference material				
9.	Preparing exercise and assignments				

PART FOUR) SUPPORT TO STUDENTS FOR ICT USE

In the past two school academic years, have you undertaken professional development in the following areas?

Tick one box for each row: Yes No

	Support to students for ICT use	Yes	NO
1.	Introductory courses on internet use and general applications (basic Word-processing)		
2.	Advanced courses on applications (advanced word-processing,)		
3.	Advanced courses on internet use (creating websites/home page, video conferencing)		
4.	Courses on the pedagogical use of ICT in teaching and learning		
5.	Course on multimedia (using digital video, audio equipment, etc.)		
6.	Participate in online communities (e.g. mailing lists, twitter,facebook , e.t.c)		
7.	ICT training provided by school staff		
8.	Personal learning about ICT in your own time		

PART FIVE) OBSTACLES TO USING ICT IN TEACHING AND LEARNING

Is your use of ICT in teaching and learning adversely affected by the following?

Tick one box for each row: Yes No

	Obstacles of ICT use in teaching and learning	Yes	No
1.	Insufficient number of computers		
2.	Insufficient number of internet-connected computers		
3.	Insufficient Internet bandwidth or speed		
4.	Insufficient number of laptops/notebooks		
5.	School computers out of date and/or needing repair		
6.	Lack of adequate skills of teachers		
7.	Insufficient technical support for teachers		
8.	Lack of adequate content/material for teaching		
9.	Too difficult to integrate ICT use into the curriculum		
10.	Lack of pedagogical models on how to use ICT for learning		
11.	Pressure to prepare students for exams and tests		
12.	Most parents not in favor of the use of ICT at school		
13.	Most teachers not in favor of the use of ICT at school		
14.	Using ICT in teaching and learning not being a goal in our school		

Permit letter

UNIVERSITY OF NAIROBI
COLLEGE OF EDUCATION AND EXTERNAL STUDIES
SCHOOL OF EDUCATION
DEPARTMENT OF EDUCATIONAL ADMINISTRATION AND PLANNING

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P.O. BOX 30197 NAIROBI
OR P.O. BOX 92
KIKUYU

7th April, 2015

Our Ref: UON/CEES/SOE/A&P/1/4

TO WHOM IT MAY CONCERN

Dear Sir/Madam

SUBJECT: **ABDIFITAH MOHAMED MOHAMUD - REG NO. E55/77480/2015**

This is to certify that **ABDIFITAH MOHAMED MOHAMUD** is our Master of Education student in the Department of Educational Administration and Planning at the University of Nairobi. He is currently doing his research on ***"Influence of Information Communication Technology (ICT) on Quality of Education in Secondary Schools in Mogadishu- Somalia".***

Any assistance accorded to him will be highly appreciated.

Yours faithfully,

DR. GRACE NYAGAH
CHAIRMAN
DEPARTMENT OF EDUCATIONAL ADMINISTRATION AND PLANNING

GN/nd

UNIVERSITY OF NAIROBI
COLLEGE OF EDUCATION AND EXTERNAL STUDIES
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7th April, 2015

Our Ref: UON/CEES/SOE/A&P/1/4

TO WHOM IT MAY CONCERN

Dear Sir/Madam

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This is to certify that **ABDIFITAH MOHAMED MOHAMUD** is our Master of Education student in the Department of Educational Administration and Planning at the University of Nairobi. He is currently doing his research on ***"Influence of Information Communication Technology (ICT) on Quality of Education in Secondary Schools in Mogadishu- Somalia".***

Any assistance accorded to him will be highly appreciated.

Yours faithfully,

DR. GRACE NYAGAH
CHAIRMAN
DEPARTMENT OF EDUCATIONAL ADMINISTRATION AND PLANNING

GN/nd

JAMHUURIYADDA FEDERALKA SOOMAALIYA

Wasaaradda Waxbarashada, Hiddaha & tacliinta sare Xafiiska Agaasimaha Guud

جمهورية الصومال الفيدرالية

وزارة التربيـــة والتعليـــم العالي

مكتب مدير العام

Somali Federal Republic

Ministry of Education Culture and Higher education

Director General Office

Ref: **WWB/XAG/0348/2015** Date: **18th May: 2015**

To whom it may concern,

SUBJECT: PERMISSION LETTER OF M.ED RESEARCH

Dear Abdifitah Mohamed Mohamud

Fallowing your application dated **Wednesday 6th May 2015**- regarding the authority to carry research on: ***influence of Information Communication Technology (ICT) on Quality of education in secondary schools in Mogadishu- Somalia.***

The Ministry of Education Culture and Higher Education is very pleased to inform you that you are fully authorised to carry out research in the locations of Mogadishu, from the date signed this latter you can go head to **carry out all your topic research activities** on ethical manner in the areas mentioned above.

Your are advised to report the above mentioned district commissioners and district education officers before you start the work and after you have done it. We really appreciate the good work that you have done during the past one and half year.

Yours Sincerely,

Mohamed A. Nur
Director General

Federal Republic of Somalia

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